



Leopoldina

news

Deutsche Akademie der Naturforscher Leopoldina –
Nationale Akademie der Wissenschaften

Halle (Saale), 8 June 2012

02 | 2012

Leopoldina celebrates inauguration of new headquarters



Arrival at the new building: Leopoldina President Jörg Hacker welcomes Federal Minister Annette Schavan, Minister-President Reiner Haseloff, and Minister of State Cornelia Pieper (from left to right).

Photo: David Ausserhofer

The Leopoldina inaugurated its new headquarters in Halle with an opening ceremony and a special colloquium on 25 May. Around 400 politicians, academics and other high-profile guests attended the event. Prof. Annette Schavan, German Federal Minister of Education and Research, said in her speech that “this is a great day for the Leopoldina and for science in Germany.”

Schavan continued with the move to the newly refurbished site on the Jägerberg in Halle, the Leopoldina has found a location truly suited to its purpose as the German National Academy of Science. This purpose, she explained, is primarily that of providing scientifically founded advice to policymakers and society, an increasingly important task, especially given the growing complexity of political and societal processes. “Policymakers need

independent scientific advice more now than ever,” said Schavan.

In his opening speech, Leopoldina President Prof. Jörg Hacker ML also focused on the Academy’s transformation from a purely scholarly society into the proactive modern academy it is today. He said that the new building would make the Leopoldina more open to the public and would also promote dialogue between science and politics. “Academies of science are institutions that are able to provide independent, scientifically founded advice on fundamental problems.” As such problems he cited the challenges of climate change and the transition to renewable energy sources as well as the ethical and legal issues surrounding biotechnological research. Hacker thanked the federal and state governments for their support in purchasing and renova-

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Dear members
and friends of the Leopoldina,

With the inauguration of its new main building on 25 May, the Leopoldina has now truly arrived in its new home in Halle. I am delighted



that the building is also stimulating the public’s interest in the work of the German National Academy of Sciences, thus drawing more attention to science.

This is great news, as scientific and research findings serve little purpose unless they can be discussed within society and are useful to society. This is one of the reasons why the Leopoldina is throwing its doors open to the public this summer. From 20 to 22 June, the Academy will host a three-day symposium, “Physik, Philosophie und Friedensforschung” (Physics, Philosophy and Peace Research) to honour the Leopoldina member Carl Friedrich von Weizsäcker on what would have been his 100th birthday. The Weizsäcker Prize will be awarded on the second day of the event. The Leopoldina Night will take place on 6 July as part of the Long Night of Science event. The programme will be of interest to all age groups and will include a public discussion on scientific freedom and on the limitations and responsibilities of science. I cordially invite you to visit us in our new home.

Kind regards,

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ting the site.

The German Federal Ministry of Transport, Building and Urban Development provided €16 million from the second economic stimulus package, while the State of Saxony-Anhalt contributed almost €1 million, also from the second economic stimulus package.

In his welcoming address, the Minister-President of Saxony-Anhalt, Dr Reiner Haseloff, praised the Leopoldina as an important institution that guides policymakers and society as a whole on scientific issues. “With this new building, the Leopoldina is clearly making its presence felt here in its traditional location,” he said.

Cornelia Pieper, Minister of State at the Federal Foreign Office, also gave a welcoming address. She passed on warm wishes for the future from the German Federal Ministry of Transport, Building and Urban Development, saying that the ministry had greatly welcomed the opportunity to fund this construction project. “It was a matter of preserving an historical building of architectural significance. This building gives the Leopoldina prestige both nationally and internationally.” Mrs Pieper added that the Leopoldina had not been allocated a “soulless” new building, instead it had moved into a home with a special, historical dimension.

Science itself played a suitably important role on the day of the inauguration. Literary scholar Prof. Wolfgang Frühwald ML from Augsburg gave a lecture called “‘Nature is neither core nor shell’ – the natural sciences in discourse and in the context of society’s expectations”. He spoke about “the discourse between the natural sciences and society on the price that we all have to pay for prosperity and progress”. Frühwald posited that this price is getting too high, as “the bourgeois society characterised by our type of science, and the values and goals it upholds, has clearly come to an end”. This development can be seen, he said, in the fact that there is increasingly less respect for the private sphere. In its place, we have a situation where everyone can join in with everything, something that has overturned the established relationship between teachers and students.

