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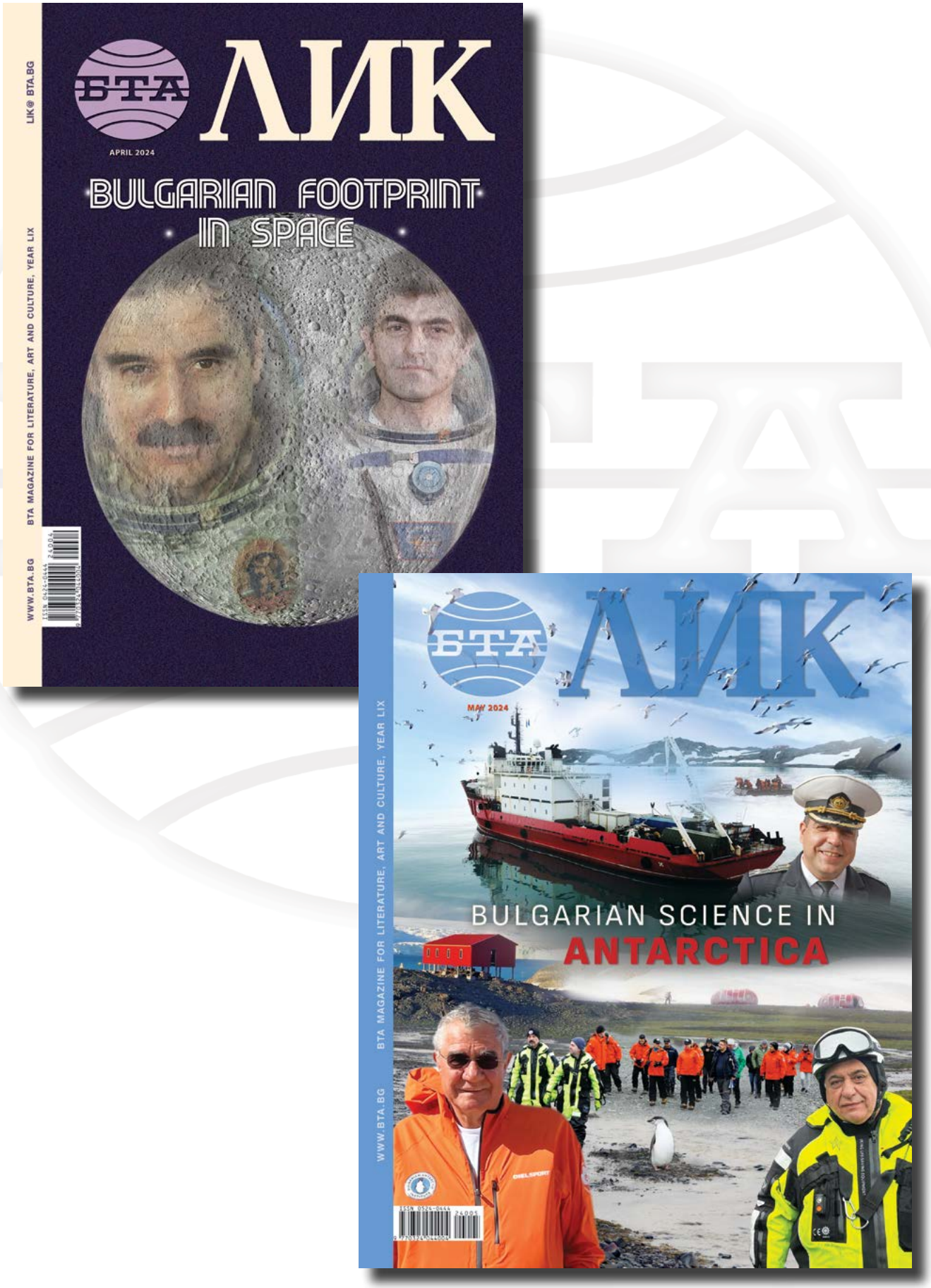
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CONTENT

Bulgarian Academy of Sciences at 155

Kirl Valchev, BTA Director General

BTA is fulfilling a duty: this is the best way to describe this issue of LIK, dedicated to the 155th anniversary of the oldest institution of modern Bulgaria – the Bulgarian Academy of Sciences (BAS), founded in the Romanian town of Braila in 1869 under the name Bulgarian Learned Society.

A duty, not only because the first building to house BTA on Tsar Osvoboditel Blvd, next to Parliament in central Sofia, serves as BAS' current headquarters. This is where BTA's first director Oscar Iskander and his assistant started reading telegraph messages and write by hand the first BTA news bulletins in 1898. The Bulgarian Learned Society completed construction in 1892, but due to lack of funding, the building was rented out to the Ministry of Foreign Affairs and Religious Denominations, part of which were the press directorate and BTA. This is what we know from BTA's 125-year history, to which the news agency dedicated a three-volume edition with first-hand witness accounts, historical studies and archival records, published once again with BAS' help and thanks to its Prof. Marin Drinov Publishing House.

This edition of LIK, however, is more of a duty for BTA, because it is those who have a platform that have a huge duty to present those who truly deserve to be presented - both those who work in the field of science nowadays, as well as those who have left a lasting mark in it in the past. Those are the people whose "hands the Bulgarians will be kissing", as the first literary critic Nesho Bonchev wrote to the first chair of the Bulgarian Learned Society, Prof. Marin Drinov, responding to his letter. In it, the historian and linguist, who headed the Society over the course of nearly two decades, notes the following on the occasion of its founding: "We're wandering in the fog. Hold on. I already saw a beam of light. Go with me!" This issue of LIK is a sign that these words are coming true and 155 years later Bulgarians continue to honour the founders of "one of the most magnificent popular temples of Bulgarian science", as Prof. Marin Drinov himself referred to the future Academy.

This issue of LIK is also a token not only of BTA's participation, but of the contribution of Bulgarian media to promoting science in general.

An expression of such recognition was the decision that, on their way to Odesa for the opening of the 19th World Meeting of Bulgarian Media on June 19, the feast day of St. Paisius of Hilendar, media people from 14 countries would to stop in Braila, Romania. Where once stood the house in which the Bulgarian Learned Society was founded, and where nowadays is the Church of the Ascension of Christ, called the "Bulgarian Church", we commemorated the 155th anniversary of the Bulgarian Academy of Sciences, and with us was its President, Academician Julian Revalski. Because this anniversary and the related Bulgarian contributions to science are a source of pride for Bulgarians wherever they may be in the world.

BTA participated in observances of the anniversary of the Romanian Academy, once again in Braila and Bucharest in September. Back then, its President Ioan-Aurel Pop received BTA's LIK English-language issue dedicated to last year's first voyage to Antarctica and back of the Bulgarian naval research vessel Sv. Sv. Kiril i Metodii, in which BAS scientists participated.

This year, BTA also published an issue of its LIK magazine in both Bulgarian and English about Bulgarian science in Antarctica. Prior to that, there was an issue dedicated to Bulgarian space science and the 45th anniversary of the first flight of a Bulgarian in space, with which Georgi Ivanov made Bulgaria the world's sixth space nation.

BTA and BAS have had an agreement for three years, under which Bulgaria's national news agency receives copyrighted

articles systematically each week about what's new in the Academy's work, which it publishes in its specialized science and culture section (LIK), which is named after this emblematic magazine. BTA publishes the most interesting of these articles in its English language service.

Thus, BTA fulfills three very important duties that those with a platform have, which are also formulated by Prof. Marin Drinov.

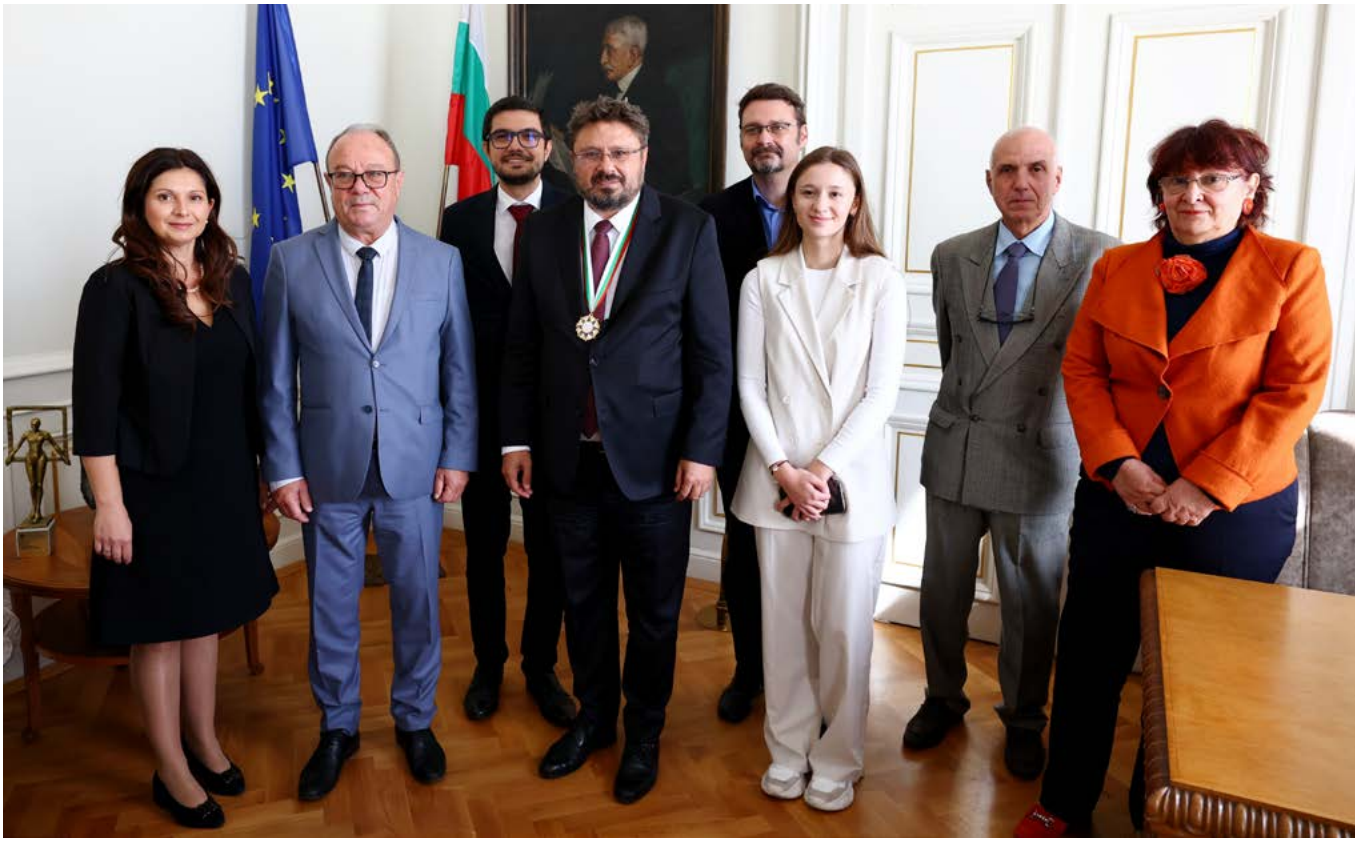
First, a duty to language, because according to Prof. Drinov, "language is the spiritual fortress of a nation".

Second, a duty to public opinion, because according to Prof. Drinov, "a nation's great future needs not only giftedness and abilities, developed crafts and economic activities, but also public discipline and order that rest on language, faith, popular education, literature and public opinion, which must be developed".

And third, a duty to uphold and develop "national moral interests", as Prof. Drinov called them back in 1868, before BAS was established in a "Letter to the Bulgarian intelligentsia".

By presenting the faces of Bulgarian science and education in the past and nowadays, BTA shows that we, Bulgarians, have reputable intellectuals on whom we can rely for our future. Because Prof. Marin Drinov was right by saying that the people need reputable leaders. And this is especially important to be remembered in the month of October, when Bulgarians voted in yet another round of early parliamentary elections, in which there were fewer scientists not only among the candidates, but also among the opinion-makers participating in the election debates – something that needs to change with the help of the news media.

Sofia, September 30, 2024. BAS President Julian Revalski awards BTA Director General Kiril Valchev with an Honorary Medal of the Bulgarian Academy of Sciences President for professionalism, journalistic ethics and for long-standing contribution in covering the BAS achievements in the international and national media space.
Photo: Minko Chernev, BTA



Sofia, September 30, 2024. Silviya Boteva-Valcheva, BAS President Julian Revalski, Aleksandar Valchev, BTA Director General Kiril Valchev, Pavel Valchev, Ana Maria Valcheva, Corresponding Member and doctor of technical sciences Stefan Hadjitodorov, and Corresponding Member and doctor of biological sciences Evdokiya Pasheva during the award ceremony at the Bulgarian Academy of Sciences.
Photo: Minko Chernev, BTA

Sofia, September 30, 2024. The Honorary Medal of the Bulgarian Academy of Sciences President presented to the BTA Director General. Photo: Minko Chernev, BTA

Academician Julian Revalski, Bulgarian Academy of Sciences President:

"The Academy Continues to Be a Cornerstone of Bulgarian Science"

Academician Julian Revalski. Photo: Vladimir Shokov, BTA

Julian Revalski was born on February 27, 1956, in the town of Simitli. He graduated in Mathematics from the Faculty of Mathematics and Mechanics at Sofia University in 1981. He became a Candidate of Mathematical Sciences in 1986, and Associate Professor at the BAS Institute of Mathematics and Informatics in 1994. Three years later, he was awarded a PhD in mathematical sciences and has been a professor at the Institute of Mathematics and Informatics since 2001. Prof. Revalski became a corresponding member in 2008 and academician in 2015. He was elected President of the Academy in 2016 and was re-elected in 2020. Julian Revalski is involved in numerous national and international scientific and applied research projects. His areas of scientific interest include variational analysis, game theory, monotone operators, and topological methods in optimization, among others. He has served as a visiting researcher and professor at the University of Waterloo, Canada, the Humboldt University of Berlin, Germany, and the University of Limoges, France. He is a member of the Union of Bulgarian Mathematicians and the Union of Bulgarian Scientists, the American Mathematical Society, and Société de Mathématiques Appliquées et Industrielles (the French Applied and Industrial Mathematical Society).

Sofia, April 12, 2021. BTA Director General Kiril Valchev and BAS President Julian Revalski sign a cooperation agreement between the Bulgarian News Agency and the Bulgarian Academy of Sciences at the BTA National Press Club. Photo: Hristo Kassabov, BTA

Academician Revalski, you assumed the role of President of BAS in 2016. What has changed over these eight years?

I would like to highlight a few points. First and foremost, through collective efforts, we successfully restored BAS's credibility. Why do I point this out? Because around 2010, we faced what I would call an unprecedented pressure from institutions that significantly influenced public opinion, which largely led to the Academy and its scientists losing their credibility before the Bulgarian public. So, I view the restoration and consolidation of that credibility as a major achievement. Today, all institutions acknowledge BAS not only as the largest research centre in Bulgaria but also as the kind of partner they would turn to for expert work and science-based recommendations to help shape the country's future. The second point I would like to make is about the funding of the Academy. Over these years, the budget has nearly tripled compared to when I first became President. This includes both the state subsidy, which accounts for about 60% of the Academy's budget, and additional funding secured through projects, be they scientific, applied, or business-related. The third point is about something that occurred this year [2024] and extends beyond the Academy to the entire academic community. After years of efforts in this direction by all partners: the academic community, the National Assembly, the Education and Science Ministry, and trade unions, a system for adequate remuneration for academic staff was established. This applies not only to BAS but also to state higher education institutions, marking a major victory for the academic community as a whole.

October marks the 155th anniversary of the founding of BAS. How has the institution evolved over more than a century and a half?

The focus has varied over different periods, but I would say that throughout its 155-year history, BAS has played a key role

Sofia, July 10, 2019. President Rumen Radev presents to BAS the Prof. Marko Semov Award for the Academy's contribution to the development of the nation's spiritual life and on the occasion of BAS' 150th anniversary. Photo: Minko Chernev, BTA

in Bulgarian society. At its very founding, nine years before the Liberation, its primary role was tied to the Bulgarian Revival. The focus was on the history, language, the roots and the way of life of the Bulgarian people. After the Liberation, the main contribution was to the construction of modern Bulgaria. All members of the Bulgarian Learned Society, as the Academy was called until 1911, played a key role in the construction of modern Bulgaria. Our first President, Marin Drinov, was also the first minister of popular enlightenment. A number of our members and presidents went on to become prime ministers, MPs, ministers, and founders of the National Library and Sofia University, Bulgaria's first university, as well as all the major institutions in Bulgaria. So, during this post-Liberation period, the main focus was on building the modern institutions of the Bulgarian state. I would define the first half of the 20th century as the time when the Academy played a role in consolidating Bulgarian science, first at the national level and later internationally. During this time, Bulgarian scientists achieved international recognition for their outstanding contributions. It should be noted that research institutes started to emerge within the Academy following World War II. Up to this point, there had been no institutes. BAS used to be a classical academy with full and associate members, which are now referred to as academicians and corresponding members. During this period, institutes were established across various fields, not only in natural sciences, mathematics, and engineering but also in the social sciences and humanities. For instance, the Institute of Fine Arts, the Institute of Music, the Institute of Literature, and the Institute of Bulgarian Language were all founded at this time. It is important to note that institutes in the natural and technical sciences played a key role in the development of all modern industries in Bulgaria. Everything that could be considered part of a modern industry at the time had its origins in a BAS institute. This included nuclear energy, pharmaceuticals, everything related to computing - the first handheld calculator, the first Bulgarian computer, as well as chemical technology, biotechnology, and, of course, all space research and the sending of a Bulgarian cosmonaut into space as part of a fully Bulgarian-designed scientific programme developed in BAS.

In more recent years, following the changes, despite periods of great turbulence, the Academy has undoubtedly remained the largest research centre in the country. It is also the most productive in scientific terms. With about 15% of Bulgaria's academic staff, we now contribute nearly 40% of the country's scientific output and around 70% of patents and utility models. We can confidently say that we continue to be a cornerstone of Bulgarian science.

What are the most significant moments in the history of the Academy so far?

The most significant moment is undoubtedly its establishment. Creating a Learned Society inspired by similar literary societies in the region, such as those in Croatia, Romania, and other European countries, is remarkable, as the Learned Society was founded at a time when Bulgaria was yet to

Sofia, November 1, 2019. BAS President Julian Revalski at the marking of National Awakeners' Day with a solemn celebration at the Assembly of Academicians and Corresponding Members and the BAS General Assembly. Photo: Assen Tonev, BTA

reestablish itself as a country. It was truly remarkable that the Bulgarian intelligentsia realized the need for such a cause and succeeded in rallying support from the Bulgarian diaspora of merchants and industrialists and in persuading Bulgarian revolutionaries of its necessity. I should note that Vasil Levski was among the donors behind the establishment of the Society. Albeit modest, his donation came from the funds collected for revolutionary purposes. Another significant moment was the Society's transformation into an academy. From the outset, its founders, similarly to Marin Drinov, envisioned it as an academy of European type. This vision became a reality in 1912, when the Bulgarian Academy of Sciences Act was officially enacted. Since then, we have been operating under specific legislation. It has been amended over the years, with the most recent bill being passed in 1991. This is another moment that I would say has been key in more recent times. Because in 1991, during a turbulent period, a bill was enacted that preserved BAS as an autonomous institution. I am not referring to preserving ownership but rather preserving it as an organization, maintaining its structure, keeping the institutes intact, together with the members of BAS.

What are the most challenging moments for the Academy?

There was one particularly challenging period right after the establishment of the Society, in the years leading up to the Liberation. Despite the support of sponsors, some of whom were based in Braila, it was hard to organize the Society's activities, to publish a journal, to create a library, to start keeping an archive, and manage other aspects of the Learned Society's work. I would like to mention a remarkable Bulgarian, Todor Peev, who, though not among the founders, came to Braila as a teacher and played a crucial role in stabilizing the Society at a time when it was on the brink of collapse. Another difficult period came in the late 19th and early 20th century when the Society faced serious financial difficulties. Some of these were linked to debts owed to banks, stemming from a loan taken to construct our building. During this period, our then-president, Ivan Evstratiev Geshov, played a significant role in overcoming financial difficulties, donating 100,000 gold leva, a substantial sum at the time, to repay the Society's debts. This helped stabilize the Society financially and paved the way for its transformation into an Academy

shortly thereafter. In 1922, there was a serious dispute with the Bulgarian Agrarian National Union government over an enacted spelling law which, fortunately, was resolved favourably. The period following September 9, 1944, was also challenging, as some Academy members were tried by the People's Court, and some lost their lives. A difficult period in more recent years occurred in 2009–2010, when, for reasons unknown to us, the Finance Ministry drastically cut the BAS budget. Despite a positive outcome from an international audit initiated by BAS, an attempt was made to dismantle the Academy by splitting its institutes and redistributing them to ministries and universities. Strong opposition from scientists and public support, including from the international scientific community, played a decisive role. The proposed bill was withdrawn, and the Academy preserved its integrity. Unfortunately, the consequences lingered long after these events.

What initiatives have you undertaken to celebrate the 155th anniversary of the Academy?

We began the year with a series of initiatives. Our scientific secretary for biodiversity, bioresources, and ecology, Assoc. Prof. Ina Aneva, has been making short films about the work of our scientists, which are available on the BAS website. She also produced a full-length documentary about BAS, entirely her concept and production. This truly unique film was made with great dedication to the Academy. Its premiere in the packed Prof. Marin Drinov Hall was met with great enthusiasm and excitement, marking the culmination of our anniversary celebrations.

Among our other initiatives is an exhibition marking the 200th anniversary of the first edition of Petar Beron's The Fish Primer. We first presented it here, in the garden opposite the National Theatre, and then, in September, we took it to the Romanian Academy of Sciences. The exhibition was presented during a two-day visit. The first day of the visit was centred around the exhibition and our relationship with the Romanian Academy of Sciences, as well as expressing our gratitude to the Romanian people and land for welcoming Bulgarian expats during the Ottoman rule, who went on to establish the Bulgarian Learned Society. The second day was dedic ated to Braila, where we paid our respects and laid a wreath at the memorial plaque marking the site of Varvara Hadzhiveleva's house where the Bulgarian Learned Society was founded. The house no longer exists and has been replaced by what is now called the Bulgarian Church.

On October 12, we celebrated the 155th anniversary with a special event at the National Opera House. The highlight was an amazing concert prepared by Maestro Plamen Kartalov, who is also a BAS academician.

In early November, we will host an exhibition at the European Parliament. Numerous other events have been organized by the BAS institutes to commemorate the anniversary. They are too many to list.

What is the role of an academy of sciences in the 21st century?

'Key' might be the word that best describes it. You can see that we live in an uncertain world, facing challenges of all kinds, including pandemics, wars, and conflicts that are becoming increasingly prevalent. There are also climate change and natural disasters such as cyclones, floods, and earthquakes. A scientific approach is needed to address all this. Therefore, there is no way that any of these problems can be solved without science. Take COVID-19 as a prime example. If it had not been for the scientists and physicians, how could we have handled the pandemic, the vaccines and everything? This response was the result of many years of research that equipped us to take action when the disaster struck. We cannot deal with looming problems without science, particularly interdisciplinary science. That is why, I see the role of academies and science in general as increasingly vital in addressing all challenges ahead.

Where and how do Bulgarian scientists find the motivation to dedicate themselves to science?

Science and culture naturally provide an outlet for intellectual

expression, especially for people from smaller countries like Bulgaria. School and family have a major influence in shaping a person's path – whether one will pursue a science career or something else. This is a pivotal moment in one's development. We strive to inspire young people to engage in scientific research while they are still in school. In 2014, BAS established the High School Student Institute to support the expression and development of students interested in research across various scientific fields and its applications. The Institute encompasses all scientific disciplines – natural sciences, social sciences, and the humanities. The BAS High School Student Institute encourages independent project work, which is the highest level of applying the research approach in education.

How do you attract young scientists?

We have faced a noticeable lack of new staff over the past 10-15 years, so attracting young people has always been a priority of my predecessors' and of mine. That is why virtually all our programmes have been oriented toward young people. That was the first point. Second, following improvements in the Academy's funding – particularly in terms of the budget – our primary efforts have focused on increasing the remuneration of junior academic staff: assistants and principal assistants. The goal is to attract more young people and ensure they can advance in their careers. However, for me, the most important factor has always been the institutional environment. It is the best way to attract fresh talent to BAS. While salaries may not be very high, a good, well-established institutional environment, clear career prospects and the absence of factors that could undermine the process would attract people. Many are willing to accept a lower salary when they find such an environment, as they know that they will be able to naturally advance, relying on nothing but their hard work.

Which foreign academies are you partnering with today? What best practices are you borrowing from their experiences, and what practices are they borrowing from ours?

We partner with some 40 scientific organizations worldwide, including academies and research centres, which makes us Bulgaria's most recognized

Sofia, October 7, 2019. A ceremony for validating a 150 Years of BAS postage stamp is held at the Academy's Prof. Marin Drinov Hall. The event, which is part of the programme marking the 150th anniversary of BAS, is unveiled by BAS President Julian Revalski. Photo: Vladimir Shokov, BTA

Sofia, November 28, 2017. The Bulgarian Academy of Sciences awards an honorary degree to Prof. Francesco Guida at a solemn ceremony in the Academy's Great Hall. The award is presented by BAS President Julian Revalski.

partner in international scientific cooperation. This partnership is a two-way process. We learn from their experiences, they learn from ours, and most importantly, these partnerships often lead to new scientific output that helps to advance science. People have found long ago that science conducted in the confines of four walls is less effective, as you may waste your time duplicating the work of others, or you could reach a discovery more quickly through collaboration. There are cases where we adopt highly valuable practices. About two years ago, we observed a unit at the University of Jerusalem that has been engaged in a particular task for 30-40 years. They evaluate the scientific results produced by the researchers at the university, assess their commercialization potential, and find ways to make them commercial. When commercialization succeeds, both the university and the scientists benefit from the profits. Part of the proceeds are reinvested into supporting research. We are doing something similar through a unit called Joint Innovation Centre and a project under the Recovery and Resilience Plan, aiming to build a bridge between our research and business. It has been four years since we began organizing joint meetings between the business and scientific communities in collaboration with the Bulgarian Small and Medium Enterprises Promotion Agency. The goal is to foster connections, enabling businesses to learn about what has been developed by BAS institutes and promoting further collaboration to bring the output to commercialization.

How do you generate return on investments in science, and how should an institution of BAS's rank be funded?

Investments in science take a long time to pay off. Basic research has the longest payback period, while applied research has a slightly shorter one. Regardless of the field, however, it takes a long time. Yet the whole history of mankind shows that investments in science eventually pay off many times over. Predicting where a flower will sprout in 5 or 10 years is impossible, but when it does bloom in a few places, all the effort is rewarded. It takes patience – it is always rewarded. In the meantime, science enhances the intellectual level of a nation, which is not

immaterial. Institutions like BAS, both in Bulgaria and internationally, require two types of funding. The first is what we call institutional funding. It is provided through the state budget and serves as the organization's lifeline. There should also be project-based funding, which should be secured by the scientists themselves. We are responsible for finding our projects, be it through our national fund, Horizon Europe, the Innovation Fund, or projects with companies. It is up to us. BAS currently has a funding ratio of about 60% institutional and 40% project based. Although this might seem adequate for those who provide the funding, it is not very sustainable for an organization like BAS. A large percentage of the Academy's work is devoted to basic research, alongside efforts in the humanities and social sciences. You cannot expect these to generate high returns, as their primary focus is on studying society and humanity, as well as our cultural and historical heritage, language, and history. Organizations like ours, such

as the National Centre for Scientific Research in France and the Max Planck Society in Germany, tend to have a funding ratio of around 80% institutional and around 20% project based. This is more sustainable when it comes to the development of science, because basic research must also be developed. We must not forget the social sciences and the humanities, which are of great importance to society. I should also mention an activity that typically lies outside the scope of academies. We have four museums: an archaeological, an ethnographic, a natural history museum and an anthropological museum, which is the newest addition. The activities of these museums extending beyond scientific research are highly beneficial for society and the younger generations.

You have said that politicians are becoming increasingly aware of the need to listen to the views of scientists when making important decisions. In which areas do politicians most frequently consult scientists?

Without prioritizing them in terms of importance, one of the areas is energy. About six years ago, we drafted an energy development strategy focused on electricity consumption, encompassing all aspects of this sector. This document has since become fundamental for the Energy Ministry when making forecasts and analyses for the future. It would come as no surprise that another area we have worked in is demography. We have very good institutes in this field. Several projects have been developed for government institutions, providing guidelines on how to address the problem. Although our organization does not engage in clinical medicine, we have a highly developed biomedicine division. That is why, during the COVID-19 pandemic, for instance, we were consulted for advice on vaccines and all epidemic-related matters. I could certainly list many other things such as numerous analyses involving environmental assessments. It is also worth noting that at some point the recognition of the importance of our expertise led the Council of Ministers to establish a special mechanism for commissioning us as experts on specific issues. This was a recognition of BAS's importance as a centre of expertise. There is also continuous operational work that we do for the State. For instance, we monitor the seismological activity across the region, not just within the country. We conduct ongoing monitoring of the Black Sea, which is tied to the Environmental Protection Act. We also need to provide the European community with data, as the Black Sea is part of Europe. We monitor everything radiation levels related. We have a great environmental laboratory on Musala that enables multi-spectral monitoring.

You have also said that you should start from basic research to get to applied research, yet there was a time when basic science was overlooked in favour of research focused on innovation. Why is it important for basic science to remain the focus of scientists?

The answer is very simple: innovation cannot exist without basic research. Sometimes innovation arises from other fields like technological experience, for instance. But nowhere in the world will you see innovation emerging from research without the foundation laid by basic science.

Everything starts with basic research before progressing to research that leads to innovation. In short, without a foundation, there can be no applied research. It is no surprise that many of the world's most popular innovations were developed by scientists that are really good at basic science. Knowing the basics, they can start putting things into practice more easily.

A strategy for artificial intelligence in Bulgaria by 2030 is being developed on your initiative. How do you think the advancement of AI will influence the work of scientists and science in general?

A few years ago, I proposed the initiative for a strategy on artificial intelligence development in Bulgaria to the government, recognizing that only the Academy and the scientific community had the necessary capacity. At that time, we also brought in university scientists to draft this artificial intelligence strategy. The advancement of artificial intelligence will have profound implications for scientific research. We all hope these implications will be mostly positive, as artificial intelligence enables us to process data and derive insights faster, tasks that up until now were often very time-consuming. It also facilitates the rapid collection of various types of information, not just data. For instance, if you need some piece of basic knowledge quickly, it can be retrieved in a matter of seconds. In the past, we would visit libraries to find relevant books or magazines, pick them up from the shelves, read through them, and take notes. Now, all you need to do is request information on a topic and you get the results right away. This is crucial because it spares you the steps that were once very time-consuming. This elevates research to a qualitatively new level. Adding to this, artificial intelligence is self-learning. Nearly three years ago in France, I tried an early version of ChatGPT. Since then, as we use it, it has continued to learn from us, becoming far more advanced than it was initially. Artificial intelligence will bring many benefits not only to science but also to education. However, there would probably be some downsides as well. One of them is plagiarism. It would be way easier to plagiarize using artificial intelligence, as it can rephrase your words, and you might not get immediately caught for using something that has already been discovered. Another concern related to artificial intelligence that could have a negative impact is the issue of liability. Who should be held accountable if you make a decision based on an AI-driven system, and something goes wrong? Autonomous vehicles are a prime example. If an accident happens, who would be responsible? The artificial intelligence developer or the driver in the car who let artificial intelligence navigate the vehicle? This is a fundamental issue, because if something happens to someone on the road, God forbid, someone must be held accountable. This leads to another question: who takes responsibility for decisions driven by artificial intelligence? If I were to summarize the potential negative consequences, they would be categorized as moral or legal issues.

We rely on science to address global challenges, such as environmental protection and climate change. However, in what aspects of everyday life does science remain invisible while profoundly impacting human life?

There are many examples where people may not realize that profound scientific discoveries are at the core of what they use. Take your phone, for instance. Do you know how much science is behind it? When you take a picture and use the zoom feature, that process relies on a simple and well-known mathematical operation that students are taught in school. Nearly every technology we interact with has science embedded within it. It all began with theoretical discoveries, which were later applied in practice. Whether in radios, TV sets, satellites, or space stations, technologies are the result of scientific breakthroughs. For instance, a well-known mathematical method called the Fourier transform is used in computed tomography. In the 19th century, this was just a theoretical concept, and it was only years later that it was implemented in such a vital field. A great deal

of science also underpins efforts made in recent years to improve living conditions in cities, or what are referred to as Smart Cities. At the heart of this idea lie scientific advancements related to traffic modelling, urban environment modelling, air quality monitoring, and the optimal use of water resources. All this requires scientific approaches that are not necessarily readily visible to the public. What does the future look like through the eyes of a scientist like you?

What does the future look like through the eyes of a scientist like you?

At this moment, when we are witnessing so many worrying developments around the world, saying that everything will be positive in the future might be a bit of an exaggeration. Nevertheless, I am generally optimistic and hope that humanity will always find a way out of every situation it finds itself in. There are many challenges ahead of us, both local and global. This year, for instance, we experienced an extreme summer. If we were to analyze this, we should determine whether these phenomena were the result of human activity alone, natural events, or a combination of both. This significantly affects people, and they should be provided with guidance on how to deal with it. This is an area where science is indispensable. That is why I said earlier that we cannot envision the future without a serious scientific approach to nearly every problem. I remain hopeful that common sense and collective wisdom will prevail and, with the support of those involved in science, solutions will be found to the challenges ahead. Let us look forward with optimism, for the sake of our children, grandchildren, and the younger generation, holding on to hope for a brighter future.

Sofia, July 11, 2022. BAS President Julian Revalski presents a foreign BAS member diploma to Maxim Kontsevich, who was conferred the diploma in 2020. Photo: Vladimir Shokov, BTA

Dimitar Hristov, Institute for Historical Studies, Bulgarian Academy of Sciences

The Bulgarian Academy of Sciences at 155 (1869-2024)

Dimitar Hristov
Photo: personal archive

Chief Assist. Prof. Dimitar Hristov, PhD, joined the Institute for Historical Studies with the Bulgarian Academy of Sciences in 2012 as part of the Section on The Bulgarians, the Ottoman Empire and Europe. His research interests cover the Bulgarian National Revival. He explores topics in the sphere of church history and the history of knowledge. He has written a number of research papers and has worked as a history teacher. He has contributed to A History of the Bulgarian Academy of Sciences (two parts, 2014, in Bulgarian), A Brief History of the Bulgarian Academy of Sciences (2019, in Bulgarian) and other works on the past of the Bulgarian Learned Society and BAS.

This year the Bulgarian Academy of Sciences (BAS) celebrates its 155th anniversary. Such jubilee occasions customarily call for highlighting the record of the institution's success in an elevated language. This brief article will take a different look of the time past. Because the real history of BAS is a succession of challenges, ordeals and failures. The fact that the Academy survived during all those years is, as far as we are concerned, its most praiseworthy achievement. The ups and downs of this history cannot be recounted in full on several pages, but one dimension must be noted by all means. This is the human dimension: the resolve, sacrifices and patience of the people who intertwined their fate with the fate of BAS.

In 1844, on the pages of the first Bulgarian magazine, Lyuboslovie, young Gavril Krastevich put forward a proposal on the establishment of a Bulgarian Academy — an idea that apparently came somewhat ahead of its time. By "academy" Krastevich meant a small circle of several best educated Bulgarians to take care of refining the national language, spelling, textbooks, etc. The call to set up a Bulgarian Academy was not met with a quick response but was not forgotten either. In the ensuing years such initiatives were launched ever more often. Some pushed for a nationwide scientific or Learned Society modelled on those existing in the large European countries. Others proposed a "Bulgarian Matica", following the example of Slav nations. Still, it was essentially the same idea: Bulgarians needed a hub of national knowledge and research (especially into the native language and history), of arts and letters.

Bulgarians in Constantinople made a serious attempt by setting up a Bulgarian Literary Community (1857-1862). Its journal Balgarski knizhitsi was a quality publication and set a role model for the future scientific press in this country. The undertaking, however, was not properly resourced. Political bickering, personal feuds and defaults on obligations undermined it, and it came to a premature end. The torch was picked up by Bulgarian emigrants outside the Ottoman Empire. In 1867, young enthusiasts Marin Drinov of Panagyurishte and Vasil Stoyanov of Zheravna met in Prague and conceived the establishment of a Learned Society to be joined

by the widest possible range of compatriots. They mounted a vigorous campaign to promote their idea among Bulgarians in Romania, Russia, Austria-Hungary and other countries. Vasil Drumev, a man of letters from Shumen, was enlisted in the initiative. The nationwide cause received a huge favourable response, especially during the first meetings, but conflicts and differences of opinion followed soon after. Within a couple of years the setting up arrangements surmounted a number of difficulties. The idea was translated into reality in Brăila, Romania. That port city on the Danube River was home to a sizable Bulgarian community, including affluent people and intellectuals. The Bulgarian Learned Society (BLS) began its activities on October 1, 1869.

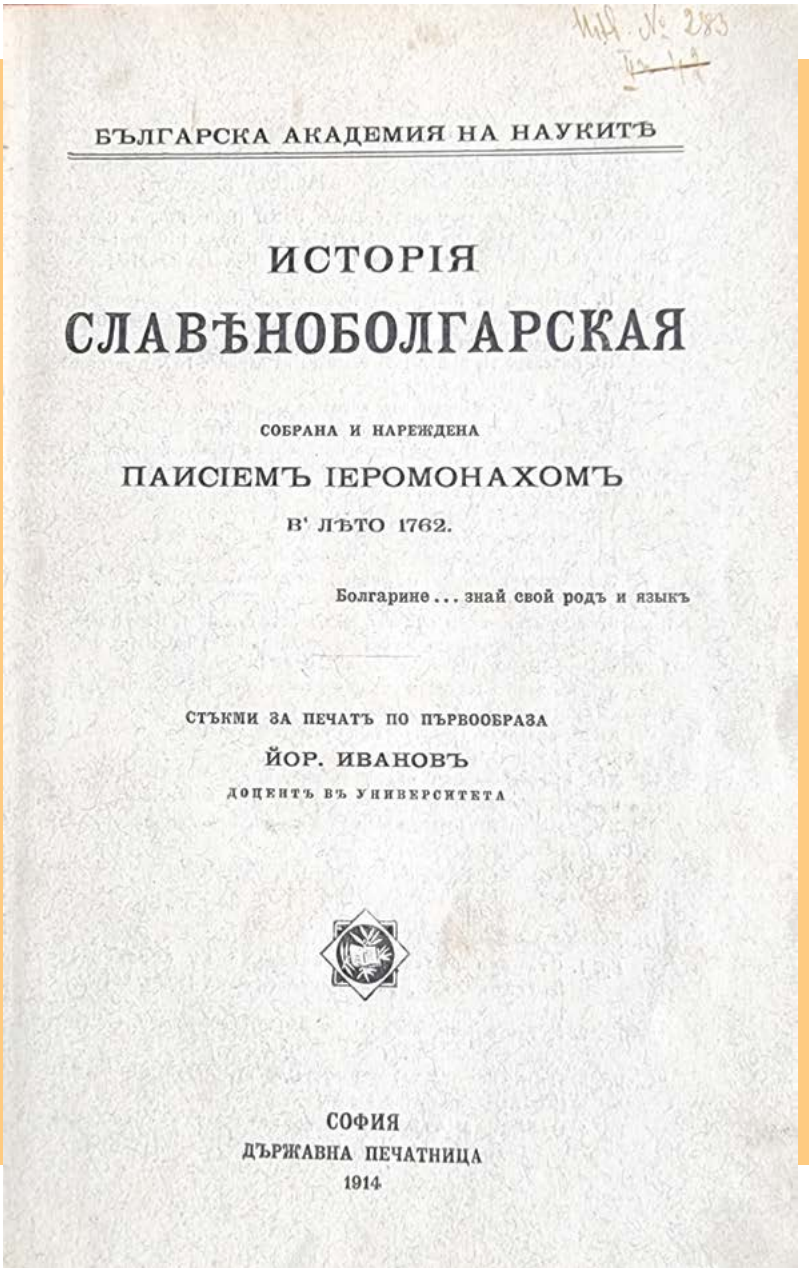
The founders of the BLS played an enormous role — each in their own way. President Marin Drinov, a philologist and historian, was the face and the "brain" of the Society. Records Keeper Vasil Stoyanov, an ardent organizer, was the heart of the institution. Vasil Drumev (the future Metropolitan Kliment of Tarnovo) gave the BLS its soul by quietly and selflessly toiling on its journal. They were soon joined by a fourth figure - Todor Peev. He took over the affairs of the Society at the most difficult point in time, when financial and personal problems threatened to put it out of operation. Merchant Nikola Tsenov was there, too, as an irreplaceable President of the Board of Trustees, standing firm as a backbone of the BLS. Poorly educated himself, Tsenov was a staunch champion of every cause for the advancement of education and letters and a generous benefactor. The BLS was headquartered in his home in Brăila while the Society was situated there. It would not be an exaggeration to say that without the sacrifices of those devoted persons, the history of the Academy would have been much shorter.

Immediately after the Liberation [from Ottoman rule], in the autumn of 1878, the BLS relocated to Sofia. It resumed its activities there under the care of the newborn State. Again, the enthusiasm of particular people was the driving force of its life. Czech historian Konstantin Jireček was particularly prominent among them. He was elected foreign member of the BLS back when he wrote History of the Bulgarians (1874-1876). At Drinov's invitation, he came to Bulgaria in 1879 to place himself in the service of the young Principality. His keen desire to help Bulgarian science at times clashed with a disappointing reality. "Things are making slow progress, alla bulgara, …", Jireček wrote to Drinov, referring to the slack activity among the BLS associates.

The BLS's greatest achievement in the pre- and post-Liberation years was its print publication: Periodichesko spisanie na Balgarskoto knizhovno druzhestvo [Periodical Journal of the Bulgarian Learned Society]. That was a scientific review prepared up to the highest academic standards of its time. At the beginning, the Journal included an arts section. It was there that Ivan Vazov debuted as a poet. For a long period of time, the title page of the publication had an epigraph reading "Wisdom reigns, wisdom slaves …". The third part of the Bulgarian proverb was omitted, but readers got the message. Unless you harness your wisdom to doing something useful, it will be left with the option of "… wisdom takes geese to pasture". The BLS's internal structure started to take shape in 1884. The scientific pursuits were grouped in three branches: a Branch of History and Philology (history, archaeology, ethnography, linguistics and literature), a Branch of Natural Sciences and Medicine (zoology, botany, mineralogy, geology, physical geography, physics, chemistry, astronomy and medicine), and a Branch of Government Sciences (political economy, statistics, financial science, canon law, common law, administrative and international law). The development gathered momentum but was followed by a period of stagnation. The government's support for the Society proved to be nominal and contingent on loyalty to the powerholders.

A "silent coup" took place in the management of the Society in 1898. A new, more energetic leadership ended the lethargy. The BLS was headed by people who were concurrently scientists and public and political figures. Ivan Evstratiev Geshov became President, and Dr Dimitar Mollov was Vice President. President Geshov made an extraordinary contribution by paying off the Society's mortgage loan with his own funds. Later on, in yet another noble gesture, he provided his house in central Sofia for a seat of BAS. The idea about an academy was now carried through. In 1911, at a ceremonial meeting of the members in the auditorium of the Slavyanska Beseda Community Centre, the Bulgarian Learned Society was transformed into a Bulgarian Academy of Sciences. The resolution was confirmed by a special act of Parliament.