In the colloquium that followed the inauguration, Prof. Karl Vocelka from the University of Vienna gave a lecture on “The role of Emperor Leopold and his



View from the garden of the façade of the Leopoldina’s new building on the day of the inauguration. The outdoor spaces were also redesigned during the building’s redevelopment.

Photo: Stephen Ruebsam

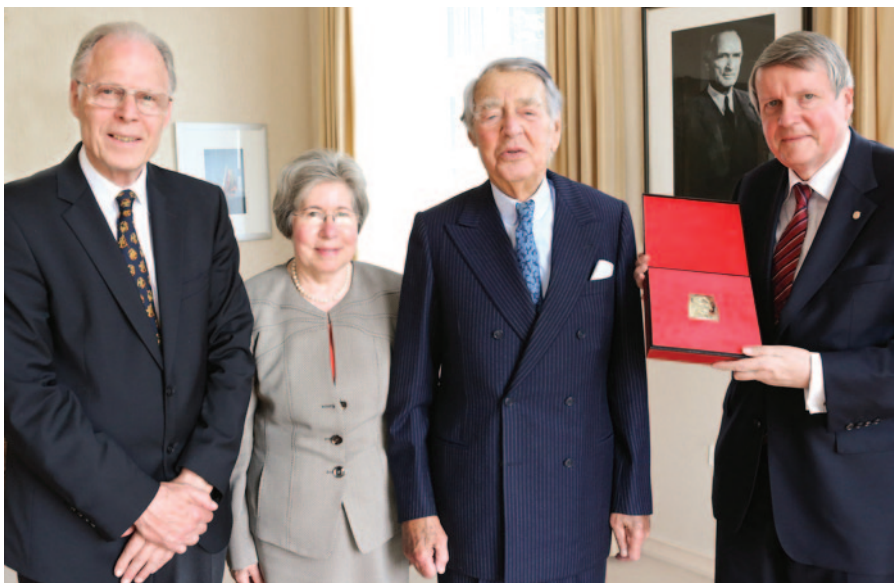
importance as a patron of science and the arts”. Vocelka described the opportunities enjoyed by the Leopoldina as an academy of science from very early on, as Leopold I granted the Leopoldina special rights, including freedom from censorship, in 1687.

In the round-table discussion following Vocelka’s lecture, discussions focused on the importance of freedom in science and of academic exchange worldwide, particularly within academies and international academy networks. In a thought-provoking presentation, Sir Brian Heap, President of the European Academies Science Advisory Council (EASAC) spoke about the challenges faced by our global society and about how quickly decisions sometimes have to be made in the political sphere. Heap explained that while the danger of the wrong decisions being made is no greater today than it was in the past, the consequences of a wrong decision can now be seen sooner. He said that academies are essential partners in this regard. “Academies provide independent advice – whether they asked for it or not.” Furthermore, Heap said, academies always keep an eye on the future and on possible developments. Forecasts that are based on sound science and made outside the day-to-day business of politics are vital for society, he said. Prof. Krishan Lal, President of the Indian National Science

Academy, said that the role of academies was to “inspire” society. For his part, the President of the Hungarian Academy of Sciences, Prof. József Pálincás, said that empowering policymakers to make decisions was a major task of science academies. Prof. Tilman Brück from the Global Young Academy pointed out that this task should always be seen in a global context. The journalist Dr Jeanne Rubner, head of the science section at Bayerischer Rundfunk, spoke about the balancing act performed by academies when they impart knowledge. On the one hand, she said, academies must be splendid and unique; on the other, they need to be able to communicate their knowledge in a manner that can be understood by society.

On the evening before the inauguration ceremony, the guests had a chance to learn about the history of the Leopoldina at a joint exhibition by the Leopoldina and Stiftung Moritzburg, the state art museum of Saxony-Anhalt called “The faces of science”. The exhibition features around 250 historical images of Leopoldina members. It shows the development of portraits of scholars from the 17th to the 20th century and explains how portrait techniques and scientists’ self-images have changed. The evening included a presentation and a lecture and concluded with a reception hosted by the Leopoldina Academy Circle of Friends. (mab)

Leopoldina sponsor Berthold Beitz awarded the Emperor Leopold I Medal



Presentation of the medal in Essen: Volker ter Meulen and Bärbel Friedrich with award-winner Berthold Beitz and Jörg Hacker.

Photo: Alfried Krupp von Bohlen und Halbach Stiftung

Prof. Berthold Beitz, chairman of the board of trustees of the Alfried Krupp von Bohlen and Halbach Foundation, was awarded the Emperor Leopold I Medal during the inauguration of the Leopoldina's new main building. Leopoldina President Prof. Jörg Hacker ML thanked Beitz for his services to German science and for his support of the Academy's work. Beitz was unable to attend the event, but received the award in Essen on 29 May from Jörg Hacker, Vice President Prof. Bärbel Friedrich ML and former President Prof. Volker ter Meulen ML.

In his laudatory speech, Hacker praised Beitz's services and commitment to the Leopoldina, describing him as a tru-

ly selfless sponsor. "During the division of Germany, Prof. Beitz provided incredibly generous financial and moral support to the Leopoldina through the Alfried Krupp von Bohlen and Halbach Foundation", Hacker said. "The construction of the Leopoldina's lecture hall in Halle's Emil-Abderhalden-Strasse in 1987/88 was only possible thanks to Beitz's support." Hacker said that Beitz continues to support the Academy through the foundation to this day. For example, his support enabled grants for young scientists; the organisation of symposia; and the construction of an international meeting centre in cooperation with Martin Luther University Halle-Wittenberg, the State of Saxony-Anhalt

and the Federal Government.

Prof. Beitz, who was born in 1913, became Chief Executive of Alfried Krupp von Bohlen und Halbach in 1953, who was the last individual owner of the Krupp concern and hence Beitz was one of the most important managers in Germany. He remains Chairman of the board of trustees of the Alfried Krupp von Bohlen und Halbach Stiftung and manages the concern's estate. Beitz has received many lifetime achievement awards. Among other remarkable feats, he saved the lives of several hundred Jewish forced labourers in occupied Galicia during the Second World War by describing them as essential to the oil industry and employing them in factories that he managed.

As executor of the Krupp estate, Beitz also played a major role in restructuring the Ruhr region when the coal and steel industry there went into decline. Beitz is regarded as one of the great patrons of German science. The Leopoldina awarded him the title of Honorary Sponsor in 1987 and granted him the status of Honorary Senator in 2005.

Berthold Beitz is the first person to be honoured with the Emperor Leopold I Medal. The medal, which was designed by the sculptor Prof. Bernd Göbel (Halle), is awarded to public figures for their services to the Leopoldina and to science as a whole. The obverse bears a portrait of Emperor Leopold I. Written on the reverse is "Mit besonderem Dank – Die Leopoldina" (With special thanks – the Leopoldina). The medal pays homage to Emperor Leopold I, who granted the Academy special privileges in 1687, including freedom from censorship. The Leopoldina Academy Circle of Friends funded the medal. (mab)

Cooperation agreements signed with India and South Korea

As part of the festivities surrounding the inauguration of its new main building, the Leopoldina signed cooperation agreements with the national academies of science in South Korea and India. The aim of the agreements is to create a basis for the ongoing exchange of knowledge. Leopoldina President Prof. Jörg Hacker ML signed the agreements with his counterparts Kil-Saeng Chung, President of the Korean Academy of Science and Technology, and Krishan Lal, President of the Indian National Science Academy.

The agreement with the South Korean academy is a new one for the Leopoldina. "Just like at the Leopoldina, the life sciences play a major role in the work of the Korean national academy. The academy is a key player in Korean policy advice and an important link to the whole of Asia", said Hacker. He went on to remark that there were many scientific links between the two academies, particularly with regard to energy and water issues and in the field of personalised medicine. The first collaborative events on

these and other subjects will take place this year. The agreement signed with the Indian national academy in New Delhi in 2007 was renewed. "Like Korea, India is one of the most dynamic countries when it comes to research", said Hacker. He explained that both academies have already benefitted from exchanging information at numerous symposia held in recent years on subjects such as climate change, infectious diseases, green genetic engineering and plant biology. (mab)

News



Meeting of the contributing Academies on 27 and 28 February 2012, Washington, D.C.