From then on, in the course of three decades BAS functioned as a club of elite scientists. Almost all of them were university lecturers with a pro bono membership of the Academy. They treated it as a forum of honour for scientific



БЪЛГАРСКА АКАДЕМИЯ НА НАУКИТѢ

ИСТОРІЯ
СЛАВѢНОБОЛГАРСКАЯ

СОБРАНА И НАРЕЖДЕНА
ПАИСІЕМЪ ІЕРОМОНАХОМЪ
В' ЛѢТО 1762.

Болгарине... знай свой родъ и языкъ

СТѢКМИ ЗА ПЕЧАТЪ ПО ПЪРВООБРАЗА
ЙОР. ИВАНОВЪ
ДОЦЕНТЪ ВЪ УНИВЕРСИТЕТА

СОФИЯ
ДЪРЖАВНА ПЕЧАТНИЦА
1914

The front page of "Slav-Bulgarian History," published by the Bulgarian Academy of Sciences in 1914. The issue is part of the collection of the Sofia Library's Native Knowledge and Literary Heritage sector.

presentations, meetings and discussions. The State financing of BAS remained relatively low. Despite the restraints, during that period the academicians started a number of important publications by means of the print journals and reviews. At the same time, the institution also acquired a significant public role. Private individuals made a number of charity funds available to the Academy. It thus became a major benefactor with considerable prestige. The financial standing improved appreciably in the 1930s. Assistance came from archaeologist Bogdan Filov, BAS President between 1937 and 1944, who was concurrently minister of national education and, later on, prime minister. A new law governing the operation of the institution was enacted in 1940. It was renamed Bulgarian Academy of Sciences and Arts (BASA). The law benefited the scientists. The establishment of a Branch of Literature and Fine Arts opened the Academy to writers, artists and composers. Under the regulations, each of the four branches was limited to 12 regular and 12 corresponding members (in present-day terms: academicians and corresponding members).

The good life did not last long. The Allied air raids of Sofia (1943-1944) caused a suspension of the Academy's activities. The BAS building was badly damaged. Still, a far more powerful "shock wave" hit the Academy "from the Left" on September 9, 1944. The Communist-led coup put to a test the very existence of BASA. It was branded as a "bourgeois research institution" and was subjected to a purge. There was a looming threat of a closure of the Academy itself. The "instruction" changed in early 1945: instead of closing it down, it was to be reformed along Soviet lines. The old academicians tried to keep themselves and their scientific pursuits by demonstrating a readiness for change. Communist philosopher Todor Pavlov was elected academician, and then also President of the Academy. A product of the Stalinist Soviet school, his word carried weight with the elite of the Bulgarian Communist Party (BCP). Under his direction, the life of the Academy was completely transformed. Research institutes started to be organized. Oppositionists were duly removed. Everybody's conduct and statements came under close scrutiny. Two successive laws, in 1947 and 1949, placed the institution under State and party control. The old name BAS

was restored, and the Academy was thoroughly reorganized. Its structure became hierarchical. The individual institutes formed the base, and above that level was the BAS leadership which, in turn, reported to the Council of Ministers. That put an end to the Academy's autonomy.

In the 1949-1953 period the BCP pursued an active policy towards the Academy, counting on it "to build socialism". Humanities and social sciences were assigned to re-educate society in a Marxist spirit. Natural, mathematical and technical sciences took care of the industrialization and the strengthening of the agricultural sector. With the Cold War in progress, BAS was expected to contribute to the "defensive strength of the motherland". Substantial funding was allocated to the institutes, and new staff was recruited. Vetting applied at all levels, the old scientists were forced to absolutely toe the Marxist line. Among the young, party membership opened the way to a career in science. The institutes' managements were hand-picked from among the loyalists. Gross interference by the powerholders and an atmosphere of suspicion were constant companions of the research endeavours.

The Khrushchev Thaw after 1956 brought an improvement to the condition of the Academy. The BCP's new governance policy assumed that "the struggle on the ideological front" had been successful. The authorities wanted to showcase a positive image of the country through its researchers, and the Academy was allowed more contacts with the international research community. The large-scale state investments in the Academy started to bear fruit. In the 1960s and 1970s the research results grew exponentially. There was a dramatic shift in the composition of BAS. The institutes and professionals in natural and technical sciences already outnumbered by multiples the organizational and human resources in the humanities and social sciences. Laboratories, computing centres and experimental units gave the Academy its new face. The National Astronomical Observatory on Mt Rozhen, the ELKA electronic calculator and Bulgaria's first nuclear reactor epitomized the success story of BAS. The Academy itself epitomized the advances of Bulgarian science and technology. The fields of science multiplied, and institutes started to proliferate, spawning new, ever more specialized units. Even two new separate academies: an Agricultural Academy and a Medical Academy, emerged as a result of the swarming.

Angel Balevski, a metallurgical engineer who became internationally renowned for his new method of counter-pressure casting, headed the Academy in 1968. The two decades of his presidency (until 1988) are nostalgically remembered by many. The Academy's expansion peaked during his tenure. Balevski figured prominently in the Communist Party apparat but was a technocrat by disposition and a warm-hearted person with a bright sense of humour. He felt equally at ease with rank-and-file research associates and the "first Party and State leader" (as BCP General Secretary and State Council President Todor Zhivkov was styled). Balevski's diplomacy was key to his success as head of a now enormous academy in a situation where party "considerations" continued to dictate the agenda.

In 1988 BAS had 122 stand-alone


Брой 8 — Българска библиотека — Брой 8

Софрони Врачански

За стогодишнината на новата българска печатна книга (1806—1906)

написа

А. Теодоровъ Баланъ

а издаде

Българското книжовно дружество въ София

отъ фондъ «Напредъкъ»

София

Държавна печатница

1906.

The front page of an issue about Sophronius of Vratsa on the occasion of the 100th anniversary of the new Bulgarian print book. The author is A. Teodorov Balan, the book is published by the Bulgarian Learned Society in Sofia in 1906. The issue is part of the collection of the Sofia Library's Native Knowledge and Literary Heritage sector.

research units and a full-time staff of over 15,000. The institution's publications, inventions and patents were practically innumerable. The State invested generously in science, and even ideological control was no longer that tight. But still, that was precisely the period historians would call "the Era of Stagnation". The Academy proved to be a place for nice and easy plum jobs, self-serving careerism and logging results. Good-faith associates at the institutes often shouldered the burden of "socialist collectivism", while others lived off them with impunity. The efficiency and practical applicability of research decreased. BAS faced a new predicament in its history: the risk of falling victim to its own success.

Action to address the stagnation was taken during the perestroika. In 1988 the presidency passed to mathematician Blagovest Sendov, world famous and member of no party, albeit enjoying firm political support from the regime. He was reform-minded — just as ever more people in the Academy. The expectations of change were huge, but what exactly should change? The issue of academic freedom came to the fore. Initially, there was talk of "pluralism of opinions", but democratization of science gradually emerged as the dominant demand. The whole debate fell into the vortex of changes after November 10, 1989.

In 1989-1992 BAS democratized by fits and starts — just as Bulgarian society. The BCP primary organizations, onetime guardians of the system, disappeared without a trace. The Academy regained the autonomy that had been cancelled in 1949. The separate institutions became more independent in decision-making. In its new Statute BAS raised high the flag of parliamentarianism, determining that a members' General Assembly is the Academy's supreme governing body. The erstwhile forced like-mindedness gave way to a fierce clash of viewpoints on the future of BAS. The positions of the Academy researchers diverged both internally and externally with the political context. The opposition against the former regime regarded BAS as a "communist structure" that should be destroyed or restored as a literary club. The change had a very tangible financial expression which dealt a heavy blow to the Academy. For 1991, BAS had a budget that was a ninth of the amount for 1990. Redundancies, downsizing and mergers of research units became inevitable.

The majority of the academic community concurred against the institution reverting to a club

format. A struggle started to keep the structure of institutes, making it more efficient by shedding the communist legacy and maximizing its adequacy in international scientific life. According to the new leadership, the reform should in principle be carried out in a professional, scientifically competent and politically unbiased way. The adjustment made difficult, uneven and costly progress. In the 1990s the number of institutes was slashed. Some were closed down altogether, and others, which engaged in similar activities, were merged. Their staff size was cut, salaries were severely constrained, and less funding was allocated to facilities and practice-oriented research. Nevertheless, BAS continued to make scientific contributions. A project financing system was ushered in to offset in part the underfunding. Quite a few research teams managed to achieve productive cooperation with international partners.

Meanwhile, the "invisible hand of the market" captured the minds of politicians and budgeters. BAS was expected to be "market oriented" and, as far as possible, to pay its own way. In 2010, this kind of thinking came into head-on collision with the essence of scientific knowledge. The Finance Ministry directly accused the Academy of freeloading. The already insufficient budget was cut further. The BAS researchers took a long-term unpaid leave. Some quit, others were made redundant, and the rest held on one more time, downhearted and hoping against hope. What followed was yet another round of negotiations, protests and reforms: merger of institutes, renaming of research units, and replacements of managements. An international audit was initiated, and it showed impartially that BAS had weak sectors but also such worthy of the highest praise.

The Bulgarian Academy of Sciences weathered that crisis, too — the latest in a series during its long history. Over the last decade and a half it has stabilized, has gained public trust and, most important of all, has been doing science. Financial constraints are still there, but the Academy is coping nevertheless. So what's new? In his childhood Marin Drinov herded sheep with his father. Vasil Stoyanov had to work as a porter and a horse groom to earn money for his tuition. What BAS represents today is the making of poor parents' children who were inspired by a grand idea to pursue success. That same idea, albeit expressed in slightly different terms, now keeps inspiring the Academy to advance. "Wisdom reigns, wisdom slaves…" After all, isn't that the main question, and namely: how wisdom is put to use!

Bucharest, September 17, 2024. Academician Julian Revalski and the Romanian Academy Vice President, Academician Mircea Dumitru, at the Romanian Academy's library, where an exhibition is unveiled on the 200th anniversary of the first issue of Petar Beron's "Fish Primer". Photo: Bisser Todorov, BTA


ЙОСИФЪ I
ЕКЗАРХЪ БЪЛГАРСКИ
(1877–1902)
ЮБИЛЕЕНЪ СБОРНИКЪ
ИЗДАВА
БЪЛГАРСКОТО КНИЖОВНО ДРУЖЕСТВО ВЪ СОФИЯ
СОФИЯ — ДЪРЖАВНА ПЕЧАТНИЦА — 1904.

The front page of a jubilee anthology about Exarch Joseph I of Bulgaria, published by the Bulgarian Learned Society in 1904. The issue is part of the collection of Sofia Library's Native Knowledge and Literary Heritage sector.

Yoanna Lashkova and BTA Reference Department

Prof. Marin Drinov:

Language Is the Spiritual Stronghold of a People

"As long as a people neglects these moral forces, does not honour them, does not allow them to develop and strengthen, however gifted it may be, no great future can be expected for it... Language is the spiritual stronghold of a people... Religion is one of the greatest propellers of the spiritual life of humanity. For a people at such a stage of moral and mental development as ours, religion is the first and chief cultural force." These words belong to Prof. Marin Drinov (1838-1906), one of the pioneers of Bulgarian historiography and founder of the Bulgarian Learned Society, today the Bulgarian Academy of Sciences (BAS).

His entire activity shows his great patriotism. According to Marin Drinov, the strength of a nation like the Bulgarian lies in its morality. A morality that is based on its intellectuals, language, religion and the power of public opinion.

A page from a small collection about Prof. Marin Drinov, published by the Bulgarian Learned Society in Sofia in 1906. The issue is part of the collection of the Sofia Library's Native Knowledge and Literary Heritage sector.

FROM LOCAL SCHOOL TO CLASSROOMS IN RUSSIA

Marin Drinov was born on October 20, 1838 in Panagyurishte in the family of Stoyan and Maria Drinov, who had three more sons and six daughters. His brothers Naiden and Peyo Drinov were active participants in the preparation and holding of the April Uprising in Panagyurishte. By chance of circumstances, Marin Drinov was left out of the revolutionary movement and followed the path of education and science.

In 1852, Drinov enrolled in the local four-class school, from which he graduated successfully in 1855. He was a pupil of National Revival teacher, writer and participant in the April Uprising Yordan Nenov, who chose him as his assistant. In Panagyurishte Marin Drinov graduated from the mutual (monitorial system) and then the class school.

Together with his inseparable friend, educator Nesho Bonchev, Drinov became a teacher in the local school. Barely 17, the two engaged in considerable social activity - collecting and arranging folk songs, reading Russian books supplied to the school through Zakhary Knyazhevsky, and abolishing the use in school of means of punishment such as the cane and the foot stocks. At the insistence of Nayden Gerov, Vice Consul in Plovdiv, Panagyurishte residents collected 4,599 groschen for the edification of their beloved teachers and sent them to Russia to receive higher education.

AWAY FROM HOME

In 1858 the 20-year-old Marin Drinov went to Kyiv, where he lived in the local Slavic guesthouse and studied at the Theological Seminary. In 1861 he moved to Moscow, where he enrolled in the Faculty of History and Philology of Moscow University from which he graduated in 1863. Soon after his graduation, Marin Drinov was employed as a private tutor in the family of the noble Prince Golitsyn, where he remained until 1870. He travelled extensively in Europe, visiting Austria-Hungary, Italy, France and Switzerland. He had the rare historical chance to work in the archives and museums of Vienna, Prague, Geneva, Rome and Naples for several years.

FIRST ACADEMIC EFFORTS

Marin Drinov's scientific output was vast and reflected his interests in historical science, Slavic studies, literary history, linguistics and folklore.

His first article in Bulgarian, titled Are Phanariots and Jesuits a Threat to Our Nationality, was printed in 1866 in several issues of the Vremya newspaper published by Todor Burmov. With this he launched a series of academic publications devoted to the struggle of the Bulgarian people for an independent church. Three years later, in 1869, his two seminal scholarly works, Views on the Origin of the Bulgarian People and the Beginnings of Bulgarian History, directly related to the history of the Bulgarian nation and state, and A Historical Survey of the Bulgarian Church from its Beginnings to the Present Day, were both published in Vienna.

Marin Drinov was one of the first to scientifically define the place of Paisii of Chilandar in the history of the Bulgarian National Revival through his article Father Paisii, His Time, His History and His Disciples.

ON THE IMPORTANCE OF NATIONAL MORALITY

The role of the intelligentsia was an important subject that intrigued Marin Drinov as a scholar. One of his first articles on this subject appeared in 1868 in issue four of the Narodnost newspaper. Letter to the Bulgarian intelligentsia was an appeal to cultural and educational workers to unite their efforts and direct them towards the defence of "national moral interests" and to the development of the "moral powers" of the people.

There Marin Drinov wrote that the great future of a nation required not only giftedness and abilities, developed crafts and economic activity, but social discipline and order firmly stepping on language, faith, education of the people, literature and public opinion, which must be developed.

CHAIRMAN OF THE BULGARIAN LEARNED SOCIETY

The Bulgarian Learned Society (the future BAS) was founded on September 30, 1869 (October 12, 1869 according to the Gregorian calendar) in Braila, Romania, and Marin Drinov was elected as its first Chairman in absentia. Years later, the first Rector of Sofia University, Acad. Alexander Teodorov-Balan, justified his election as the first Chairman by saying: "Drinov's still fresh scientific writings, his ongoing occupation with science, his proposals in the letter to the Bulgarian community centres for a printed edition of materials and manuscripts accumulated by their collection of items relevant to the life and past of the Bulgarian people, his acquaintance with scholarly persons and societies, especially in the Slavic world, were a paramount recommendation for him to the assembly in Braila, so that it elected him in absentia as the chief worker in the newly founded Bulgarian Learned Society."

In 1873, Marin Drinov completed the first classification of the book collection in the library of the Bulgarian Learned Society, which transferred its activities to Sofia after the country's liberation from Ottoman rule in 1878. Marin Drinov was Chairman of the Bulgarian Learned Society until 1898, when he was elected Honorary Chairman. According to the Minutes of the General Assembly of the Bulgarian Learned Society of November 10, 1898, Marin Drinov was awarded the Order of Civil Merit, First Degree, for his social and scientific services. In 1911, the Bulgarian Learned Society was renamed the Bulgarian Academy of Sciences.

PROFESSOR IN KHARKOV

In 1872 Drinov was accepted as a full-time grantee of the Imperial Kharkov University with specialization in Moscow. In 1873 he defended his master's thesis at Moscow University on "The Settlement of the Balkan Peninsula by the Slavs" and was elected associate professor. In it he put forward the thesis that the settlement of Slavic tribes on the Balkan Peninsula was a long process spanning several centuries. In 1875 he was elected professor at Kharkov University. His work as an ethnographer and folklorist was instrumental in the development of the Historical and Philological Society of Kharkov, founded in 1877. He participated actively in the preparations preceding the establishment of the Society of which he was elected secretary and then chairman in 1890-1897.

FOR THE BENEFIT OF BULGARIAN STATEHOOD

The April Uprising that broke out in Bulgaria in 1876 interrupted his university activities. During the Russo-Turkish War of Liberation (1877-1878) Marin Drinov joined the Russian army as an advisor to the Commander-in-Chief of the Russian armies of the Danube, Grand Duke Nicholas Nikolaevich of Russia, and was subsequently assigned to the headquarters of the Danube army as an advisor to Russian civilian governor, Prince Vladimir Cherkassky. After the liberation of Sofia on December 23, 1877, Marin Drinov was appointed vice-governor of the city. In May 1878, Prince Dondukov-Korsakov appointed him head of the Department of National Education and Religious Affairs. Teaching in Bulgarian schools was resumed under his leadership. He drew up the first school statutes and regulations, as well as the first curricula, and took care of improving the material situation of teachers. On August 19, 1878 he issued the Provisional Statutes of Public Schools.

Marin Drinov actively participated in the drafting of the Tarnovo Constitution (1879). On his proposal, Sofia was chosen as the capital of the Principality of Bulgaria (April 3, 1879).

SUPPORT OF THE BULGARIAN NATIONAL LIBRARY

Marin Drinov was also one of the co-founders and first donors of the St. Cyril and St. Methodius National Library. On August 15, 1878 the then police major in Sofia, A. K. Paul, turned to him and informed him that he wished to contribute to the education of Bulgarian youth by donating his private library of 228 volumes to Sofia City Council.

A meeting of the founding members of Sofia Public Library was convened on the initiative of Marin Drinov on November 28, 1878 (December 10 according to the Gregorian calendar), and on June 5, 1879 it was recognized by the first Grand National Assembly in Tarnovo (today Veliko Tarnovo) as the Bulgarian National Library. He later bequeathed his entire library of 2,670 volumes to it, including 1,000 on philology and literature, 790 on history, 180 on ethnography, and the rest on archaeology, bibliography, theology, geography, folklore and art.

LAST DAYS

In 1879 Marin Drinov returned to Kharkov, where he devoted himself to academic work. Until 1903 he headed the Department of Slavonic Studies at the University of Kharkov, which made him a professor emeritus at the university until his death on February 28, 1906. In April 1909 his remains were brought to Sofia by historian Prof. Vasil Zlatarski and poet Pencho P. Slaveykov.

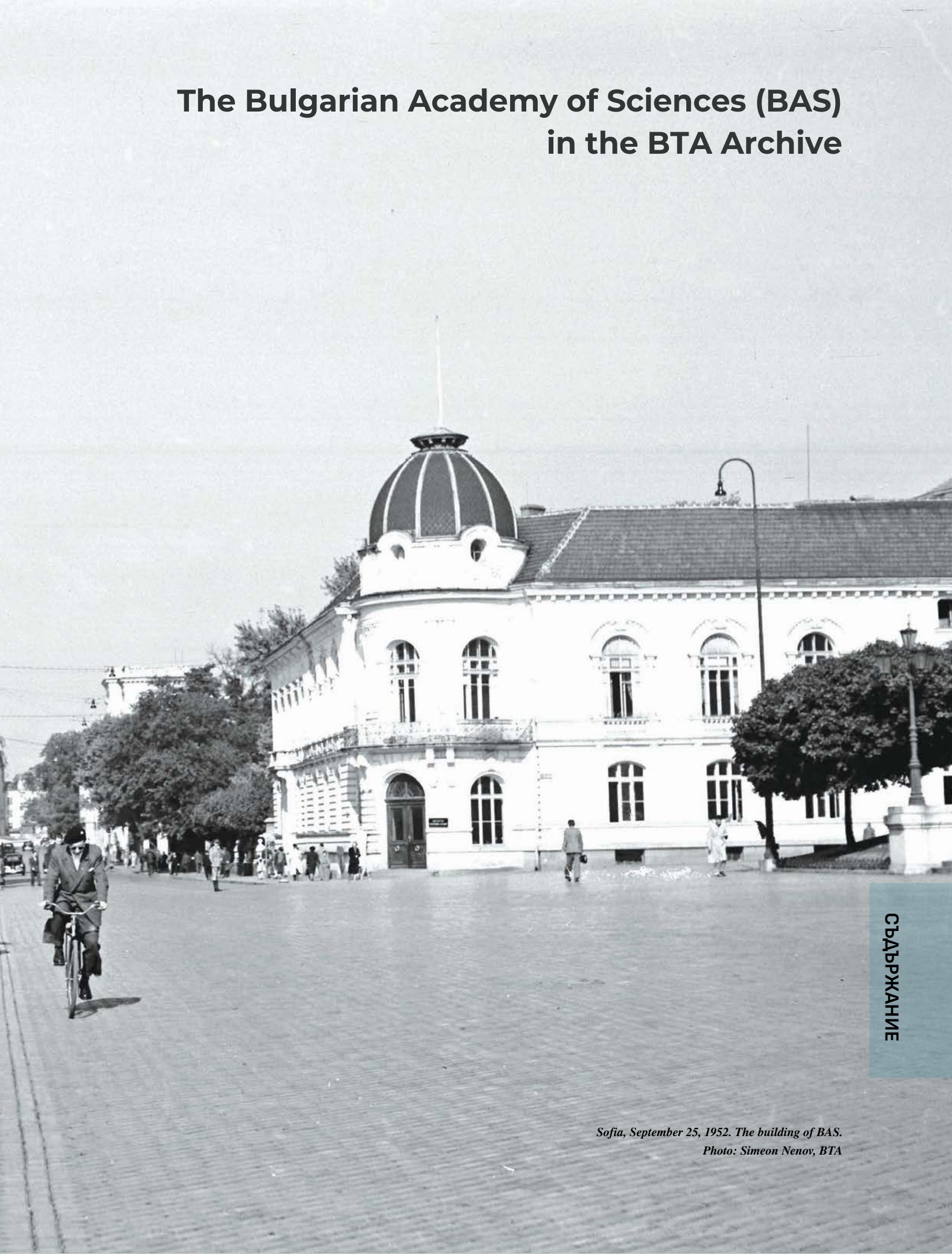
COMMEMORATION

A street in the central part of his hometown, Panagyurishte, and a school bear his name. There are also schools named after him in Sofia, Kyustendil, Pleven and Varna. In 1938 two busts of Prof. Marin Drinov, made by the sculptor Ivan Lazarov, were unveiled in the Borisova Garden in Sofia and in Panagyurishte. The Bulgarian Academy of Sciences awards the honorary Prof. Marin Drinov Badge, with ribbon, and a Marin Drinov plaque for outstanding contribution to the development of Bulgarian science.

The publishing house of BAS, as well as one of its main halls also bear the name of Prof. Marin Drinov. Since 1996, BAS has been awarding a Prof. Marin Drinov prize for young scientists. The "Marin Drinov" Centre of Bulgarian Studies and Balkan Studies at the Faculty of History of V. H. Karazin Kharkiv National University and the Institute for Historical Studies at BAS organize the "Drinov Readings".

СЪДЪРЖАНИЕ

The Bulgarian Academy of Sciences (BAS) in the BTA Archive



Sofia, September 25, 1952. The building of BAS.
Photo: Simeon Nenov, BTA

СЪДЪРЖАНИЕ

News about the Bulgarian Academy of Sciences (BAS) has consistently been a key part of the coverage of the Bulgarian News Agency (BTA) over the years. The BTA archive holds hundreds, even thousands, of articles documenting the academy's progress through the decades. By exploring the agency's bulletins and broadcasts, one can follow some of the most exciting moments in the history of this scientific institution—its significant discoveries and achievements, the induction of new members, and the awards and honours received by distinguished researchers, academics, and public figures, both from Bulgaria and internationally.

In the LIK magazine, we feature a curated selection of news about BAS that BTA has been sharing with the public for over a century.

1908

A news article from Kharkiv, published by BTA on March 9, 1908, reveals that a formal gathering took place at the university to honour the delegation sent by the Bulgarian government for the funeral of Professor Marin Drinov. Following the ceremony, the delegates were given time to deliver speeches, extending a "Welcome" and acknowledging the contributions of the late Drinov. The following day, they departed the city and headed directly back to Bulgaria.

1938

On October 18, the Academy of Sciences hosted a lecture titled "Colonel Lawrence's Life in Arabia by Sir Ronald Storrs." The event began with remarks from British Minister Plenipotentiary George Rendel. Attendees included the Ministers Plenipotentiary from France, the United States, Hungary, Czechoslovakia, Romania, and the Bulgarian royal envoy in London, Mr. Momchilov.

1942

On January 11, the Bulgarian Physical and Mathematical Society, in collaboration with the Italian Cultural Institute of Sofia, organized a meeting at the Academy of Sciences. The event was held under the patronage of Prime Minister and Minister of Public Education Filov, along with the Italian Minister Plenipotentiary Count Magistrati, to commemorate the 300th anniversary of Galileo Galilei's death.

Count Magistrati opened the meeting with a speech, stating, "This solemn gathering on the occasion of the 300th anniversary of Galileo Galilei's death, along with the extensive coverage in the Bulgarian press, demonstrates that the noble Bulgarian people consistently lead in honouring the great masters of science and the arts from all eras and nations."

1944

A news article from October 19 noted that the Ministry of Public Education has finalized the establishment of the Spelling Commission. This commission includes representatives from the Academy of Sciences, the university, the Writers' Union, and other individuals distinguished in this field. The first meeting of the commission is scheduled for Saturday, October 21, and will be chaired by the director of higher education and cultural institutes, Dim. Osinin.

1945

On April 22, the Bulgarian Academy of Sciences and Arts held a solemn meeting at the National Theatre on the occasion of the inclusion of a diploma for the proclamation of Regent Todor Pavlov as a regular member of the Academy of Sciences and Arts – Philosophical-Social Branch.

At the meeting were present the Regent Mr. Tzevtko Boboshevski, members of the Council of Ministers, members of the Bulgarian Academy of Sciences and Arts, high-ranking officers, the faculty, eminent social leaders, friends, acquaintances, and admirers of Regent Pavlov, and many citizens. The Vice-President of the Academy of Sciences and Arts, Dolapchiev, introduced the new regular member of the academy and delivered a welcoming speech.

* * *

1946

On 11 November 1946, an important gathering was held at the National Theatre in Sofia, organized by the Bulgarian Academy of Sciences and Arts, the Sofia State University, the Union of Scientists, and supported by the Board of National Culture. The meeting addressed the critical issue of atomic energy, with a report titled "Atomic Energy in the Service of Culture" presented by Georgi Mashalov of the Faculty of Physics and Mathematics. The assembly stressed the danger posed by the monopolization of the atomic bomb and its threat to global peace, and the need for atomic energy to be harnessed solely for advancing the material culture of humanity. A resolution was adopted, supporting Soviet proposals to the United Nations for the prohibition of atomic weapons and a general reduction of armaments, and it appealed to scientists, writers, and progressive thinkers worldwide to rally against war-mongering and imperialist aggression. Messages of solidarity were directed to leaders such as Generalissimo Stalin and prominent figures like Albert Einstein, underscoring a global call for peace and collaboration.

1947

In a conversation with press representatives on March 4, 1947, Todor Pavlov, President of the Bulgarian Academy of Sciences, outlined the Academy's primary tasks under its newly approved statute and law. He emphasized the need to combine theoretical work with practical applications, aligning with the country's two-year economic plan and broader state and social construction efforts. The Academy's activities would focus on creating scientific-investigation institutes, discovering and preparing new scientific cadres, and fostering international collaboration, particularly with the Soviet Academy of Sciences. Pavlov highlighted the Academy's commitment to combating fascist remnants and ensuring its role as the highest scientific institution in Bulgaria, dedicated to serving the people and advancing culture.

On May 18, 1947, the "Aegean Sea Fauna" exhibition was inaugurated at the Natural Science Museum of the Bulgarian Academy of Sciences. The exhibition, organized by Mr. Alexi Petrov, showcased the marine life of the Aegean Sea, featuring an aquarium with representative sea animals, economic maps, and images of the coast. Prime Minister Georgi Dimitrov, Minister of Information and Arts Dimo Kazassov, and other dignitaries attended the opening ceremony. In his speech, Minister Kazassov commended Mr. Petrov's contributions to the field of science and announced that he had been awarded the medal "For Civic Merit" (III grade).

Sofia, June 8, 1952. Biological cardiac testing on frogs by Slavka Atanassova and Berta Kamenova, assistants of the Institute of Experimental Medicine with BAS.
Photo: Simeon Nenov, BTA

Sofia, October 9, 1952. Students review exhibits from the exhibition at BAS on the occasion of Avicenna's 1,000th birth anniversary.
Photo: Simeon Nenov, BTA

Sofia, July 17, 1952. Institute of Biology with BAS.
Photo: Lyudmil Kostov, BTA

Sofia, June 8, 1952. The head of the Institute of Experimental Medicine with BAS, Dr. Paskov, conducts tests on conditioned reflexes in dogs. Photo: Simeon Nenov, BTA

1948

On November 13, a ceremonial meeting was held at BAS to support the Soviet Union delegation's efforts at the United Nations for disarmament and peace. The event was attended by BAS President Todor Pavlov, all regular and corresponding members of the academy, researchers, and other associates.

Pavlov opened the meeting with a brief address. Doncho Kostov presented a report, followed by speeches from academicians Nikolay Raynov, Metodi Popov, Mihail Dimitrov, Tsvetan Kristanov, Georgi Nadjakov, and Georgy Khlebarov. Researchers Elena Savova and Elena Khlebarova also spoke. The attendees concluded by voting on a resolution where Bulgarian scientists expressed their opposition to a new world war, advocating for disarmament and lasting peace. Their message was: "Atomic energy should serve the development of human civilization and progress, not be used as a weapon."

1949

On September 16, the Supreme Council for Agricultural Research began its sessions in the auditorium of the Faculty of Agronomy. The council comprises representatives from all experimental institutes and stations nationwide, overseen by the Ministry of Agriculture and the Ministry of Forestry. Participants also include representatives from state enterprises, the universities in Sofia and Plovdiv, the Academy of Sciences, and the Union of Scientific Workers, along with senior officials from the Ministry of Agriculture and the Ministry of Forestry.

The sessions began with a speech by Deputy Minister of Agriculture T. Chernokolev.

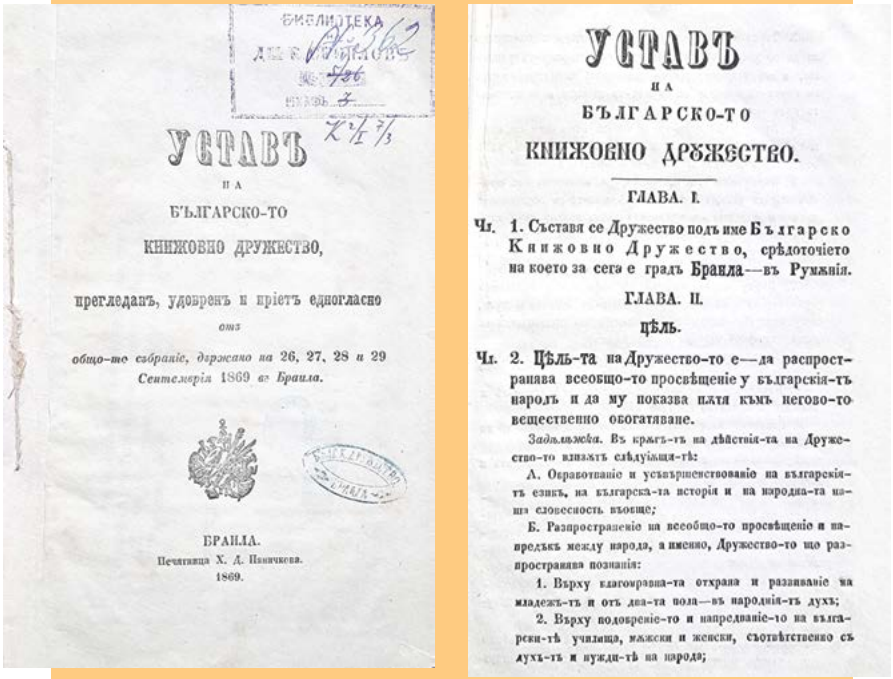
1952

On September 24, 1952, BAS and the Union of Scientists in Bulgaria hosted a ceremonial scientific session to honour the esteemed Tajik scholar, physician, and philosopher Avicenna, commemorating the 1000th anniversary of his birth. The event was held in the academy's Grand Hall and was attended by notable public figures, academicians, scientists, artists, cultural figures, and workers, all gathered to celebrate the lasting legacy of the brilliant Tajik polymath.

The session was initiated by BAS President T. Pavlov. Sava Ganovski presented a report titled "Avicenna as a Philosopher, Progressive Scientist, and Cultural Figure."

"It is challenging to evaluate the vast cultural impact Avicenna had on the world's cultural heritage," Ganovski said. He noted that Avicenna's major contribution to global civilization was his ability to absorb the scientific advancements of the East and Ancient Greece and then enrich and expand them through a critical process. Throughout his life, Avicenna opposed superstition, ignorance, and prejudice, championing truth, justice, and science.

Academician Tsvetan Kristanov delivered a report titled "Avicenna as a Physician and Natural Scientist." In his presentation, Kristanov reviewed the extensive scientific contributions of the renowned scholar and physician, noting that Avicenna's major influence in medicine persisted for seven centuries.



УСТАВЪ
НА
БЪЛГАРСКО-ТО
КНИЖОВНО ДРУЖЕСТВО,

прегледанъ, удобренъ и пріетъ единогласно
отъ
общо-то събраніе, държано на 26, 27, 28 и 29 Септемврія 1869 въ Браила.

БРАИЛА.
Печатница Х. Д. Панчкева.
1869.

УСТАВЪ
НА
БЪЛГАРСКО-ТО
КНИЖОВНО ДРЪЖЕСТВО.

ГЛАВА. I.

Чл. 1. Съставя се Дружество подъ име Българско Книжовно Дружество, срѣдоточието на което за сега е градъ Браила—въ Румынія.

ГЛАВА. II.

ЦѢЛЬ.

Чл. 2. Цѣль-та на Дружество-то е—да распространява всеобщо-то просвѣщеніе у българскія-тъ народъ и да му показва пжтя къмъ негово-то вещественно обогатяване.

Задължества. Въ кржгъ-тъ на дѣйствія-та на Дружество-то влизатъ слѣдующія-тѣ:

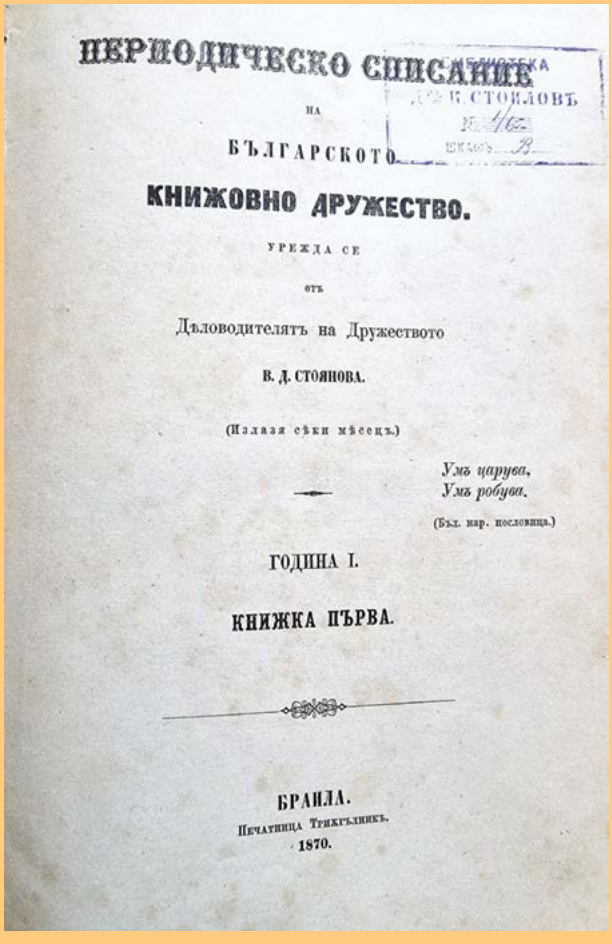
А. Окарактиване и усъвършенствованіе на българскія-тъ езикъ, на българска-та исторія и на народна-та наша словесность въобще;

Б. Разпространеніе на всеобщо-то просвѣщеніе и напредъкъ между народа, а именно, Дружество-то ще распространява познанія:

1. Върху благоприлична-та отхрана и развиваніе на младежъ-тъ и отъ два-та пола—въ народнія-тъ духъ;

2. Върху подобреніе-то и напредваніе-то на българскитѣ училища, мжжски и женски, съотвѣтственно съ духъ-тъ и нужди-тѣ на народа;

Pages from the Statute of the Bulgarian Learned Society, published in Braila in 1896 at the print shop of D. Panichkov. The issue is part of the collection of the Sofia Library's Native Knowledge and Literary Heritage sector.



ПЕРИОДИЧЕСКО СПИСАНИЕ
НА
БЪЛГАРСКОТО
КНИЖОВНО ДРУЖЕСТВО.

УРѢЖДА СЕ
отъ
Дѣловодителятъ на Дружеството
В. Д. СТОЯНОВА.

(Излазя сѣки мѣсецъ.)

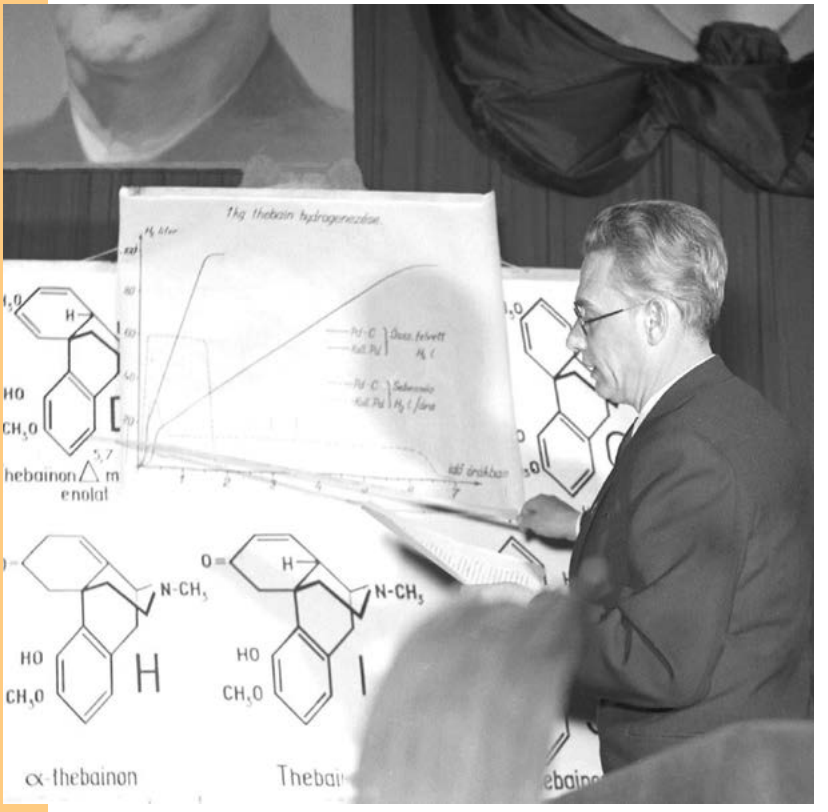
Умъ царува,
Умъ робува.
(Бълг. нар. пословица.)

ГОДИНА I.

КНИЖКА ПЪРВА.

БРАИЛА.
Печатница Трикѫлникъ.
1870.

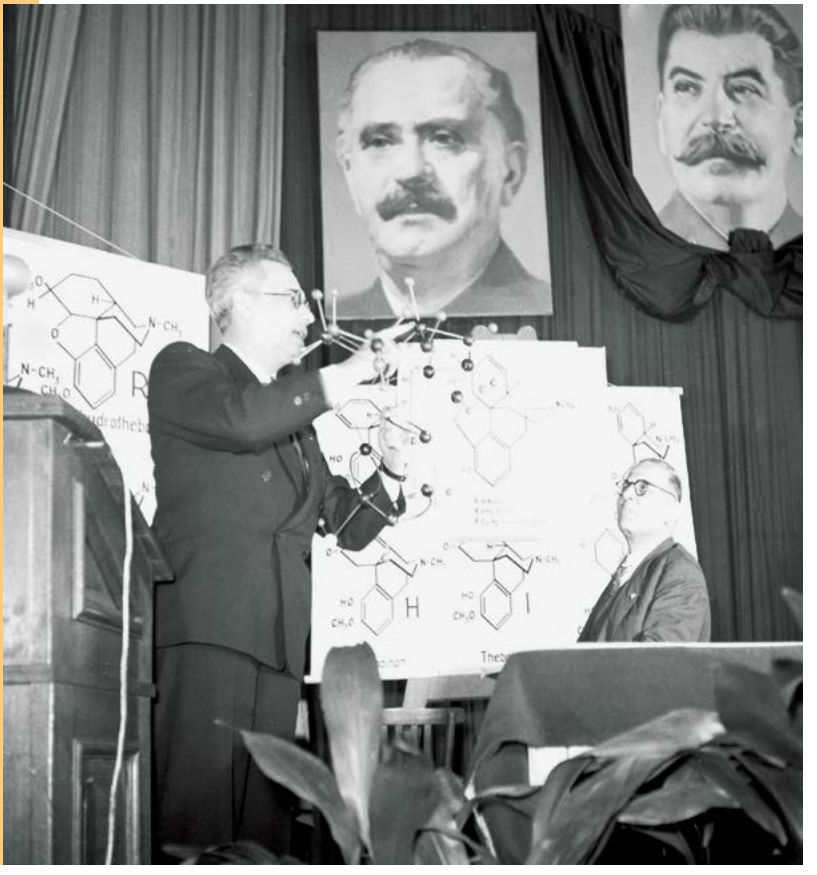
The first page of booklet one of the Periodical Journal of the Bulgarian Learned Society, published in Braila in 1870. The issue is part of the collection of the Sofia Library's Native Knowledge and Literary Heritage sector.



Sofia, March 27, 1953. Introductory lecture on "Obtaining and Transforming Alkaloids in Maca" by BAS Corresponding Member Prof. Rezső Bognár before the Academy's full audience. Photo: Racho Stoyanov, BTA

1955

In the summer of 1955, a delegation of Chinese agricultural scientists visited Bulgaria, attending the Institute of Plant Science at the Bulgarian Academy of Sciences. Institute deputy director Rayna Georgieva welcomed the guests and noted that cultural ties between scientists from Bulgaria and China were deepening and expanding. Georgieva introduced the visitors to the structure, organization, and research work of the Institute of Plant Science. She highlighted several achievements of the institute that have had a significant impact on both agricultural practice and scientific development. The Rector of Beijing Agricultural University, who led the delegation, expressed gratitude for the warm welcome.