Photo: NAS

Leopoldina gives recommendations to the G8 summit in Camp David

In the run-up to the G8 summit in Camp David, Maryland, the German National Academy of Sciences Leopoldina, in partnership with the national science academies of the G8 member states and seven other science academies, has equipped the world leaders with a set of recommendations on addressing some of the planet's most pressing challenges. The partners' three statements on the topics of water and energy, greenhouse gas reduction and ways of building resilience to natural and technological disasters were handed over to the participating governments for them to consult during their negotiations on 18 and 19 May 2012.

The three statements spell out the fundamental role that science and research could play in finding solutions to global dilemmas. The 15 national science academies that bring together outstanding scientists recommend that governments in the G8 states systematically organise global solution-finding processes and better incorporate the global scientific community in those processes.

In their "Energy and Water Linkage" statement, the science academies point out that governments around the world are not giving enough attention to the interaction between these two resources.

This has not only caused inefficient planning and implementation, it could also lead to dangerous shortages of water and energy in many parts of the world. The academies recommend policies that develop the two resources in concert and thus protect them both.

The statement on "Building Resilience to Disasters of Natural and Technological Origin" refers to the fact that the costs and losses incurred by such disasters have been extraordinarily high in recent years. Also, developments following the events in Fukushima have been a reminder that even highly developed countries like Japan can be devastated by natural and technological disasters, with effects being felt far into the future. The academies therefore consider it vital to systematically monitor and continuously re-analyse risks, to devise quicker warning and response systems that employ the very latest information technologies, to improve public health systems and building standards, and to invest in development aid in these areas.

The statement on "Improving Knowledge of Emissions and Sinks of Greenhouse Gases" calls on politicians to foster the development of more precise, standardised methods for improved assessment of sources and for reduction of greenhouse gas emissions. The academies

see this as a step towards preparing a viable international climate treaty. The science academies recommend steps to fill key gaps in knowledge and requiring comparable annual reports from all states. These could form the basis of further successful measures for protecting the climate.

Every year since the G8 heads of state and government met in Gleneagles in 2005, the national academies in those countries – Canada, France, Germany, Italy, Japan, Russia, the UK and the United States – have worked together to produce joint, scientifically founded statements on topics of relevance to the global community. The statements are intended to assist the governments during their negotiations at the annual G8 summits. This year's statements were prepared during a conference of academy representatives in Washington on 27 and 28 February 2012. The national academies of Brazil, China, India, Indonesia, Mexico, Morocco and South Africa participated alongside the academies from the G8 countries. At these meetings, Germany is always represented by the Leopoldina. (mab)

► You can view the 'G-Science' Statements at: www.leopoldina.org/en/international-issues/policy-advice-by-the-g8-academies/

www.leopoldina.org has a new look

The Leopoldina's new website was finished in just ten months

The German National Academy of Sciences presented its new website, www.leopoldina.org, to the public on 21 May 2012. Boasting a stylish modern design, the website offers users a wide range of content and a variety of new functions. Scientists, policymakers, journalists and members of the public can visit the website to quickly gain a clear overview of the Leopoldina's national and international policy advice activities.

The Academy's web presence has been thoroughly revamped to ensure it meets the standards required of a modern proactive academy. It is divided into nine sections: About us, Members, Science, Publications, Policy Advice, International Issues, Fellowship Programme, Events, and a press section. The website is available in English and German and was designed to meet all accessibility criteria. The site's clear structure and easy navigation, coupled with a search engine with "type ahead" functionality, allow all kinds of users to quickly and easily search pages and documents for the exact information they are looking for, and often to download it.

The www.leopoldina.org homepage presents visitors with all the Academy's latest activities at a glance. It features news items, press releases and publications documenting the Academy's scientific research and its policy advice activities, as well as a brief programme and calendar of upcoming events. Another new feature is the Member in Focus, which presents individual members of the Academy and their research interests. The profile changes regularly and in keeping with the latest events, featuring, for example, a member who has just won an award or achieved recognition in some other form.