1956

On August 3, the International Information bulletin of BTA cited a TASS news report from Chernihiv, announcing the completion of the first phase of an archaeological expedition organized by the academies of sciences of the USSR, Ukraine, and Bulgaria. The TASS correspondent spoke with the expedition leader, researcher of ancient Russia and corresponding member of the USSR Academy of Sciences, B. A. Rybakov. "Two years ago, we began excavations of ancient Slavic settlements in Bulgaria. Now, together with Bulgarian scientists, we continue archaeological research in Ukraine along the Desna and Ros rivers," Rybakov said. The research programme is expected to continue for many years. Chernihiv is of

particular interest, as it was once the capital of a vast territory stretching along the left bank of the Dnieper, Don, and present-day Kuban.

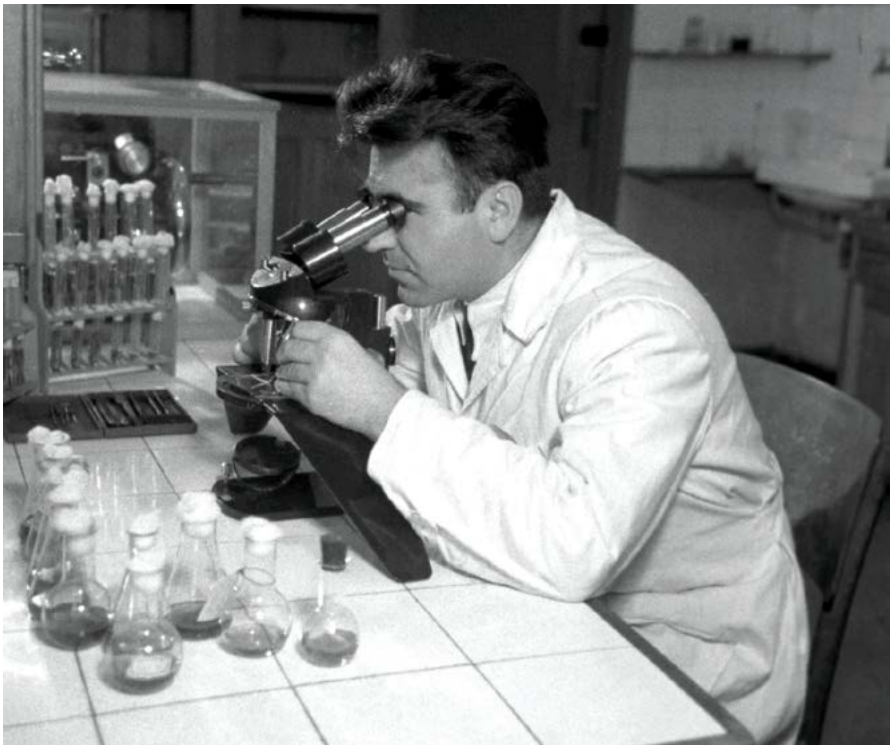
1957

On December 3, 1957, a delegation from the Academy of Sciences of the People's Republic of Romania, headed by Petre Constantinescu-Iași, conducted a series of meetings with representatives from the Bulgarian Academy of Sciences. During these discussions, the need for close collaboration between the two academies to tackle various scientific and practical challenges of mutual interest was unanimously recognized. Plans for future joint projects were outlined, and there were talks about the forthcoming signing of a scientific cooperation agreement.

1958

On October 8, 1958, a scientific cooperation agreement was signed at the Balkan Hotel between BAS and the Hungarian Academy of Sciences (HAS). The agreement details the coordination of research on important issues, joint scientific projects on topics of mutual interest, and the provision of scientific support. The two academies will exchange researchers for collaborative studies, share experiences, and swap scientific literature and reference materials.

The agreement was signed by the Vice President of BAS, Sava Ganovski, and Erik Molnár, a member of the Presidium of HAS.



Sofia, January 3, 1953. Junior scientific assistant Petar Pavlov studies the stage development of wheat at the Physiology Unit of the Central Research Institute. Photo: Violeta Popova, BTA

1959

In October 1959, Professor Hideomi Tuge, a prominent Japanese scientist and physiologist from Tokyo University, visited Bulgaria to explore opportunities for scientific collaboration. During his week-long stay, Tuge described Bulgaria as "a beautiful country with nice, cordial, and honest people." He praised Bulgarian physiologists for their "active work on many interesting questions" based on Pavlov's theory, which he identified as a strong foundation for their research.

Tuge was particularly impressed by the Bulgarian system of medical education, noting that "physicians in Bulgaria are highly qualified and possess solid knowledge in their specialties." Reflecting on his visit, he emphasized his commitment to fostering closer ties between Bulgarian and Japanese scientists. "I feel duty-bound to work, when I return to my country, for the establishment of solid and useful ties between Bulgarian and Japanese scientists," he said.

* * *

A five-day conference for morphologists in Bulgaria will start on November 24 at BAS hall, BTA reported. The event is organized by the Department of Biological and Medical Sciences, the Institute of Morphology at BAS, and the departments of anatomy, histology, and embryology from higher education institutions.

The conference will be inaugurated by BAS Deputy President Hristo Daskalov.

Academician Asen Hadzhiolov, director of the Institute of Morphology at BAS, will deliver a report on the state and objectives of morphological sciences in Bulgaria. Hadzhiolov said many

achievements by Bulgarian scientists in methodological, theoretical, and scientific aspects have received positive recognition both domestically and internationally.

This first-of-its-kind conference for morphologists in Bulgaria will feature 50 presentations covering areas such as cytology, cytochemistry, anatomy and anthropology, embryology, comparative histology, and more.

1960

On February 19, 1960, a plan was signed in Sofia to implement the cultural agreement between the People's Republic of Bulgaria and the People's Republic of Albania for 1960. The plan seeks to enhance cultural connections between the two nations. The Bulgarian Academy of Sciences and the State University in Tirana will share expertise in organizing scientific work and training personnel, along with exchanging scientific publications and materials on significant research in the natural and social sciences.

1961

On November 27, 1961, a scientific cooperation agreement was signed in Bucharest between BAS and the Academy of Sciences of the Romanian People's Republic. Representing Bulgaria, Academician Lubomir Iliev, Chief Scientific Secretary of BAS, signed the agreement, while Academician Malinski signed on behalf of Romania.

The agreement details the collaboration between the two academies in both the social and historical sciences, and the exact

Sofia, October 10, 1952. Academician Metodi Popov, a Bulgarian scientist, biologist, founder and director of the Institute of Biology with BAS
Photo: Violeta Popova, BTA

and natural sciences.

In the evening, the Bulgarian Embassy in Bucharest held a reception to honour the BAS delegation. The event was attended by leaders from the Romanian Academy, several heads of sections from scientific institutes, and senior officials from the Ministry of Foreign Affairs of the Romanian People's Republic. The gathering was marked by a very friendly and cordial atmosphere.

1962

On September 21 and 22, T. Tsolov from BAS presented a report to the National Assembly. The report focused on speeding up technical progress in the national economy and the role of science in this effort. In his report, he analysed the key issues found in documents focused on enhancing State leadership in science and technological advancement, and the growth and reinforcement of research and design efforts.

Tsolov stated that to speed up scientific progress and boost its impact, it is essential to connect it more closely with practical applications. He mentioned that the country currently has 31 scientific institutes under the Bulgarian Academy of Sciences, 24 under the Academy of Agricultural Sciences, 21 research institutes in the technical sector, and 22 higher education institutions.

The report underscores the necessity to raise the level of involvement of BAS in tackling crucial scientific and technical challenges, particularly in areas like solid-state physics, electronics, automation, and mechanical engineering. To address these needs, the creation of six new scientific institutes is being planned: Institute of Electronics, Institute of High-Molecular Compounds, Institute of Electrochemistry and Corrosion, Institute of Automation and Telemechanics, Institute of Mechanical Engineering and Metallurgy.

1963

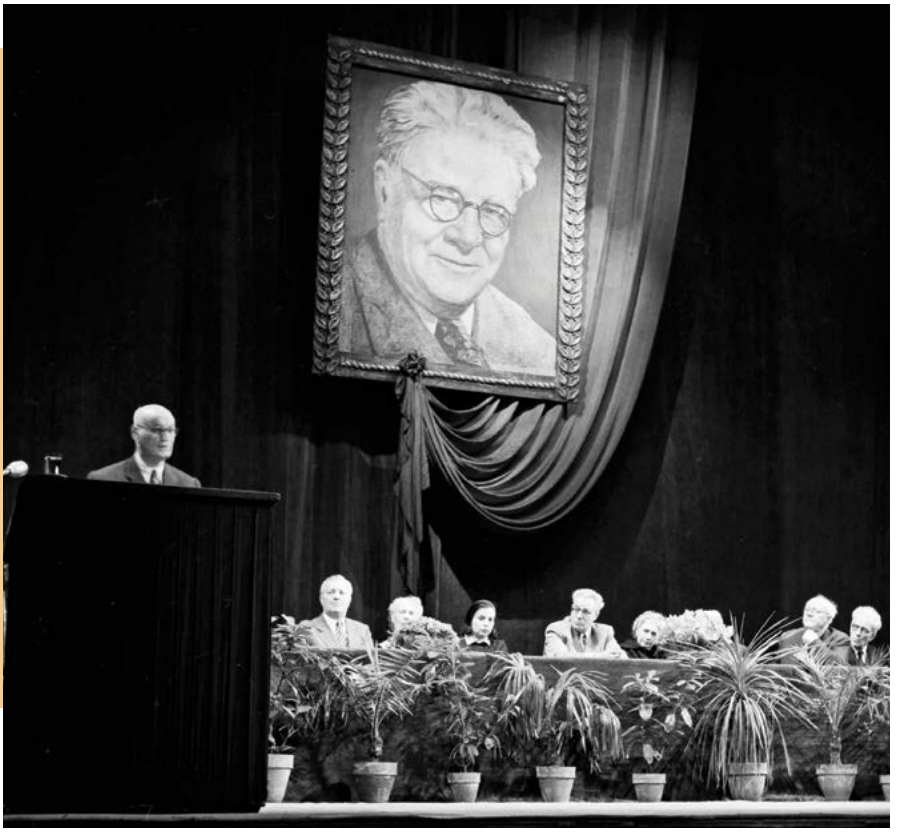
On November 28, 1963, the first volume of the Brief Bulgarian Encyclopaedia, published by BAS, is set to be released. The plan is for the encyclopaedia to consist of five volumes, aimed at a broad audience. It will feature 27,000 articles spanning all fields of knowledge and culture, along with many photographs, drawings, maps, and other visual materials.

Around 1,500 Bulgarian scholars participated in developing this groundbreaking work. The new Bulgarian encyclopaedia captures major global socio-political and social changes. It offers readers insights into recent discoveries and advancements in science, technology, and culture. Additionally, it features information about the lives and contributions of notable Bulgarian public figures, scientists, writers, artists, and freedom fighters.

1964

October 23, 1964, marks the anniversary of the launch of Bulgaria's first nuclear reactor.

On November 9, 1961, the reactor was activated at the Atomic Research Base of the Physics Institute of the Bulgarian Academy



Sofia, October 5, 1952. National Conference at the Grand Hall of BAS. Photo: Racho Stoyanov, BTA

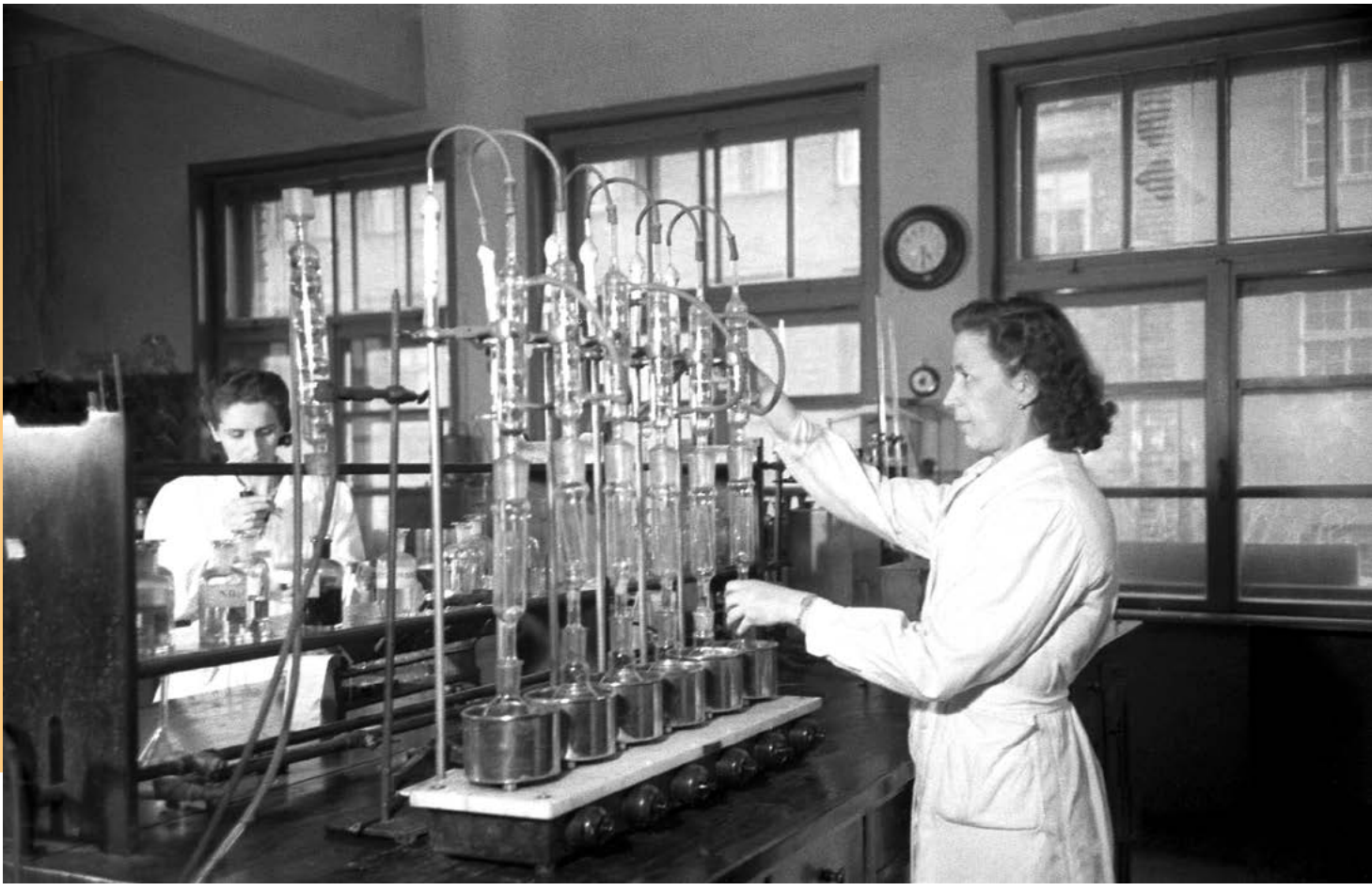
Sofia, September 16, 1952. Academician Skryabin, part of the Soviet cultural delegation, talks about the successes of Soviet medicine at the Bulgarian Academy of Sciences.

of Sciences, with assistance from the Soviet Union. To commemorate this anniversary, a press conference was held on October 23 with members of the Union of Bulgarian Journalists. They were introduced to the reactor's structure and the scientific laboratories. Following this, they spoke with the deputy director of the Physics Institute, Sazdo Ivanov, and other researchers. The nuclear reactor is now a key facility for scientific research and experimentation. It also produces radioactive isotopes domestically, which were previously imported.

1965

In early February 1965, BTA reported that the Institute of Organic Chemistry at BAS successfully developed a method to produce human fibrinogen free from plasminogen. Research indicated that the new preparation could be effectively used in clinical and outpatient treatment for the early detection of rheumatism. A sufficient volume of this preparation has already been produced to meet the needs of the Research Institute of Epidemiology and Microbiology and the Institute of Haematology. It will be used to determine the activity of preparations from streptokinase, urokinase, human plasmas, and others.

Sofia, October 9, 1952. An exhibition at BAS about Avicenna on the occasion of his 1,000th birth anniversary, which attracts strong interest. Photo: Simeon Nenov, BTA
Photo: Racho Stoyanov, BTA



Sofia, January 5, 1953. At the Biochemistry Lab with the Central Research Institute, chemist Elena Andreeva extracts oils from oil-bearing plants. Photo: Violeta Popova, BTA

1966

On January 27, 1966, the BTA News Bulletin highlighted the 70th birthday of Georgi Nadjakov, a distinguished Bulgarian physicist. Born in 1897, Nadjakov studied physics and mathematics at Sofia University and specialized in France under the guidance of Paul Langevin. He worked alongside Frederique Joliot-Curie and Pierre Biquard before returning to Bulgaria to teach physics at Sofia University.

Nadjakov is credited with over 100 research papers and is renowned for his discoveries in the physics of solids, the photoelectric effect in dielectrics, and permanent photoelectric polarization. His work on the photoelectret state of substances has spurred further research in the USSR, the USA, and beyond, marking a significant contribution to science.

Nadjakov holds memberships in prestigious international institutions, including the Göttingen Academy of Sciences, the USSR Academy of Sciences, and the American Association for the Advancement of Science. He also represented Bulgaria in international organizations like the United Nuclear Research Institute in Dubna and the International Atomic Energy Agency. A laureate of the Dimitrov Prize and a Hero of Socialist Labour, Nadjakov continues to contribute actively to science and public life.

1967

In February 1967, the Bulgarian Academy of Sciences published the second volume of the Atlas of Bulgarian Dialects. This important work delves into the history and linguistic evolution of the Bulgarian language. The atlas provides valuable insights into the cultural and ethnic history of the Bulgarian people, exploring the development of dialects and population movements over the last six or seven centuries.

The recent study explores the connections between the Bulgarian, Romanian, and Turkish languages, uncovering shared linguistic features and their origins.

1968

Rostislaw Kaischew, Vice-President of the Bulgarian Academy of Sciences and Director of the Academy's Physical Chemistry Institute, has been elected a member of the prestigious Leopoldina German Academy of Naturalists. At 60, Kaischew is recognized as a leading expert in electro-crystallization and a pioneer in the modern theory of crystal growth. He is also a member of the German Academy of Sciences in Berlin and the Czechoslovak Academy of Sciences, highlighting his international acclaim.

In related news, Academician Panteley Zarev, Secretary of the Linguistics, Literary Science, and Art Studies Department at the Bulgarian Academy of Sciences, travelled to Paris to deliver lectures on Bulgarian literature at the Sorbonne during a one-month stay.

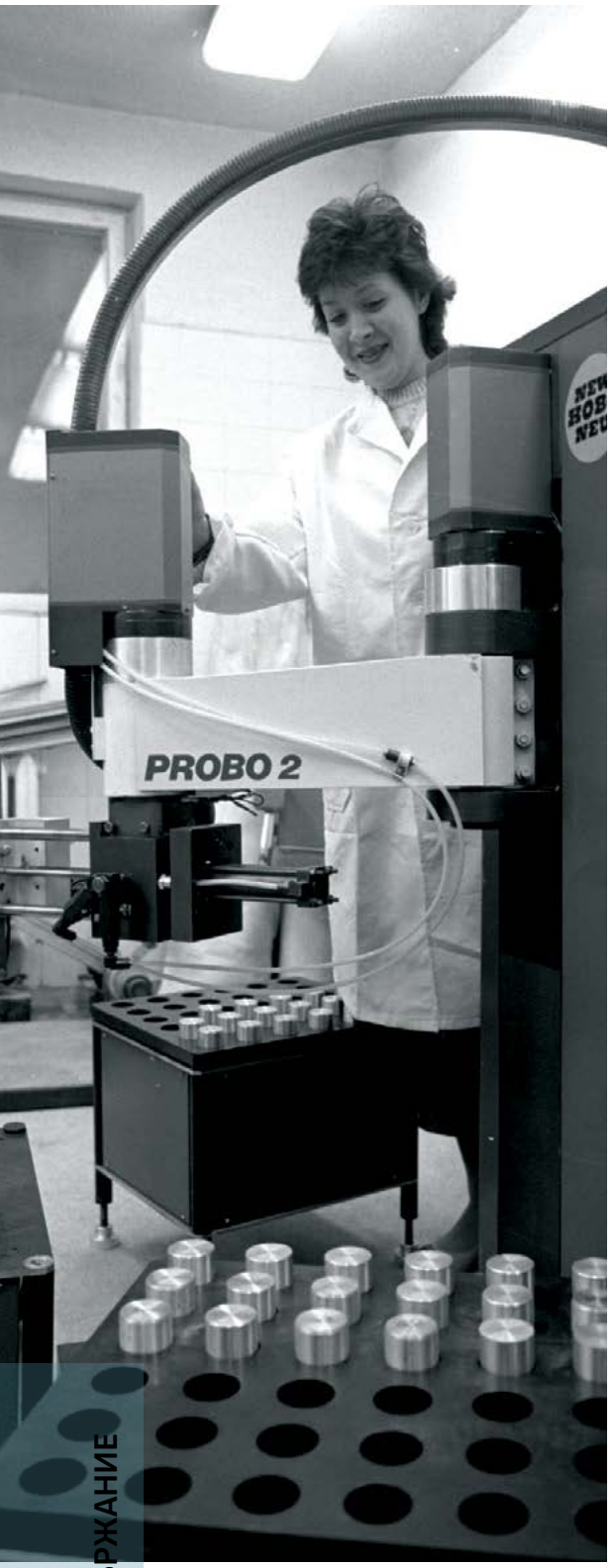
Additionally, Dimiter Kadanoff, Head of the Anthropology and Anatomy Section at the Institute of Morphology, completed a lecture series at the Faculty of Medicine at Bonn University. During his visit to the German Federal Republic, he also presented scientific papers to medical audiences in Düsseldorf, Mainz, and Königstein.

* * *

In April 1968, it was announced that the Encyclopaedia Service at the Bulgarian Academy of Sciences was developing two new Bulgarian encyclopaedias. After the release of the fifth and final volume of the Short Bulgarian Encyclopaedia in early 1969, a new single-volume "Encyclopaedia A-Z" was planned for publication in 1970. This encyclopaedia was designed to be a comprehensive reference work, appealing to a broad audience, and would include around 22,000 articles.

A new encyclopaedia titled "Bulgaria" is in the works. This will be an expanded version of the short encyclopaedia, focusing solely on Bulgaria. It will be published in four volumes and will feature extensive illustrations.

Sofia, March 18, 1953. Lab technicians Snezhina Truskieva, Dimitrinka Stoyanova, and Margarita Nikolova from the Central Forestry Research Centre measure the height, thickness, and growth of pine plantations. Photo: Varvara Kirilova, BTA



Sofia, October 31, 1989. BAS develops a technology and catalytic set for cleaning exhaust fumes from internal combustion diesel engines.
Photo: Emil Ivanov, BTA

1969

An article by BTA in September 1969 notes that September 29 marks the centenary of the founding of the Bulgarian Learned Society in Braila, Romania, which was renamed BAS in 1911.

Founded in the challenging times of 1869, this pioneering scientific organization of the Bulgarian people aimed to promote education and guide Bulgarians towards prosperity. The society's primary objectives were to study the Bulgarian language and literature, history, folklore, and way of life, support the spiritual development of the people, and prepare them for significant challenges.

After the Liberation in 1879, the Learned Society relocated to Sofia and continued its work. Thirty-three years later, it adopted a new statute, changed its name to the Bulgarian Academy of Sciences, and focused on conducting and supporting independent scientific research.

The foundation of Bulgarian science was laid by distinguished scholars such as historians Marin Drinov and Vasil Zlatarski, linguists Aleksandar T. Balaban, Lyubomir Miletich, Benyo Tsonev, and Stefan Mladenov, and literary historians Ivan Shishmanov, Boyan Penev, and Yordan Ivanov. Pioneering geologists, geographers, botanists, zoologists, medics, mathematicians, and physicists like Georgi Bonchev, Stefan Vatev, and Atanas Ishirkov also played a crucial role. Their contributions significantly advanced the understanding of Bulgarian history, language, and literature, improving Bulgaria's prestige in the global cultural community.

Throughout Bulgaria's turbulent history, the Bulgarian Academy of Sciences has been linked to the era's most progressive ideas and the revolutionary traditions of the Bulgarian people.

* * *

The 100th anniversary of BAS was celebrated on October 1, 1969, in Sofia's Universiada Hall, with the attendance of prominent Bulgarian leaders, scientists, and delegations from 54 international academies, including the Soviet Union, France, Poland, and the United States.

Established in 1869 in Braila, during the Ottoman era, BAS grew from a modest organization into a major scientific hub under socialism. Today, it comprises 55 scientific units, including 36 institutes, with nearly 6,000 staff and notable achievements in fields such as nuclear physics, chemistry, geology, and medicine. By 1967, BAS accounted for 11% of patents filed in Bulgaria and abroad.

In his address, First Secretary of the Bulgarian Communist Party and Prime Minister Todor Zhivkov called the centenary a celebration for all Bulgarians, reflecting on the Academy's transformation into a "powerful factor in the country's socialist development." He awarded the Academy the Georgi Dimitrov Order, recognizing its contributions to science and progress.

1970

On February 10, 1970, BTA reported the international recognition of two prominent Bulgarian scientists, Kiril Serafimov and Marin Petrov, for their significant contributions to their respective fields.

Kiril Serafimov, a senior researcher at the Institute of Geophysics with the Bulgarian

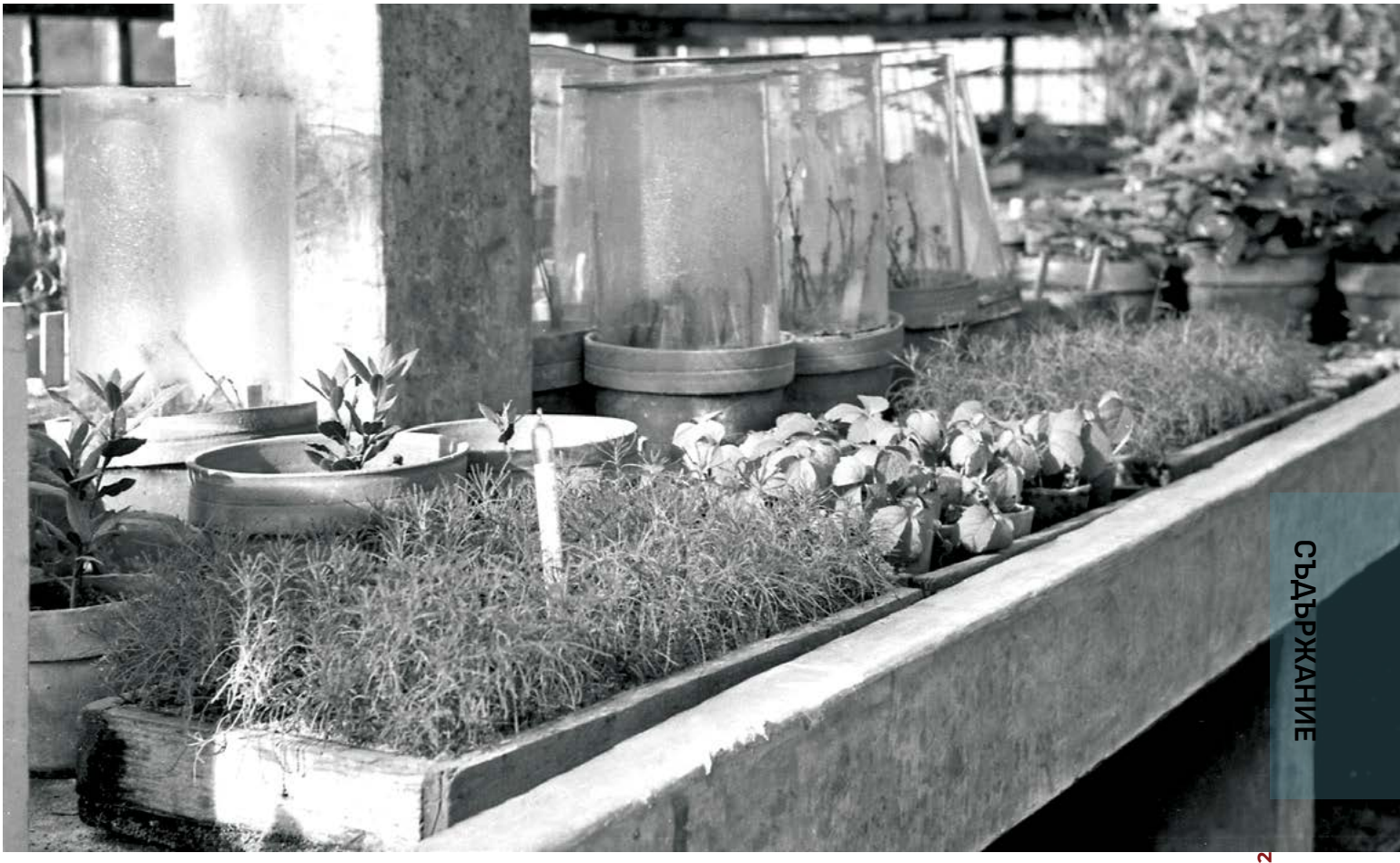
Academy of Sciences (BAS) and secretary of the National Committee for the Study and Use of Outer Space, was elected a corresponding member of the International Academy of Astronautics in Paris. At 57, Serafimov had focused his research on ionospheric studies, particularly ionization neutralization processes and satellite and rocket movement. His prolific academic output includes numerous papers published in Bulgaria and over 40 internationally recognized works.

Additionally, the French Academy of Surgery awarded an honorary diploma to Marin Petrov, director of the Department of Surgical Propaedeutics at the Higher Medical Institute in Sofia, naming him a corresponding member. During its annual meeting in January, the academy praised Petrov's groundbreaking contributions, especially his work on nerve and spinal cord root transplantation. Petrov is affiliated with several prestigious organizations, including the French National Society of Orthopaedics and Traumatology and the International Society of Surgeons, and has lectured at leading universities in France. His current research focuses on transplantation treatments, spinal cord injuries, and post-operative peritoneal complications.

1971

On April 20, 1971, BTA reported that Bulgaria announced a comprehensive approach to controlling diabetes, emphasizing early detection of metabolic disturbances. Nationwide screenings were planned over five years, with 54,000 individuals already under observation, compared to 6,500 in 1965. Diabetic patients received free insulin and medical care through 49 clinics, two sanatoria (one for children), and an upcoming boarding school for diabetic children.

Research led by Ivan Penchev revealed insulin antibodies in patients who had never taken insulin and identified links between fat metabolism disturbances and hyperglycaemia. Diabetes incidence stood at 4 per 1,000 people, with higher rates in urban areas and office workers compared to rural areas and farmers.



Sofia, March 18, 1953. Measuring the soil temperature of Santolina seedlings at the greenhouse of the Central Forestry Research Centre, located in the Park of Freedom. Visible in the back are jars with attempts at vegetative rooting of oak cuttings. Photo: Varvara Kirilova, BTA

1972

On February 3, 1972, the Ambassador of Poland to Bulgaria, Jerzy Szyszko, hosted a reception at the embassy to celebrate the awarding of a diploma to the esteemed Bulgarian scientist and public figure, Angel Balevski. Balevski, who serves as the President of BAS, was elected as a foreign member of the Polish Academy of Sciences. Szyszko praised Balevski's significant contributions to both Bulgarian and global science. He noted that it is an honour and a source of pride for Polish scientists to have such a distinguished scholar and innovator among their ranks.

Balevski expressed gratitude for the high recognition of his scientific work. He said that this is an acknowledgment of all Bulgarian science and the strong creative ties that connect scientists from Bulgaria and Poland.

1973

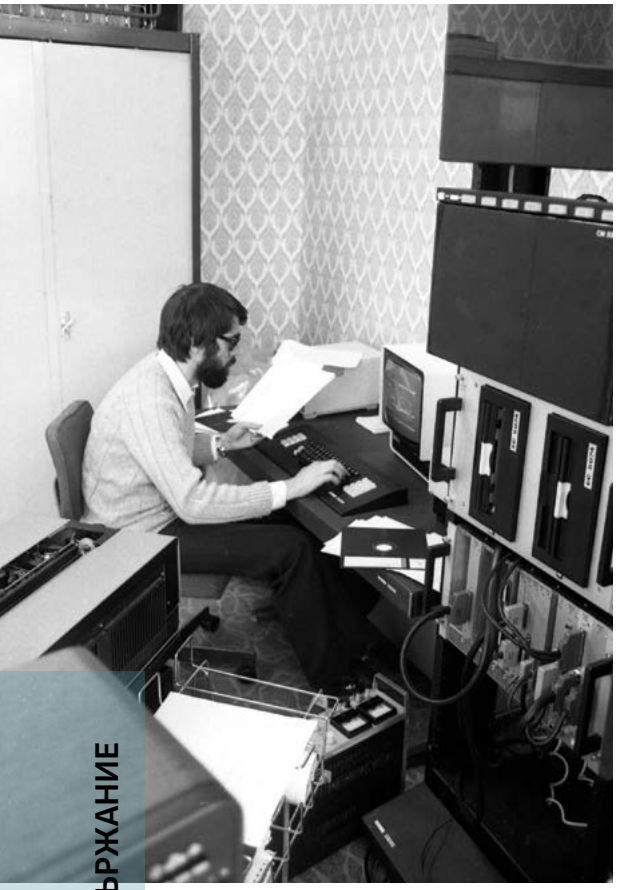
On March 27, 1973, BTA reported that Bulgaria had 685 scientific libraries visited by approximately 540,000 readers annually. The largest and oldest is the library of the Bulgarian Academy of Sciences, founded 105 years earlier, which houses over 900,000 volumes, 12,000 microfilms, numerous magazines, newspapers, and documents. Its collection includes Old Slavonic and Bulgarian manuscripts from the 9th to 14th centuries, such as the "Eninski Apostle" (11th century) and the Sofia Psalm Book (14th century), along with rare books and personal archives of notable figures

СЪДЪРЖАНИЕ

like Konstantin Jirecek and Felix Kaniz.

Before 1944, this library held only 40,000 volumes—equivalent to one year's intake now. The BAS library, with 40 branch offices, exchanges books with over 5,000 scientific institutions across 90 countries.

Sofia University's library, founded 84 years earlier, contains 860,000 volumes and 2,900 old printed books and collaborates with educational establishments in 70 countries. Meanwhile, the Kiril and Methodius National Library, the largest depository of diverse literature in Bulgaria, receives 14,000 scientific magazines and 25,000 books annually and serves 24,000 regular readers, half of whom are scientists. Additionally, the patent library of the Science and Technical Progress Committee houses descriptions of about 5.5 million patents, representing nearly one-third of the global total.



Sofia, January 25, 1983. The TSLANP-0270 system at the Central Laboratory for Mechanization of Scientific Instrumentation with the Bulgarian Academy of Sciences. Photo: Stefan Tihov, BTA

1974

On January 2, 1974, BTA reported that Bulgarian nuclear physics had developed largely through cooperation with Soviet scientists. Since 1944, Bulgarian specialists have received extensive training in the USSR, including prominent figures like Hristo Hristov, Milko Borissov, and Georgi Bliznakov, who became key leaders in nuclear research and energy.

The first Bulgarian atomic reactor, built in Sofia in 1955 with Soviet assistance, facilitated advanced research in ultracold neutrons, uranium fission, neutron thermolysis, and dosimetry, producing over 50 isotopes. The establishment of the Nuclear Engineering Economic Corporation and the construction of a nuclear reactor at Kozloduy marked further progress, with nuclear power expected to supply over half of Bulgaria's electricity by 2000.

The opening of a Nuclear Energetics specialty at the V.I. Lenin Mechanical and Electrical Engineering Institute signalled a commitment to training local experts. Bulgarian physicists also contributed to international efforts at the United Nuclear Research Institute in Dubna and the Serpukhov Nuclear Accelerator, with notable theoretical work by Pavel Markov and Ivan Todorov on elementary particle interactions.

* * *

On April 24, BTA reported about a High-Speed Spectrophotometer. The innovative device, known as the high-speed spectrophotometer 170, was developed at the Central Biochemical Laboratory of BAS. The apparatus has attracted international attention. It was developed in collaboration with scientists from the Academy of Sciences of the USSR. This partnership began a few years ago when the Bulgarian Academy of Sciences and the USSR Academy of Sciences established a joint coordinating council to address issues related to high-speed spectrophotometers.

The new apparatus, designed by Bulgarian and Soviet experts, is used for the study and registration of rapidly proceeding processes (of the order of 50 microseconds) in the spheres of biophysics, chemistry, biology and medicine. It is based on a Bulgarian invention which has been patented in Britain, France, Italy and other countries.

The spectrophotometer 170 consists of several electronic units: a photo transducer, a block for the electronic normalization of spectra and a device for the rapid mixing of liquids. The registration takes place on the screen of a memory oscilloscope.

* * *

In June 1974, BTA reported on a New Concentrate for Agriculture developed by engineers K. Rounder and A. Tatarski at the fodder-yeast hydrolysis plant in Razlog. This innovative method produces a protein-vitamin concentrate from the slime remaining after the biological purification of industrial wastewater.

Research conducted at the Industrial Microbiology Institute of the Bulgarian Academy of

Sofia, January 19, 1982. IMKO-1, the first Bulgarian personal computer created by specialists at the Institute of Technical Cybernetics and Robotics with BAS. Based on the Intel 8080 microprocessor on one big-printed circuit board, the computer has a keyboard for manual data entry. The necessary information is displayed on the screen of a regular black-and-white television, and a regular cassette player serves as peripheral memory. The computer can be connected to print and other devices.
Photo: Zhivko Angelov, BTA

Sciences and various farms demonstrated the concentrate's high agricultural value. It contains essential amino acids and B-group vitamins, particularly Vitamin B12 in substantial quantities. Animals fed with the concentrate experience rapid growth in weight and size, providing a cost-effective substitute for protein fodder and scarce items like pure Vitamin B12, fish meal, soya, and peanut-oil cake. Preliminary data suggests the annual economic benefit of this invention will exceed BGN one million, with one kilogram of the concentrate derived from 200 litres of waste slime suspension.

The method is already in use at the Razlog plant and is slated for implementation in industrial enterprises and urban purifying stations utilizing biological wastewater treatment.

1975

BTA reported in the spring that the first national conference on using mathematical models and computers in linguistics will take place from May 3 to May 9, 1975, at the BAS Creative Centre in the Golden Sands resort near Varna. This important scientific event is organized by the Unified Centre for Mathematics and Mechanics, with support from the Unified Centre for Language and Literature at BAS.

The conference will feature both local and international scientists and experts. It will include three discussions on theoretical and computational linguistics, the current state and future prospects of quantitative linguistics, and the present and future of machine translation.

1976

An agreement for scientific cooperation between BAS and the British Academy was signed on June 3 in Sofia. It aims to expand creative ties between the two scientific organizations, particularly in the fields of humanities and social sciences. The agreement was signed by the scientific secretary of BAS, Veselina Breskovska, and the foreign secretary of the British Academy, Arthur Geoffrey Dickens.

1977

Bulgarian contributions to international scientific and technical cooperation are evident in fields such as biomaterials, polymer chemistry and the environment, electrochemistry, systems mathematics, and theoretical chemistry, which are among the most promising contemporary scientific areas, BTA reported on August 20, 1978. Each year, Bulgarian Science and Technology Days are held internationally. These events have taken place in the Soviet Union, Czechoslovakia, Poland, Cuba, England, Denmark, Italy, Sweden, Belgium, the Netherlands, and Finland.

Over the past thirty years, the scientific work of approximately 700 Bulgarian scientists has been published internationally. About 50 Bulgarian scientists have received more than 70 foreign orders, medals, and awards, and many have been elected as members of foreign academies for their significant scientific contributions.

An important measure of the progress of Bulgarian science is the

number and impact of its scientific discoveries and inventions. The first Bulgarian scientific discovery to receive both national and international recognition was made by Georgi Nadjakov for his work on the photoelectronic state. In November 1976, this esteemed scientist was honoured with a diploma from Cambridge, England.

1978

In December 1978, the Central Laboratory of Geodesy at BAS celebrates its 30th anniversary, BTA reported. Over these years, its team has tackled important scientific challenges, with many of their projects receiving international recognition.

Recently, electronic computing machines have been more frequently used in scientific research. The laboratory's theoretical and applied studies are integrated with scientific and technical support in the design, tracing, and control measurements of structures using new construction methods. The laboratory has played a role in the successful construction of the Varna bridge-viaduct, the Festival Hall in Sofia, and other projects. Currently, researchers are investigating geodetic issues related to the Sofia metro.

1979

The January issue of the magazine Parallels, published by BTA, explores Bulgaria's participation in the Interkosmos program. The magazine notes that in 1967, Bulgaria became a co-founder of the socialist countries' space research initiative, Interkosmos. Since then, the country has been actively involved in projects related to space physics, meteorology, biology, medicine, satellite communications, and more. In 1972, Bulgaria sent its own equipment into space for the first time on the satellite Interkosmos-3. This device measured ionospheric parameters, and Bulgaria was officially recognized as the 18th space-faring nation in the world.

Bulgarian equipment, renowned for its high quality, is sent into space nearly every year. At BAS, a significant array of instruments has been developed for the first automatic unified orbital station dedicated to ionospheric research under the Interkosmos program, called "Ionozont IK". Furthermore, some of this equipment will be part of the next international mission, which will feature a Bulgarian cosmonaut.

1980

In the Central Laboratory for Optical Recording and Information Processing at BAS, researchers are successfully developing holographic diffraction gratings, a BTA news report from mid-March 1980 said. These gratings can replace many traditional optical components, simplifying equipment and reducing both its weight and cost.

Although diffraction gratings have been around for a while, the conventional mechanical methods of producing them are slow, costly, and often result in lower quality. This is because the process involves creating hundreds or thousands of grooves per millimetre on their surface.

The Central Laboratory for Optical Recording and Information Processing provides holographic diffraction gratings to the Central Laboratory for Space Research at BAS. These gratings are used in developing instruments for optical Earth observation from space.

1981

Measurements of the Earth's atmospheric glow in the vacuum ultraviolet range will be carried out from the Interkosmos-Bulgaria 1300 satellite. The Photon-1 ultraviolet spectrometer, created by specialists at the BAS Space Centre in Stara Zagora, will be used for this task, according to a BTA report from August 7, 1981.

In this part of the light spectrum, the light is not only invisible to the human eye but is also quickly absorbed by the air. This light in the upper layers of the atmosphere provides specific information about the processes and phenomena occurring there, which is of great interest to science. Measuring such light is only possible from a space-based platform.

1982

Specialists from the Institute of General and Comparative Pathology at BAS and the Higher Medical Institute in Sofia have worked to prevent repeated surgical operations for cartilage tissue grafting in maxillofacial plastic surgery, BTA reported in February 1982.

The scientists found that the patient's body eventually breaks down and expels the grafted fragmented cartilage, while whole cartilages are accepted without reaction.

This required multiple surgeries, and occasionally a series of additional procedures.

Discovering this small secret of

nature enables surgeons to apply established medical techniques to control the body's adverse reaction to transplanted tissue after surgery.

1983

Experts in space technology have noted that the Bulgarian optical laser reflector system (OLRS), installed on the satellite Interkosmos-Bulgaria 1300, surpasses similar equipment on the American lunar mission ships Apollo 11 and Apollo 14 in key technical parameters. This was highlighted in a news report from August 1983.