The homepage also provides users with a direct means of gaining insight into the Leopoldina's central role as a policy advisor and a promoter of international relationships. The new media library in the press section is also just a click away. It also features a special playback window where users can watch the new film all about the Leopoldina that premiered at the opening ceremony of the Leopoldina's new headquarters on the Jägerberg. At the bottom of the homepage is an acti-

ve timeline, which gives a clear and visually appealing overview of the Academy's history since 1652.

Also just one click away is the Members' section, which has been completely redesigned. Here, users can search for specific members and, for the first time, Nobel Prize winners. This section will be gradually expanded to provide detailed information about all the Academy's members. The world map in the International Issues section shows the Leopoldina's international activities and partnerships. All of the Academy's publications, from the results of scientific symposia to state-

ments on specific policy issues, are grouped in a single section of the website and can be easily searched according to theme and category.

A large number of publications are available for download in PDF format. As well as providing press releases and newsletters, the press section has been expanded to feature all the latest news items about the Leopoldina, a media library with selected audio and video content, and a special download area, where journalists can download information and print-quality press photographs on important themes and people.

The Department of Press and Public Relations is responsible for the website's content. It uses the latest version of the free TYPO3 content management system, which is favoured by authorities, universities and research institutions worldwide. (rg)

The screenshot displays the homepage of the German National Academy of Sciences Leopoldina. At the top, there is a navigation bar with links for 'About us', 'Members', 'Science', 'Publications', 'Policy Advice', 'International Issues', 'Fellowship Programme', 'Events', and 'Press'. Below this, the main content area is divided into several sections: 'News' (with a featured article about the inauguration of the new headquarters in Halle), 'Member in Focus' (highlighting a member), 'Press' (listing recent press releases), 'Publications' (listing recent publications), 'Events' (listing upcoming events), 'Policy Advice' (listing recent policy advice), and 'International Relations' (listing recent international activities). A 'Member in Focus' section is also visible, featuring a profile of a member. At the bottom, there is a timeline showing the Academy's history from 1652 to 2012, with key events marked.

The homepage shows all information at a glance.

New Leopoldina film

A new seven-minute film about the Leopoldina premiered on 25 May at the start of the opening ceremony for the Academy's new headquarters. It presents the role of the German National Academy of Sciences and shows fascinating images of the Leopoldina's new headquarters during each stage of the refurbishment. To watch the film in German visit:

www.leopoldina.org/en/press/media-library/

International Issues

IAP and IAC executive boards meet in Halle



Representatives of the IAP and IAC academy networks at their meeting in Halle.

Photo: Markus Scholz

In late March, the 40 highest-ranking representatives of the international IAP and IAC academy networks accepted the Leopoldina's invitation to hold IAP and IAC executive board meetings in the new Leopoldina headquarters. Guests from 20 countries, including China, Indonesia, Mexico, Australia and the United States travelled to Halle to visit the German National Academy of Sciences Leopoldina, which is a member of both organisations.

The InterAcademy Panel, or IAP, describes itself as “the global network of science academies”. It is an international network of over 100 national academies that aims to promote cooperation among its members. It also advises governments and social actors on issues of global relevance. The InterAcademy Council, or IAC, is an international association of scientific academies whose primary concern is producing statements on global issues relating to science, technology and health.

The IAP held its executive board meeting on 26 and 27 March, and this was followed by the IAC board meeting on 28 March. On 27 March, between the two meetings, there was a joint session with representatives from both academy associations. The meetings were very produc-

tive and the two organisations were able to make significant progress.

COOPERATION WITH FAO

The IAC decided to produce a new statement about the sustainable use of water reserves and agreed to team up with the UN Food and Agriculture Organization (FAO) to form an expert committee to assess the options for improving how food and nutrition security data are produced and used.

The items on the IAP agenda were taken from the Third Strategy Plan and from an assessment of the activities of regional networks, such as the EASAC, the European Academies Science Advisory Council, which has been based at the Leopoldina's headquarters for two years. The IAP also began preparing for the Grand Challenges and Integrated Innovations conference coming up in February 2013. The conference is being held to coincide with the annual general meeting of the Brazilian Academy of Sciences.

While in Halle, the IAP and IAC also worked on the Research Integrity project, which aims to develop materials that provide individual researchers and educators with advice and guidelines on good scientific practice, including science ethics, integrity and the prevention of

scientific misconduct.

The international guests were able to take advantage of a special Halle visitor's programme. This included a dinner with musical accompaniment, a museum visit and an organ concert in the house where composer Georg Friedrich Handel was born. On another evening, the guests spent the evening at the Stiftung Moritzburg, the state art museum of Saxony-Anhalt, where one of the IAP's two co-chairs, Prof. Howard Alper, gave an entertaining talk on “The Science and Engineering of Chocolate”. Afterwards, some guests took the opportunity to take a guided tour of the Pompeii – Disasters at Mount Vesuvius exhibition at the State Museum of Prehistory in Halle.

CENTER OF INTERNATIONAL DIALOGUE

The meetings of these multinational academy associations mark the Leopoldina's first step towards making its new headquarters in Halle a centre for international dialogue and consultation on important themes for policymakers and society as a whole. (as)

Leopoldina furthers commitment to German-Russian cooperation

Year of Science: Leopoldina lectures from Nobel Prize winner Zhores I. Alferov at the 2nd German-Russian Young Researchers Cooperation Forum in Halle and Berlin; participation in the closing event

Promoting greater collaboration and exchange between German and Russian scientists is not only the aim of the German-Russian Year of Science 2011/2012 but also a key motivation for the Leopoldina, which has been actively participating in this year of cooperation. In 2011 the Leopoldina organised two high-profile lectures in Russia, where internationally renowned scientists Prof. Otfried Höffe ML and Prof. Dieter Bimberg ML presented their areas of specialism to the interested public. Another concern of the Leopoldina is to promote cooperation between young scientists. In cooperation with the Young Academy and the Council of Young Scientists at the Russian Academy of Sciences (RAS), the Leopoldina organised a German-Russian Young Researchers Cooperation Forum in Moscow (Leopoldina news, Issue 1/2012). Both events were successfully followed up in 2012.

The 2nd German-Russian Young Researchers Cooperation Forum was held in Berlin and Halle on 17 and 18 April. Over 30 young scientists from Germany and Russia – including many who had taken part in the first workshop in Moscow in December – assembled in Berlin on the first day of the event. The highlight of the day was a visit to Queen Nefertiti, as curator Dr Verena Lepper, a member of the Young Academy, took the researchers on an exclusive tour of the Egyptian Museum. Dr Lepper gave her guests insight into Egyptian culture and history and imparted exciting details about the architecture and restoration of the Neues Museum, which houses the Egyptian Museum. The day's programme closed with a flying visit to the premises of the Young Academy, which was founded in 2000 by the Leopoldina and the Berlin-Brandenburg Academy of Sciences and Humanities.

The second day took place in the new Leopoldina headquarters in Halle, led by Dr Kirill Dmitriev and Dr Verena Lepper (both members of the Young Academy) along with Dr Denis Fomin-Nilov (RAS Council of Young Scientists). The day was dedicated to presenting plans for further cooperation and was deemed very successful. It was announced that the Young



Russian Noble Prize winner Zhores I. Alferov writing his name in the Leopoldina guest book.

Photos: Markus Scholz

Researchers Cooperation Forum will continue to run in the future. In addition, numerous ideas for cross-border collaborative projects were compiled, from photo competitions to the promotion of science as a school subject.

As last year, the Leopoldina complemented the Young Researchers Cooperation Forum with a public lecture. These lectures help raise awareness of the need for increased dialogue and exchange between young researchers and give participants the opportunity to meet and speak with scientist. The Leopoldina was able to present a special speaker – Prof. Zhores I. Alferov. On 18 April the Russian Physicist and Nobel Prize winner spoke in Halle on the topic “The Semiconductor Revolution in the 20th Century”. On 20 April he gave a lecture on “Semiconductor Heterostructures” at the TU Berlin in the presence of Federal Minister of Education and Research Prof. Annette Schavan. Alferov demonstrated that highly complex topics can be presented even to laymen in an understandable and exciting way. Above all he delighted his audience with a potpourri of stories and anecdotes from his long academic career, which made the lectures an entertaining experience for everyone and demonstrated how scientific innovation is often propelled forward by individual movers and shakers.