For nearly two years, this system, along with 14 laser stations worldwide, has been used to determine the satellite's location. It is the first device of its kind globally to be mounted on a multipurpose

Varna, July 24, 1984. A moment from the solemn naming of the first research ship, the Akademik, of the Institute of Marine Research and Oceanology with BAS. Photo: Dimitar Bozhinov, BTA

Sofia, December 4, 1984. Engineer Velichko Dobrinov, head of the group of specialists working on the Robko generation of robots at the Institute of Technical Cybernetics and Robotics with BAS, and Robko-9, a mobile, intelligent and personal robot. Photo: Dimitar Altunkov, BTA

Sofia, December 25, 1984. In the Ecology and Physiology of Helminths section with the Central Laboratory for Helminthology with BAS in the capital, biologist Vassil Dimitrov studies with an Opton microscope the development cycles and other questions from helminths' biology. Photo: Rouslan Donev, BTA

space object. Developed at the Central Laboratory of Geodesy at BAS, the device has received positive feedback from reputable observatories around the world.

1984

The rapid progress in physicochemical biology over the past 15-20 years, combined with advancements in automation and instrumentation, has opened new avenues in modern biotechnology. These areas are now essential to scientific and technological advancements in industry, enabling the development of waste-free technologies and tackling food and energy issues, BTA reported on March 30, 1984.

For several years, BAS has been investigating both fundamental and applied aspects of biotechnology. They have developed biosynthetic methods for producing glucose isomerase and glucoamylase, identified genetic systems that control chromosome conjugation for the first time, synthesized new growth regulators, and successfully achieved zygote transplantation in cows.

1985

From May 27, scientists at BAS have new opportunities to intensify their research. A computing centre for collective use by all unified centres of BAS was opened in the academic town in Sofia, BTA said in 1985.

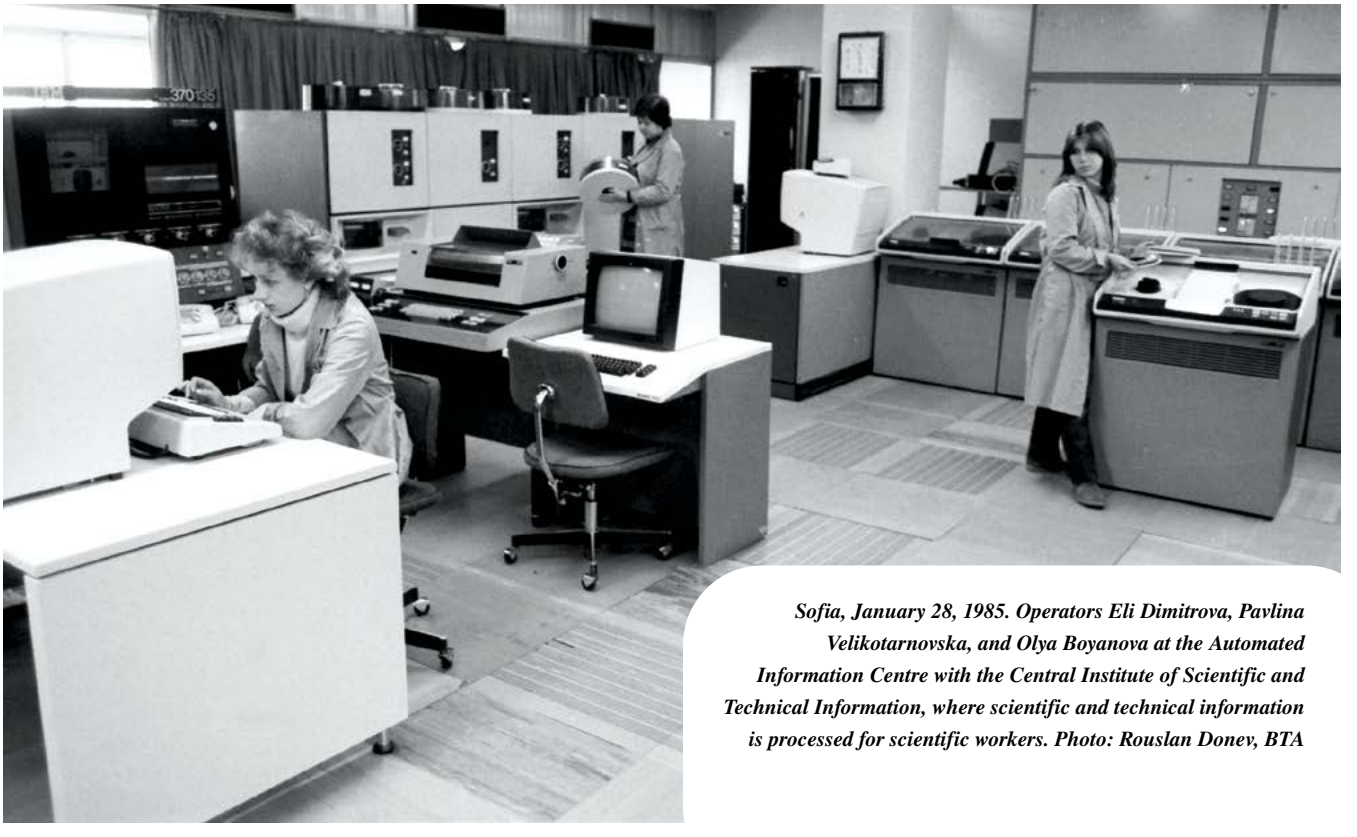
Few advanced countries in the world possess such a modern computing network. The centre is a scientific and production organization that supplies high-performance computing equipment for all levels of the academy. It establishes networks of computing machines within BAS and can link them with similar networks from other organizations. This centre will enable coordination for software support for automating scientific, administrative, and management activities.

1986

The first Bulgarian-American scientific seminar, held in Sofia starting October 6, was considered productive and highly beneficial by the participants. This sentiment was echoed at the end of the important bilateral meeting on October 16, BTA reported in 1986. Scientists from the US and Bulgaria discussed opportunities for expanding future collaborations and sharing expertise across various fields.

Following the plenary sessions focused on the application of scientific results in practice, the guests visited scientific institutes and laboratories in Sofia and across the country.

The guests were particularly



Sofia, January 28, 1985. Operators Eli Dimitrova, Pavlina Velikotarnovska, and Olya Boyanova at the Automated Information Centre with the Central Institute of Scientific and Technical Information, where scientific and technical information is processed for scientific workers. Photo: Rouslan Donev, BTA

impressed by advancements in biotechnology, computer technology, nuclear energy, and research in molecular biology and genetics. The American scientists also praised the Bulgarian Institute of Ship Hydrodynamics, calling it a state-of-the-art scientific centre, and the Institute of Oceanology at BAS, both located in Varna.

1987

Through collaborative efforts, scientists from three national institutes have developed a new series of components for the electronics and engineering sectors. These components, called photoelectric rotary converters, are universally applicable for precise measurements, BTA reported in 1987.

Researchers from the Central Laboratory for Photoprocesses at the Unified Centre for Chemistry of BAS, the Higher Institute of Mechanical and Electrical Engineering-Gabrovo, and the Institute of Mechatronics-Gabrovo have developed this innovation.

Experts predict that converters will be widely adopted across various automated systems. They are also highly regarded by designers of robots, machine manipulators, CNC machines, antennas, and local devices.

1988

In June, a two-day scientific session took place in Sofia to mark the 25th anniversary of the Institute of Electronics at BAS, BTA reported in 1988.

The Institute of Electronics has created various physical methods,

Sofia, July 21, 1986. Specialist Bogdana Boudevska carries out an experiment with a porphyrin derivative, a starting material in the fight against cancer photosensitization. Photo: Dimitar Altunkov, BTA

Sofia, January 23, 1986. Karidentikon, a new creation by the Institute of Technical Cybernetics and Robotics with BAS. It is primarily used in garage subscription systems and vehicle inspections to avoid subjective errors. Photo: Dimitar Altunkov, BTA

Sofia, February 3, 1987. Chromatographic separation of cell protein with a modern chromatograph at the laboratory for molecular cell genetics, headed by Prof. Assen Handzhiyolov.
Photo: Rouslan Donev, BTA

Sofia, December 5, 1986. Scientific assistants Vesiin Yosifov, Eng. Nikolay Badinski, Zoya Pelinkova, Emiliya Aleksieva, and Eng. Vladimir Yordanov, creators of a microprocessor device for modelling biotechnological objects, in the Systems for Managing Biotechnological Processes section.
Photo: Dimitar Altunkov, BTA

Sofia, March 24, 1987. At the Central Laboratory for Electrochemical Electricity Sources, chemist Adriana Vurbanova uses a unique methodology in the preparation of an experiment for fundamental research into processes of metal electrocrystallisation.
Photo: Georgi Kazakov, BTA

experimental setups, and devices that have paved the way for new research and practical uses. Its accomplishments include the first Bulgarian laser, the first plasmotron and multiplasmotron, the first fully automated system for electron lithography, and the first systems for electron beam welding, melting, refining, and evaporation.

A key aspect of the fundamental research in radiophysics, quantum, and physical electronics is the readiness of scientific results for practical application. Over 40 devices have been developed, earning widespread international recognition.

1989

BAS occupies an important significant role In Bulgaria's cultural landscape – a status achieved through the committed efforts of its scholars over its 120-year history. Founded by a people striving to reclaim their statehood, BAS stands out as a vital scientific institution, contributing to the enlightenment of Bulgarians and the preservation and advancement of Bulgarian culture, BTA said in a news article from October 4.

"You must always remember the unique circumstances surrounding the founding of our academy," said President of BAS Blagovest Sendov during a ceremonial meeting in Sofia. "This fact alone should inspire respect and reverence for this esteemed institution among all Bulgarians. Unlike other European academies, established by monarchs and powerful states to bolster their authority, we have the duty to preserve and advance the academy so that it remains not just a symbol of the past, but a valuable part of the present and an essential part of the future."

1990

On April 12, BTA reported that BAS hosts a representative office of the international foundation " International Foundation for the Survival and Development of Humanity." This non-governmental organization was established in January 1988 to promote cooperation among countries in culture, education, environmental protection, human rights, and international security.

The connections BAS maintains with many international governmental and non-governmental organizations enable the Bulgarian office to engage in active international cooperation in ecology, education, and other fields.

One such organization is the International Council of Scientific Unions (ICSU), which BAS helped establish in 1931. The largest program ever prepared by ICSU to study issues threatening our planet is currently underway. An element of this program is the initiative to celebrate April 22 as Earth Day. According to the latest data from BAS, which coordinates the preparation for this day in Bulgaria, it will be observed in 120 countries, home to over 150 million people.

Another interesting fact that BAS President Blagovest Sendov shared with reporters is that the ICSU has chosen BAS to host its general assembly. From October 1 to 6, 1990, Bulgaria will become the first Eastern European country to welcome representatives of this organization of scientists in the field of natural sciences.

Sofia, August 5, 1988. Scientific assistant Alexander Dulgerov studies the composition of an oakwood extract at the Laboratory for MASS-spectrometry.

1991

In a BTA news update from October 2, it was announced that the National Assembly voted on the Bulgarian Academy of Sciences Act, which had been pending since July 18 of this year. This legislation significantly changes the structure of BAS, turning it into a federation of independent institutes dedicated to scientific, educational, and applied research activities. The leadership and management of BAS will be handled by representatives from its institutes, while academicians and corresponding members will retain the exclusive right to elect academicians and corresponding members from both Bulgaria and abroad. However, their exclusive authority to participate in the General Assembly and to determine the strategy, organization, and leadership of BAS is removed.

The institutes will become the dominant element in its leadership and activities, being proportionally represented in the higher management body, the General Assembly.

BAS noted that the first law governing it dates back to 1912. Subsequent laws were enacted in 1947 and 1957, after which its activities were regulated solely through decrees by various bodies and organizations.

1992

Former chief expert in the International Department of BAS Dimitar Konstantinov became the first Bulgarian to receive Germany's Order of Merit after November 10, 1989. The award was presented by President Richard von Weizsäcker. The honour was awarded on October 30 during a ceremony at the German Embassy by Ambassador Christel Steffler.

Sofia, January 8, 1990. In the Robotics and Mechatronics section of the Institute of Mechanics with BAS, scientific assistant Lyubomir Markov uses the ARO anthropomorphic robot with five levels of freedom for research purposes. Photo: Dimitar Kolchakov, BTA

Novi Iskar, June 13, 1989. The first capacities of the NOVIS enterprise with BAS are already in operation. In the Fine Mechanics section, Yordan Yordanov checks the manufacture of a sensor and controls its installation in a gas regulator, which has high reliability requirements.
Photo: Dimitar Altunkov, BTA

Konstantinov was awarded the order for his contributions to strengthening scientific relations between Bulgaria and Germany. He was instrumental in reestablishing connections with the Alexander von Humboldt Foundation, which had been disrupted during World War II, and in forming a cooperation agreement between BAS and the German Research Foundation in 1975.

1993

On March 11, 1993, BTA reported on archaeological excavations on Trapezitsa Hill in Veliko Tarnovo, the site of Bulgaria's last capital before the Ottoman conquest. Led by Maria Dolmova from the Institute of Archaeology of BAS, the digs resumed in 1992 after a 90-year hiatus, following initial excavations by French scholar Georges Seur in 1900.

The team unearthed medieval residential quarters surrounding 14 churches previously discovered. These 14th-century structures, just 15-20 cm below the surface, included two- and three-story houses with wooden upper floors. Interestingly, the earliest settlement on Trapezitsa dates back to the Bronze Age, though it remained uninhabited until the 13th century. The site was abandoned following the Ottoman conquest in 1393, with the furniture and belongings removed.

1994

In October 1994, Bulgaria celebrated the 125th anniversary of BAS under the patronage of President Zhelyu Zhelev, with

support from UNESCO. Among the honoured guests was UNESCO Director-General Federico Mayor, an honorary member of BAS. On October 11, a cooperation agreement between BAS and UNESCO was signed, facilitating BAS's participation in European Union scientific projects, as announced by BAS President Academician Yordan Malinovski. Additionally, a Club of Bulgarian Journalists was established at BAS, and prominent media outlets, including BTA and various newspapers, prepared a commemorative edition, "125 Years of BAS," as a tribute to the Academy.

Sofia, October 12, 1994. The solemn marking of BAS' 125th anniversary is attended by President Zhelyu Zhelev, UNESCO Secretary General Federico Mayor, and Prime Minister Lyuben Berov. Photo: Evelina Andreeva, BTA

1995

On June 7, 1995, the French Academy of Sciences donated 60 French scientific books to BAS, BTA reported in 1995. The donation was presented by Fernand Texier, the cultural advisor at the French Embassy, and Jean-Nicolas Lefilleul, the General President of Alliance Française in Bulgaria.

The donation aims to foster the mutual development of Bulgarian and French research laboratories, a collaboration that Texier said has existed for a long time.

Among the donated books is a work by Liu Ning, who received the Nobel Prize in Physics years ago.

1996

With 105 votes in favour out of 114 members of the General Assembly of BAS, Ivan Yuhnovski, a corresponding member of BAS, was elected as the President of the academy on April 8.

"It is important to unite the efforts of scientific institutes, production units, business circles, and society for the development of fundamental and applied science during the transition period," the newly elected President said. He noted that it is necessary to attract more young talent to BAS. "By the end of the year, an academic centre for doctoral training will be established," Yuhnovski told BTA.

1997

The topic of human cloning will unite representatives from the Bulgarian Academy of Sciences, the Bulgarian National Academy of Medicine, and the Agricultural Academy at a conference in April, BTA reported in 1997.

Georgi Rusev from the Institute of Microbiology identified three reasons why lobbying groups will advocate for its swift implementation. These include individuals who have lost loved ones and wish to have them restored using cells from preserved tissues, like hair. A stronger push is anticipated from medical organizations or companies that will use a variant of this technology to supply organs for transplantation. The most fantastical scenario, which Rusev noted is not impossible, involves creating people with specific qualities, often soldiers, a long-standing human aspiration reflected in the legend of Jason and the Golden Fleece.

At the conference, human cloning was discussed from theological, sociological, psychological, and legal perspectives.

* * *

Three Bulgarian devices for research and experiments in space are currently aboard the Russian orbital station Mir, Director of the Institute for Space Research at BAS Petar Getsov told BTA in July 1997.

All three devices were designed and built by scientists from the institute. The institute will also contribute two more types of equipment to international space projects the later in the same year.

Getsov mentioned that the Bulgarian space greenhouse Svet, developed by Tanya Ivanova, is unique worldwide. It was funded

by NASA as part of the Shuttle-Mir Program US space program. In 1990, an US astronaut harvested the first crop of Bulgarian wheat from the greenhouse.

1998

Bulgarian scientists are preparing to help cancer patients with new laser surgical systems that lower postoperative risks. These laser systems, designed for oncological and selective cell surgery, and endoscopy, are anticipated to be incorporated into medical practice by the year 2000, Avramov told BTA on March 7, 1998. Avramov leads a scientific project conducted jointly by the company Optella, BAS, and the Structural and Technological Policy Fund at the Ministry of Education.

The scientists are working on new equipment from the Mediray – Rays of Health laser surgical systems family. This high-tech scientific product is unique and could have wide applications in clinical practice, potentially leading to improved and more affordable treatments, Avramov noted.

* * *

Bulgarian scientists have devised a new approach for cancer diagnosis and treatment. Researchers from the Institute of Organic Chemistry at the Bulgarian Academy of Sciences, under the leadership of Maria Shopova, have developed a Bulgarian adaptation of the innovative method for photodynamic cancer therapy. This was announced by the institute's director, Yuri Stefanovski, at a press conference on April 24.

The method is safe and is used for diagnosing and treating different types of cancer, Shopova noted. The research team also developed a new drug, Hematodit, which is used in this method to fight malignant tumours.

1999

On July 29 BTA reported on a new program focused on the biological diversity of the Central Balkan Range was initiated under a Bulgarian-Swiss project. Led by Boryana Mihova, the initiative involves eight scientists from the Bulgarian Academy of Sciences and volunteers from the Nature Fund organization.

The team will establish test fields above the mountain's treeline to study ten rare and vulnerable plant species. Their work includes monitoring habitat changes and assessing the need for interventions like reserve expansion, redirecting tourist flows, and strengthening protection measures.

A key focus will be on juniper vegetation, which aggressively spreads over areas with diverse flora, potentially threatening other species. This program marks a significant step in conservation efforts in the region.

2000

Archaeologists from the Bulgarian Academy of Sciences uncovered the largest Thracian sanctuary ever found in the Balkans near the village of Starosel, Plovdiv district, as reported by BTA on August 11, 2000. The sanctuary, dating back to the 5th century B.C., features a 240-meter-long stone wall, a grand staircase, and two elaborately decorated rooms. Georgi Kitov, head of the expedition, suggested the site could have been the burial place of a powerful Thracian king. The discovery also included valuable artifacts, including coins, pottery, and weapons. However, ongoing excavation faces financial challenges as funds are running low.

* * *

On October 7, 2000, as reported by BTA, Bulgaria celebrated its Day at the EXPO 2000 international fair in Hanover, Germany, showcasing its rich cultural and natural heritage. Deputy Prime Minister Peter Jotev emphasized Bulgaria's ancient history, progressing modern economy, and contributions to global culture. Visitors enjoyed performances by Bulgarian folklore groups and explored exhibits of traditional products like honey, herbs, and astronaut food developed by the Bulgarian Academy of Sciences. The event highlighted Bulgaria's potential for global integration and innovation.

* * *

Archaeologists discovered the tomb of a Thracian ruler near the Starosel sanctuary, as reported by BTA on August 21, 2000. The 5th-century B.C. burial site included a 25-gram gold ring, ornate silver and bronze vessels, and ceremonial weapons, indicating royal status. Georgi Kitov, leading the excavation, noted that the burial offers insights into Thracian customs and culture. While the find is remarkable, the project risks suspension due to depleted financial resources.

2001

As reported by BTA on July 27, 2001, BAS hosted a meeting to discuss Bulgaria's economic

priorities, gathering prominent financiers, politicians, and business leaders. The event marked the establishment of a new discussion platform aimed at generating ideas for economic recovery. Media headlines reflected the diverse viewpoints presented, with Dnevnik highlighting tycoon Iliya Pavlov's emphasis on state roles and Novinar describing the initiative as a novel collaboration between scholars and business. Discussions touched on the need for ethical reforms in politics and business.

* * *

BTA reported on November 2, 2001, that BAS would remain closed until the end of the year due to insufficient funds for heating, electricity, and essential resources. BAS President Ivan Yuhnovski said that researchers would continue working from home where possible, taking their computers with them. He underscored the importance of maintaining critical institutions like the Institute of Hydrology and Meteorology, which supports key state bodies, including the Ministry of Defence and disaster management agencies.

* * *

Four space research devices developed at BAS were sent into orbit aboard the U.S. space shuttle Discovery for use on the International Space Station, BTA reported on March 12, 2001. The devices, designed to measure radiation exposure in the U.S. module "Destiny" and on astronauts' bodies, will collect data over four months. BAS's Central Laboratory of Solar-Terrestrial Influences is also developing additional systems for radiation control on modules from the US, Russia, Japan, and the European Space Agency.

Sofia, September 26, 2002. Metodi Karadzhov presents the new inductively coupled plasma atomic emission spectrometer at the official opening of a new laboratory at the BAS Geological Institute under the NATO Science for Peace project.
Photo: Tihomir Penov, BTA

Sofia, September 26, 2002. Official opening of a new laboratory at the BAS Geological Institute under the NATO Science for Peace project. Photo: Tihomir Penov, BTA

Sofia, June 1, 2011. Defence Minister Anyu Angelov opens an exhibition of products with military use at the Institute of Metal Science, Equipment and Technologies with BAS. The exhibits were developed by joint scientific teams from the Ministry of Defence and the Institute of Metal Science. Photo: Vladimir Shokov, BTA

2002

BAS opened an advanced analytical laboratory for monitoring water and soil pollution, as part of NATO's Science for Peace programme, BTA reported on September 30, 2002. Located at BAS's Geological Institute, the lab is equipped with a cutting-edge ICP Jobin Yvon Ultima 2 device, capable of analyzing up to 75 elements. The project, valued at 223,000 euros, involves researchers from BAS, the French Geology Service, and the University of Antwerp. This initiative addresses pollution from heavy metals in the Plovdiv region and aims to support sustainable environmental practices.

* * *

Bulgaria will supply radiation monitoring equipment for the International Space Station in mid-2003, Dimiter Mishev of BAS announced, as reported by BTA on December 4, 2002. The dosimeter will be installed in a Russian module, continuing Bulgaria's contributions to international space research. BAS has a 30-year history of space achievements, including being the third country to develop astronaut food and the 18th to send equipment into orbit. A BAS scientific session marked the anniversary of the first Bulgarian-made device launched aboard the Interkosmos-8 satellite in 1972.

* * *

BAS experts concluded that incinerating SS-23 missile engines is unsuitable due to health and environmental risks, BTA reported on August 13, 2002. President Georgi Purvanov endorsed this conclusion and urged authorities to explore safer methods. Discussions among the Ministries of Defence and Environment, along with BAS researchers, highlighted alternative techniques, including water-based methods. While most missile components are being destroyed safely, protests by local residents and environmental concerns persist, emphasizing the need for transparency and safety in the process.

2003

The Defence Ministry is negotiating with another country to destroy SS-23 missile engines abroad, BTA reported on March 21, 2003. Defence Minister Nikolai Svinarov stated that BAS recommended this approach at the end of 2002 to minimize risks given Bulgaria's geographic conditions. Following these recommendations, the ministry conducted site visits and initiated talks with U.S. institutions for external disposal. Svinarov denied allegations of secret engine incineration, emphasizing adherence to expert advice and environmental safety.

* * *

During the 134th anniversary of BAS, President Georgi Parvanov emphasized the need for science and education to be prioritized in state policies, BTA reported on October 10, 2003. He highlighted BAS's achievements, including contributing 60% of Bulgaria's scientific output despite representing only 16% of the country's research workforce. Purvanov called for stronger collaboration between

Sofia, June 1, 2011. A moment from the opening of the exhibition of products with military use at the Institute of Metal Science, Equipment and Technologies with BAS. Attending the event is BAS President Nikola Sabotinov.
Photo: Vladimir Shokov, BTA

science, the state, and businesses to address funding shortages and strategic development. BAS President Ivan Yuhnovski outlined the academy's extensive international collaborations and project contributions.

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Bulgaria and Hungary signed a protocol to improve scientific cooperation through 45 joint projects, BTA reported on November 13, 2003. BAS President Ivan Yuhnovski noted that nine new projects would focus on informatics, mathematics, biology, chemistry, and folk art. Hungarian Academy of Sciences (HAS) President E. Szilveszter Vizi announced that the projects, involving universities and institutions from both nations, would be implemented over 150 weeks. Vizi was also honoured with the title of honorary doctor and made a foreign member of BAS.

2004

BAS unveiled a gold death mask of a Thracian ruler at an exhibition marking its 135th anniversary, BTA reported on October 12, 2004. Unearthed in the Valley of Thracian Kings near Kazanluk, the mask is among valuable archaeological finds from prehistory, antiquity, and the Middle Ages displayed at the BAS head office. Pavlina Ilieva of the BAS Archaeology Institute noted the significance of the exhibition, which highlights the contributions of the Archaeology Institute as part of BAS's extensive research network involving over 7,000 scientists.

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Archaeologists discovered fragments of unique medieval murals near the Forty Holy Martyrs Church in Veliko Tarnovo (Central Bulgaria), BTA reported on July 13, 2004. Konstantin Totev from the Archaeological Institute with BAS stated that these are the largest mural fragments uncovered in the area to date. The finds include the restored image of a saint and Greek inscriptions, believed to date back to the church's first decoration in 1230. Excavations, funded by the Ministry of Culture and other entities, aim to clarify the layout of the Grand Lavra monastery complex.

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Bulgaria is participating in the international Generations and Gender Survey, covering 13,000 randomly selected individuals aged 18 to 79, BTA reported on November 5, 2004. BAS Institute of Sociology will conduct the survey from November 10 to December 20, funded by the Max Planck Institute for Demographic Research and the UN Development Programme. This multi-wave study, spaced three years apart, will explore family dynamics, including child-parent and partner-partner relationships, aiming to provide insights into evolving societal and family structures.

2005

The brain drain from Bulgaria is significantly slowing down, BAS President Academician Ivan Yuhnovski said in an interview, BTA reported on January 6, 2005. He noted that the exodus of scientists aligns with the broader emigration of young and active individuals. Despite persistent funding challenges, Yuhnovski highlighted 2004 as a successful year for BAS, with

Sofia, October 27, 2011. A moment from the award ceremony for the annual Rotary Distinction named after Academician Metodiy Popov. Awards were presented to Irina Vasseva, Elena Yakimova, and Vasiliy Goltsev. Photo: Minko Chernev, BTA

growth across all scientific domains and remarkable archaeological discoveries. He emphasized that Bulgarian scientists, despite limited resources—33 times lower than the EU average—are several times more efficient, producing four times more scientific output per unit of investment compared to researchers in better-funded economies.

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The Central Laboratory for Biomedical Engineering Prof. Ivan Daskalov at the Bulgarian Academy of Sciences has launched an online journal, Bioautomation, to advance research in bioprocess engineering, BTA reported on February 7, 2005. The journal, published in English, integrates achievements in biology, biochemistry, mathematics, and other disciplines. Supported by prominent international scholars, including Jean-Pierre Babary (France) and Konstantin Konstantinov (USA), the journal will feature original research, reviews, and articles by established and emerging researchers. Bioautomation aims to promote knowledge-sharing and innovation in this multidisciplinary field.

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BAS has significant potential to aid disaster response and protect people against natural calamities, Georgi Alexiev, Director of the BAS Institute of Geography, said at an international meeting in Veliko Turnovo, BTA reported on September 7, 2005. The forum, organized under NATO's Challenges of Modern Society program, reviewed a pilot study on using landscape sciences for environmental assessment. Alexiev emphasized the need to redefine flood-prone areas, update Bulgaria's seismic hazard map, and increase government support for BAS projects. A seminar on flood damage mitigation is planned to leverage scientific insights for disaster management.

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Bulgarian Academy of Sciences (BAS) researchers identified 314 sites covering 34% of Bulgaria's territory as candidates for the European environmental network NATURA 2000, BTA reported on November 22, 2005. Presented in an exhibition at BAS, the sites include diverse habitats rich in flora and fauna, such as the Sakar and Kamchiiska Mountains, Cape Emine, and Cape Kaliakra. Dimiter Nankinov and his team highlighted six caves and other critical areas in their inventory, implemented with support from the Environment and Water Ministry and Danish collaborators. Bulgaria ranks as Europe's third richest country in biodiversity, following Spain and Greece.

2006

Bulgarian scientists have been contributing to the European Network of Excellence on Atmospheric Composition Change (ACCENT) for two years, BTA reported on January 17, 2006. Led by Professor Dimiter Sirakov of the BAS National Institute of Meteorology and Hydrology, the

Sofia, October 27, 2011. The Institute of Plant Physiology and Genetics with BAS hosts a solemn meeting for conferring the annual Rotary Distinction named after Academician Metodiy Popov for high scientific achievements in the field of biology. Elena Yakimova was among the award winners.
Photo: Minko Chernev, BTA

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project is part of the European Commission's Sixth Framework Programme. Bulgarian researchers focus on tracking air pollutants and identifying emission sources, highlighting human activity as a significant factor in climate change. ACCENT, financed with EUR 12 million, involves scientists from 35 European countries and aims to establish a unified European research space.

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BAS General Assembly approved a Code of Ethics for Bulgarian Scientists to Prevent and Suppress Bioterrorism, BTA reported on January 31, 2006. Developed as part of Bulgaria's participation in UN-led initiatives, the code aligns with the Biological and Toxin Weapons Convention. BAS also reviewed its 2005 financial performance, which included BGN 28 million in self-generated revenue from EU, NATO, and international projects. The 2006 budget subsidy increased to BGN 68 million, supporting research and international collaborations.

Bulgarian archaeologists uncovered Europe's oldest salt-making facility near Provadia, dating back to 5,400 B.C., BTA reported on November 2, 2006. Led by Professor Vassil Nikolov of the BAS Museum of Archaeology, the team discovered ceramic vessels and heating facilities used to produce salt for trade. The facility predates the Stone and Copper Age and coincides with the time of the Varna necropolis, suggesting the wealth in the region was linked to the salt trade. This groundbreaking discovery sheds light on early trade and economic activity in Europe.

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BAS showcased its research achievements in an exhibition celebrating Bulgaria's EU accession, BTA reported on April 10, 2006. BAS has secured 420 EU-funded projects since 1992, totalling EUR 23 million. Eight BAS research centres, including those focusing on nanotechnology, environmental monitoring, and renewable energy, were highlighted. Notable projects presented include NATO-supported innovations in helicopter protection and border security systems. BAS highlighted its pivotal role in integrating Bulgaria into the European research community.

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BAS is collaborating with the Russian Academy of Sciences (RAS) on 26 fundamental space research projects, BTA reported on November 22, 2006. BAS Vice President Academician Nikola Sabotinov highlighted the involvement of BAS's Space Research Institute and the Central Laboratory of Solar-Terrestrial Influences. These projects include space physics, remote Earth studies, and space technologies. BAS is also conducting 44 additional joint projects with RAS, underscoring strong bilateral cooperation in scientific exploration.

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Marking its 137th anniversary, BAS called for increased investment in research and development, BTA

reported on October 13, 2006. BAS President Academician Ivan Yuhnovski urged the government to allocate 3% of GDP to R&D by 2010, aligning with European standards. He highlighted BAS's contributions to science and education, including its authorship of over 200 university textbooks and leadership in EU scientific initiatives. Despite financial constraints, BAS remains a key player in Bulgaria's integration into the European Research Area.

2007

BAS opened its institutes, laboratories, and museums to several thousand visitors during its Open Days event, BTA reported on May 24, 2007. Held in honour of the Day of Slavonic Letters, May 24, the event attracted school and university students, and the general public. Highlights included BAS's oceanographic ship Academica in Varna and visits to the National Archaeological Institute, the Ethnographic Institute, and the Institute of Metal Science. The Open Days aimed to connect the public with BAS's scientific and cultural contributions.

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An international team of scientists, including members of BAS, is studying changes in the Black Sea ecosystem under the SESAME project, BTA reported on May 18, 2007. Supported by the European Commission's Sixth Framework Programme, the project involves 48 universities and research institutes. Bulgaria's ship Academic and researchers from the University of Sofia are contributing to the assessment and prediction of ecosystem changes and their ability to provide goods and services. The four-year project, launched in 2006, is coordinated by the Greek Centre for Marine Research.

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The Bulgarian Defence Industry Association (BDIA) joined the AeroSpace and Defence Industries Association of Europe (ASD), BTA reported on December 19, 2007. Despite this achievement, ABDI expressed concerns over being excluded from Bulgaria's military modernization projects. Stefan Vodenicharov of the BAS Institute of Metal Studies emphasized the need for state support in defence-related research and development, calling for improved legislation and collaboration with the Defence and Education Ministries. The association continues to push for a dedicated defence research centre.

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A conference on Roma integration, organized by BAS and other institutions, highlighted education and socioeconomic challenges faced by the Roma community, BTA reported on January 19, 2007. BAS researchers noted that language barriers and high school dropout rates remain key obstacles. Initiatives like preparatory classes for non-native Bulgarian speakers and education centres aim to improve integration. BAS researchers also stressed the importance of family support, mixed classes, and Roma assistant teachers in fostering educational success.

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BAS celebrated its 138th anniversary by calling for increased science funding, BTA reported on October 12, 2007. President Ivan Yuhnovski emphasized the need to align Bulgaria's research investment with European standards. BAS, which employs less than 16% of Bulgaria's scientists, produces more than 50% of the country's scientific output and patents. Yuhnovski urged the government to prioritize science funding to prevent further brain drain and improve Bulgaria's global competitiveness.

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A survey conducted by the BAS Institute of Sociology revealed that 59.9% of Bulgarians support the NATURA 2000 network of protected areas, BTA reported on November 14, 2007. While 78.4% of respondents were aware of NATURA 2000, the survey noted that better communication is needed to highlight its advantages. Key environmental concerns identified by the public included deforestation (98.8%), overdevelopment of the Black Sea coast (92%), and threats to national parks. The findings underscore the importance of public engagement in conservation efforts.

2008

BTA reported on February 7, 2008, that a Bulgarian-built instrument, the R3DE, developed by BAS in collaboration with the University of Erlangen, is set to measure cosmic radiation aboard the International Space Station (ISS). The device, weighing 120 grams, is part of ESA's Columbus laboratory module launched with the space shuttle Atlantis. Tsvetan Dachev of BAS said that the module will study the effects of ultraviolet and cosmic radiation on biological materials and minerals, providing critical data for future Moon and Mars missions.

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BTA reported on February 12, 2008, that Academician Ivan Yuhnovski was re-elected as President of the Bulgarian Academy of Sciences (BAS) for a fourth term, garnering 85 votes out of 108. Despite controversy regarding age-related eligibility, Yuhnovski's candidacy was upheld by the BAS General Assembly. Highlighting his tenure, Yuhnovski stressed that BAS's own revenue now constitutes 40% of its budget and the Academy's state subsidy for 2008 saw a historic 22.25% increase.

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BTA reported on October 23, 2008, that Bulgarian scientists from the Solar-Earth Influence Laboratory at BAS created the RADOM space device for India's Chandrayaan-1 lunar mission. The instrument, known internationally as Lyulin, will measure radiation levels 100 km above the Moon's surface, aiding future missions by assessing radiation risks. Bulgaria secured its place on the mission, competing against 32 countries and demonstrated its leading role in space research.

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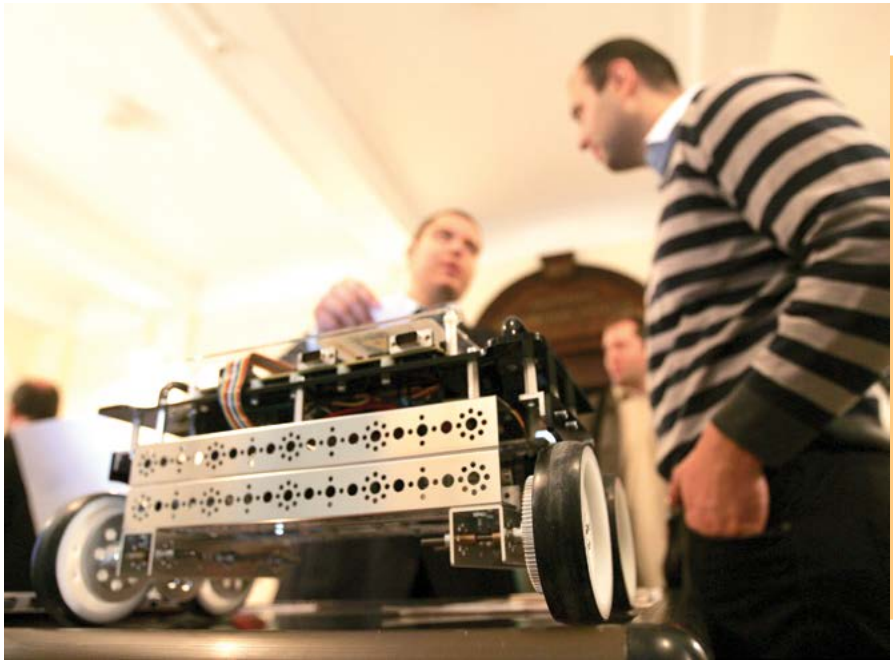
BTA reported on June 19, 2008, that physicist Nikola Sabotinov was elected President of BAS with a decisive vote of 84-21. Sabotinov pledged structural reforms, interdisciplinary research, and increased cooperation with private businesses. His election follows Ivan Yuhnovski's resignation earlier that year. Sabotinov aims to raise scientists' salaries and strengthen BAS's contributions to Bulgaria's scientific and economic landscape.

Blagoevgrad, November 2, 2011. The newly published "I Hear Your Voices. The Individuals of the High School and Bulgaria" anthology is presented at the Regional History Museum by editor-in-chief Assoc. Prof. Alexander Grebenov of the Institute for Historical Studies with BAS. Photo: Emil Mihaylov, BTA

Sofia, November 17, 2011. "Big Encyclopedia Bulgaria" is officially presented in BAS' central building.Photo: Georgi Georgiev, BTA



Sofia, November 30, 2011. The BAS' central building hosts an exhibition of robots within the Service Robotics 2011 National Conference.
Photo: Bistra Boshnakova-Parsons, BTA

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BTA reported on November 25, 2008, that economists from BAS evaluated the potential impact of the global financial crisis on Bulgaria, emphasizing the need for prudent planning. The team highlighted risks to small and medium enterprises due to limited lending, while noting Bulgaria's strong investment growth in the first half of 2008. The experts recommended targeted support for vulnerable sectors to mitigate potential economic slowdowns.

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BTA reported on December 30, 2008, that scientists from the Plovdiv-based Central Laboratory for Applied Physics at BAS have developed an ultraviolet device for water purification, tailored for use in disaster response, military missions, and expeditions. The device, one of BAS's notable achievements in 2008, is pending patenting and highlights Bulgaria's capacity for innovative scientific contributions. BAS President Nikola Sabotinov also praised the Academy's contributions to the CERN Big Bang experiment and Moon radiation measurements aboard Chandrayaan-1.

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BTA reported on September 20, 2008, that a framework agreement for establishing a regional research centre for marine sciences and technologies was signed in Varna. The collaboration involves the Varna Naval Academy, the BAS Institute of Oceanology, and the Institute of Hydro- and Aero-Dynamics. The centre aims to advance marine research and innovation in Bulgaria and the Black Sea region.

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BTA reported on November 27, 2008, that BAS unveiled a project to introduce hologram stickers on university diplomas to prevent forgery. Designed by BAS's Central Laboratory of Optical Storage and Processing of Information, the holograms feature multi-layered security measures. Education Minister Daniel Valchev confirmed that the stickers will be implemented by spring 2009, which would mark an improvement in diploma authentication and aligning Bulgaria with modern standards.

2009

BTA reported on January 24, 2009, that the National Institute of Meteorology and Hydrology with BAS became a member of the European Centre for Medium-Range Weather Forecasts (ECMWF). This collaboration enables more precise fourteen-day weather forecasts, enhancing Bulgaria's capacity to predict severe weather events and mitigate their effects. The membership follows the 2005 floods and recommendations for improved forecasting.

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BTA reported on February 28, 2009, that Peter Atanassov from the Institute of Electronics at BAS won Bulgaria's inaugural Pythagoras Science Award. The prize, which includes a monetary award of BGN 10,000, recognizes outstanding contributions to nanotechnology. Prime Minister Sergei Stanishev presented the award at a ceremony attended by BAS President Nikola Sabotinov and Education Minister Daniel Valchev.

Sofia, December 12, 2011. BAS President Nikola Sabotinov meets with President Rosen Plevneliev to present to him the three-year programme for the Academy's development.
Photo: Bistra Boshnakova-Parsons, BTA

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BTA reported on March 14, 2009, that Genoveva Mihova, acting Director of the Centre for the Study of Population at BAS, warned of continuing low birth rates, high mortality, and aging population trends in Bulgaria over the next 25 years. Speaking at a scientific conference, Mihova highlighted the role of emigration and low reproductive rates in the demographic crisis, emphasizing the need for policies to address education and employment among minority populations.

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BTA reported on April 11, 2009, that President Georgi Parvanov met foreign cosmonauts attending celebrations for the 30th anniversary of the first Bulgarian in space and the 40th anniversary of the Space Research Institute at BAS. Purvanov praised Bulgaria's contributions to the Interkosmos program and expressed continued support for space research. BAS Chair Nikola Sabotinov highlighted the institute's achievements, including launching Bulgarian space equipment in 1972.

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BTA reported on October 15, 2009, that researchers from BAS's Institute of Oceanology discovered a remarkably well-preserved 19th-century sailing ship at a depth of 110 meters near Cape Kaliakra. The 52-meter-long ship is believed to have been a trading vessel that sank during a storm. The discovery was part of the ResPont project, dedicated to exploring Bulgaria's underwater cultural heritage.

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BTA reported on October 13, 2009, that BAS celebrated its 140th anniversary with a solemn concert and an exhibition showcasing research achievements in space science, nanotechnology, and robotics. President Georgi Purvanov called for a national focus on science as a developmental priority and criticized the lack of private sector engagement in scientific research. BAS President Nikola Sabotinov highlighted the Academy's contributions to Bulgaria's scientific and cultural development.

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BTA reported on October 28, 2009, that the National Museum of Natural History, part of BAS, celebrated its 120th anniversary. Founded by Prince Ferdinand in 1889, the museum houses Bulgaria's largest natural history collection. Bas-reliefs of the museum's founders, Prince Ferdinand and Ivan Buresh, were unveiled during the celebrations, which included a ribbon-cutting ceremony for a new exhibit in the Fishes Hall.

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BTA reported on May 9, 2009, that Princess Marie Louise visited BAS and donated memoir documents sent by an expatriate Bulgarian. The Princess expressed interest in the state of BAS's National Museum of Natural History, Ethnographic Institute, and Institute of Archaeology, and in collections donated by her grandfather, King Ferdinand I, and her father, King Boris III.

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BTA reported on April 23, 2009, that BAS economists analyzed the impact of the global economic crisis on Bulgaria, highlighting the role of administrative inefficiency and corruption as internal contributors. At a press conference, Mitko Dimitrov, Director of the BAS Economic Institute, praised businesses' adaptive measures but warned of challenges in public administration and EU relations that hinder economic recovery.

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BTA reported on July 14, 2009, that independent international experts conducted a comprehensive evaluation of the institutes and laboratories of BAS. The assessment focused on scientific output, development potential, and applied research capabilities. BAS is the first research organization in Bulgaria to undergo such a review, which is expected to guide future reforms and align the Academy's activities with European standards.

2010

BTA reported on January 8, 2010, that BAS requires BGN 3.8 million to fund severance payments for 400-500 retiring researchers as part of its reform plan. BAS President Nikola Sabotinov said the reorganization would reduce institutes from 69 to 42, focusing on youth recruitment and stricter enforcement of retirement policies to pave the way for a more efficient structure.

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BTA reported on January 9, 2010, that Prime Minister Boyko Borissov, during a visit to BAS's Institute of Metal Science and the Geophysical Institute, expressed government support for the Academy's research and development efforts. He highlighted BAS's capacity to develop defence and industrial technologies and pledged assistance in marketing its innovations abroad.

Varna, December 14, 2011. The Institute of Oceanology with BAS marks the 150th birth anniversary of Norwegian polar researcher Fridtjof Nansen, after whom a new 13-metre research vessel is named. Deyana Demireva becomes the ship godmother. Photo: Krassimir Krastev, BTA

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BTA reported on May 19, 2010, that BAS was set to stage a rally against Education Minister Sergei Ignatov's proposal to transfer its institutes to different ministries and state institutions. BAS President Nikola Sabotinov warned that such reforms would lead to the Academy's disbandment, describing the proposal as an attack on its integrity and autonomy. Sabotinov noted that BAS is ranked 374th out of 4,000 research institutions worldwide and urged an end to policies that jeopardize the Academy's legacy.

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BTA reported on May 19, 2010, that a European initiative funded under the EU LIFE+ environmental programme will declare two new protected areas for the Bulgarian sea lavender (Limonium Bulgaricum). The project, led by the Institute of Botany at BAS and the Ministry of Environment and Water, uses the plant micro-reserve model and spans 42 months.

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BTA reported on May 20, 2010, that Prime Minister Boyko Borissov met with BAS President Nikola Sabotinov following a protest against proposed reforms. Borissov assured that BAS's autonomy and central administration would be preserved, adding that the government does not plan to sell BAS properties. Sabotinov emphasized that the reform, involving mergers of institutes, would ensure efficiency

without compromising the Academy's research role.

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BTA reported on June 21, 2010, that a prehistoric skeleton, dated to approximately 8,000 years ago, was uncovered near Ohoden village by Georgi Ganetsovski of the Vratsa Regional Museum of History. The find, which included burial artifacts such as a spherical pot and flint knife, was made in collaboration with the Institute of Anthropology at BAS and adds significant insight into Neolithic rituals in the region.

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BTA reported on November 4, 2010, that approximately 1,000 BAS employees protested in front of Parliament, demanding an increase in the Academy's 2011 budget from BGN 59 million to BGN 111 million. Protesters carried banners with slogans such as "The Closure of BAS – A Step towards the Third World" and "Banana Republics Do Not Need Science." They also called for the dismissal of Finance Minister Simeon Dyankov and Education Minister Sergei Ignatov. The Academy warned that failure to secure adequate funding could lead to its closure.

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BTA reported on November 5, 2010, that the Education Ministry launched the country's first online university rating system. It ranks universities across 51 indicators to guide funding decisions. Education Minister Sergei Ignatov emphasized that the system would prioritize strong academic programs while reducing funding for weaker ones. The rating system also highlighted low unemployment rates among graduates of certain programs, such as medicine and law.

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BTA reported on December 17, 2010, that BAS President Nikola Sabotinov met with EU Regional Policy Commissioner Johannes Hahn in Brussels to discuss BAS's financial challenges and proposed legislative changes that could fragment the institution. Sabotinov warned that the decentralization scheme might remove BAS from the global research map, threatening its role as Bulgaria's primary national research hub. Hahn noted BAS's regional and European significance, with support from research organizations like Britain's Royal Society.

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BTA reported on December 30, 2010, that scientists at the Institute of Solid State Physics with BAS achieved a groundbreaking milestone by cooling rubidium atoms to temperatures 10,000 times lower than interstellar space. This advancement, made using a magneto-optical trap, opens avenues for quantum computing and high-precision atomic clocks. It also promises greater precision in microelectronics manufacturing.

2011

BTA reported on December 13, 2011, that President-elect Rosen Plevneliev urged an additional BGN 14 million for BAS by mid-2012 to stabilize the institution. He stated that BAS's financial stability was critical for long-term planning and aligning with the Bulgaria 2020 Strategy. Plevneliev emphasized the importance of integrating BAS priorities into national policies and expanding revenue sources, including EU funding and public-private partnerships.

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BTA reported on June 30, 2011, that BAS signed a cooperation agreement with Tokuda Hospital in Sofia to set up a research centre focused on bio-medicine and quality of life. BAS President Nikola Sabotinov hailed the partnership as an example of successful public-private collaboration, involving scholars from six BAS research institutes.

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BTA reported on October 13, 2011, that meteorologists and seismologists at BAS would receive reduced salaries due to funding shortages. BAS President Nikola Sabotinov stated that the institution's 2011 subsidy met only 70% of its salary requirements. Sabotinov warned that further budget cuts in 2012 could severely impair the Academy's ability to maintain essential activities like weather forecasting.

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BTA reported on November 2, 2011, that BAS employees held a candlelight vigil protesting a proposed budget reduction from 59 million to BGN 54 million for 2012. Protesters argued that the funding cuts would lead to the institution's operational collapse. BAS President Nikola Sabotinov highlighted the dire need for increased government support to sustain the Academy's core scientific and national responsibilities.

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BTA reported on April 13, 2011, that the launch of the BalkanSat microsatellite, a BAS-led project with Balkan nations, was delayed due to insufficient funds. Designed to monitor natural disasters such as wildfires and floods, the satellite requires an estimated budget of 2–2.5 million euros. BAS Director Peter Getsov emphasized the satellite's importance for environmental monitoring.

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BTA reported on March 24, 2011, that BAS and the Bulgarian Industrial Capital Association signed an agreement to collaborate on EU projects and utilize scientific research for industrial and economic development. The partnership aimed to foster competitiveness through the application of BAS's scientific achievements.

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BTA reported on February 21, 2011, that BAS demographics experts predicted the disappearance of Bulgaria's rural population by 2062 if current trends persist. The study cited factors such as population decline, lack of services, and migration. Nikolai Tsekov warned that 200 villages were already depopulated, with 500 more on the brink.

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BTA reported on September 19, 2011, that BAS collaborated with Japanese researchers to develop a new polymer capable of delivering medicines directly to malignant cells, minimizing damage to healthy tissues. BAS President Nikola Sabotinov noted that this innovation was among 130 BAS-developed products implemented by companies.

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BTA reported on December 24, 2011, that environmentalists alerted the European Commission about potential violations of the EU Habitats Directive during the filming of The Expendables 2 in Devetaki Cave, a protected Natura 2000 site. BAS researchers cited significant disturbances to the cave's bat population, which declined from 33,000 to 10,000 following the shoot.

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BTA reported on September 1, 2011, that Parliament unanimously adopted BAS's annual report for 2010. The report highlighted 3,232 research projects, including 2,289 funded from external sources, which generated BGN 36 million. Despite its achievements, BAS faced financial challenges due to reduced state subsidies.

2012

BTA reported on December 13, 2012, that BAS signed a memorandum of cooperation with the Sofia Tech Park company to build a high-technology park in Sofia, aiming to bolster the competitiveness of Bulgarian science and business. The partnership will focus on supporting innovation, sharing expertise, and creating sustainable jobs. According to the memorandum, BAS will contribute to the development of research and development units during the initial stages of the project. Both parties will work on maintaining a shared scientific infrastructure database and creating a software platform for its utilization. Additionally, they aim to establish links between their websites to facilitate collaboration. The park is expected to serve as an innovation hub and contribute to the socio-economic development of Bulgaria.

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On December 4, 2012, BTA reported that Academician Stefan Vodenicharov was elected as BAS President for a four-year term by the General Assembly. Vodenicharov, who previously served as Director of the Institute of Metal Science, Equipment, and Technologies, pledged to advocate for a larger budget for BAS in 2013 and increase its participation in national and EU programs. "The Academy and the universities should participate in the Bulgaria 2020 Programme and other initiatives through joint teams," he said. His election comes after the passing of his predecessor, Stefan Dodunekov, earlier in the year. Vodenicharov emphasized integrating BAS laboratories and scientists into the planned Sofia Tech Park.

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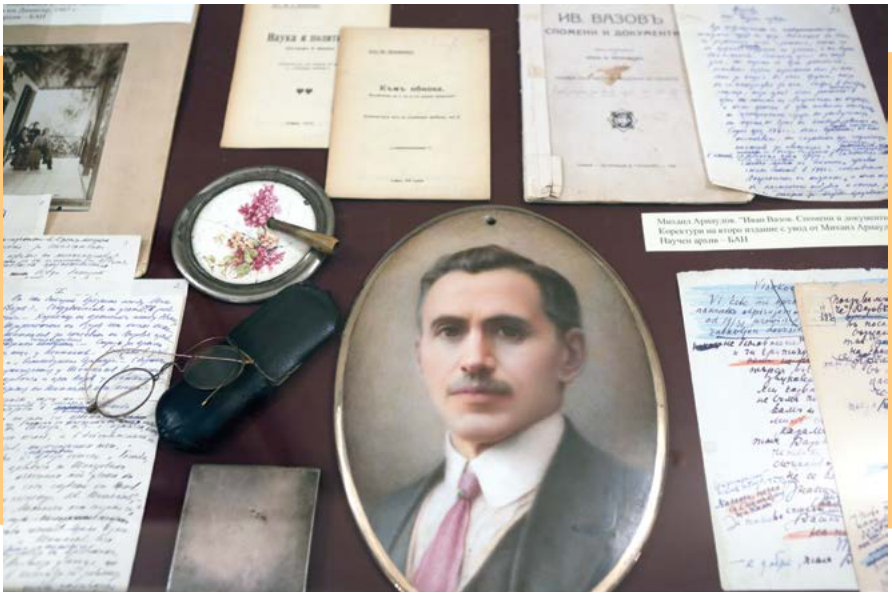
BTA reported on November 21, 2012, that an internal audit revealed that BGN 371,000 were misappropriated from the Institute of Experimental Morphology, Pathology, and Anthropology at BAS between mid-2010 and August 2012. "Counterfeit primary accounting documents and a fake diploma of the Institute's chief accountant were found," said Evgenii Nikolov, BAS Vice President and acting President. The violations included administrative staff receiving higher salaries than associate professors and professors. While the cashier involved was dismissed, the chief

Sofia, June 20, 2012. At a ceremony at BAS, President Nikola Sabotinov officially hands over the post to the newly elected head of the Academy, Academician Stefan Dodunekov. Attending the ceremony is Minister of Education, Youth and Sport Sergey Ignatov, who awards Academician Sabotinov. Photo: Assen Tonev, BTA



Sofia, November 20, 2012. Opening of the 5th Shishmanov Readings Scientific Conference on the occasion of the 150th birth anniversary of Prof. Ivan Shishmanov. The National Museum of Literature presents the One Remarkable Friendship exhibition of manuscripts, photographs, and personal belongings of Ivan Vazov and Ivan Shishmanov. Photo: Vladimir Shokov, BTA

Blagoevgrad, October 31, 2012. At an official ceremony at the Neofit Rilski South-West University, Prof. Ivan Dobrev is awarded an honorary degree. The lecturer in old Bulgarian language, history of the Bulgarian language and Indo-European studies receives the honorary degree from Prof. Ivan Mirchev. Photo: Emil Ivanov, BTA

accountant evaded termination by repeatedly submitting sick leave certificates. BAS has referred the case to the prosecution, highlighting broader accountability issues. The audit underscores ongoing challenges in ensuring financial transparency within the Academy.

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On June 13, 2012, BTA reported that BAS signed a strategic agreement with the French Academy of Sciences to enhance scientific collaboration in mathematics, IT, biomedicine, archaeology, and earth sciences. During the signing ceremony, French Academy Permanent Secretary Catherine Brechignac remarked, "This agreement is much more strategic in nature and concerns sciences where we have already worked together." Outgoing BAS President Nikola Sabotinov stated, "This agreement is a recognition of Bulgarian scientists and the role of BAS as a national scientific centre." Education Minister Sergei Ignatov described the agreement as "remarkable," stressing the significance of deepening ties between the two academies.

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BTA reported on July 6, 2012, that BAS celebrated its pivotal role in CERN's Higgs boson experiments. Vladimir Genchev detailed the contributions of 80 Bulgarian researchers over two decades, including the design, production, and testing of 125 ion units for CERN's Large Hadron Collider (LHC). Genchev highlighted the collaboration between BAS institutes and the St. Kliment Ohridski University of Sofia, which earned Bulgaria USD 5 million. He humorously recalled Finance Minister Simeon Dyankov's past remark that funding would go only to discoveries, saying, "I am giving you now my bank account so that Dyankov can transfer the money."

Sofia, April 18, 2013. BAS President Stefan Vodenicharov opens the 12th session of the informal conference of heads of meteorological and hydrometeorological services from Southeast Europe, hosted by the National Institute of Meteorology and Hydrology with BAS. Photo: Vladimir Shokov, BTA

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On November 15, 2012, BTA reported that BAS's Rozhen Observatory avoided closure after securing contracts with the Ministries of Agriculture and Environment worth BGN 270,000. Prime Minister Boyko Borissov remarked, "The observatory is run by BAS, and it is the Academy's responsibility to take care of the facility." The observatory had faced severe funding shortages, with staff salaries cut by 40% in October to stave off shutdown. Rozhen remains the largest astronomical observatory in Southeastern Europe, essential for regional and international research.

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BTA reported on October 13, 2012, that BAS celebrated its 143rd anniversary under the shadow of persistent budget constraints. Vice President Evgenii Nikolov described the BGN 59.8 million 2013 draft budget as "insufficient," saying, "To function normally, the Academy needs BGN 98 million." Education Minister Sergei Ignatov proposed funding distribution based on institute performance, citing isotope production for cancer treatment and medicinal product development as priorities. "We want reasonable, peaceful means to achieve what BAS deserves," Nikolov said, adding that BAS institutes have faced "an absolute and obvious genocide" over the last three years.

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BTA reported on January 25, 2012, that BAS and the Kozloduy Nuclear Power Plant (NPP) announced a joint strategy to advance nuclear energy in Bulgaria, building on successful collaboration during Kozloduy's stress tests. BAS President Nikola Sabotinov said, "This project highlights the practical benefits of cooperation between science and industry." The partnership includes joint projects, training programs for young specialists, and organizing conferences to address nuclear

energy challenges. Six doctoral candidates from Kozloduy are currently being trained at BAS's Institute for Nuclear Research and Nuclear Energy.

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On October 10, 2012, BTA reported that BAS researchers staged protests against the proposed BGN 59 million budget for 2013, calling it inadequate for maintaining scientific activities. "The researchers in BAS will be working 12 months and get paid a ten-month wage." Protesters expressed frustration with ongoing underfunding and its impact on wages and operations, with many researchers forced to take unpaid leave. President Rosen Plevneliev's earlier pledge to secure an additional BGN 14 million for BAS remained unfulfilled.

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BTA reported on May 28, 2012, that following a magnitude 5.8 earthquake in Western Bulgaria, BAS proposed measures to improve disaster preparedness, including a hotline for reporting seismic activity to the Interior Ministry and public safety education via loudspeakers. Nikolay Miloshev, Director of BAS's Institute of Geophysics, emphasized the importance of rapid information dissemination, suggesting the system be activated for quakes exceeding magnitude 4. The quake caused significant damage, injuring 30 people and rendering 14,000 buildings uninhabitable.

2013

BTA reported on January 10, 2013, that the Bulgarian government approved a new operational programme called Science and Education for Smart Growth for the 2014–2020 EU programming period. At the weekly Cabinet meeting, attended by BAS President Academician Stefan Vodenicharov and nine university rectors, the ministers endorsed the programme aimed at fostering smart growth through improvements in research and education quality. Prime Minister Boyko Borissov said, "Although funding for science and education is limited, this step will ensure visible progress." BAS will also prepare a communication on "Good Neighbourly Relations with North Macedonia" for use by Bulgarian officials in Brussels.

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On February 7, 2013, BTA reported that Stefan Vodenicharov, President of BAS, was elected Minister of Education, Youth, and Science by the National Assembly. In his inaugural address, Vodenicharov emphasized prioritizing the preparation of the Operational Programme Science and Education and the introduction of an innovations bill. He also announced plans to establish a new research and education institute within BAS. Despite mixed reactions from opposition parties, Finance Minister Simeon Dyankov expressed optimism about Vodenicharov's ability to bring meaningful improvements

Sofia, January 16, 2013. BAS President Stefan Vodenicharov presents an honorary degree to the Ambassador of the Republic of Korea to Bulgaria, Chun Bee-ho. Photo: Hristo Kassabov, BTA

to education and science in the government's remaining months.

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On February 13, 2013, BTA reported that four Bulgarian-made devices were delivered to the International Space Station (ISS) aboard the Progress M-18M cargo spaceship. Developed by BAS's Space Research and Technology Institute, the devices are part of the OBSTANOVKA experiment, a multinational initiative studying the effects of solar activity on humans and technology. BAS stated that the equipment would be operational once installed on the ISS hull by the next crew. The experiment is part of the global Space Weather programme involving scientists from Bulgaria, the UK, Poland, Russia, Ukraine, and Czechia.

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On April 19, 2013, BTA reported that BAS hosted an exhibition of holograms replicating artefacts from the Thracian tomb near Mezek. The event, inaugurated by BAS President Stefan Vodenicharov, featured holograms created by Holobul, in collaboration with BAS's Institute of Optical Materials and Technologies. The exhibition commemorated the 90th anniversary of Bulgarian scientist Academician Jordan Malinovski and aimed to popularize Bulgaria's rich cultural heritage. Visitors saw artefacts dating back to the 4th–3rd century BC, showcasing advanced holographic techniques based on Russian scientist Yuri Denisyuk's methods.

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On July 31, 2013, BTA reported that BAS President Stefan Vodenicharov and Eleonora Nikolova, Director of the Centre for Prevention and Countering Corruption and Organized Crime, signed a memorandum of cooperation. Under the agreement, BAS committed to conducting in-depth analyses of Bulgaria's governance and proposing reforms to eliminate corruption. The memorandum highlighted BAS's role as a guarantor of scientific integrity in addressing systemic issues. Institutes within BAS, such as the Institute for Economic Studies and the Institute for the State and Law, will lead efforts to draft a new regulatory framework.

Sofia, April 7, 2014. BTA Director General Maxim Minchev and BAS President Stefan Vodenicharov sign a cooperation agreement at the Academy's building. Photo: Petar Krastev, BTA

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On August 2, 2013, BTA reported that BAS and Sofia Tech Park formalized a cooperation agreement. The initiative aims to foster innovation by avoiding duplications in scientific infrastructure and establishing a network of laboratories and a technological transfer office. BAS will provide expertise and recruit partners for the park's development. This partnership marks a significant step in bridging scientific research with practical applications, strengthening Bulgaria's innovation ecosystem.

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On September 18, 2013, BTA reported that Luchezar Pehlivanov of BAS participated in the Joint Danube Survey 3 (JDS3), an international research expedition studying the river's ecosystem. The six-week survey aimed to assess biodiversity and environmental pressures along the Danube. Pehlivanov highlighted challenges faced by fish populations, such as overfishing and invasive species. The survey collected 68 samples, with 15 from Bulgaria's river section. Preliminary findings revealed significant human impact, including wastewater discharge, but also confirmed the region's rich biodiversity.

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On November 30, 2013, BTA reported on the Robotics and Smart Systems 2013 exhibition hosted by BAS. The event, inaugurated by Chavdar Roumenin, Director

of BAS's Institute for System Engineering and Robotics, showcased advanced robotic systems designed to improve the lives of disabled individuals. Featured exhibits included service robots, educational devices, and technologies facilitating mobility and communication. Roumenin emphasized the potential for leasing these high-cost innovations to businesses. The conference, held under BAS President Stefan Vodenicharov's patronage, focused on promoting independence and social integration for people with specific needs.

2014

On January 15, 2014, BTA reported on an exhibition at Sofia's Sredets Hall, showcasing philanthropy in Bulgaria from the late 19th to mid-20th century. Organized by BAS researchers Rossitsa Stoyanova and Tsvetana Velichkova, the exhibition featured photographs and documents of renowned benefactors such as Vassil Aprilov and Peter Beron. It emphasized donations made to BAS, which continues to be a cornerstone of Bulgarian science. Visitors could explore how these philanthropists funded schools, libraries, hospitals, and cultural institutions, contributing significantly to the nation's progress.

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On February 20, 2014, BTA reported that BAS announced its initiatives to mark its 145th anniversary. BAS President Stefan Vodenicharov highlighted that BAS scientists were responsible for 73% of Bulgaria's 2013 patents and played a pivotal role in introducing the Internet to Bulgaria. Vodenicharov

Sofia, November 1, 2014. President Rosen Plevneliev presents an Order of the Balkan Range, First Class, to Academician Stefan Vodenicharov for his contributions to the development of science, and the Honorary Sign of the head of State to BAS and the Union of Scientists in Bulgaria. Photo: Vladimir Shokov, BTA

Sofia, October 31, 2014. Sofia Mayor Yordanka Fandakova receives the Honorary Sign of BAS from its President Stefan Vodenicharov for the Academy's 145th anniversary. Photo: Petar Krastev, BTA

Sofia, October 30, 2014. BTA Director General Maxim Minchev receives the 145 Years of BAS Honorary Sign from BAS President Stefan Vodenicharov at a solemn ceremony. Photo: Vladimir Shokov, BTA

noted that the Academy's participation in EU projects was exceptionally successful, with a 34% approval rate compared to Europe's 21% average. Various events have been organized throughout the year to commemorate this milestone, including a gala at the Sofia Opera and Ballet on October 14.

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On February 28, 2014, BTA reported that BAS hosted a two-day forum on Bulgaria's demographic challenges, attended by over 150 scholars. Discussions emphasized financial incentives for well-educated families, linking welfare benefits to parental care quality, and addressing regional depopulation. Atanas Atanassov of BAS argued that differentiated family support could mitigate demographic decline. Experts noted that life expectancy depends heavily on lifestyle (50%), urging reforms to promote public health and family well-being.

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On March 28, 2014, BTA reported that BAS's Institute of Biodiversity and Ecosystem Research concluded its BulPlantNet Project, establishing 56 small, protected sites to conserve 47 rare plant species. Funded by the EU LIFE+ Programme, the initiative created a network for species like Bulgaria's unique plants. Dimiter Peev emphasized the importance of voluntary cooperation with private landowners.

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On April 29, 2014, BTA reported that BAS hosted a scientific conference honouring the canonization of Pope John XXIII and Pope John Paul II. Held under the auspices of Vice President Margarita Popova, the event highlighted the contributions of the two pontiffs to Bulgaria and global Christianity. Popova praised Pope John Paul II for declaring Sts. Cyril and Methodius co-patron saints of Europe, acknowledging Bulgaria's medieval contributions to spreading their legacy.

Sofia, October 14, 2014. Historian Georgi Markov and Simeon Saxe-Coburg-Gotha are among the guests of a solemn concert at the Sofia Opera and Ballet, which marks BAS' 145th anniversary. Photo: Petar Krastev, BTA

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On May 12, 2014, BTA reported on joint celebrations by BAS and the Academy of Sciences and Arts (MASA) of North Macedonia to honour Sts. Cyril and Methodius Day. BAS President Stefan Vodenicharov and MASA President Vlado Kambovski laid wreaths at the Sofia monument dedicated to the saints. The event included a liturgy and signing of a cooperation agreement for 30 joint science projects. Vodenicharov described the collaboration as a testament to shared spiritual values between the two nations.

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On July 5, 2014, BTA reported that BAS's Space Research and Technology Institute launched two experiments involving space radiation and microgravity. The first experiment used a dosimeter aboard the Russian satellite Foton-M4 to study the effects of space conditions on biological organisms, including geckos. The second experiment, conducted on the International Space Station, involved chemical and biological samples to examine long-term exposure to open space.

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On June 18, 2014, BTA reported on BAS's warning about Sofia's vulnerability to earthquakes during an international conference. Emil Botev, head of BAS's Seismology Department, stated that a magnitude 7 quake could endanger over 2 million residents and cause €20 billion in damages. Experts urged stricter construction regulations and retrofitting of older buildings.

Yordan Milev emphasized that proactive measures are crucial, as such earthquakes occur approximately every 200 years.

2015

On January 30, 2015, BTA reported that Deputy Prime Minister and Labour and Social Policy Minister Ivailo Kalfin and BAS President Stefan Vodenicharov agreed to establish an expert council within BAS to modernize Bulgaria's National Strategy for Demographic Development (2012-2030). The council will support the National Council on Demographic Policy, focusing on priority areas such as quality of life, work motivation, and poverty alleviation. Kalfin emphasized the need for updated measures and greater visibility of the council's work to address pressing demographic challenges.

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On February 16, 2015, BTA reported that BAS's Cyrillo-Methodian Research Centre collaborated with the Earth and Man National Museum in Sofia to present an exhibition titled "The Church in Samuel's Bulgaria: Roots and Heritage." The exhibition, marking the Assumption of St Constantine Cyril the Philosopher, opened on February 14 and displayed literary works, wall paintings, and architectural features from Tsar Samuel's reign (997-1014). The event focused on the Bulgarian church's history and was extended until April 12 due to high public interest.

Sofia, November 9, 2015. At an academic ceremony in the BAS Grand Hall, Ecumenical Patriarch of Constantinople Bartholomew receives an honorary degree.
Photo: Assen Tonev, BTA

Sofia, July 17, 2015. Environment and Water Minister Ivelina Vassileva and BAS President Stefan Vodenicharov present the new and updated issue of Red Book of the Republic of Bulgaria.
Photo: Vladimir Shokov, BTA

Sofia, June 3, 2016. At a solemn ceremony at BAS' building, Academician Stefan Vodenicharov presents an honorary degree to Prof. Lyudmila Verbitskaya, President of the St Petersburg University.
Photo: Hristo Kassabov, BTA

Sofia, November 21, 2016. At a solemn ceremony, BAS presents an honorary degree to Prof. Gjorge Ivanov, President of the Republic of Macedonia.
Photo: Assen Tonev, BTA

Sofia, March 18, 2016. At a ceremony in BAS' hall, Petar Mandzhoukov donates BGN 400,000 to the Academy for scientific activities in the field of Thracian studies. The donation is accepted by BAS President Stefan Vodenicharov.
Photo: Hristo Kassabov, BTA

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On March 28, 2015, BTA reported that BAS presented its 2013 activity report to the National Assembly. Despite conducting globally competitive research, the Academy faced severe funding constraints, with its state subsidy of BGN 70.75 million primarily allocated to salaries and social contributions. BAS generated BGN 41.4 million from projects and contracts, particularly through EU programs like the Seventh Framework Programme.

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On April 30, 2015, BTA reported that BAS President Stefan Vodenicharov presented the Academy's 2014 activity report to the Parliamentary Education and Science Committee. Vodenicharov noted that the BGN 77- million subsidy primarily covered wages, leaving no funds for research. He highlighted the aging scientific workforce, with only 3% of researchers under 30, and called for increased funding to address generational gaps and ensure the continuity of scientific knowledge.

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On July 18, 2015, BTA reported the unveiling of the latest three-volume edition of Bulgaria's Red Book of endangered species by Environment Minister Ivelina Vassileva and BAS President Stefan Vodenicharov. The book, which catalogues 808 plant and fungus species, 287 animal species, and 166 natural habitats, was updated to reflect the impacts of urbanization and climate change. Over 200 scientists contributed to this project, which also includes an electronic version with multimedia features.

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On November 25, 2015, BTA reported that BAS presented its findings on Bulgaria's demographic trends during a forum organized by the Ministry of Labour. BAS experts stated that achieving zero population growth was Bulgaria's most optimistic goal. Recommendations included reducing early death rates by 20%, attracting emigrants and EU immigrants, and improving economic conditions to support young families. BAS Director Mitko Dimitrov emphasized the need for targeted policies to address these challenges.

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On November 10, 2015, BTA reported that isotopes for cancer diagnostics and treatment would become available in Bulgaria by mid-2017. BAS's Institute for Nuclear Research and Nuclear Energy, with funding from the US Department of Energy, Kozloduy Nuclear Power Plant, and the Bulgarian government, acquired the TR-24 cyclotron technology. This facility will produce affordable isotopes for Bulgaria and neighbouring countries, addressing a critical healthcare need.

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On November 10, 2015, BTA reported that Ecumenical Patriarch Bartholomew was awarded an honorary doctorate by BAS during his visit to Bulgaria. The ceremony highlighted the Patriarch's contributions to interreligious dialogue, environmental advocacy, and Orthodox unity. BAS President Stefan Vodenicharov praised Bartholomew's commitment to addressing global issues, including climate change. The event was part of a broader recognition of the

Sofia, February 12, 2016. The Botanical Garden with BAS-Sofia hosts the traditional seasonal exhibition about the Ericaceae family in relation to the mass flowering of azaleas.
Photo: Assen Tonev, BTA

Patriarch's efforts in fostering peace and cooperation across religions and nations.

2016

On January 11, 2016, BTA reported that BAS President Stefan Vodenicharov faced a no-confidence vote by the BAS General Assembly. Blagoy Georgiev criticized Vodenicharov for his handling of budget negotiations and his absence from BAS meetings for seven months, attributing this to his focus on a potential presidential campaign.

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On January 12, 2016, BTA announced the receipt of equipment for the construction of the largest cyclotron in the Balkans at the Institute for Nuclear Research and Nuclear Energy with BAS. Education and Science Minister Todor Tanev attended the event, highlighting the importance of this advanced technology for cancer diagnostics and scientific research.

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On February 1, 2016, BTA reported that eight historians from BAS and Sofia University sent a letter to the Education Ministry advocating for the term "Ottoman domination" rather than "bondage" to describe Bulgaria's historical period under Ottoman rule. This sparked a debate, with other BAS historians, including Academician Georgi Markov, expressing diverging views, emphasizing ongoing academic contention on the matter.

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On March 10, 2016, BTA covered BAS President Stefan Vodenicharov's presentation of the 2014 BAS Annual Activity Report to Parliament. He noted BAS's achievements, including nearly 10,000 academic publications, while highlighting challenges like the lack of young researchers and insufficient state funding. Vodenicharov reiterated the need for sustainable support to maintain the Academy's contributions to global research.

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On April 29, 2016, BTA reported a meeting between Deputy Education Minister Krassimir Kiryakov, BAS President Stefan Vodenicharov, and Confederation of Employers and Industrialists in Bulgaria President Kiril Domuschiev to discuss collaborative projects under the Operational Programme "Science and Education for Intelligent Growth." The partnership aims to create centres of excellence and foster cooperation between BAS institutes and Bulgarian industries.

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On October 20, 2016, BTA reported that BAS's Economic Research Institute revised its GDP growth projection for Bulgaria in 2016 to 2.9%, up from the spring forecast of 1.9%. The update cited improved private consumption and export performance. However, researchers cautioned against challenges such as structural unemployment, underinvestment, and regional disparities.

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On November 22, 2016, BTA reported that President of North Macedonia Gjorge Ivanov was awarded an honorary doctorate by BAS for his contributions to law studies, education, and civil society. At the ceremony, BAS President Stefan Vodenicharov praised Ivanov's academic achievements and efforts to strengthen bilateral relations between Bulgaria and North Macedonia.

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On December 21, 2016, BTA reported that BAS hosted the Second National Olympic Natural Science and Innovation Conference. Participants included students from Bulgaria's national Olympic teams in disciplines like mathematics, physics, and informatics, who collectively have won over 700 medals in international competitions.

2017

On January 24, 2017, BTA reported that the Environment Ministry provided BGN 17 million in funding to BAS institutes over the past two years. This allocation supported critical environmental research and activities under two Financial Mechanism programs of the European Economic Area. Of the total, BGN 11.2 million were channelled into projects managed by the Environment Ministry, while an additional annual budget of BGN 2.5 million was allocated to BAS's National Institute of Meteorology and Hydrology and the Institute of Oceanology. Moreover, the Enterprise for Management of Environmental Protection Activities granted nearly BGN 750,000 annually in 2015 and 2016. Environment Minister Ivelina Vassileva highlighted the importance of BAS's scientific contributions to addressing environmental challenges, emphasizing the collaboration between the Ministry and the Academy in tackling critical national and regional issues.

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On January 31, 2017, BTA announced BAS's plan to implement a BGN 2 million program aimed at retaining young scientists within Bulgaria. The program, initiated under the leadership of BAS President Academician Julian Revalski, was designed to address the alarming shortage of young researchers. Of the 2,700 scientists employed at BAS, only 240 were under the age of 35. Revalski noted that financial constraints and low starting salaries, which averaged just over BGN 500 for assistant professors, discouraged young talent from pursuing scientific careers in the country. The program included provisions for salary supplements, funding for conference participation, and resources for research equipment. BAS expected around 200 young researchers to benefit from the initiative, which sought to enhance career opportunities and reduce the trend of emigration among talented scientists.

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On February 4, 2017, BTA reported a groundbreaking initiative by BAS linguists who identified 40 distinct Bulgarian dialects and developed an innovative dialect atlas. The atlas delineates the linguistic diversity across regions and will soon feature an interactive online map. This map allows users to click on specific areas to hear spoken samples of regional dialects. BAS researchers emphasized the project's significance in preserving Bulgaria's linguistic heritage and providing a tool for both academic and public exploration of the country's rich cultural diversity.

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On February 23, 2017, BTA reported on an important meeting between representatives of BAS and the Academy of Sciences and Arts of North Macedonia. The meeting, hosted by BAS, highlighted the successful completion of 30 joint research projects and laid the groundwork for future cooperation. BAS President Academician Julian Revalski and Chair of the Academy of Sciences and Arts of North Macedonia Taki Fiti discussed and approved a list of new collaborative projects for 2017–2019, emphasizing the shared scientific and cultural goals of the two institutions.

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On May 10, 2017, BTA celebrated the remarkable achievements of Bulgarian students at the 34th Balkan Mathematical Olympiad in Ohrid, North Macedonia. The team, supported by BAS, clinched the top position, earning four gold

and two silver medals. Gold medals were awarded to students from the Sofia School of Mathematics and the Science and Mathematics High School in Burgas, while silver medals went to participants from the American College in Sofia and the Sofia School of Mathematics. The team was led by mathematicians from the BAS Institute of Mathematics and Informatics, including Dragomir Dragnev.

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On May 19, 2017, BTA reported that the Bulgarian Parliament adopted BAS's activity reports for 2015 and 2016, recognizing the Academy as a cornerstone of the nation's scientific and cultural identity. The reports detailed BAS's substantial academic output, with over 17,000 publications during the two years, and highlighted persistent challenges such as low salaries and difficulties recruiting young researchers. In the parliamentary debate, MPs praised BAS's contributions but called for reforms to address underperforming units and improve financial support. BAS President Revalski emphasized the Academy's commitment to excellence and its strategic role in advancing science and education in Bulgaria.

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On November 17, 2017, BTA reported on the presentation of BAS's comprehensive report evaluating the feasibility of the Belene Nuclear Power Plant. The report, led by Alexander Tassev, provided a nuanced analysis of the project's economic and energy implications, outlining scenarios under which the plant could be financially viable. These included an investment of EUR 10.5 billion and a 70:30 financing ratio between borrowed and owned capital. The report predicted potential energy shortages in the Balkans after 2035 and emphasized the role of nuclear energy in ensuring long-term energy stability. BAS stressed that while it did not endorse specific policy decisions, its findings offered valuable data for national energy planning.

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On December 20, 2017, BTA announced that the Bulgarian government pledged an extra BGN 15 million for BAS in 2018 following extensive negotiations. The funding increase brought BAS's total budget to BGN 98 million, addressing critical needs such as salary adjustments and doctoral grants. BAS President Academician Julian Revalski expressed satisfaction with the agreement, which marked a significant step toward stabilizing the Academy's finances. The additional funds were earmarked for priority projects, including demographic research, energy strategies, and youth programs. BAS's General Assembly welcomed the development as a move toward ensuring the Academy's continued contributions to Bulgaria's scientific and social advancement.

2018

On January 4, 2018, BTA reported that the Bulgarian government approved an additional allocation of BGN 15 million to BAS for 2018. This decision, formalized through an agreement between the Council of Ministers and BAS, was part of a broader strategy to strengthen science and innovation in Bulgaria. The funds were aimed at addressing

Sofia, October 27, 2017. Academician Vesselin Drensky, Director of the Institute of Mathematics and Informatics, receives an honorary sign from Deputy Education Minister Ivan Dimov at the solemn marking of the Institute's 70th anniversary, held in BAS' Grand Hall. Photo: Tsvetomir Petrov, BTA

Sofia, June 29, 2017. Assoc. Prof. Liliya Dimitrova from the National Institute of Geophysics, Geodesy and Geography within the BAS Presents Its Institutes campaign. Photo: Minko Chernev, BTA

Sofia, September 19, 2017. In BAS, opera singer Boyko Zvetanov receives the Nicola Ghiuselev International Award for opera performance and fine art for 2017. Photo: Minko Chernev, BTA

underfunding issues and supporting critical research activities. BAS leadership welcomed the move, noting that these additional resources would enable the Academy to stabilize operations, improve research conditions, and enhance salaries for its staff.

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On January 5, 2018, BTA highlighted BAS's release of an edited version of its 1,000-page report on the feasibility of the Belene Nuclear Power Plant. The published version, comprising over 300 pages, excluded commercially sensitive information. The report emphasized a potential energy shortfall in Bulgaria and the region by 2030, suggesting the need for new basic generating capacities of 2,000 MW. The study concluded that the Belene project could be viable under specific conditions, such as favourable investment costs and financing ratios. The report also discussed alternative energy sources, including hydropower and renewable energy, to address future capacity shortages.

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On January 17, 2018, BTA announced the involvement of BAS astronomer Nevena Markova in an international team that discovered a higher prevalence of massive star formations in the universe than previously thought. This breakthrough, published in the Science Magazine, underscored the critical role of massive stars in shaping the evolution of galaxies and transforming the early universe into its present form. BAS described the discovery as a milestone in understanding cosmic evolution, attracting significant attention from scientific communities in Britain, Germany, and Spain.

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On February 7, 2018, BTA reported on a collaborative study by BAS's Institute of Biodiversity and Ecosystem Research and Greenpeace Bulgaria, which revealed microplastics pollution in the Black Sea. The study, part of the global "Break Free from Plastic" campaign, identified fibres from fishing nets and ropes as predominant pollutants. Data collected during the survey aligned with the EU Marine Strategy Framework Directive and highlighted the urgent need for policies to address marine plastic pollution. BAS researchers

Sofia, April 2, 2018. The Roberta humanoid robot of the Institute of Robotics with BAS greets those attending the first training within the Institute's project Cyber-Physical Systems for Pedagogical Rehabilitation in Special Education (CybSPEED). Photo: Hristo Kassabov, BTA

emphasized the implications for marine ecosystems and public health.

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On September 8, 2018, BTA reported that a BAS team from the Space Research and Technology Institute won a gold medal at the Invent Arena 2018 exhibition in Czechia. The team, led by Peter Getsov, Professor Garo Mardirossyan, and Svetoslav Zabunov, developed an anti-drone reconnaissance system based on a tethered aerostat. Designed to detect and neutralize unauthorized drone activities, the system has applications in counter-terrorism and the protection of sensitive facilities. BAS hailed this recognition as evidence of its researchers' innovation and contribution to global technological advancements.

2019

On January 4, 2019, BTA reported that the National Institute of Meteorology and Hydrology (NIMH), newly transferred to the Education and Science Ministry, had begun new initiatives, including a significant project on air quality in Sofia. This project aims to scientifically assess the main sources of air pollution, specifically differentiating between the impact of transport and household heating. NIMH Director Plamen Ninov highlighted the urgency of this work, given the ongoing public debate. Additionally, NIMH launched a project with the Interior Ministry to enhance flood warning systems. The institute assured the public of uninterrupted operations despite its separation from BAS at the start of 2019.

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On March 23, 2019, BTA highlighted groundbreaking research by the Institute of Molecular Biology at BAS. Led by Iva Ugrinova, the team demonstrated the potent anti-tumour effects of cannabis-derived cannabidiol during in vitro experiments. The extract was effective against nine lines of tumour cells, including those from mammary gland, lung, and uterine cervix cancers. The research is part of the national program BioActiveMed, which involves seven BAS institutes and five

Sofia, April 10, 2019. BAS hosts the marking of 40 years since the spaceflight of the first Bulgarian cosmonaut, Georgi Ivanov, bringing the first cosmonauts of five European countries to Sofia. Cosmonauts from the Intercosmos international programme Pavel Vinogradov (Russia), Vladimir Remek (Czechia), Miroslaw Hermaszewski (Poland), Bertalan Farkas (Hungary), and Ivan Bella (Hungary), as well as cosmonaut Boris Egorov's wife Tatyana Egorova arrive in Bulgaria for the anniversary's marking.
Photo: Vladimir Shokov, BTA

Sofia, February 5, 2019. BAS President Julian Revalski presents Academician Plamen Kartalov with a Marin Drinov Honorary Sign. The ceremony is held in the office of the BAS President. Photo: Minko Chernev, BTA

Sofia, October 2, 2019. The heads of the most successful projects under the Programme for Supporting Young Scientists and PhD Students at BAS are awarded at the National Archaeological Museum of BAS. Education and Science Minister Krasimir Valchev takes part in the award ceremony.
Photo: Assen Tonev, BTA

Sofia, November 15, 2019. Education and Science Minister Krasimir Valchev attends the official opening at the Institute of Molecular Biology with BAS of a Centre for Advanced Microscopy for Fundamental and Applied Research in Biology, Medicine and Biotechnology. Photo: Assen Tonev, BTA

Sofia, February 26, 2019. The Bulgarian Academy of Sciences marks the 170th birth anniversary of renown statesperson and long-standing BAS president Ivan Evstratiev Geshov. An exhibition with original documents is displayed in the Academy's lobby.
Photo: Tsvetomir Petrov, BTA

universities. Ugrinova expressed hopes for clinical trials and called for changes to Bulgarian regulations restricting access to cannabidiol for research purposes.

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On April 3, 2019, BTA reported on a conference hosted by BAS, organized in partnership with the Atlantic Club in Bulgaria, to discuss Pope Francis' historic visit. The event featured speeches by Apostolic Exarch Christo Proykov, Atlantic Club President Solomon Passy, and BAS Vice President Vasil Nikolov. The forum, titled "Pope Francis in Bulgaria," explored themes of interfaith dialogue and peace, with participants emphasizing the global attention Bulgaria would receive during the papal visit. The discussions also touched on the Pope's diplomatic efforts and his emphasis on Christian unity.

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On July 1, 2019, BTA reported that microbiologists from the Stephan Angeloff Institute of Microbiology at BAS had developed rapid tests for detecting common foodborne pathogens. Hristo Naydenski explained that the tests utilize molecular biology techniques to identify specific pathogens, including their concentrations, within a single day. The innovative diagnostic tools are particularly relevant during the summer, a high-risk season for foodborne illnesses. Naydenski also emphasized the importance of proper food handling and hygiene to prevent contamination, especially with the rising trend of consuming unpasteurized milk.

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On October 2, 2019, BTA reported the opening of an exhibition celebrating the 150th anniversary of BAS. Held at the Lovers' Bridge in Sofia, the event showcased 60 posters highlighting BAS's contributions since its founding in 1869. Visitors could learn about the development of the Vitosha computer, Bulgaria's first electronic calculator, cutting-edge robotics, and other groundbreaking innovations. The exhibition aimed to emphasize BAS's enduring role in advancing science, technology, and culture in Bulgaria. The anniversary celebrations culminated with a formal event on October 12, commemorating the Academy's rich legacy.

2020

On February 11, 2020, BTA reported that preparations for a Bulgarian exhibition at the Louvre, titled "Art and Cultures in Bulgaria: 16th-18th cc," had become the subject of significant controversy. The Bulgarian Academy of Sciences (BAS), along with the Holy Synod of the Bulgarian Orthodox Church, voiced strong opposition, citing concerns over the exhibition's concept. BAS argued that presenting Christian icons alongside Islamic artifacts, such as prayer rugs and Korans, risked portraying Bulgaria inaccurately as "European Turkiye." This sparked a public outcry and drew attention to the broader implications of how Bulgarian culture and history are represented internationally.

Emmanuel Moutafov, Director

of BAS's Institute of Art Studies, argued that such a portrayal lacked scholarly rigor and failed to reflect Bulgaria's cultural identity. BAS proposed alternative themes, such as the early European civilization from the 6th-7th century BC or the Second Bulgarian Kingdom (12th-14th century), which would provide a more balanced and historically accurate representation. After consultations with stakeholders, including the French Ambassador in Sofia, the Culture Ministry announced the cancellation of the exhibition.

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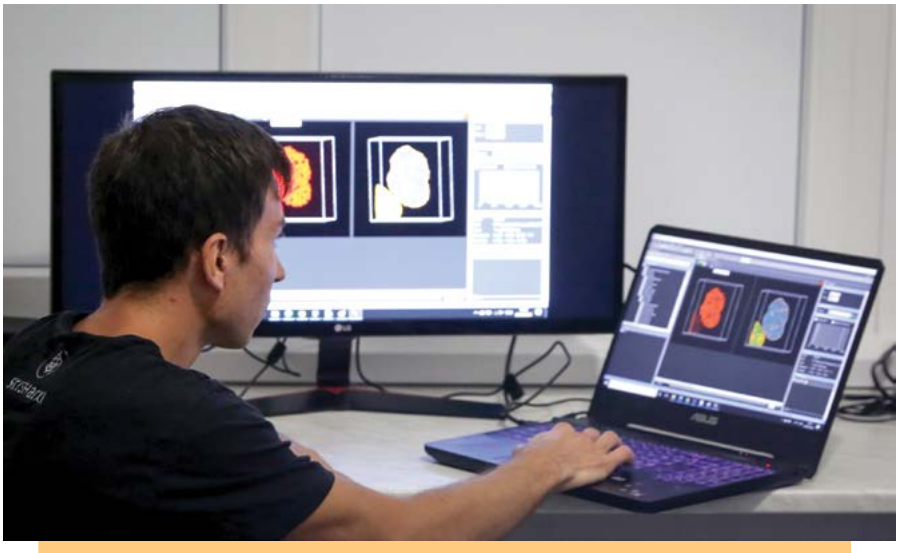
On March 12, 2020, BTA reported that BAS had mobilized its researchers to assist the government in addressing the COVID-19 pandemic. BAS President Julian Revalski established a working group led by Penka Petrova, Director of BAS's Institute of Microbiology, to provide expert advice to the national coronavirus task force. This team of scientists contributed to critical areas, including biomathematical modelling to predict the virus's spread and the development of strategies for resource allocation in hospitals.

Nikolai Vitanov from BAS's Institute of Mechanics presented mathematical forecasts suggesting that strict adherence to quarantine measures could significantly reduce the infection rate within three weeks. BAS also engaged in research to develop a COVID-19 vaccine, supported by donations from various institutions. Additionally, BAS researchers worked on innovations such as rapid diagnostic tools and protective equipment.

Sofia, September 29, 2020. The Immunology Laboratory at the Institute of Microbiology with BAS. Photo: Minko Chernev, BTA



Sofia, September 29, 2020. A laboratory at the Institute of Molecular Biology with BAS. Photo: Minko Chernev, BTA

Sofia, April 12, 2021. At the BTA National Press Club, BTA Director General Kiril Valchev and BAS President Julian Revalski sign a cooperation agreement between the two institutions. Photo: Hristo Kassabov, BTA
Photo: Assen Tonev, BTA

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On July 3, 2020, BTA reported a significant technological advancement by researchers at the Bulgarian Academy of Sciences (BAS). Scientists from the Institute of Robotics unveiled a UVC disinfection robot designed to combat the spread of COVID-19 and other pathogens. Using ultraviolet light, the robot can efficiently disinfect floors and surfaces in hospitals, public spaces, and homes, ensuring high levels of hygiene.

The innovative robot, recently patented in Bulgaria, operates autonomously, reducing the risk of human exposure to harmful viruses during cleaning processes. BAS emphasized that the robot could be a valuable tool in healthcare facilities and other environments requiring stringent infection control.

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On October 13, 2020, BTA covered a ceremony commemorating the 151st anniversary of the Bulgarian Academy of Sciences (BAS). The event, held at the Prof. Marin Drinov Hall, featured speeches from prominent figures, including BAS President Julian Revalski. Revalski highlighted the Academy's unwavering commitment to supporting Bulgaria's response to the COVID-19 pandemic, noting that BAS researchers had been working tirelessly seven days a week to assist the country during this critical time.

BAS's contributions included developing mathematical models to predict the spread of the virus, volunteering in hospital laboratories, and working on innovative solutions like diagnostic tools and potential vaccines. Sofia Mayor Yordanka Fandakova and other guests praised the Academy's efforts to address the challenges posed by the pandemic.

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On May 28, 2020, BTA reported that the Bulgarian Academy of Sciences (BAS) had issued a strong statement condemning historical inaccuracies in an exhibition at the Russian Cultural Centre in Sofia. The exhibition claimed that Sts. Cyril and Methodius were "reformers of the Slav alphabet" and "first disseminators of literacy and education in Russia," misrepresenting their role and Bulgaria's pivotal contribution to Slavic culture.

BAS referenced renowned Russian scholars, including Academician Dmitry Likhachov, to affirm that the Glagolitic alphabet, created by

Cyril and Methodius, originated from the Bulgarian dialect of the 9th century. BAS criticized the exhibition for distorting historical facts and undermining Bulgaria's contributions to the development of the Cyrillic script, which has since become a cornerstone of Slavic culture.

The Academy's position was supported by Bulgarian political and cultural figures, who called for a formal response to this perceived historical revisionism.

2021

On January 5, 2021, BTA reported that 37 Bulgarian scientists, including 25 researchers from BAS and 12 professors from Sofia University, were listed among the world's top 2% of scientists. This prestigious ranking, compiled by Stanford University, evaluates researchers based on the number of publications and citations in Scopus, the leading scientific database.

The list includes over 160,000 researchers out of six million evaluated globally, covering 22 scientific fields and 176 subfields. BAS representatives highlighted this achievement as a testament to the institution's high scientific standards and its contribution to global research. Fields represented by BAS scientists ranged from physics and chemistry to environmental sciences and engineering, underscoring the Academy's multidisciplinary excellence.

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On February 10, 2021, BTA announced the opening of the annual

Sofia, June 15, 2021. BAS and the Georgi Rakovski National Defence College sign an agreement on cooperation and joint activity at the College. Participating in the ceremony are BAS President Julian Revalski and the National Defence College head, Major General Grudi Angelov. Photo: Assen Tonev, BTA

Sofia, December 16, 2021. Prof. Hassan Chamati, head of the Institute of Solid State Physics, Bulgarian Posts Executive Director Deyan Daneshki, BAS President Julian Revalski, and Prof. Peter Boyvalenkov, Director of the Institute of Mathematics and Informatics. Photo: Tsvetomir Petrov, BTA

exhibition "Bulgarian Archaeology 2020," organized by the National Archaeological Institute and Museum at the Bulgarian Academy of Sciences (NAIM-BAS) in collaboration with 16 other museums. The exhibition features artifacts from 27 archaeological sites excavated in 2020, including exquisite gold, silver, and bronze ornaments, ceramic figurines, and a unique coin collection.

The exhibition, which highlights Bulgaria's rich history from the sixth millennium BC to the Middle Ages, offers visitors a glimpse into the country's ancient cultures and civilizations.

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On March 19, 2021, BTA reported on the return of the "Science for Business" forum, organized by BAS and the Bulgarian Small and Medium Enterprises Promotion Agency. The event, held online due to COVID-19 restrictions, showcased BAS's most applicable research projects, including prototypes of a COVID-19 vaccine, PCR pathogen detection kits, and innovative air disinfection devices.

The forum highlighted collaborations between BAS and Bulgarian enterprises, offering solutions in 3D digitization, energy efficiency, robotics, and environmental protection. A key mission of the event was to strengthen the connection between science and business, creating opportunities for practical applications of cutting-edge research. Participants included entrepreneurs, researchers, and innovation enthusiasts.

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On July 8, 2021, BTA reported that BAS signed a new cooperation agreement with the Russian Academy of Sciences (RAS) to strengthen scientific collaboration. The agreement, signed remotely by BAS President Academician Julian Revalski and RAS President Alexander Sergeev, includes a roadmap for joint research projects across various disciplines, including fundamental space research, with 35 projects already underway in this area.

The agreement facilitates the exchange of scientific and technical information, joint conferences, and training programs for young

Sofia, December 16, 2021. A series of two postage stamps and a special postmark "Bulgarian scientists: 125 years since the birth of Academician Nikola Obreshov and 125 years since the birth of Academician Georgi Nadzhakov" are presented at BAS. The artist of the stamps is Assoc. Prof. Stoyan Dechev.
Photo: Tsvetomir Petrov, BTA

researchers. The remote signing ceremony, attended by the Russian Ambassador to Bulgaria and the Bulgarian Ambassador to Moscow, underscored the longstanding partnership between the two academies and their shared commitment to advancing scientific innovation.

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On April 30, 2021, BTA reported that the Bulgarian Academy of Sciences (BAS) received the prestigious Japanese Foreign Minister's Award for its contributions to fostering Bulgarian-Japanese relations in science, innovation, and culture. The award was presented by Japanese Ambassador Hiroshi Narahira to BAS President Julian Revalski during a special ceremony.

Revalski expressed gratitude for the recognition, emphasizing BAS's long-standing collaboration with Japanese institutions, which includes joint research initiatives and cultural exchanges. The award was seen as a testament to BAS's dedication to promoting international cooperation and advancing scientific and cultural understanding between Bulgaria and Japan.

2022

On January 13, 2022, BTA reported the opening of the exhibition "Infirmaries in Antiquity and the Middle Ages," organized by the National Museum of Anthropology at BAS. This unique display highlights the evolution of hospitals as healthcare institutions, detailing their structure, funding, educational roles, and medical achievements.

The exhibition, a collaborative effort with the Museum of Medicine at Plovdiv Medical University and the Svishtov Museum of History, is supported by the Ministry of Culture. It commemorates the 15th anniversary of the National Museum of Anthropology, the only museum in Bulgaria dedicated to palaeoanthropology and the study of living populations. Visitors can explore the exhibition at the museum's Sofia location from January 14 to June 30, 2022, diving into how healthcare shaped human civilization.

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On February 8, 2022, the General Assembly of BAS expressed strong dissatisfaction with the planned subsidy for the Academy in 2022, as reported by BTA. BAS researchers criticized the government for setting their salaries significantly lower than those of their counterparts in public universities, a disparity that risks demoralizing young scientists.

In 2021, the minimum salary for an Assistant Professor at BAS was BGN 946, which is only 72% of the equivalent salary at public universities. BAS highlighted its indispensable contributions to national crises, including its role during the COVID-19 pandemic, maintaining vital monitoring networks and offering expert input on seismic activity, radiation, and environmental monitoring. The General Assembly called for immediate dialogue with the government, warning of possible long-term protest actions if their grievances remained unaddressed.

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On February 9, 2022, BTA reported that the National Archaeological Institute and Museum at BAS (NAIM-BAS) had inaugurated its 15th annual exhibition, "Bulgarian Archaeology 2021." This year's exhibition, supported by 20 other museums, features discoveries from 40 archaeological sites spanning the Palaeolithic period to the Middle Ages.

Visitors can view gold, silver, and bronze ornaments, ceramic artifacts, ancient coins, and tools, illustrating the cultural evolution of the Bulgarian lands. Open from February 16, 2022, in the Central Hall of NAIM-BAS, the exhibition underscores BAS's role in preserving and promoting Bulgaria's historical and cultural heritage.

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On February 17, 2022, BTA highlighted the upcoming launch of Lyulin-SET, a radiation-measuring device developed by the Institute of Space Research and Technologies at BAS. This device, part of the Automated Radiation Measurements for Aerospace Safety (ARMAS) module, will be sent to the International Space Station (ISS) aboard the Antares rocket on February 19, 2022.

Developed under the leadership of Tsvetan Dachev, Lyulin-SET is the 23rd BAS device designed for space applications. It will monitor space radiation levels in the Japanese section of the ISS for 6-12 months before returning to Earth for analysis. BAS researchers are also preparing two additional devices for space missions in 2022, including one bound for Mars and another for a high-altitude Virgin Galactic mission.

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On March 10, 2022, BTA reported on two new courses launched by the School Institute of the Bulgarian Academy of Sciences (SchI-BAS). These include "Robotics and the Internet of Things," led by Denis Chikurtev, and "Latest Facts about the DNA Structure in Gametes," taught by Desislava Abadjieva.

The robotics course introduces participants to robot construction, programming, and the principles of microcontrollers and sensors, while the DNA course delves into the hereditary mechanisms of gametes and the impact of external factors on DNA integrity. Designed to encourage young students' interest in cutting-edge science, the courses include practical sessions and awards for outstanding participants, such as BAS publications or vouchers for educational materials.

2023

On February 16, BTA reported that BAS President Julian Revalski sent a letter to BTA Director General Kiril Valchev, congratulating BTA on behalf of himself and BAS on the occasion of BTA's 125th anniversary. In his message, Revalski emphasized the agency's pivotal role in Bulgarian journalism, stating that "for generations of Bulgarians, the information disseminated by BTA is a symbol of professionalism and objectivity." He acknowledged the agency's credibility and impartiality, highlighting the lasting mark it has left in the history of Bulgarian journalism and its wide public trust.

Revalski also expressed BAS's deep appreciation for the partnership with BTA, particularly the agency's professional support in presenting scientific achievements, initiatives, and innovations. He wrote: "On this holiday, I would like to thank you once again for making the views of BAS scientists a sought-after and important topic in the BTA news stream. I believe that we will continue to implement our ideas for joint initiatives."

The letter concluded with Revalski wishing the BTA team good health, success in their future endeavours, and resilience in facing new challenges.

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On March 8, BTA reported that a delegation from the Bulgarian Academy of Sciences (BAS), led by its President Julian Revalski, visited the Israel Academy of Sciences and Humanities. During the visit, Revalski and Israeli Academy President David Harel signed a new Research Cooperation Agreement, reaffirming the long-standing collaboration between the two institutions. This agreement ensures continued opportunities for joint activities in areas of shared scientific interest. The two sides

Sofia, October 12, 2022. BAS President Julian Revalski presents the 2021 Journalism Award to BTA's Irina Simeonova within the solemn marking of the Academy's 153rd anniversary. Photo: Vladimir Shokov, BTA

also explored the possibility of organizing an interdisciplinary workshop in Bulgaria with the participation of Israeli scientists to foster stronger ties between the scientific communities of both countries.

The meeting was attended by BAS Vice President Stefan Hadjitodorov and Israeli Academy Vice President Margalit Finkelberg. The delegation also held discussions with representatives from Yissum, the technology transfer company affiliated with the Hebrew University of Jerusalem. At this meeting, the Yissum model for successful commercialization of research projects was presented, and the possibility of hosting a workshop in Bulgaria to explore the applicability of this model in the country was discussed.

* * *

On June 8, BTA reported that Kazakhstan is exploring opportunities for Bulgarian companies to join the Trans-Caspian International Transport Route (Middle Corridor). At a roundtable hosted by the Institute for Economic Studies of the Bulgarian Academy of Sciences in Varna, Kazakhstan's Ambassador to Bulgaria, Viktor Temirbayev, emphasized Bulgaria's strategic location for shipping via Port Burgas and enhancing road haulage through the Bulgarian-Turkish border.

The Middle Corridor links China and Europe via the Caspian Sea and the Caucasus, bypassing Russia. Temirbayev noted that in 2022, goods turnover along the route increased 2.5-fold, and he encouraged Bulgarian companies to participate in this growing transport mechanism.

At the Astana International Forum, Kazakh President Kasym-Jomart Tokayev highlighted the corridor's potential to significantly reduce transit times between China and the EU. Temirbayev also announced that the fifth meeting of the Bulgaria-Kazakhstan intergovernmental commission would take place in Sofia to review existing cooperation and explore new opportunities.

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On May 26, 2023, BTA reported the signing of a partnership agreement between BTA and the Institute of Ethnology and Folklore Studies with Ethnographic Museum at the Bulgarian Academy of Sciences (IEFSEM – BAS). BTA Director General Kiril Valchev stated, "BTA has a responsibility to tell stories that are of greater value than the issues of the day," highlighting the deepening collaboration between BTA and BAS.

Under this agreement, IEFSEM and its museum will regularly provide updates on projects that preserve and share Bulgarian cultural heritage. The institute also presented its European project, Mediteller, which aims to document and showcase little-known cultural practices from Bulgaria, Spain, and Italy through a storytelling platform.

The project involves six research institutes and will produce digital content about local traditions, festivals, crafts, and folklore. IEFSEM Deputy Director Iglika Mishkova emphasized empowering local communities and creating networks for cultural preservation.

Valchev noted BTA's unique capability to amplify these efforts through its network of correspondents across Bulgaria and its English-language service, ensuring global visibility for local traditions.

* * *

On July 17, 2023, BTA signed another partnership agreement with the National Archaeological Institute with Museum (NAIM) at BAS. During the signing ceremony at BTA's National Press Club, Director General Valchev praised NAIM as Bulgaria's oldest museum, founded after the country's liberation, with Marin Drinov as a key figure behind its establishment.

NAIM Director Hristo Popov emphasized the agreement's role in ensuring consistent dissemination of Bulgarian archaeology's achievements. He announced several upcoming international collaborations, including an exhibition on Thracian culture in partnership with the Getty Museum in Los Angeles, where Bulgaria will contribute two-thirds of the artifacts. Additional exhibitions with North Macedonia and Serbia are also planned.

Valchev highlighted BTA's support for archaeologists, offering free access to its press clubs for sharing discoveries with local and national audiences.

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On October 20, 2023, BTA reported a meeting between Bulgarian Academy of Sciences (BAS) President Julian Revalski and Bulgarian News Agency (BTA) Director General Kiril Valchev, held on the occasion of the 185th birth anniversary of Marin Drinov.

During the meeting, Valchev highlighted Marin Drinov's significant contributions as a founder of the Bulgarian state, his role in drafting the Constitution, and his influence in designating Sofia as the capital. Valchev described Drinov as "the first Bulgarian historiographer" for his pioneering works on Bulgarian history.

To mark the occasion, Valchev awarded a commemorative medal celebrating BTA's 125th anniversary to Academician Revalski, expressing gratitude for BAS's support, particularly through its Marin Drinov Publishing House, which published books commemorating the agency's milestone. Valchev underscored BTA's role as a Balkan

Smolyan, July 1, 2023. Prime Minister Nikolay Denkov participates in the opening of the new robotic telescope of the Institute of Astronomy with BAS at the Rozhen National Astronomical Observatory.
Photo: Hristina Georgieva, BTA

news hub and its unique partnership with BAS, which includes weekly publications about the Academy's activities.

Valchev proposed a special edition of BTA's LIK magazine to coincide with BAS's 155th anniversary in October 2024, featuring a retrospective of BTA's coverage of the Academy over the past 125 years. He noted that such an issue would honour Marin Drinov's legacy, emphasizing the importance of preserving institutional memory. Revalski warmly supported the idea, acknowledging its significance for the upcoming anniversary.

Following the meeting, Revalski and Valchev laid wreaths and flowers at Marin Drinov's monument in Sofia. Revalski reflected on Drinov's vision of transforming the Bulgarian Learned Society into a science academy and his belief in the power of knowledge, education, and science as a source of national pride. He also noted Drinov's firm conviction that science transcends borders and serves as a bridge between nations—a sentiment still relevant today, 185 years after his birth.

Sofia, May 26, 2023. Julia Popcheva of the Institute of Ethnology and Folklore Studies with Ethnographic Museum with BAS, the head of the Bulgarian team of the MEDITELLER project, Dr Iglika Mishkova, Institute Director Vladimir Penchev, BTA Director General Kiril Valchev, Prof. Manuela Gieri, project manager Prof. David Sanchez, and Chief Assistant Bozhidar Parvanov at the BTA National Press Club in Sofia during the Institute's news conference on "Storytellers: Europe and Preserving Local Cultural Heritage". Within the event, BTA and the Institute signed a partnership agreement.
Photo: Hristo Kassabov, BTA

Celebrations in 2024

(through the lens of the BTA English-language news service)

The Bulgarian Academy of Sciences (BAS) celebrated its 155th anniversary with a number of initiatives in 2024. The Bulgarian News Agency reported them all and was an active participant in some. You will find below the highlights of the BTA coverage of the BAS anniversary.

In Braila, with participants in the 19th World Meeting of Bulgarian Media

In June 2024, BAS marked its 155th anniversary with a ceremony in Braila, Romania. It was joined by participants in the 19th edition of the World Meeting of Bulgarian Media, which was organized by BTA in three Ukrainian cities with large Bulgarian communities: Odesa, Bolgrad and Izmail.

The Bulgarian delegation included Bulgarian BAS President Academician Julian Revalski, Bulgarian National Radio Director General Milen Mitev, BTA Director General Kiril Valchev, Bulgarian Ambassador Radko Vlaykov, BTA Deputy Director General Evgenia Drumeva, the head o f the Council for Electronic Media Gabriela Naplatanova, the Rector of Sofia University Prof. Georgi Valchev, as well as representatives of Bulgarian news outlets and Bulgarian-language media from countries around the world.

In Braila, the delegation was welcomed in the courtyard of the Church of the Ascention of Christ, known as the Bulgarian Church, by the city's mayor, Viorel Marian Dragomir, and Father Ion Bujoy. They welcomes the guests from Bulgaria and shared details about efforts to preserve and restore the church.

In the church courtyard, a commemorative plaque is mounted to honour the establishment of the first Bulgarian Learned Society, which later evolved into the Bulgarian Academy of Sciences. The inscription on the plaque reads: "On this site stood the house where, in 1869, Bulgarian emigrants laid the foundations of the Bulgarian Academy of Sciences." Wreaths were placed at the commemorative plaque.

The Learned Society was set up by Bulgarian immigrants in 1869 in a private house. On October 28, 1878, it was decided to move the Bulgarian Learned Society from Braila to the new capital of Bulgaria - Sofia. The house in which the Society was founded was demolished and the Church of the Ascension was built there. It came to be known among the local people as "Biserica Bulgariasca".

Bulgarian-language services have not been held in this church since the 1950s but there is still a "Bulgarian Church" sign at the entrance, and inside, along the names of Bulgarian donors, are icons of Sts Cyril and Methodius, St Tryphon and St Marina.

"The greatest wealth of Bulgaria are its people," said the BAS President, Academician Julian Revalski. Here said that here once stood the house of Varvara Hadzhiveleva, a bright Bulgarian woman who agreed to host in her home the founding meeting of the Bulgarian Learned Society. "It was a great achievement for its time, because you can imagine a nation that had no state, and this nation woke up and its brightest minds created the Bulgarian Learned Society as one of the key elements of the Bulgarian Revival," he added. He said that the founders were aware of the importance of language, history, culture and roots of the Bulgarians.

"The statute [of the Bulgarian Learned Society] said that the main goal was to spread enlightenment among all Bulgarian people and to place them alongside other

Braila, June 18, 2024. The St Kliment Ohridski University of Sofia Rector, Prof. Georgi Valchev, acting Council for Electronic Media Chair Gabriela Naplatanova, BTA Director General Kiril Valchev, BAS President Julian Revalski, Bulgarian National Radio Director General Milen Mitev, Braila Mayor Viorel Dragomir, the participants in the 19th World Meeting of Bulgarian Media, as well as Bulgarian Ambassador to Romania Radko Vlaykov mark 155 years since BAS' establishment.

nations," said Academician Revalski.

"I am very grateful that BTA, the Bulgarian National Radio and the Bulgarian National Television, taking an almost decade-long journey to celebrate the 1,350th anniversary of Bulgaria and "14 centuries of Bulgaria in Europe", included our anniversary as one of the first to be commemorated, together with the 200th anniversary of The Fish Primer. In this way you show the importance of BAS and I hope that you will also suggest to those on whom the future of Bulgaria depends, where to concentrate their attention, and that is education, science and culture, on which our whole country depends," said the BAS President.

Academician Revalski told the Mayor of Braila that a warm feeling arises among his colleagues when the name of Braila is mentioned, because in the years when there was no Bulgaria, the city was given the opportunity to nurture a Bulgarian diaspora and to come up with the idea of establishing a Bulgarian Learned Society.

"This is the big message of the first event of the participants in the 19th World Meeting of Bulgarian Media: that in the face of Bulgarian science and education, past and present, the Bulgarian community around the world has authorities to rely on," said BTA Director General Kiril Valchev.

"On the way to Odesa, where tomorrow we will open the 19th World Meeting of Bulgarian Media, we stopped in Braila to honor the 155th anniversary of the

founding of the oldest institution of modern Bulgaria - the Bulgarian Academy of Sciences, which was established in 1869 under the name of Bulgarian Learned Society. That happened even before the Liberation [from Ottoman rule], in a house on the site where the Church of the Ascension, known as the Bulgarian Church, now stands," Valchev said in his speech.

He recalled that the first chairman, historian, and linguist Prof. Marin Drinov, who led the society for nearly two decades, wrote to the first Bulgarian literary critic Nesho Bonchev upon its founding: "We are wandering in the fog. Hold on! I have already seen a saving beam of light. Follow me!" To which Bonchev replied: "The Bulgarians will kiss your hands!"

"We, the representatives of Bulgarian media from 14 countries, are here to send a message that these words have come true. One hundred fifty-five years later, Bulgarians continue to honor the creators of 'one of the most magnificent national temples of Bulgarian science,' as Prof. Marin Drinov himself called the future academy," Valchev further emphasized.

The Director-General also stated that Prof. Drinov was right to claim that the Bulgarian nation needs an authority to lead it: an authority that understands the "common national moral interests, the most important of which are: language, faith, public education, literature, and public opinion," because these continue to ensure our future.

"In this city, where during the Bulgarian National Revival about twenty thousand Bulgarians lived, the rebels planned Bulgaria's future in the inn of Stranjata, as described by Ivan Vazov. Nearby, not far from where we stopped, was the house where, during the time of the founding of the Bulgarian Learned Society, another indisputable Bulgarian authority - Hristo Botev - lived. We are also laying flowers at his monument," Valchev noted.

Bulgaria's Ambassador to Romania Radko Vlaykov said Bulgaria's priority in Romania is "to preserve the memory of the Bulgarians and to find every opportunity to bring historical memory to the fore".

The Ambassador said he was grateful to the Romanian people for the reception they gave to the Bulgarians in the middle of the 19th century. "To be able to live, to prepare the revolutionary movement of Bulgaria and, above all, to prepare the future of the Bulgarian state," he said. In his words, the great Bulgarians in that period did not only think of how to liberate Bulgaria, but how to make it function.

"One of the priorities in our work this year is to celebrate the 155th anniversary of the Bulgarian Academy of Sciences and today we put the symbolic beginning of a series of events that will be held to show in the most convincing way that during these 155 years the oldest Bulgarian institution has always lived up to the needs of the Bulgarian people," the Ambassador explained.

"We have very good relations with Bulgaria," Braila Mayor Viorel Marian Dragomir told the members of the Bulgarian delegation in Braila.

"Here we want to talk about what the Bulgarians who lived here have done for Braila. Some of them came here for trade. Then they got involved in the life of the city. They built beautiful, nice houses, churches. There were also Bulgarians who came to Braila to find peace and shelter, to go from here into the great Bulgarian revolution. We were good hosts for them. They integrated very well into our society. They were all like brothers. We are twinned with the cities of Pleven (North Bulgaria) and Shumen (Northeast Bulgaria). We have very good relations, we visit each other several times a year," the Braila Mayor said.

Viorel Marian Dragomir noted that the Braila theatre has recently participated in several cultural events in Shumen.

"We have great respect for our ancestors. Even today we have very good relations with the Bulgarian Society of Braila. All guests from Bulgaria who come to visit our town are well received here," he stressed.

"As your ancestors felt, you should always feel at home in Braila," the Mayor told the members of the Bulgarian delegation.

New cooperation agreement with Romanian Academy of Science

BAS and the Romanian Academy signed a new cooperation agreement at a ceremony in Bucharest on September 17. The agreement is part of the initiative to celebrate BAS's 155th anniversary and was undersigned by BAS President Julian Revalski and his Romanian counterpart Ioan-Aurel Pop.

"There is much symbolism and

many similarities between BAS and the Romanian Academy," said Academician Revalski. He added that it was not just a renewal of the cooperation agreement the two institutions had but also a new beginning. "Of all the similar institutions, we have the most joint projects with the Romanian Academy," he said, mentioning also the historical connections between the two academies. "Both academies were established as literary and scholarly societies. Both were founded in Romania. The entire career of one of the first Bulgarian educators, who laid the foundation for education in Bulgaria during the Bulgarian Revival period - Petar Beron - was also connected to Romania," says the academician. He thanked the Bulgarian Ambassador to Romania, Radko Vlaykov, for the idea of holding some of the events for the 155th BAS anniversary in the Romanian capital.

Academician Ioan-Aurel Pop said he was proud that the history of the Bulgarian Academy of Sciences is intertwined with Romania. "The two academies were initially founded as literary and scholarly societies at a time when, in Romania, the official alphabet was changing from Cyrillic to Latin. We are proud that the Bulgarian Academy of Sciences was established in Romania, and our country supported such an important event," he said, recalling that the two academies were founded a few years apart - Romania's in 1866, and Bulgaria's in 1869.

"The two academies cooperate very successfully, including in research across various fields. In recent years, our cooperation has become even stronger," added the Romanian Academy President.

"The cooperation agreement between the Bulgarian and Romanian Academies of Sciences is strategic for the relations between these two neighboring and friendly countries," said Ambassador Vlaykov. "I see symbolism in the fact that the signing of this cooperation agreement is taking place today, on the day of the holy martyrs Faith, Hope, Love, and their mother Sofia," he added.

After the signing of the agreement, protocol gifts were exchanged, symbolizing both institutions and both countries. Academician Revalski gifted his host a replica of a vessel from the Thracian Treasure. The BTA Director General presented the hosts with an issue of an English-language special issue of BTA's LIK magazine dedicated to the first voyage to Antarctica and back by the Bulgarian naval research vessel Sv. Sv. Kiril i Metodii. Scientists from the Bulgarian Academy of Sciences participated in the expedition.

Academician Pop showed the Bulgarian delegation around the building of the Romanian Academy and its museum collection, sharing important moments from the history of the Academy.

Later, an exhibition was opened in the Library of the Romanian Academy in Bucharest, dedicated to the 200th anniversary of the first edition of The Fish Primer by Petar Beron.

Braila, September 18, 2024. Braila Mayor Viorel Dragomir, Bulgarian Ambassador to Romania Radko Vlaykov, the priest from the Bulgarian church Ascension of Our Lord in Braila, BAS President Julian Revalski, and BTA Director General Kiril Valchev at a prayer service led at the Bulgarian Church in Braila.

Braila, September 18, 2024. BAS President Julian Revalski, Bulgarian Ambassador to Romania Radko Vlaykov, BTA Director General Kiril Valchev, and BAS representatives laying wreaths at the monument to Hristo Botev in Braila. Photo: Bisser Todorov, BTA

Back in Braila in September

On September 18, a BAS delegation together with diplomats and Bulgarians based in Romania, visited Braila for the Academy's 155th anniversary.

Archbishop Casian of Lower Danube and Archpriest Kiril Sinev, who represents the Bulgarian Patriarchate in Bucharest, celebrated a prayer service in Bulgarian and Romanian at the Church of the Ascension in Braila. Archbishop Casian said that the church is a kind of cathedral and academy of Bulgarian-Romanian friendship, culture and spirituality. He added that there are many individuals who connect Bulgaria and Romania and are part of the two countries' history, such as Queen Theodora of Tarnovo, declared a saint by the Romanian Orthodox Church, Sophronius of Vratsa, who published his Nedelnik in 1806 in Romania's Rymnik, and Hristo Botev, who fought for cultural and spiritual freedom.

Archbishop Casian commented that Botev had insisted on the establishment in Braila, rather than in Odesa or Galatz, of the Bulgarian Learned Society. The Archbishop recalled that at the time, Braila was an important trade and spiritual centre that welcomed people from various countries, including the Bulgarian awakeners who created the Bulgarian Learned Society on October 12, 1869.

BAS President Julian Revalski said that the Bulgarian Learned Society, which later turned into BAS, was undoubtedly the most significant contribution to the Bulgarian Revival in the spiritual sphere. In remarks at the site in Braila, where the Academy was founded in 1869 and where later the Church of the Ascension was built, he recalled that the establishment of the Bulgarian Learned Society was the fruit of almost 20 years of activity of a number of Bulgarian enlighteners. Revalski noted that the "engines" of this process were historian and linguists Marin Drinov and Vasil Stoyanov and clergyman, writer and politician Vasil Drumev.

"The enthusiasm of these enlightened Bulgarians alone was not enough to establish the Society. Two other things were needed. One was the place and the other was people to support it. The Romanian land with its people was the place that served for the establishment of the Bulgarian Learned Society. The people who materially helped its creation were Bulgarians who lived here, on your land, and you welcomed them in your homes," said Revalski.

He expressed hope that Bulgarians and Romanians will continue to come to this place around October 12 to see "this Orthodox temple, which in a harmonious way connects Orthodox religion and science."

Bulgarian Ambassador Radko Vlaykov said that the founders of the Bulgarian Learned Society laid the foundations of the first institution of Bulgarian statehood even before the Liberation. „Only a year later the Bulgarian Exarchate was set up," he added.

Vlaykov thanked Archbishop Casian, describing the service he conducted together with Archpriest Kiril Sinev as "very emotional". "With your wise words, you brought us back in time, capturing the atmosphere of these 155 years.

This was especially true when you sang together, we heard the united voice of Bulgarians and Romanians. This requires of us to remember that period in the mid-19th century when the Romanian society provided full protection to Bulgarians who came to Romania to work on the future of their state. Some of the brightest figures in Bulgarian history worked to prepare the revolution for the Liberation of the Bulgarian state, while others laid the foundations of Bulgarian statehood," Vlaykov added.

Vlaykov expressed gratitude for the support the Romanian people provided to Bulgarians before the Liberation, describing the relations between the two neighbouring nations as exceptionally friendly. He noted that the 155th anniversary of BAS is an occasion to assess what the two countries have achieved together and what they can accomplish in the future. Together with Archbishop Casian, they highlighted the good partnership between them, and the good partnership within the European Union.

"Bulgarians have built wonderful things in Braila, the cosmopolitan city in the east of Romania which has been home to various ethnic communities over the centuries," Mayor Viorel Dragomir said. He played host to the celebration of the 155th anniversary of BAS.

Dragomir noted that, historically, the foreigners who settled in Braila were usually people who wanted to engage in trade, but there were also exiles seeking shelter. "We may be speaking about them in the past tense, recalling that Braila provided a home for them, but I would suggest that we speak about today and tomorrow as we commemorate them, and throw bridges to connect us with them," the host said.

The same day, Mayor Dragomir, BAS President Revalski, Ambassador Vlaykov and BTA Director General Kiril Valchev discussed Braila's cooperation with the Bulgarian towns of Shumen and Pleven, and future joint projects with various Bulgarian institutions.

Honor for BTA Director General

BAS awarded BTA Director General Kiril Valchev with the Honorary Medal of the BAS President for his professionalism, journalistic ethics and for considerable contribution in covering the BAS achievements. The distinction was presented to Valchev by BAS President Academician Julian Revalski.

The ceremony took place at BAS and was attended by the recipient's family: wife Sylvia Boteva - Valcheva, son Alexander Valchev and daughter Ana Maria Valcheva, and brother Pavel Valchev. Also present were the BAS vice presidents, corresponding member Dr. Evdokia Pashheva and corresponding member Dr. Stefan Hadzhitodorov.

The BAS President called Valchev "one of our most enthusiastic friends, outside the Academy, who in a systematic way covers the activities of BAS as it is - without glossing over the problems that need to be resolved". He recalled that eight years ago, when he became President of BAS, he first participated in Darik Radio's The Week show, which Valchev then hosted.

Academician Revalski also said, "Scientists are the kind of people who are very often absorbed in what they are doing and think it is not so important to tell the others what they are doing in plain words, or are very often shy. However, the social role of science in recent years has been extremely important and social engagement and responsibility, and what Kiril Valchev has done at Darik Radio, and now at BTA, is extremely important. I am very glad that since he took over as Director General, our relations with BTA have been very strong, and the news agency regularly reports on the BAS work with stories for domestic and foreign users."

Valchev said that the Honorary Medal is "a medal of duty - not of merit" for him "because those of us who have a tribune to speak to the others bear a huge duty to represent those who really deserve to be represented - both those who are working today in the field of science and those who in the past have left a lasting mark". He noted that this distinction has been given to such great names that have made their mark in Bulgarian history that the comparison can only be humbling.

Valchev said to him the honour is "also a recognition for the Bulgarian media". "You have listed the places where I have worked

- in the Bulgarian national Darik Radio, now in BTA, but many other media deserve recognition for their works to promote science and to show that your work does not go unnoticed".

He went on to say: "My first encounter with BAS was in the late autumn of 1996, when I was 23 years old and working as a radio host. At that time, Academician Yuhnovski was the BAS President, and the Academy faced severe funding problems. Scientists were protesting in central Sofia, outside Parliament, and there weren't many platforms for in-depth coverage of the issue. On Darik Radio, where I hosted The Day and The Week talk shows, we created a series highlighting what BAS was doing during those challenging times in terms of funding. Later, over the years, with your predecessor Academician Vodenicharov, we launched a special segment on Darik Radio every Saturday during prime time to showcase the work of BAS institutes. For the 150th anniversary of BAS, we introduced a dedicated segment where we once again highlighted the institutes' activities," says Kiril Valchev.

He said further, "I already have one award from BAS, I don't have many personal awards, but in 2020 I received, on the occasion of the 150th anniversary [of BAS], the annual award in the Electronic Media category. Then fate took me to the BTA and there, indeed, together, we did many things. We established a working agreement between BTA and BAS for weekly coverage of the activities of the BAS institutes and BAS scientists. The highlights are translated into English. We have also concluded several agreements with individual institutes that have very visible activities, for example the Archaeological Institute with Museum, the Ethnographic Institute, the Institute for Space Studies, and they additionally provide a lot of information to us."

He also talked about the resumption of BTA's LIK magazine for art and culture, which has recently put out several special issues on scientific topics: Antarctic research and space science. They also turn out to be the "best sellers" abroad and that is why we have translated the issues dedicated to Bulgarian science in Antarctica and the first and second Antarctic voyage of the Bulgarian naval research ship Sv. Sv. Kiril i Metodii, said Valchev. He presented the leadership of the Bulgarian Academy of Sciences with an issue of the magazine, which features several BAS researchers working in Antarctica.

"We put out a special LIK dedicated to space research," said also the BTA Director General. "We were able to publish three volumes for the 125th anniversary of the BTA. The first collects personal testimonies of outstanding BTA staffers. The second is about the history of BTA, authored by Panayot Denev, himself a former BTA Director General with the participation of an extremely valuable editor, Prof. Rumiana Preshlenova, who headed the Institute of Balkan Studies," noted Valchev. He added that the published third volume is with news from the BTA archives. It is again edited by prof. Preshlenova and prepared with the Prof. Marin Drinov Publishing House of BAS.

Valchev emphasized three crucial responsibilities for individuals with a public platform, as outlined by Prof. Marin Drinov.

"He said that language is the spiritual fortress of a nation, and we bear immense responsibility for how we use it, given its profound role. We also carry significant responsibility for shaping public opinion. Bulgarian media must work to cultivate an understanding that science is of immense importance for a great future, as Marin Drinov stated. The third major responsibility is the protection of national moral interests, as Prof. Drinov referred to them, and the development of the moral strengths of our people," Valchev remarked.

He said that the honour he has just received would have pleased the most his father, who was the founder of the National Polytechnic Museum. "My father spent a lot of time at the Bulgarian Academy of Sciences, he was one of the most active people in the Union of Scientists in Bulgaria and in the Science magazine", he said.

The BAS President and the BTA Director General also talked about the proper use of the Bulgarian language and the opportunities for more scientists to participate in Bulgarian politics.

The living spirit of the founders

The premiere of the film 155 Years of BAS: The Living Spirit of the Founders took place October 11 in the Prof. Marin Drinov Hall of BAS. The film's creator is Associate Professor Ina Aneva, an amateur director, screenwriter, cinematographer, and editor, as well as the scientific secretary of BAS. All participants volunteered their time and dedication to the cause to demonstrate that the spirit of the founders remains alive, continuing to illuminate the path of science in Bulgaria for 155 years.

"We are witnessing something unique because this film was created by a scientist -Associate Professor Ina Aneva, who has been part of BAS since the beginning of her career and has experienced it all to reach her current level of professional recognition. She is an established scientist, both nationally and internationally. The film is unique because she crafted it through her perspective," said Academician Julian Revalski. "Ina made this film not at the leadership's request but perhaps despite it, showing remarkable initiative, exerting effort, and not requesting any funding from us," added the BAS President. He further noted that Associate Professor Ina Aneva created the film out of love for the Academy, which was her driving force.

"As a mathematician, I am not particularly versed in artistic expressions, but I find what Associate Professor Ina Aneva has created both beautiful and inspiring. Since I will soon be handing over the baton to another President, I can do so with peace of mind, knowing there are people like Ina at BAS," said Academician Revalski.

At the beginning of the film, Academician Julian Revalski, speaking from his office at the Academy, explains that BAS is the oldest national institution in Bulgaria's modern history. It was established as the Bulgarian Learned Society BLS in Braila, nine years before Bulgaria's liberation. Academician Mihail Arnaudov collected and analyzed archival documents from this period, revealing the inspiring spirit and tireless determination of the BLS founders, as noted by Academician Revalski in the film.

The film was created without targeted funding. Its narrative traverses different eras - from the founding of BAS to the present - highlighting key moments and individuals who have contributed to the development of science and statehood in Bulgaria. The documentary portion of the film delves into the challenges faced

Sofia, September 30, 2024. BAS President Julian Revalski awards BTA Director General Kiril Valchev with the Honorary Medal of the BAS President for professionalism, journalistic ethics and for long-standing contribution in covering the Academy's achievements in the international and national media space.
Photo: Minko Chernev, BTA

Sofia, October 11, 2024. Assoc. Prof. Iva Aneva, author of the documentary "155 Years of BAS: The Living Spirit of the Founders"
Photo: Hristo Kassabov, BTA

by the Academy in recent years, including the period from 2008 to 2012. Academician Nikola Sabotinov, who chaired BAS during that time, shares insights about the difficulties, the subsequent international audit, and the protests that helped save the Academy.

The roles of Mihail Arnaudov, Marin Drinov, Vasil Stoyanov, Vasil Drumev, and Vasil Levski are portrayed with great emotion by leading Bulgarian scientists in their respective fields, including Prof. Petar Zhelev, Prof. Georgi Gadzhev, Associate Professor Dimitar Antonov, Associate Professor Svetoslav Georgiev, and student Stoimen Shopov.

The film is an inspiring story of the unyielding spirit and dedication of Bulgarian minds who have paved the way for enlightenment and national progress over the centuries. It emphasizes the creation of the Bulgarian Learned Society, driven by the relentless determination of patriots whose spirit remains alive today. This is a tale of steadfast belief in education and science as the foundation of societal progress. Even during the harshest moments of statelessness and crises, the Bulgarian Academy of Sciences has outlasted political and historical upheavals, establishing itself as a pillar of Bulgarian science, culture, and spirituality.

The feature portion of the film begins with a narrative by Academician Mihail Arnaudov, who collected and analyzed archival documents about the creation of the Learned Society in Braila, shedding light on the key moments and figures involved. The opening scene depicts a meeting between Marin Drinov and Vasil Stoyanov in Prague in 1867, where they deliberated on ways to elevate education and the spirit of the Bulgarian people. Viewers are introduced to correspondence between Marin Drinov and Nesho Bonchev, highlighting their purity of character and intellectual aspirations during this period. The film reconstructs moments

Sofia, October 11, 2024. Julian Revalski presents the documentary film "155 Years of BAS: The Living Spirit of the Founders", made on the occasion of the Academy's 155th anniversary.
Photo: Hristo Kassabov, BTA

from the correspondence between Vasil Stoyanov and Marin Drinov, where they shared their dreams and challenges in creating a sustainable organization.

Audiences also get a glimpse of the work of scientists from various institutes, presented by scientific disciplines. Activities of national significance are revealed, along with the international recognition and achievements of Bulgarian scientists on the global stage.

The Academy takes great pride in its Doctoral Training Center and the BAS Student Institute, which promise to carry forward the mission of the Academy's founders.

The film concludes with inspiring words from Academician Julian Revalski, who looks to the future with optimism and confidence in the challenges and opportunities ahead for BAS and Bulgarian science.

"This film is an amateur initiative that a group of us scientists decided to bring to life," said Associate Professor Ina Aneva in an interview with BTA. She added that she took charge of everything—from the idea to filming, scripting, and editing. "This is my first film, and I made it entirely for the 155th anniversary of BAS to showcase that the spirit of the founders is alive and that scientists continue to work with the same enthusiasm and inspiration," she noted.

The first part of the film is historical, with scientists wholeheartedly stepping into the roles of the founders of the Bulgarian Learned Society, explained Associate Professor Aneva. She specified that the film is 1 hour and 28 minutes long. A total of 53 BAS scientists participated, showcasing the Academy's greatest scientific achievements. "I am extremely grateful to Academician Julian Revalski, who supported this idea and was the first person I told about my desire to create a film," she told BTA.

A celebration at the Sofia Opera and Ballet

On October 12, BAS held a formal event at the Sofia Opera and Ballet to celebrate its 155th anniversary. BAS President Julian Revalski delivered a festive speech.

He began by acknowledging Bulgarian Patriarch Daniil, who was present at the solemn gathering.

"For us, the BAS scientists and staffers, it is a tremendous honor that you, as the head of the oldest national institution of the Bulgarian state - the Bulgarian Orthodox Church - are here among us to jointly mark the 155th anniversary of the second oldest national institution in Bulgaria, the Bulgarian Academy of Sciences," noted Academician Revalski.

BAS awarded its first Grand Prize for Science to Acad. Vassya Bankova in recognition of her outstanding scientific achievements. The award was presented by BAS President Prof. Julian Revalski and Acad. Hristo Tsvetanov, who chairs the award committee, at a formal event at the

The BAS President further said that BAS is Bulgaria's leading research center, where world-class research is conducted. "With its academic staff representing about 15% of the country's scientific potential, BAS produces nearly 40% of Bulgaria's national scientific output. BAS scientists are responsible for 40% of the projects under the European Union Framework Programmes and are now contributing to reconstruction initiatives. Our regional academic centers unite researchers from across the country. As advisors to the nation, we develop cutting-edge science for the benefit of society and serve as a vital resource for Bulgarian government institutions," Revalski said.

The BAS Assembly of Academicians and Corresponding Members honoured Acad. Vassya Bankova with the 2024 Grand Prize for Science, Revalski added.

"This award is highly prestigious, especially given the six outstanding, internationally renowned scientists who competed for it," Tsvetanov added.

Bankova gave an acceptance speech, stressing that she is "deeply honoured to have spent my entire career at the Institute of Organic Chemistry with Centre of Phytochemistry at BAS". "Since my student years, I have always deemed the Academy the temple of Bulgarian science," she added.

Vassya Bankova is a scientist with impressive research output, BAS said. Her research area of interest being the chemistry of propolis, she has made major contributions to the current knowledge of bee glue.

The BAS Grand Prize for Science was instituted in 2024 to recognize Bulgarian scientists with international recognition for outstanding achievements in science. The BAS Prize will be awarded annually in one of the following fields: natural sciences, mathematics, and engineering; life sciences; and social sciences and humanities.

"Since its transformation, the Bulgarian Academy of Sciences has been Bulgaria's most sought-after and recognizable partner in international cooperation. Our scientific archive preserves an impressive number of proposals for cooperation from European academies since the early years of the Society, which became the basis of the international relations of the Bulgarian Academy of Sciences - expanded and strengthened for more than a century, today they are a significant tendency of the Bulgarian state in the field of international scientific cooperation. Let's mention the dozens of bilateral agreements with the largest research institutions in the world, the membership in prestigious European scientific organizations such as EASAC – the European Academies' Science

Advisory Council, and ALLEA, the community of all European academies, which are guarantors of the high quality of European science, stimulate progress in research and innovation and, as unions of European scientific potential, give reasoned opinions to solve important challenges facing Europe and the world", said Academician Revalski. He pointed out that nowadays BAS is the leading scientific centre in Bulgaria, where world-class research is conducted.

"If our predecessors 155 years ago mobilized the spiritual forces of the nation in the direction of the aspirations for a new modern state and in the quest for independence and prosperity, today we are able to offer competent, objective and independent expertise on key issues in all areas of public life. In an era marked by rapid technological innovation and complex global challenges, BAS is an institution through which many of the stigmata needed for policy in any modern state can be defined. May it remain for the next 155 years - for the prosperity of our Fatherland and the Bulgarians," the BAS President said in conclusion.

At the celebration, BAS awarded its first Grand Prize for Science to Acad. The winner was picked at a competition organized by the General Assembly of BAS Academicians and Corresponding Members. The Grand Prize honours Bulgarian scientists with international recognition for outstanding achievements in science, and will be awarded annually in one of the following fields: natural sciences, mathematics, and engineering; life sciences; and social sciences and humanities.

Academician Vassya Bankova is the first winner of the Grand Prize. She received the honour in recognition of her outstanding scientific achievements in 2024. The award was presented by BAS President Julian Revalski and Academician Hristo Tsvetanov, who chairs the award committee.

"Six magnificent and world-renowned scientists participated in this competition, which makes very prestigious award that we are presenting now," said Academician Tsvetanov.

Sofia, October 12, 2024. The 155th anniversary of BAS is marked with a solemn meeting and concert at the Sofia Opera and Ballet. BAS President Julian Revalski gives a speech. Photo: Nikola Uzunov, BTA

Bankova gave an acceptance speech, stressing that she is "deeply honoured to have spent my entire career at the Institute of Organic Chemistry with Centre of Phytochemistry at BAS". "Since my student years, I have always deemed the Academy the temple of Bulgarian science," she added.

"In this moment of extraordinary recognition, I am overwhelmed with gratitude - for the high mark I received from such a prestigious award committee. And I am very happy because this recognition is not only for me: it is recognition for the group I work in, for the institute where I work, and for the whole Academy. I am grateful to the colleagues we've worked together, because no one in our science can achieve these results alone, which are now highly appreciated. I am grateful to all my colleagues at the Institute with whom I have worked long years, to all the colleagues from the Academy with whom we have worked together. I am grateful to many colleagues from all over the world, with whom we have worked together. I'm grateful to my husband for everything," Academician Vassya Bankova told the attendees.

"This award was in my programme for the management of BAS and I am very happy that it has become a reality," said the BAS President. "Its aim is to become the most prestigious science award in Bulgaria, without underestimating others. It will be awarded in three categories, this year in the field of natural sciences and engineering. The other two areas will be life sciences (to be presented next year), and the social sciences and humanities (in two years' time). This will be an individual award for the achievements of a scientist by a scientific organization or Bulgarian higher education institution", said Academician Revalski.

Representatives of international academies and partner organizations arrived in Sofia for the BAS anniversary celebration. Among them are scientists from 15 world scientific organizations and from EASAC. They participated in a meeting with the leadership of the Academy, which was held at the BAS before the celebration.

Sofia, October 12, 2024. Academician Vasya Bankova is the first winner of the BAS Grand Prize for Science in recognition of her outstanding scientific achievements for 2024. Photo: Nikola Uzunov, BTA

Institutes: The Places that Launch Science

In the 155th year of the Bulgarian Academy of Sciences' (BAS) existence, LIK magazine asked the directors of the BAS institutes to share a few words about the greatest successes of the institutes entrusted to them and the current projects they are working on.

Despite their busy schedules, most of them replied. You can see what they said on the pages of this themed edition of BTA's LIK magazine dedicated to BAS.

Prof. Peter Boyvalenkov, DSc, Institute of Mathematics and Informatics (IMI-BAS):

What are the most significant discoveries made at your institute over the years?

IMI-BAS is a natural centre of mathematical research in Bulgaria. The Bulgarian schools established and developed at IMI in the main mathematical areas of algebra, complex differential geometry, approximation theory, probability theory and mathematical statistics, coding theory continue to enjoy high international recognition. IMI scientists' publications in the most prestigious international journals confirm Bulgaria's place on the world scene of mathematics.

The first computing centre in Bulgaria was established at the IMI-BAS in June 1961 under the leadership of academician Lyubomir Iliev. The centre and its successors strategically added the development of computational mathematics and mathematical informatics to the institute's priorities. IMI scientists have successfully developed new mathematical algorithms for solving various classes of applied scientific problems, such as optimization and control of dynamical systems, modelling of bioprocesses, computation of gravimetric quantities, evaluation of financial derivatives, etc. Advanced research is being developed in the areas of data protection, big data analytics, data mining and artificial intelligence with applications in medicine, disaster and emergency management, digital cultural heritage, education, etc.

What are the current projects being developed by scientists at your institute?

IMI-BAS is an active participant in several important projects for the development of the country: the Centre of Excellence funded by the Operational Programme Science and Education for Smart Growth and three national infrastructure complexes funded by the National Roadmap for Research Infrastructure. The scientific programme Enhancing the Research Capacity in Mathematical Sciences and a new programme of excellence are being developed in cooperation with the Ministry of Education and Science and the Simons Foundation. Young Bulgarian mathematicians with degrees from elite foreign universities, one of them with a project under the European Marie Skłodowska-Curie programme, have been recruited. Renowned foreign experts have been integrated. Four new departments are being founded in the International Center for Mathematical Sciences (established at IMI in 2019) this autumn to develop advanced areas in mathematics.

IMI is a leading participant in the National Education with Science Programme, with traditions dating back to more than 50 years ago, aimed at developing young talent.

IMI scientists are also developing projects funded by the Bulgarian National Science Fund for basic research competitions, for young scientists and postdocs, bilateral research collaborations, the Vihren and Peter Beron and SIE programmes.

Assoc. Prof. Plamen Nikolov, PhD, Institute of Electrochemistry and Energy Sytems Academician Evgeni Budevski (IEES-BAS):

What are the most significant discoveries made at your institute over the years?

Founded nearly six decades ago, in 1967, as the Central Laboratory of Electrochemical Power Sources (CLEPS), IEES-BAS has been carrying out fundamental and applied research activities mainly aimed at the technological development of systems for the storage and use of electrical energy. In 2004, CLEPS was transformed into an institute. Today, it aims at decarbonizing the economy, transport and everyday life. Its research areas are batteries and supercapacitors; hydrogen and fuel cells; energy materials; theoretical electrochemistry and electrochemical methods.

Only a few years after it was founded, the institution earned national and international recognition. For nearly six decades, its teams have produced numerous scientific publications and innovative technological developments, including ones protected by Bulgarian and international patents and implemented in production at home and abroad. Experts in the international academic and industrial electrochemical communities have recognized the achievements of several generations of researchers who have grown professionally in the schools of eminent scientists such as Academican Evgeni Budevski (electro-crystallization of metals, electrochemical kinetics, PEM fuel cells), Academican Dechko Pavlov (lead-acid batteries), Academician Aleksandar Popov (solid metal electrodes), Prof. Zdravko Stoynov, DSc (electrochemical methods and impedance spectroscopy), Prof. Iliya Iliev and Prof. Anastasia Kaisheva (gas diffusion electrodes and metal-air cells), Prof. Rafail Moshtev and Prof. Karekin Hampartzoumian (lithium batteries) and Prof. Todor Vitanov and Prof. Veselin Bostanov (electrocatalysis and electro-crystallization).

In the new millennium, IEES-BAS is making further advances in the Institute's traditional fields, adding to its portfolio successful developments in the areas of advanced green hydrogen technologies, nanomaterials, supercapacitors and more.

What are the current projects being developed by scientists at your institute?

Since 2021, IEES-BAS has been performing experimental research in a real demonstration energy-independent "Green Office" environment built under the National Scientific Programme Low Carbon Energy for Transport and Domestic Use – E+ (2018-2023).

IEES-BAS is the coordinator of the Centre of Competence Technologies and Systems for Generation, Storage and Utilization of Clean Energy – HITMOBIL (2019-2023) that is unique for Southeastern Europe. The project is led by Corresponding Member Evelina Slavcheva. Research is conducted in renovated laboratories with modern equipment. The field Integrated Energy Systems laboratory has been built for industrial scale research. The region's first mobile hydrogen charging station and hydrogen electric vehicle have been in operation since 2024. A pilot production line for soft-pack lithium-ion cells has also been installed.

In 2018, the National Scientific Infrastructure Energy Storage and Hydrogen Energy coordinated by IEES-BAS successfully built an integrated national research space with advanced technological facilities including a pilot plant for semi-industrial production of gas diffusion electrodes for various electrochemical energy systems. Current developments aim at higher levels of technological readiness.

IEES-BAS experts have played a key role in the National Scientific Programme Low Carbon Energy for Transport and Domestic Use which involves the development of a prototype trolleybus transformed by retrofit to run on a combination of batteries and hydrogen.

Under the National Recovery and Resilience Plan, IEES-BAS started working on the 2-year Improved Electrolyte for Vanadium Flow Batteries project led by Assoc. Prof. Plamen Nikolov, PhD. The project aims to develop innovative electrolyte additives to increase the energy efficiency of batteries designed for renewable energy storage.

Prof. Kaloyan Kirilov Petrov, PhD, Institute of Chemical Engineering:

What are the most significant discoveries made at your institute over the years?

Perhaps the most significant discovery in recent years is related to the biotechnological production of 2-butanol. Due to its outstanding fuel characteristics, butanol is rightly considered the fuel of the future. The possibilities of direct production of 2-butanol from sugars were researched in a joint project with the Institute of Microbiology, funded by the Bulgarian National Science Fund (contract KP-06-N67/11 from 2022). It was unequivocally demonstrated that 2-butanol is significantly less toxic to its producing cells than 1-butanol. A genetically modified organism for the direct production of 2-butanol from sugars was created. This opens up in principle the possibility of obtaining high yields and of the industrial application of 2-butanol as a biofuel.

What are the current projects being developed by scientists at your institute?

The most significant projects are:

- Technologies and Systems for Generation, Storage and Utilization of Clean Energy (Association Center of competence HITMOBIL funded by the Operational Programme Science and Education for Smart Growth);
- Biotechnological Synthesis of 2-butanol: A New Strategy to Solve Energy and Environmental Problems (funded by the Bulgarian National Science Fund);
- Optimal Safe Loading and Geometry for Layered Nanocomposites under Thermo-Mechanical Loading (funded by the Bulgarian National Science Fund);
- Bioelectrochemical Systems for Purification of Organic Pollutants (funded by the Bulgarian National Science Fund);
- Optimization Studies of Geothermal Plants Including Phase-Processing Components as a Renewable Heat Source with CFD Methods (funded by the Bulgarian National Science Fund).

Assoc. Prof. Maxim Ganchev, PhD, Central Laboratory of Solar Energy and New Energy Sources (CL SENES):

What are the most significant discoveries made at your institute over the years?

CL SENES is an independent scientific division of BAS founded by the Council of Ministers on July 1, 1977. Various prototypes of photovoltaic modules were developed at CL SENES until 1996. The first autonomous photovoltaic system (1.5 kW) for pumping water was completed in the laboratory under a UNESCO project in 1996. The first grid-connected photovoltaic system (10 kWp) was built in Bulgaria under a project of the European Commission's Fifth Framework Programme. A test bench for solar thermal collectors, European standard EN12975, was developed. In 2019, under the InDeWaG project, Horizon 2020 Programme, a glass pavilion with circulating water flow was built in Complex 2 of the BAS. The construction aimed to test and cover the criteria for zero-energy buildings under real conditions. The façade system is able to actively control the thermal stability inside a room. In 2023, two completely new laboratories were built at CL SENES. The Photovoltaic Modules and Generators laboratory established under the project Association Center of Competence HITMOBIL will support scientific and technological research in the field of high-efficiency solar photovoltaic cells, new prototypes of photovoltaic modules, their reliability and analysis of aging and possible degradation. The Functional Coatings Development Laboratory equipped under the Center of competence MIRACle project will be used to produce organic and perovskite photovoltaic cells and their components, such as selective layers, active layers and contacts.

What are the current projects being developed by scientists at your institute?

- CL SENES is a partner in Project BG05M20P001-1.002-0011 Establishment and Development of a Competence Center for Mechatronics and Clean Technologies MIRACle (Mechatronics, Innovation, Robotics, Automation, Clean Technologies).
- CL SENES is a partner in Project Center of Competence focused on research, experimental development and knowledge transfer in Technologies and Systems for Generation, Storage and Utilization of Clean Energy.
- National Scientific Infrastructure Energy Storage and Hydrogen Energy – NI SEVE D01-160/28.08.2018 under the National Roadmap for Research Infrastructure 2017-2023 funded by the Ministry of Education and Science.

Assoc. Prof. Ekaterina Iordanova, PhD, Institute of Solid State Physics (ISSP):

What are the most significant discoveries made at your institute over the years?

Over the years, the ISSP has established itself as a key research centre both in Bulgaria and on the international scene thanks to significant discoveries and applied projects.

As early as 1959, the Institute of Physics at BAS (the predecessor of the ISSP) marked the beginning of microelectronics in Bulgaria. The Silicon department, established under the leadership of Jordan Kasabov, saw the beginning of intensive research on the basic methods and processes involved in producing micron-sized electronic elements and integrating them into circuits on the surface of a silicon crystal. As a result, the first original field-effect MOS transistors and a prototype integrated circuit were developed using planar technology in 1966. All this was the basis for the development of microelectronics in Bulgaria and made our country one of the first in the world to begin microelectronic production.

In 1974, Academician Nikola Sabotinov's team launched the copper bromide vapour laser, which received international recognition as invention of the year. This invention together with the discovery of the effect of hydrogen in copper halide vapour lasers doubled their power and efficiency.

In the 1980s, a team led by Prof. Veselin Kovachev was among the first in the world to record a superconducting transition at a temperature of 86.5 K in an yttrium-barium-copper-platinum-oxygen system synthesized by Prof. Marin Gospodinov. Corresponding Member Lozan Spasov discovered a new cut of quartz, which became the basis for the development of quartz temperature sensors.

Academician Al. Derzhanski contributed to the development of nuclear magnetic resonance, a new spectroscopic method for studying the nature of substances. A new thermally stimulated conformational transition in myoglobin was identified, and the gradient flexoelectric effect was discovered.

Academician Al. Petrov discovered bioflexoelectricity, a liquid crystal analogue of piezoelectricity in solid crystals.

Academician Milko Borissov laid the foundation for the physics of surface acoustic waves and their use in acoustoelectronic devices. The technology for obtaining synthetic quartz crystals needed for industrial production was developed. The Acoustoelectronics Laboratory is developing a method for the cryopreservation of biological material by controlling the wetting properties of cryocontainers, nanotechnology for the functional activation of human spermatozoa, and a miniaturized piezoelectric sensor for seminal fluid and urine analysis, which have potential applications in medicine.

What are the current projects being developed by scientists at your institute?

The ISSP continues to be a modern research centre with a leading position in the EEA and is an example of the successful combination of fundamental research with practical application. The laboratories conduct research, application activities and expertise in two main areas: functional materials and nanostructures and photonics. Projects are focused on the synthesis and characterisation of new and functional materials and in the search for new ways to exploit their potential technological applications. Current projects are innovative approaches aimed at the discovery, development and application of new materials, technologies, measurement devices, light sources in areas of societal relevance such as improving the quality of life in key sectors covering energy, communication and information technologies, medicine, environmental protection.

Assoc. Prof. Tatyana Koutzarova, PhD, Institute of Electronics:

What are the most significant discoveries made at your institute over the years?

The first Bulgarian laser, plasmotron, ultra-high vacuum pump, microchannel electro-optical transducer, parametric microwave amplifier, Josephson junctions and SQUID, portable microwave hygrometer, magnetometer, installations for electronic lithography, electron-beam melting and refining of metals, and electron-beam welding were developed at the Institute of Electronics at BAS. A number of advanced electron-beam, laser and plasma technologies and new types of gas sensors were also developed, as well as methods for the formation of nanostructured materials.

What are the current projects being developed by scientists at your institute?

Currently, the scientists of the Institute of Electronics are working on 19 projects funded by the Bulgarian National Science Fund, one project under the Vihren programme, three from the National Roadmap for Research Infrastructure, one contract under the National Science Programme Environment and one project under the Operational Programme Science and Education for Smart Growth.

An expression of international recognition of the Institute's activities is our scientists' participation in the management and implementation of:

a) three projects funded by EC programmes:

- Antimicrobial Integrated Methodologies for orthopaedic applications under Horizon 2020
- ACTRIS IMP – Aerosols, Clouds and Trace gases Research InfraStructure Ne
- Horizon 2020's Surface Transfer of Pathogens under Horizon Europe

b) 14 projects in the framework of inter-academic collaboration with scientific organizations from 10 countries

c) six projects under COST programmes.

Prof. Tsvetanka Babeva, PhD, Institute of Optical Materials and Technologies (IOMT) Academician Jordan Malinowski:

What are the most significant discoveries made at your institute over the years?

In 2023, the IOMT celebrated the centenary of the birth of its patron, Academician Jordan Malinowski, a distinguished Bulgarian physical chemist with research interests in the physical chemistry of photographic processes who served as BAS President between 1992 and 1996. His research led to the creation of a new theory, which became known in the international community as the

symmetric scheme of Malinowski. IOMT scientists follow in the footsteps of their patron and work on interdisciplinary subjects related to the study of photo-induced processes in micro- and nano-sized layers and structures; optical metrology; art, digital and polarization holography; the development of high-tech materials, methods and technologies for optical applications and flexible transparent electronics; the creation of new materials and recording systems with applications in ecology, biomedical research, food industry, non-destructive testing and cultural preservation. An important achievement of the Institute with a significant impact on the development of world science is the discovery of the world's first high-performance material based on azobenzenes for polarization holographic recording. The discovery gave a tremendous boost to the development of this area of physics of optical technology. Dozens of research groups around the world are currently working in this field. The publication, which described it, has been cited over 900 times and has contributed to the formation of the BAS h-index.

What are the current projects being developed by scientists at your institute?

IOMT-BAS is a partner in two Horizon 2020 funded projects. One, with the acronym TOCHA, is related to the development of a new generation of magnetic topological isolators and devices through which information can be transmitted losslessly. The other, with the acronym PLENOPTIMA, is related to object visualization and machine learning. Four project PhD students are being trained at IOMT under this project to obtain the so-called joint PhD degree. IOMT-BAS is participating in the National Centre for Mechatronics and Clean Technologies, whose first phase was completed at the end of 2023 with funding from the Operational Programme Science and Education for Smart Growth. The second phase funded by the Research, Innovation and Digitization for Intelligent Transformation Programme that is about to start will see IOMT develop functional materials and structures for photonics and optoelectronics, as well as advanced non-destructive testing of materials and structures.

IOMT-BAS is a partner in two projects of the National Roadmap for Research Infrastructure funded by the Ministry of Education and Science: Distributed Infrastructure of Centers for Synthesis and Characterization of New Materials and Their Applications (INFRAMAT) and the National Center of Biomedical Photonics.

IOMT-BAS is also working on a number of projects funded by the Bulgarian National Science Fund, on contracts for international cooperation funded by BAS, and on contracts funded by the Ministry of Education and Science's National Programme Young Scientists and Post-doctoral Fellows.

Prof. Radostina Stoyanova, Institute of General and Inorganic Chemistry (IGIC):

What are the most significant discoveries made at your institute over the years?

HIGIC's most significant discoveries lie in turning research on the chemistry and surface of materials into an effective means of addressing today's challenges. As a result, 3D technology has been used to develop innovative catalysts for environmental protection and gas sensors for monitoring and managing air emissions. A carbon capture and catalytic conversion system has been designed. A new type of electrode material for sodium-ion batteries was proposed as an alternative to the currently used lithium-ion batteries. Innovative products and technologies based on the chemical resources of the Black Sea are being developed, and natural medical cosmetics (SeaStars) are being produced and marketed on a small scale at home and abroad.

What are the current projects being developed by scientists at your institute?

IGIC implemented 38 projects with various funding sources over the past year. These include the establishment of a National Centre for Mechatronics and Clean Technologies coordinated by IGIC-BAS (Operational Programme Science and Education for Smart Growth), and organizing the European Network on Materials for Clean Technologies (TwinTeam) coordinated by IGIC-BAS and partners from leading European research organizations. IGIC as leader together with partner organisations from Turkiye and Spain under the European M-ERA.NET programme are conducting research on surface electrode materials for sodium-ion batteries with the goal of achieving ultra-high reversible capacity. IGIC is implementing two projects under the National Science Programme Vihren of the Bulgarian National Science Fund to conduct cutting-edge research for the development of European science with supervisors Prof. R. Stoyanova, PhD (CARiM) and Academician K. Hadjiivanov (Adonis).

Vanya Kurteva, Institute of Organic Chemistry with Centre of Phytochemistry (IOCCP):

What are the most significant discoveries made at your institute over the years?

– IOCCP conducts basic and applied research in organic chemistry and the chemistry of natural compounds. Methods are developed for the synthesis of multifunctional compounds, biomaterials, porous adsorbents and catalysts, and for the assessment of the authenticity and quality of products of plant and animal origin. A number of Bulgarian and Bulgaria-related archaeological and artistic sites have been identified using modern analytical methods. Numerous fundamental advances have led repeatedly over the years to the transformation of scientific products into applied developments. Some of the first scientific research at the institute led to the introduction of technology for the removal of methanol from fruit brandies and to the creation of the first methodology for determining the amount of oil in rose blossom. Many years of research on propolis from various geographical areas led to the creation of the concept of determining the type of propolis according to plant source, which was adopted by the International Honey Commission. A useful model for an aqueous solution of propolis has been developed in collaboration with scientists at the Institute of Polymers, which solves the problem of its poor water solubility limiting its application. Cosmetic and medicinal products with diverse biological activities have been developed. The popular enzyme preparations Neprolysin and Post-Neprol for the treatment of difficult-to-heal wounds have been notified for use in the European Union. Products with antimicrobial, antifungal, immunostimulating and antitumour activity have been developed based on components from Black Sea rapaena and snails grown in Bulgarian ecologically clean farms. The extracts have been introduced into wound regeneration preparations and the cosmetics industry. The products released on the market enjoy wide popularity at home and abroad. Technologies have been introduced for granulation of fruit and herbal pectins used in the treatment of gastrointestinal diseases and cancer. We produce well-known fruit and fruit-herbal drinks for the prevention and treatment of cardiovascular, diabetic and cancer diseases, as well as diet nectars from berries with proven antioxidant properties targeted at patients with diabetes. A new energy-saving technology for the production of activated charcoal from agricultural waste has been developed. A plant for drinking charcoal and for charcoal for water and air purification based on this technology was built. In recent years, protective masks with activated charcoal developed at the

Institute have been introduced on the market.

What are the current projects being developed by scientists at your institute?

IOCCP-BAS is currently the lead organization in the Centre of Excellence and a partner in one centre of excellence and one centre of competence. Scientists from the institute participate in the INFRAMAT project of the National Roadmap for Research Infrastructure, in five projects funded by EU and international contracts and programmes including the Erasmus+ programme (coordinator), in more than 40 research projects with the Bulgarian National Science Fund, the Ministry of Education and Science, BAS and others. Since 2024, IOCCP is a participant in four projects under the Recovery and Resilience Plan.

Prof. Bogdan Rangelov, PhD, Institute of Physical Chemistry (IPC-BAS) Rostislaw Kaischew:

What are the most significant discoveries made at your institute over the years?

IPC-BAS is the holder and successor of the world-famous Bulgarian school of physical chemistry. A school that explains and explores theoretically and experimentally our understanding of phase transitions, the thermodynamic properties of small size phases and the kinetics of their formation and growth.

- Nucleation and growth on single defect-free crystal walls was studied based on an electrolytic capillary growth method for single crystals
- The possibility of a layered mechanism of crystal growth by two-dimensional nucleation was demonstrated
- A formula for the non-stationary rate of nucleation was derived
- A probabilistic approach to the study of the nucleation process was developed
- The shielding effect of the nucleation process around a growing nucleus (crystal or droplet) of the new phase was demonstrated
- The atomistic theory of nucleation was formulated, which applies to nuclei consisting of a small number of atoms/molecules
- The nucleation theorem was proved, which constitutes a universal relation between nucleation work, supersaturation and nucleation size
- The electrochemical formation of electrically conducting polyaniline-type polymer layers was explained.
- A new theory describing Newtonian black films as two-dimensional ordered systems has been established, and their tearing was modeled by the fluctuational emergence of negative nuclei (holes) in the ordered structure
- A technology for deposition of shiny zinc plating from ammonium-chloride electrolytes has been developed and implemented in many Bulgarian enterprises
- A physicochemical method for in vitro determination of lung maturity of newborn babies has been developed and applied in clinical practice (Exerowa et al., 1986).

What are the current projects being developed by scientists at your institute?

- Centre of Excellence – National Centre for Mechatronics and Clean Technologies BG05M2OP001-1.001-0008;
- Centre of Competence – Clean Technologies for Sustainable Environment – Waters, Waste, Energy for Circular Economy BG05M2OR001-1.002-0019;
- INFRAMAT – National Roadmap for Research Infrastructure.

Petar Dimitrov Petrov, Institute of Polymers (IP-BAS):

What are the most significant discoveries made at your institute over the years?

The scientific contribution of IP-BAS scientists from 1960s to the late 1990s was fundamental for Bulgarian polymer science. Some of the developments were applied in a number of industrial enterprises. Ground-breaking research was carried out in the field of ionic polymerization. The carbonyl-olefin exchange reaction was discovered, allowing for the synthesis of new groups of polyspun polymers. Block and graft amphiphilic copolymers and polymer networks showing the ability to self-organize were synthesized. New methods were developed for the synthesis of crosslinked poly (ethylene oxide) (PEO) products and for the degradation of polyurethanes. The most significant practical achievement of IP-BAS was the introduction of technology for the production of ultra-high molecular weight PEO, which was produced under the trademark Badimol at the Neochim plant in Dimitrovgrad between 1982 and 1998. Gradually, the focus of research is shifting from classical polymers and polymer materials (plastics, rubber, resins, etc.) to new generation polymers and materials such as biopolymers, smart and high-tech polymers, polymers from renewable sources, micro- and nanomaterials, nanocomposites, etc. A team from IP-BAS constructed the first electro-fibering plant in Bulgaria, an innovative technology enabling the production of fibrous materials (non-wovens). New high-efficiency polymeric proton exchange membranes for fuel cells for the automotive and household industries and original polymer electrolytes for flexible solar batteries were developed and patented in cooperation with leading European research institutes and international companies. One of the IP-BAS developments (produced jointly with a team from IOCCP-BAS), an aqueous solution of propolis, is available on the Bulgarian market as a food supplement.

What are the current projects being developed by scientists at your institute?

IP-BAS scientists are currently involved in the work programmes of three major projects: National Centre for Mechatronics and Clean Technologies; Competence Center for Sustainable Utilization of Bio-Resources and Waste of Medicinal and Aromatic Plants for Innovative Bioactive Products; and Association Center of competence HITMOBIL – Technologies and Systems for Generation, Storage and Utilization of Clean Energy, that were developed under the Operational Programme Science and Education for Smart Growth. The research teams are also involved with a number of research projects for BAS competitions (the National Recovery and Resilience Plan) and the Bulgarian National Science Fund, as well as for the National Roadmap for Research Infrastructure. New green technologies and biomaterials, nanoparticles and hydrogels for biomedical applications, membranes and composites for electrochemical hydrogen conversion, biocontrol agents with applications in eco-agriculture, etc. are being developed within these projects.

Assoc. Prof. Stela Minkovska, PhD, Institute of Catalysis (IC):

What are the most significant discoveries made at your institute over the years?

Significant IC-BAS developments:

- The main achievement of IC-BAS, related to the successful economic growth of the country, is the implemented designs for the development of catalyst production in Bulgaria. Members of the institute founded two catalyst factories, Chimco in Vratsa and Neftochim in Burgas. Nine IC technologies have been implemented at Chimco. Its annual production of catalysts and inorganic materials is worth about USD 1.5 million. Production meets the basic needs of the nitrogen and several other industries in Bulgaria, while a portion of catalysts are exported.
- An anode catalyst for fuel cells made only of base metals, with electrochemical activity identical to that of the standard platinum anode catalyst, was invented (Patent Application No. 6250-V50510, Nickel-based catalyst for fuel cell anode, N. Borchtchoukova, Y. Wijsboom, G. Finkelshtain, D. Nikolova, M. Gabrovska).
- An integrated process for the production of pure hydrogen through the processes of methane reforming with CO2, CO shift reaction with water vapour (WGSR) and selective CO oxidation was researched. An original approach was applied for CO2 absorption at the outlet of the WGSR reactor, CO2 regeneration and utilization in the methane reforming process.

What are the current projects being developed by scientists at your institute?

The IC implements projects within the European Horizon 2020 programme, the Bulgarian National Science Fund and projects within inter-academic cooperation. IC-BAS participates as a partner in two projects under Priority Axis 1 of the Operational Programme Science and Education for Smart Growth.

- National Centre for Mechatronics and Clean Technologies;
- Association Center of competence HITMOBIL Technologies and Systems for Generation, Storage and Utilization of Clean Energy.

IC is a partner in the distributed infrastructure of centers for the synthesis and characterization of new materials and conservation, access and e-storage of archeological and ethnographic artifacts INFRAMAT, included in the National Roadmap.

Work at the institute is focused on socially relevant applied research dedicated to improving the quality of life. This involves the development of methods, catalysts and technologies for the purification of waste gases and water, the production of clean energy and new energy sources, the production of pure hydrogen for fuel cells, the production of nanostructured materials with multifunctional properties, the development of green methods for the synthesis of dyes for covalent labelling of DNA, supramolecular devices based on photochromic compounds for storing solar energy.

Prof. Lilyana Kolaklieva, Central Laboratory of Applied Physics (CLAP) – Plovdiv:

What are the most significant discoveries made at your institute over the years?

Among the achievements of the CLAP team, two stand out, which are significant both at the national and European level:

• High-power, high-temperature, high-frequency field-effect transistor (MESFET) made of silicon carbide (SiC). The main parameters of the device are: 100 W power, operating temperature of 350°C, frequency of 2 GHz. The transistor was developed in collaboration with Thales, France, as part of the European COPERNICUS project between 1995 and 2000. Its primary applications are in the energy sector and military technology, designed for operation in extreme conditions.

• Superhard, wear-resistant nanocomposite coatings for industrial applications and the technologies for their production. Coatings based on transition metal nitrides, carbides and carbo-nitrides were developed between 2015 and 2023. They are intended for modifying the surface of machine parts, components, and tools to enhance their durability and extend their operational life. Their distinguishing feature is very high hardness (40-45 GPa), combined with improved elasticity and excellent wear resistance when working in harsh conditions and temperatures up to 800°C. These properties make them suitable for both conventional applications and "dry" machining, complying with the European directive aimed at reducing and eliminating lubricants used in the metalworking industry. The coatings TiAlSiN, CrAlSiN, TiCN have been transferred to the industry.

What are the current projects being developed by scientists at your institute?

Research Projects:

• Project Centre for Excellence National Centre for Mechatronics and Clean Technologies. CLAP is a member of the association implementing the project.

• Project BG05M2OP001-1.002-0023 Competence Centre "Intelligent Mechatronic, Eco- and Energy-Saving Systems and Technologies". CLAP is a member of the association implementing the project.

• National Roadmap for Research Infrastructure. Distributed Infrastructure of Centers for Synthesis and Characterization of New Materials and Their Applications, as well as Conservation, Access and E-Storage of Archeological and Ethnographic Artifacts INFRAMAT.

• National Roadmap for Research Infrastructure. National Center of Biomedical Photonics.

• Contract with the Bulgarian National Science Fund KP-06-N-48/2 26.11.2020. Spectral Polarimetry of Polarized Fluorescence in Magneto-Optical Materials and Its Application to Precision Magnetic Field Sensors.

Innovative Projects:

• Contract with NanoTeh Gabrovo EOOD Development and Implementation of Technological Services for the Application of Nanocomposite Coatings Based on Titanium and Chromium".

• Contract with GLATEC EOOD Development of Hard Coatings Obtained by Electrodeposition Technology and Technological Services for Their Application on Metal Products.

Anastas Gospodinov, Institute of Molecular Biology (IMB) Acad. Roumen Tsanev:

What are the most significant discoveries made at your institute over the years?

Since its establishment, the Institute has been one of the leading scientific units of BAS. In the 1960s, the founder of the IMB, Roumen Tsanev, proposed a model of cellular differentiation in which the long-term binding of specific proteins to DNA controls gene expression, and conducted computer simulations of this hypothesis. These ideas and studies anticipated epigenetic regulation, which is currently a broad and separate area of biological science. This positioned chromatin biology at the centre of the research work at IMB.

The first electrophoretic separation of nucleic acids (RNA) in the world was conducted at IMB.

In the 1980s, IMB researchers demonstrated that 'old' histones are randomly distributed between daughter DNA strands during replication, providing a mechanism for epigenetic inheritance. During this time, IMB researchers were at the forefront of methodological advancements in the study of nuclear processes. A laser-based method for covalent protein-DNA linkage taking picoseconds was developed, allowing the study of transient chromatin interactions. The Institute also has an impressive history regarding innovations. For the first time in the country, genetically modified human biologically active proteins with medical applications were created, the first chemical gene synthesis was carried out, and sequencing and polymorphic DNA analysis were applied for medical and forensic purposes.

An original and highly efficient technology for the production of the anticancer drug cisplatin was developed, as well as a technology for producing gamma-interferon with a purity surpassing 99.5%.

Since 2011, the Institute's scientists have received 11 patents, six of which international. These achievements reflect our long-standing tradition of conducting high-quality research in molecular and cellular biology, with direct applications in medicine and the improvement of human health.

What are the current projects being developed by scientists at your institute?

Our institute is currently working on numerous significant projects that focus on the molecular and cellular biology of the eukaryotic genome, with an emphasis on epigenetic mechanisms. The research covers key processes such as DNA repair, genome replication, transcription, aging, and their regulation.

The studies on genomic stability include the mechanisms of DNA damage repair and the possibilities for pharmacological intervention. Special attention is given to the mechanisms for increasing the sensitivity of cancer cells to anticancer agents for precision-targeted cancer therapies.

An important area of work at the Institute includes research with high potential for application, such as the development of low-toxicity biologically active agents for precision medicine and treatments for autoimmune diseases. Studies are also being conducted in the field of nanobiology and nanomedicine, with a focus on the creation of new drugs for osteoporosis and tissue regeneration.

The Institute is part of the pan-European consortium Euro-BioImaging through its Centre for Advanced Microscopy, which provides access to the most innovative microscopic and imaging technologies for biomedical research to all interested researchers both domestically and internationally.

Since 2023, as part of the ERA Chairs project funded by the European Union, a group has been established at the Institute, led by Prof. Stefan Dimitrov, one of the leading scientists in the field of chromatin biology. The main focus of the group's research is the epigenetic mechanisms of rare diseases. Through the implementation of this project, we expect to achieve significant improvements in the research and innovation capabilities of IMB-BAS.

Research at the institute has a broad scope and promises to contribute to the expansion of knowledge in the field of biomedicine, as well as the development of new therapies and diagnostic tools.

Prof. Penka Petrova, Stephan Angeloff Institute of Microbiology:

What are the most significant discoveries made at your institute over the years?

The Institute of Microbiology has always been a leader among Bulgarian scientific institutions. Due to its contribution to biomedical sciences, the Institute is a member of the international Pasteur Network. It is difficult to highlight just a few examples of significant scientific discoveries, as this year the institute celebrates 77 years since its establishment. Its first director was the prominent Bulgarian scientist, Academician Stephan Angeloff, and at that time, the problems being worked on were primarily related to medical and veterinary bacteriology and virology. Therefore, the Institute's early achievements were connected to the study of infectious diseases and methods of prevention. Some time later, the field of infectious immunology was initiated, along with the study of interactions between bacteria and their hosts. Models were developed to study the pathogens of plague, salmonellosis, tuberculosis. The 1960s and 1970s were marked by research in experimental chemotherapy for viral infections. Significant discoveries include various inhibitors of viral replication, aimed at creating and characterizing new effective antiviral drugs against a wide range of viral families. Other discoveries made at our Institute are in the field of industrial microbiology, such as the identification of industrial producers of enzymes and antibiotics. The Institute has been connected with the work of yeast, alcohol, and industrial enzyme factories in Peshtera, Ruse, and Dolna Mitropolia, as well as the antibiotic factory in Razgrad. This vast activity is associated with the registration of valuable patents, some of which (such as one for antiviral drugs) are still in effect today.

What are the current projects being developed by scientists at your institute?

– In terms of themes, innovation in developments, number of publications, and public contribution, the Institute remains an undisputed national leader. It is the recipient of the St Cyril and Methodius plaque and the BAS Golden plaque. Three BAS academicians work at the Institute of Microbiology. Scientists from the Institute have been awarded eight prestigious Pythagoras Prizes in various fields. We participate as a partner in two competence centres and one centre of excellence.

The most important developments at the Institute of Microbiology currently are in the Biomedicine and Quality of Life direction of the BAS: in the field of probiotics and their connection to the human microbiome, as well as new approaches to the prevention and therapy of obesity. Extracts from jujube, rosemary, and betulinic acid have been studied for modulating signalling pathways related to adipogenesis, energy metabolism, intercellular and intracellular communication in the human body. The study of Bulgarian medicinal plants with approaches combining molecular pharmacology, ethnopharmacology, and phytochemical analysis marks the beginning of a new direction with great future potential. Following good collaboration with the industry, a new bioinsecticide was created

at the Institute of Microbiology. By studying the microbiota of extreme habitats, our scientists discovered bacteria capable of degrading certain types of plastics. In the field of infectious microbiology, a method for rapid tuberculosis diagnosis was developed. In the field of biotechnology (and within a Bulgarian-Chinese cooperation project), we developed new systems for producing biogas, hydrogen, and methane. In virology, numerous scientific studies on antiviral drugs against COVID-19 were conducted, and a prototype vaccine against the disease was developed in the Immunology Department. A strategic priority for our future activities is the creation of a biobank containing unique strains of microorganisms, cell lines, and laboratory animal strains. We also plan to upgrade the sterile vivarium, but we will need financial support from the Ministry of Education and Science and targeted funding from suitable national and European programmes.

Prof. Tania Pencheva, Institute of Biophysics and Biomedical Engineering (IBPhBME):

What are the most significant discoveries made at your institute over the years?

Among the most significant achievements of the scientists from IBPhBME since its establishment in 1967 are the organization of lipidology schools (Academician Kamen Kumanov, Academician Boris Tenchov), computer-aided (in silico) drug design (Academician Ilza Pajeva), generalized networks, intuitionistic fuzzy sets, indexed matrices, and intercriterial analysis (Acad. PhD, DSc. Krasimir Atanasov), electroporation (Prof. Yana Tsoneva), biomedical equipment (Prof. Ivan Daskalov, Prof. Ivan Dotsinski, Assoc. Prof. Mihail Matveev), neurophysiology and experimental electromyography (BAS Corresponding Member Andon Kosev).

In the last five years, the most significant scientific and applied research achievements of the scientists at IBPhBME-BAS are related to the study of the antitumour and antioxidant properties of natural and newly synthesized substances and nanoparticles – mechanisms of their impact on lipid metabolism and membrane structural organization during oxidative stress, inflammation, and cancer diseases; the study of natural and synthetic biologically active compounds through combined in silico / in vitro approaches; hyperaccumulation of heavy metals in the medicinal and aromatic plant sage with potential for phytoremediation of contaminated soils; the development of the theory of intercriterial analysis and its applications in various scientific fields; the development of methods and devices for recording and synchronously filtering biosignals and recognizing life-threatening cardiac arrhythmias.

What are the current projects being developed by scientists at your institute?

— Current research projects at IBPhBME-BAS, funded by various national sources (including the National Roadmap for Research Infrastructure and national scientific programmes), as well as through international collaboration, are related to:

- Cancer, neurodegenerative, and other socially significant diseases – membrane structure and dynamics, molecular mechanisms, biomarkers
- Innovative nanomaterials for application in biomedicine and ecological agriculture – biocompatibility, molecule carriers, growth regulators
- Photosynthesis – stress and adaptation mechanisms of the photosynthetic apparatus, structural organization
- Molecular modelling – drug design and assessment of toxic effects of chemicals on the human organism and the environment
- Biomedical engineering – assessment of cardiac risk, biomimetic materials, biomechanics
- Data analysis and mathematical modelling – applications in biology, medicine, and chemistry.

Prof. Svetlana Nikolova, Botanical Garden at BAS:

What are the most significant discoveries made at your institute over the years?

The Botanical Garden of BAS is a "living" open-air museum where documented collections of living plants from all over the world are preserved and protected. Its main purpose is to demonstrate plant diversity to the general public. It also holds the status of a Rescue Center for Bulgaria in connection with the United Nations' Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Its greatest achievement is the creation of the richest collection of tropical and subtropical plants on the Balkan Peninsula, exceeding 5,000 species and varieties, which took years. The collection of trees and shrubs in the open includes more than 1,000 species and varieties, mainly from the temperate zone of the Northern Hemisphere.

What are the current projects being developed by scientists at your institute?

Among the most significant projects for society are our educational programmes for children, students, and adults, children's workshops, monthly thematic exhibitions, and more. Since 2022, the Botanical Garden of BAS has been recognized by the Ministry of Environment and Water as the National Centre for ex situ Conservation of Endangered Plant Species from the Bulgarian Flora, a project that is ongoing. The goal is to preserve these species and to be able to restore them, in case they go extinct.

Vladimir Vladimirov, Institute of Biodiversity and Ecosystem Research (IBER):

What are the most significant discoveries made at your institute over the years?

IBER is a leading research institution in Bulgaria in the field of biodiversity and ecology. Its main activity is focused on conducting significant scientific research at national, European, and global levels in the fundamental and applied aspects of biodiversity, environmental conservation, and the sustainable use of biological resources.

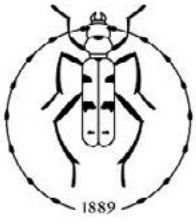
Over the past decade, more than 200 new species of plants, animals, and fungi have been described for science, along with dozens of new plant communities. Hundreds of new species have been reported for Bulgaria and several other countries. In the context of the rapidly growing global threat of biodiversity loss that we are witnessing, this represents a significant contribution to the study of global biodiversity, species distribution, and the expansion of knowledge about the diversity of organisms in Bulgaria and various parts of the world.

As a result of the scientific and applied research at the Institute, important biological and ecological characteristics of valuable plant, animal, and fungal species that are used as biological resources have been studied. For example, methods for extracting galantamine from the plant Hippeastrum papilio have been developed. Galantamine is a valuable compound used in medicine to treat the early stages of Alzheimer's disease and memory problems. The scientific foundation for several important national documents related to biodiversity policy has been developed, and proposals for declaring dozens of new protected areas have been prepared. All of these results are important for the conservation and sustainable use of biodiversity and for improving the quality of life for people.

What are the current projects being developed by scientists at your institute?

IBER-BAS works on 100 to 120 projects annually. Among our most significant tasks are two projects from the National Roadmap for Research Infrastructure (2020–2027), funded by the Ministry of Education and Science. Both are being implemented by consortia in which IBER is the leading partner. The project Distributed System of Scientific Collections – Bulgaria (DISSCO-BG) aims to enhance the capacity of the partner organizations and meet high international standards for maintaining the largest collections of biological and geological diversity in Bulgaria, as well as for improving the quality of collection-based research to meet society's needs for modern science in the field of biodiversity. The project Upgrading the Distributed Research Infrastructure Bulgarian Network for Long-Term Ecosystem Research (LTER-BG) aims to upgrade the existing scientific infrastructure and provide scientific information for the conservation and sustainable management of Bulgaria's unique biological diversity, as well as ecosystem services for the benefit of society.

The Institute's ongoing projects are focused on addressing important societal challenges related to biodiversity, such as limiting the effects of climate change, preventing the spread and controlling the populations of invasive alien species, developing the scientific foundations for the development and management of the national ecological network (protected areas and the Natura 2000 network), biodiversity conservation, and the sustainable use of biological resources.



Pavel Stoev, National Museum of Natural History (NMNH) at BAS:

What are the most significant discoveries made at your institute over the years?

In 2024, the NMNH-BAS marks the 135th anniversary since its establishment. It is the oldest museum in Bulgaria and the oldest and richest natural history museum on the Balkan Peninsula. Since 1990, the museum has had a branch in Asenovgrad – the Dimitar Kovachev Palaeontological Museum, which preserves around 35,000 fossil bones from Miocene mammals that inhabited our lands.

What are the current projects being developed by scientists at your institute?

Some of the more significant projects that the museum's scientists have been working on in recent years include:

Distributed System of Scientific Collections – Bulgaria (DiSSCo-BG), funded by the Ministry of Education and Science. The main goal of the project is the digitization of the natural samples in the museum and the Institute of Biodiversity and Ecosystem Research at BAS, modernization of the collection depots, and increasing the scientific expertise of the staff working in them.

Another project that concluded in 2024 is Cyber-taxonomic Approach to Phylogenetic Research of Model Genera of Invertebrate Animals (Invertebrata, Arachnida, Insecta) for Clarifying the Problems of Origin, Formation, and Conservation of the Invertebrate Fauna of the Balkan Peninsula. This project was funded by the Bulgarian National Science Fund. By combining DNA barcoding with statistical and morphological approaches, the project studies the phylogenetic evolution and formation paths of various groups of invertebrate animals. As a result, over 25 species of invertebrates (spiders, beetles, and millipedes) from Bulgaria, Greece, Turkiye, Montenegro, North Macedonia, Romania, and other countries were described.

The paleontological team at NMNH-BAS is very active in scientific research and is one of the leading teams in the country. One of the projects led by Prof. Nikolay Spasov aims to compare Neogene fossil mammals from China (Linxia Basin) and Bulgaria (Mesta and Struma Basins). This project is funded by the International

Partnership Programme of the Chinese Academy of Sciences.

Another project also led by Prof. Spasov, From Dinosaurs to the Earliest Human Ancestors: Fundamental Research on Significant Moments in the History of Fauna and Human Past, is funded by the Bulgarian National Science Fund under the Ministry of Education and Science and aims to study lesser-known dinosaur and hominid findings in the country.

Assoc. Prof. Tihomir Stefanov, head of the Vertebrates Department, is leading a project to study the biological and ecological characteristics of fish species inhabiting the coastal marine waters near the Bulgarian polar base on Livingston Island. The project also aims to create a pilot monitoring scheme for ichthyofauna in the region. The project is funded by the National Programme for Polar Research.

Entomologists at the museum are researching caves, specifically their potential for the emergence of zoonoses. The project, led by Assoc. Prof. Nikolay Simov, is funded by the Bulgarian National Science Fund under the Ministry of Education and Science. The goal is to determine the extent to which bats carry viral, bacterial, and fungal pathogens and the associated risks to humans.

Under the leadership of Assoc. Prof. Stefania Kamenova, research on the genome of endemic plant and animal species began at NMNH-BAS in 2024.

Svetoslav Georgiev, Geological Institute (GI) at BAS:

What are the most significant discoveries made at your institute over the years?

GI was founded in September 1947. In the second half of the 20th century, the Institute was a key player in carrying out important national scientific and applied activities in the field of geology. Its scientists were leaders in compiling the first detailed geological maps and specialized maps of Bulgaria; developing the theoretical foundations for the exploitation of the country's raw mineral materials, underground water movement, and their regional characteristics. Its researchers applied their scientific expertise in the construction of some of the largest reservoirs and hydroelectric cascades in the country (Iskar Reservoir, Goliam Beglik, Belmeken Reservoir, among others) and significant national energy projects, such as the Kozloduy Nuclear Power Plant, the Maritsa-East Power Complex, and the chemical factories in Devnya. In recent times (from 2000 onward), notable new geological findings include research on the territory of Bulgaria, the Balkan Peninsula, and the Eastern Mediterranean, the age and petrochemical characteristics of magmatism in the Rhodope region and the Srednogorie area, especially as a source of rare and critical raw mineral materials, and studies on paleoclimates in geological history in light of contemporary climate changes. Applied results include the evaluation and monitoring of hazardous geological processes (earthquakes, landslides, erosion, abrasion, weak soils) and their mitigation; the protection and preservation of the country's water resources; selection of sites for storing industrial waste (including the construction of a national repository for radioactive waste), and the assessment of geological hazards for the design and construction of railways, gas pipelines, and engineering structures.

What are the current projects being developed by scientists at your institute?

Our scientists systematically build on and enrich the knowledge of Bulgaria's geology. Current national and applied scientific themes include hazardous geological processes and phenomena, the importance of the geological environment in earthquake occurrence, the construction of facilities for the storage of radioactive waste, the condition of underground waters and geothermal resources, cultural and historical heritage, and more. In the absence of a National Geological Service, GI partially fulfills such functions without specific funding. The Institute's scientists are working on several projects funded by state and municipal institutions as well as private companies. GI-BAS representatives participate in and lead major scientific projects funded by European funds, the Bulgarian National Science Fund, the Recovery

and Resilience Plan, and others. The themes are diverse, with some projects focused on critical raw materials in Bulgaria. At the initiative of the Institute's scientists, together with colleagues from the sector, a project for a National Scientific Programme on Critical and Strategic Raw Materials for Green Transition and Sustainable Development has been prepared. The five-year programme, approved by the Bulgarian government in July 2024, is expected to begin by the end of the year.Materials for Green Transition and Sustainable Development has been prepared. The five-year programme, approved by the Bulgarian government in July 2024, is expected to begin by the end of the year.Materials for Green Transition and Sustainable Development has been prepared. The five-year programme, approved by the Bulgarian government in July 2024, is expected to begin by the end of the year.

Prof. Atanas Palazov, Institute of Oceanology:

What are the most significant discoveries made at your institute over the years?

Fifty-five phytoplankton species have been identified in the Black Sea, three of which are potentially toxic and had not been previously discovered.

Six sunken ships from various epochs have been found and documented in the country's Exclusive Economic Zone in the Black Sea, which are part of our historical heritage.

Potential deposits of alternative mineral and energy resources in the Exclusive Economic Zone in the Black Sea have been established and mapped: iron-manganese concretions, deep-water organic-mineral sediments, and gas hydrate deposits.

Two new biological species of diatom algae were discovered in Antarctic waters.

What are the current projects being developed by scientists at your institute?

The Institute of Oceanology is developing over 50 projects funded by the European Commission, the Bulgarian National Science Fund, the Ministry of Education and Science, the Ministry of Environment and Water, the Ministry of Regional Development, the Executive Agency on Fisheries and Aquaculture, and more. The most significant ones are related to research on the Black Sea, the development of modern scientific infrastructure, data collection and monitoring of the marine environment, preparing information and forecasts for the state of the Black Sea, and providing expert opinions on issues concerning marine waters, biodiversity, marine beaches, and the coastal zone for the needs of government bodies, scientific research, and the blue economy.

BAS Corresponding Member Evgeni Semkov, Institute of Astronomy and National Astronomical Observatory (IANAO):

What are the most significant discoveries made at your institute over the years?

Research on high-energy solar particles caused by solar flares and coronal mass ejections. Study of eruptive prominences observed in ultraviolet light from space observatories such as SDO and STEREO.

Study of comet C/2019 Q4 (Borisov), a non-gravitationally bound object from interstellar space, the first comet arriving from interstellar space with clear evidence of cometary activity.

An international team, including Bulgarian astronomers from IANAO, discovered cycles of oscillating brightness in a jet of high-energy particles emitted by the blazar BL Lacertae.

Study of the binary system of a

white dwarf and a red giant – RS Oph, which is expected to explode as a supernova in the future. The study, conducted entirely with a 2-metre telescope at the Rozhen National Astronomical Observatory, reveals the earliest recorded development of asymmetry in this object, as well as the detection of dust around it.

What are the current projects being developed by scientists at your institute?

The Regional Astronomical Center for Research and Education (RACIO), part of Bulgaria's National Roadmap for Research Infrastructure. A new 1.5-metre telescope has been built at the Rozhen National Observatory as part of this project.

LOFAR-BG is a project for a Bulgarian observational station for the pan-European low-frequency radio telescope Low-Frequency Array (LOFAR), also funded through the National Roadmap for Scientific Infrastructures. The installation of the radio telescope is expected to begin in 2025.

We have projects funded under Horizon 2020, ERASMUS+, COST, the Vihren programme by the Ministry of Education and Science, the European Space Agency, and the German State Fund for Scientific Research. Over 20 projects are funded by the Bulgarian National Science Fund.

Prof. Luchia Antonova-Vasileva, PhD, Institute for Bulgarian Language (IBL):

What are the most significant discoveries made at your institute over the years?

Notable achievements in the work of IBL include the contributions of Academician Vladimir Georgiev (1908-1986), who studied Indo-European and Balkan linguistics and Cyrillic studies. He developed the concept of the so-called tripartition of gutturals in his monograph Indo-European Gutturals (1932). He was also one of the first to contribute to the decipherment of the Cretan-Mycenaean script.

What are the current projects being developed by scientists at your institute?

At the IBL, which is one of the oldest institutes in BAS, national and international projects are being developed, investigating the current state, history, and dialectal diversity of our native language, the main carrier of our national culture. The relationship of the Bulgarian language with other languages is also being studied. This year, the work on the BERON project (Bulgarian Language Resources Online) was completed – an intuitive platform providing open access to reliable information on the Bulgarian literary language. The resource contains a total of about 2,400,000 forms. The content of BERON is developed by linguists from the Contemporary Bulgarian Language Section. It is based on the digitized Official Orthographic Dictionary of the Bulgarian Language. The project was commissioned by the Ministry of Education and Science through BAS's Mechanism for Commissioning and Implementing Consultations. It was carried out in collaboration with the Institute of Information and Communication Technologies at BAS. The IBL website also provides access to other linguistic resources that offer easy access to information and linguistic references to assist with Bulgarian language education, as well as data on the diverse scientific activity.

Penka Vatova, Institute for Literature:

What are the most significant discoveries made at your institute over the years?

Over its 76 years of existence, the Institute for Literature has become a leading scientific institution that concentrates the main research potential of Bulgarian literary studies. The Institute has carried out scientific research on various aspects of Bulgarian literary creativity across a nine-century period – from the Middle Ages and the Renaissance to the Modern era and contemporary times. Comparative studies with other literatures have been conducted, as well as theoretical developments on Bulgarian literary heritage, which represents the contribution of Bulgarian culture to world civilization. For the first time, the Institute has also dedicated research to areas that were previously neglected such as emigration literature, minority literature both in Bulgaria and abroad, anti-totalitarian literature, and more. Unique encyclopedic and reference publications – dictionaries, encyclopedias, electronic databases, and digital libraries – have been produced, making previously unknown or little-known literary-historical facts accessible to a broad audience. The institute's research, focusing on various aspects of literary creation, presents to society the traditional interactions between Europe and Bulgaria, but also highlights the specific dimensions of Bulgarian national identity and supports its preservation.

What are the current projects being developed by scientists at your institute?

The number of ongoing projects at the Institute for Literature is in the double digits. Some of them focus on individual research within the Institute's structural units. Most of these projects are related to rethinking literary phenomena from the past and present or applying new approaches to their study. Others aim to create lexicographical and encyclopedic reference publications and digital collections of literary texts and editions. Other projects focus on interpreting phenomena in theoretical, historical, and comparative terms, exploring interdisciplinary areas of literature and the field of interliterary interactions. Currently, seven scientific projects are being developed at the Institute, funded by the Bulgarian National Science Fund. Their subjects range from the 14th to the 20th century and cover various phenomena: medieval readings, Renaissance artistic and documentary literature, unconventional Bulgarian literature from the socialist decades, Europe and World War II, Bulgarian children's literature, literature created by women, topics linking literature and nature as well as literature and essays. The national scientific programme Development and Promotion of Bulgarian Studies Abroad is also in progress.

Rumyana Preshlenova, Institute of Balkan Studies and Center of Thracology (IBSCT):

What are the most significant discoveries made at your institute over the years?

Some of the most important discoveries made by the scientists at IBSCT over the years include:

- Thousands of documents from Bulgarian and international archives, which cover the history, languages, culture, and modern development of the Balkans, including Vasil Levski's activities and legacy;
- A wide range of information about the Thracians from ancient sources, which have been gathered, translated, and published in Bulgarian language;
- Numerous Thracian megalithic monuments in the Strandzha, Sakar, Rhodopes, and Sredna Gora mountain regions having been identified and published;
- Underwater research off the Bulgarian Black Sea coast;
- Paleogenomic information on the origin of the proto-Bulgarians and the demographic processes in the Balkans from prehistory to the modern era;
- The contribution of Constantine of Preslav to the lexical wealth of the Bulgarian language.

What are the current projects being developed by scientists at your institute?

Currently, researchers at IBSCT are involved in eight international projects, three national programmes, and twelve national projects focused on fundamental research. They also take part in scientific and applied activities to promote cultural heritage, organizing numerous poster exhibitions in Bulgaria and internationally, including at UNESCO and the Organisation for Economic Co-operation and Development. Additionally, they publish the journal Balkans, provide open access to bibliographic corpora and catalogues, produce the Let's Talk About the Balkans podcast series, and offer full-text publications and digital exhibitions.

Daniel Vatchkov, Institute for Historical Studies:

What are the most significant discoveries made at your institute over the years?

In recent years, researchers at the institute have carried out many essential studies in Bulgarian, Balkan, and European history, covering the period from the Early Middle Ages to the early 21st century. Notably, significant research has been published on the political, social, economic, and cultural history of Bulgaria. The ongoing effort to find and publish both Bulgarian and foreign sources on Bulgarian history also continues.

What are the current projects being developed by scientists at your institute?

– Researchers at the Institute are currently involved in a range of national and international scientific projects.

Some of the most important projects include those focused on prosopography in medieval Bulgaria, the study of Bulgarian cultural heritage in the Western Balkans, the impact of 20th-century wars on the political, economic, and cultural development of Bulgarian society, cultural exchange among countries in Central and Eastern Europe, initiatives concerning the rescue of Bulgarian Jews, the discovery and publication of letters from notable Bulgarian figures from the National Revival period, and multiple other collective and individual research projects.

Vladimir Penchev, Institute of Ethnology and Folklore Studies with Ethnographic Museum (IEFSEM):

What are the most significant discoveries made at your institute over the years?

The achievements of IEFSEM-BAS cover a wide range of areas. First, they involve scholarly research on humans and communities, exploring their historical and modern cultural contexts. This includes studying the traditional and contemporary culture of Bulgarians and other ethnic and religious groups in Bulgaria, focusing on historical continuity and diverse expressions. They also cover historical and current migration processes and their effects on identity, and cultural developments among Bulgarian communities abroad, both past and present. Second, they include preserving and displaying Bulgarian cultural artefacts in the National Ethnographic Museum. Third, they involve a rich collection of ethnographic and folklore archival materials, safeguarding them for future generations in the Ethnographic Archive and the National Centre for Intangible Cultural Heritage. Last but not least, they are related to promoting cultural awareness among the younger generation through our Educational Centre.

What are the current projects being developed by scientists at your institute?

Currently, the Institute is developing about 50 scientific and applied research projects, funded by European programmes, international contracts, by the Bulgarian National Science Fund, budget subsidy, etc. I would highlight Taming the European Leviathan: The Legacy of Post-War Medicine and the Common Good – European Research Council, Synergy Programme, Horizon 2020 Framework Programme, Project No. 854503. 3D data on cultural heritage through three-dimensional, automated science-based digitization – No. PVU-5 of 27.05.2024 /BG-RRP-2.011-0008-C01/

Prof. Joanna Spassova-Dikova, PhD, Institute of Art Studies:

What are the most significant discoveries made at your institute over the years?

The Institute of Art Studies at BAS has a rich history of over 75 years. It was founded on October 3, 1947, as recorded in Protocol No. 2 of the meeting of the Literary and Artistic Branch of the Academy. We are proud to say that the institute continues the legacy of the early Bulgarian enlighteners who established the first scientific and cultural institution in Bulgaria in 1869, with the name Bulgarian Learned Society, which will mark its 155th anniversary in 2024.

The institute's mission is to "explore the arts, architecture, and culture in regional, European, and global contexts, while also studying and interpreting cultural heritage and national identity."

The Institute specializes in the study of visual arts and architecture, music, theatre, and screen arts. Researchers engage in fundamental, interdisciplinary, specialized, and applied scientific research. They collaborate on joint projects with research, educational, and other related organizations both nationally and internationally. The work of the researchers of the Institute is its greatest asset. For decades, the monographs, encyclopaedia, and corpora produced by these scholars have been the cornerstone of Bulgarian education and science in the arts. Many researchers have received

prestigious awards for their research contributions.

In recent years, the institute has published several important works. Among these are the collective monographs Contemporary Musical Thought (2019) and Prayer Journeys of Bulgarians in the 18th and 19th Centuries and Art (2022). Various projects have led to the release of numerous valuable publications such as the bilingual two-volume study Bulgarian 20th Century in Arts and Culture (2019) and Corpus of 16th Century Frescoes (2023). The Post-Totalitarian Bulgarian Cinema – Models and Identities project received a certificate for the best project from the Bulgarian National Science Fund for 2022, achieving the highest number of publications—a total of 144 works, including seven monographs, two thematic collections, ten peer-reviewed articles, and more.

The project Establishment and Development of a Centre of Excellence, Heritage BG, under the European Operational Programme Science and Education for Smart Growth, culminates with the creation and ceremonial opening of the Interactive Map of the Arts in Bulgaria Laboratory

What are the current projects being developed by scientists at your institute?

– As it moves forward into the third millennium, the Institute of Art Studies remains the only specialized research institution in Bulgaria focused on the study of ancient, medieval, and modern artistic culture.

Some of the current projects researchers at the Institute of Art Studies are engaged in focus on digitizing and modernizing technologies for preserving and processing archival materials.

Researchers from the institute are conducting studies and developments under the project Topoi of Memory: Bulgarian Cultural and Historical Heritage, funded by the Council of Ministers through the National Scientific Programme for the Development and Promotion of Bulgarian Studies Abroad (National Scientific Programme Bulgarian Studies). This programme promotes cultural exchange, dissemination, and study of Bulgarian culture and arts of the 20th century, both domestically and internationally. Focused scientific research is underway, and a network of researchers is being formed. This network includes scholars from Bulgaria and other countries, along with students and doctoral candidates interested in the scientific achievements in the arts in Bulgaria during the 20th century and their promotion. Specifically, the project includes virtual reconstructions of architectural monuments that no longer exist, spanning from antiquity to the present day. Other significant ongoing projects include Liturgical Objects in the Context of Goldsmithing Art during the Ottoman Period (Based on Materials from the Plovdiv Diocese) within the programme for young scientists supported by the Bulgarian National Science Fund, and Cinema Culture, Arts, and National Images in Bulgaria (CINEMA.BG): Formation of the Public Importance of Film Culture in the Period Between the Two World Wars, also supported by the Bulgarian National Science Fund. This project examines early Bulgarian cinema in a cultural-historical context based on a vast amount of archival materials.

Significant efforts are underway to launch the second phase of the Creation and development of Heritage BG Centre of Excellence under the European Science and Education for Smart Growth Operational Programme.

Assoc. Prof. Hristo Popov, PhD, National Archaeological Institute with Museum, Bulgarian Academy of Sciences (NAIM-BAS):

What are the most significant discoveries made at your institute over the years?

NAIM-BAS is the largest research centre for archaeology in both Bulgaria and Southeast Europe. The National Museum, now succeeded by the National Archaeological Institute, is the oldest national museum in Bulgaria, and the Bulgarian Archaeological Institute is one of the country's earliest scientific institutes.

For over 130 years, our scholars have been at the forefront in Bulgaria, exploring sites that are crucial to our rich cultural and historical heritage:

- Prehistoric sites include the

Kozarnika and Bacho Kiro caves, the settlement mounds of Karanovo, Yunatsite, Provadia-Solnitsata, Dyadovo, and Ezero, the ancient mines of Ai Bunar and Ada Tepe, and the Bronze Age necropolis near Baley, among others.

- Many sites from the classical and Hellenistic periods of Ancient Thrace, which include Seuthopolis, Pistiros, Koprivlen, Babyak, Duvanlii, Starosel, Sboryanovo, the Valley of the Thracian Kings, among others.
- The ancient Greek colonies of Apollonia Pontica (present-day Sozopol) and Mesembria (present-day Nesebar).
- Numerous sites from the Roman era include ancient cities and legionary camps along the Danube Limes, such as Ratiaria, Novae, and Escus. Additionally, there is Deultum, the first ancient Roman colony in Thrace, the ancient city of Heraclea Sintica, and sanctuaries at Glava Panega, Lozen, Ognyanovo, Kasnakovo, among many others.
- All former Bulgarian capitals and related sites: Pliska, Madara, Veliki Preslav, Tsarevets, Trapezitsa.
- Several other sites linked to Medieval Bulgaria, which include Melnik, the Lovech Fortress, the Pernik Fortress, among others.

The presented list is just a small sample of the important research projects carried out by the scientists at NAIM-BAS. Their work over the years has shaped the current understanding in Bulgarian science and society of our rich history and cultural heritage, from ancient prehistory to modern day.

What are the current projects being developed by scientists at your institute?

– We are currently focused on advancing our long-term strategic projects, including the research of Pliska, Veliki Preslav, Trapezitsa, Melnik, Deultum, Ratiaria, Oescus, Novae, Heraclea Sintica, Yunatsite, and Provadia-Solnitsata. These are just a few of our major projects, many of which involve international partnerships.

Simultaneously, NAIM-BAS acts as a strategic contractor for contemporary projects vital to the public, and holds primary responsibility for conducting rescue archaeological surveys along the routes of highways, railways, gas pipelines, and power lines nationwide. Our main partners and clients include API, NRIC, Bulgartransgaz, ESO, among others.

We are engaged in many active scientific projects and framework agreements that mainly focus on fundamental science and tackle important research questions. We collaborate with scientific institutions from Austria, Germany, Poland, France, the United Kingdom, Romania, Greece, North Macedonia, and other countries.

Veselka Zhelyazkova, Cyrillo-Methodian Research Center (CMRC):

What are the most significant discoveries made at your institute over the years?

In fulfilling the mission of the CMRC—to discover, study, and promote the Cyrillic-Methodian tradition as one of the foundations of Bulgarian and European cultural identity—over the years, the centre's scholars have completed many important studies. The primary focus is the discovery, examination, and publication of Slavic, Greek, and Latin Cyrillo-Methodian sources. A large number of new copies of already known texts were discovered, and in line with the contemporary scientific paradigm, the sources were systematized and presented in an interactive digital environment (https://cyrmet-sl.kmnc.bg). The research conducted by the centre's associates on the Slavic manuscript heritage is also very important. Within the framework of the project Models of European Cultural Tradition—the Manuscripts of Tsar Ivan Alexander, three emblematic Middle Bulgarian manuscripts from the 14th century were studied and published: the Four Gospels of Ivan Alexander, the Sofia Psalter, and E. Lavrentiy's Miscellany.

What are the current projects being developed by scientists at your institute?

Two projects stand out among the ones currently developed at CMRC. The Fourteenth Century South Slavonic Scribes and Scriptoria – Paleographical Attribution and Online Repertorium project, funded by the Bulgarian National Science Fund, aims to gather data from primary medieval sources. This data will be made available to scholars as a reliable tool for identifying, defining, and organizing South Slavic manuscripts found in libraries worldwide, focusing on their paleographical features. https://kopisti14.kmnc.bg/). The Cyril and Methodius European Cultural Route project explores the Cyrillo-Methodian tradition from multiple perspectives. It is linked to the Council of Europe's initiative to improve the representation of European history and values through research, education, social inclusion, and cultural, pilgrimage, and eco-tourism (https://www.cyril-methodius.cz/en/o-nas). Additionally, the educational platform being developed at CMRC, which supports secondary education in Bulgaria and Bulgarian schools abroad, has garnered significant public interest (https://lms.kmnc.bg/).

Prof. Irena Zareva-Zafirova, PhD, Economic Research Institute:

What are the most significant discoveries made at your institute over the years?

In the year of BAS's 155th anniversary, the Economic Research Institute (BAS's dedicated unit for fundamental and applied economic research) celebrates 75 years since its founding.

Some of the institute's most notable achievements in recent years involve the creation of strategic documents such as the National Energy Strategy, with focus on the electricity sector. This includes an analysis of the potential for utilizing the assets of the Belene Nuclear Power Plant, a project commissioned by the Government of the Republic of Bulgaria to BAS. Other important works include Measures to Overcome the Demographic Crisis in the Republic of Bulgaria, following Council of Ministers Decree No. 347/08.12.2016, and the National Research Programme Healthy Foods for a Strong Bio-economy and Quality of Life, under a project by the Ministry of Education and Science. Additionally, the institute has produced reports for the President of the Republic of Bulgaria, such as The Global Financial and Economic Crisis, 2009 and Bulgaria and Strategy for Accelerated Economic Development of the Republic of Bulgaria, 2007. The scientists have also played a role in defining energy poverty, now part of in the Energy Act of 2023, and in assessing the socio-economic impacts of the COVID-19 pandemic.

What are the current projects being developed by scientists at your institute?

The institute's researchers are engaged in projects spanning nearly every sector of the economy. These projects cover public spending and policies, the labour market, demographic trends, innovation, digitization, the circular economy, capital markets, foreign trade, corporate governance, regional disparities, agriculture, the food industry, education, healthcare services, and more. Currently, there are 25 active projects funded by European programmes, the National Recovery and Resilience Plan, state institutions, and the Bulgarian National Science Fund under the Ministry of Education and Science.

One important public project involves evaluating how the Schengen Agreement affects the movement of goods and people between Bulgaria and other EU Member States.

The project focused on coal regions after the end of coal mining, along with Bulgaria's new industrial policy, is crucial for the national economy and society. Its goal is to propose policies to reduce the negative socio-economic and demographic effects in Bulgarian coal regions caused by the energy transition of the European Green Deal.

The study on the impact of the National Recovery and Resilience Plan on reforming Bulgaria's transport sector is equally important. It involves evaluating the feasibility of implementing the planned reforms in line with the National Recovery and Resilience Plan, with the goal of creating an energy-efficient, climate-neutral, and digitized transport system.

Research on the effectiveness of agroecological practices and innovations as tools for influencing the agricultural sector, the reform of corporate governance in state-owned enterprises, the role of Bulgarian electricity within the European Green Deal, and the adaptability of social support during crises is also of interest.

Prof. Irena Ilieva, PhD, Institute for the State and the Law:

What are the most significant discoveries made at your institute over the years?

Since its founding, the Institute for the State and the Law has focused on improving national legislation, assisting law enforcement and human rights agencies, offering research and expertise for educating future legal professionals, and raising public legal awareness. In 2023, scientists from the Institute published 173 works and were cited in 268 sources across 171 publications.

In 2023, a significant accomplishment of the Institute was the creation of an opinion following a scientific and practical round table titled Theoretical Possibilities and Practical Dimensions of Amendments to the Constitution of the Republic of Bulgaria. This event took place from September 30 to October 1, 2023. The opinion was submitted to the National Assembly's Committee on Constitutional Affairs and can be accessed at https://www.parliament.bg/bg/parliamentarycommittees/3201/standpoint/17049.

What are the current projects being developed by scientists at your institute?

Researchers at the Institute for the State and the Law are currently working on several projects: Theory and Empirics of Justice, Legal Issues of Artificial Intelligence, Suretyship and Other Forms of Personal Security, Examination of Commercial Disputes in Judicial and Arbitration Proceedings in the Republic of Bulgaria, Issues of Criminal Justice, State Power, Bulgaria and China in Euro-Asian Connectivity Projects, and participation in the National Scientific Programme – Security and Defence.

Prof. Antoaneta Hristova, PhD, Institute for Population and Human Studies:

What are the most significant discoveries made at your institute over the years?

- The challenges and solutions in Bulgaria's demographic development have been identified. Practical policies have been created, addressing expected trends in key demographic areas: birth rates, mortality, migration, and regional development.
- General and specific policies have been created for Bulgarians living abroad, informed by a study of their attitudes towards future development and their support needs from the Bulgarian state.
- A programme aimed at preventing and addressing aggression in Bulgarian schools has been developed and put into practice. Over 500 Bulgarian teachers, psychologists, and educational counsellors have been trained in this programme.
- Standards for child development up to the age of three have been set. Psychologists and educators in nurseries and kindergartens nationwide have received training.

What are the current projects being developed by scientists at your institute?

- Policies and practices of parental leave in Bulgaria: a study on the views of parents and employers regarding parental leave in the context of social inequality and social sustainability (2024-2026)
- Anger while driving, emotional regulation, and their link to risky road behaviour – 2023-2024 – an intercultural study on social support and help-seeking in a changing global world (2023-2024)
- Long-term health and psychosocial effects and coping resources in severely or critically ill COVID-19 patients: a qualitative study (2022-2024)
- Emerging maturity: personal experience, social functioning, and mental health (2022-2025)
- Documents at the Ecumenical Patriarchate Archives: a source for the demographic development of the Bulgarian lands during the Bulgarian National Revival (2022-2025)
- Problems of Roma Integration in Bulgaria (PRIB)
- Perceptions and stereotypes of artificial intelligence (2022-2025)
- Religiosity, perceived stress, and coping strategies in the Post-COVID Situation (2022-2024)
- Adolescent health and well-being in the context of the COVID-19 pandemic: Effects on mental health, health behaviour, social interactions, and academic motivation and achievement moderated by personality characteristics (2021-2024)

Prof. Emilia Chengelova, PhD, Institute of Philosophy and Sociology (IPS):

What are the most significant discoveries made at your institute over the years?

Over the past decade, researchers at the IPS have completed over 50 important European and national projects, each tackling a crucial issue for Bulgarian society. In the last five-plus years, the Institute's teams have concentrated on a range of socially significant problems. These include studies on education and its role as a fundamental life asset for personal and professional growth, investigations into the causes of social inequalities and ways to reduce them to boost people's incomes, and research on vulnerable groups in the labour market, along

with developing policies to create new job opportunities.

A key focus of the research by the IPS is the study of the shadow economy's complex nature. The researchers have uncovered the main motivations and reasons that lead nearly 40% of Bulgarians into the shadow economy. They also explained why there is a high level of tolerance for the shadow economy among Bulgarians. In 2023, IPS scholars developed and calculated the Index of the Tolerance of Population to "Shadow Economy". This index is unique in both Europe and Bulgaria and is a valuable tool for monitoring public attitudes towards the shadow economy. The index calculations have shown that young people (aged 15-35) are especially tolerant of shadow economy practices. In response, specific policies were created to address this negative trend.

IPS researchers are very active in drafting expert analyses and opinions for government institutions. For instance, in 2023 alone, IPS researchers participated in 35 expert bodies at the national level, preparing 145 written opinions and expert reports. These reports cover critical areas such as the labour market, active aging and poverty reduction, tackling the shadow economy, and improving social inclusion. The IPS projects in the field of urban agriculture have directly influenced the policies of the Sofia Municipality related to sustainable development.

What are the current projects being developed by scientists at your institute?

As part of several European projects, teams from the IPS are exploring critical issues impacting both the present and future of individuals. These issues include digital transformation, artificial intelligence, the development of digital skills, workforce challenges, the increase in migration and its impact on the Bulgarian economy, along with urban agriculture as an untapped opportunity to improve the quality of life for people today.

Sylvia Naydenova, Central Library of the Bulgarian Academy of Sciences:

What are the most significant discoveries made at your institute over the years?

The Central Library of the Bulgarian Academy of Sciences is the first scientific library in Bulgaria, established concurrently with the Bulgarian Learned Society as its book collection in October 1869 in the city of Braila, Romania. For 155 years, the library has established itself as a national hub for literature and a key resource for both fundamental and applied research. The transition of the library's entire technological cycle to some of the most advanced international formats, standards, and software platforms in 2003 stands as one of the most significant achievements of the team of librarians. The automated library information system ALEPH500 and the DSpace platform for digital content are modern state-of-the-art systems, adapted and developed by the Central Library to meet the technological requirements.

What are the current projects being developed by scientists at your institute?

Preserving literary and documentary heritage is a key responsibility of the library. In support of this mission, the Central Library participates in two scientific programmes run by the Ministry of Education and Science.

- Cultural and Historical Heritage, National Memory, and Social Development, 2019-2022, during which 62 literary periodicals were digitized, and 12,771 bibliographic records were added to the library and information system.
- Development and Promotion of Bulgarian Studies Abroad (National

Scientific Programme Bulgarian Studies), 2022-2025.

In the first year, we analyzed and digitized the First, Second, and Third Congresses on Bulgarian Studies, making user access easier with OCR technology.

In the second year of the National Scientific Programme Development and Promotion of Bulgarian Studies Abroad, the book collection at the library of the Bulgarian Exarchate in Istanbul was integrated into the Central Library's information system, and the Exarchate's ecclesiastical archive was digitized.

This approach allows the general public, both in Bulgaria and abroad, to access the written cultural heritage of Bulgaria.

Viktoria Lazova, Bulgarian Encyclopaedia Scientific Information Centre

What are the most significant discoveries made at your institute over the years?

In 1955, the Council of Ministers established a specialized unit within BAS called the Bulgarian Encyclopaedia Sector. Its purpose was to write and publish the Short Bulgarian Encyclopaedia. Ivan Danchov played a key role in the early stages of compiling the first five-volume edition of the Short Bulgarian Encyclopaedia (1963-1969), reinforcing the tradition of encyclopaedic work as a collaborative effort by a large creative team. Today, the creation of various editions of the Bulgarian Encyclopaedia follows a strict scientific methodology supported by a wide network of authors and consultants from various scientific and cultural institutions.

With its newly updated Encyclopaedias and scientific reference publications, the Bulgarian Encyclopaedia Scientific Information Centre maintains its reputation as a reliable source of comprehensive and up-to-date scientific and popular science information. This is demonstrated by the creation of the extensive Bulgarian Encyclopaedia A–Z: first edition in 1999, second in 2002, third in 2005; electronic edition in 2002, and a second electronic edition in 2004.

Among the recent publications by the Bulgarian Encyclopaedia Scientific Information Centre are the one-volume Encyclopaedia Bulgaria (2021), the Encyclopaedia Sacred Places of Bulgaria (2022), and the Encyclopaedia Medicinal Plants (2023), among others. These editions are currently some of the most popular encyclopaedic works on the Bulgarian market. They are academic publications featuring verified and reliable scientific information, prepared under the chief editorship of prominent Bulgarian experts in their respective fields.

What are the current projects being developed by scientists at your institute?

The Bulgarian Encyclopaedia Scientific Information Centre is actively working on digitizing the vast archive of the Bulgarian Encyclopaedia collected over many years. This archive contains original photographs, texts, letters, and more. It will form the basis for establish/ing a comprehensive encyclopaedic knowledge base aimed at both specialized scientific research and the general public in Bulgaria.

New encyclopaedic editions are currently being prepared for print, and some will soon be available on the Bulgarian book market.

Marin Pandev, Joint Innovation Centre of BAS (JIC-BAS)

What are the most significant discoveries made at your institute over the years?

The JIC-BAS was established on December 19, 2005, by a decision of the General Assembly of BAS as a specialized unit responsible for developing and supporting the academy's innovation policy. The centre coordinates the efforts of academic institutes in research, development, and innovation initiatives, aiding in the creation of innovative products, services, and technological processes developed by BAS institutes for both domestic and international markets. The JIC supports the sustainable growth of BAS's research and development potential, aligning it with the needs of societal development in the national and global economy. It promotes collaboration between scientists, research units, and businesses, providing consultation and facilitating the market transfer and implementation of knowledge, technologies, and services.

What are the current projects being developed by scientists at your institute?

The JIC is a key Bulgarian partner in the Enterprise Europe Network, set up by the European Commission in 2008. The network includes over 500 organizations from more than 50 countries such as the USA, Canada, India, China, Turkiye, Korea, and Japan. It maintains a comprehensive shared database with profiles for business, technology, and project collaboration. Through this, BAS actively participates in this important European initiative on a global level, offering integrated services to support business, science, and innovation in technology transfer, commercialization, and internationalization.

One of the most significant initiatives of the JIC-BAS in recent years is the annual Science for Business Forum, where BAS institutes present their developments, technologies, prototypes, and services with a high level of technological readiness to the business community. The event is jointly organized by BAS and the Executive Agency for Small and Medium-sized Enterprises and has evolved into a platform for collaboration among BAS scientists, industry, the entrepreneurial ecosystem, and the public sector.

The JIC-BAS is a partner responsible for managing intellectual property, technology transfer, and commercialization within the Association Centre of Competence HITMOBIL. The main goal of this centre is to create a unique infrastructure at both national and regional levels for developing, testing, optimizing, and implementing advanced industry mobility and energy storage systems. This infrastructure will support applied scientific research in two areas: industrial scientific research and experimental development. HITMOBIL is dedicated to developing and implementing technologies and systems for generating, storing, and using clean energy, leveraging renewable energy resources.

The JIC-BAS has been a long-term partner and participant in the European Researchers' Night in Bulgaria.

Sofia, September 25, 1952. The building of BAS.
Photo: Simeon Nenov, BTA

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