On 22 May, the German-Russian Year of Education, Science and Innovation officially came to an end. The Leopoldina's

great commitment to the success of the Year of Science did not go unrecognised. The Federal Ministry of Education and Research invited the Leopoldina to take part in the closing event. Working with the Young Academy and other scientists from the Young Researchers Cooperation Forum, the Leopoldina staged a scientific presentation that examined the theme of “networks” from the perspective of various disciplines within the German-Russian collaboration. Members of the forum also debated the topic of how to integrate “foreign knowledge” in a panel discussion supported by Prof. Jörn Thiede ML, who has much experience in promoting German-Russian collaboration. Another highlight of the event was the signing of a cooperation agreement between the Young Academy and the RAS Council of Young Scientists in the presence of ministers from both nations. Dr Sabine Koller and Dr Vera Mysina signed the agreements as representatives of the executive boards of their respective organisations.

The German-Russian Year of Science may have ended but the Leopoldina will continue its commitment to promoting the cooperation. A German-Russian Leopoldina symposium has been planned for September on the topic “Russian-German Cooperation in the Scientific Exploration of Northern Eurasia and the Adjacent Arctic Ocean”. It will take place in St Petersburg, led by Prof. Jörn Thiede. It is being organised primarily by young researchers. (rn)

Conference Reports

Dealing with uncertainties

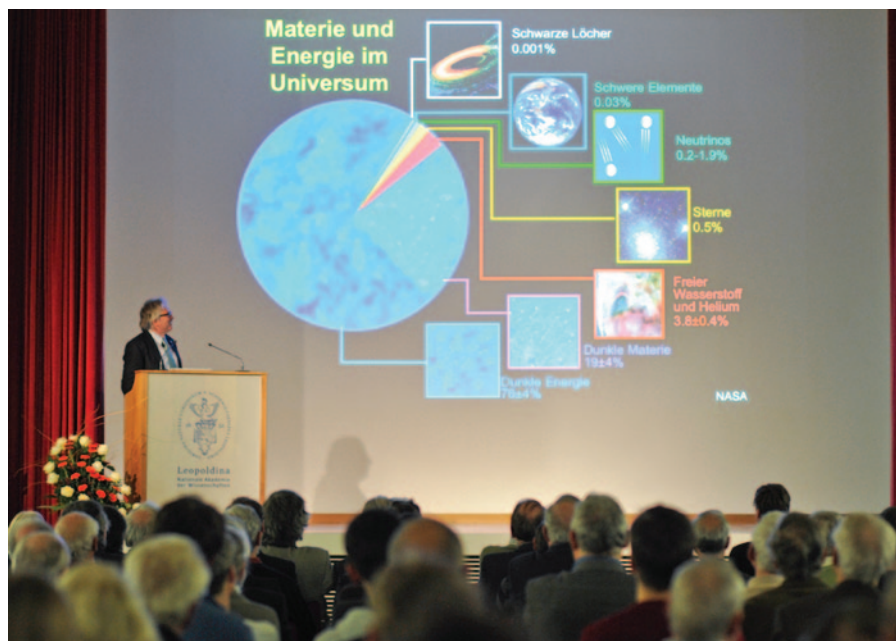
At a symposium in March, Leopoldina Class I discussed how natural science and technology can help humanity tackle global change

The symposia of the Leopoldina classes serve as forums for scientific discussion among the various disciplines. Class I: Mathematics, Natural Sciences and Engineering held the first event in 2012 with a symposium on the topic of “Our changing world – dealing with uncertainties”.

Do we know what the future of life on this planet will be? This question was posed at the start of the symposium by Prof. Volker Mosbrugger ML, Director of the Senckenberg Research Institute and Senckenberg Museum in Frankfurt, to an audience of around 140 people. Besides more intensive land use, global warming is the main reason for the decline in biological diversity worldwide, Mosbrugger said. He explained that the chances of survival of many species of animals and plants depend on their ability to reach suitable climate zones in time. However, many species cannot keep up with the pace of climate change. At the same time, Mosbrugger said, constant change and adaptation are part of nature. That means that we need to work out a dynamic sustainability concept.

After Mosbrugger’s speech, Prof. Roland Zengerle ML from the University of Freiburg spoke about the importance of microsystems technology. He explained that while microelectronics has constantly improved computer performance, microsystems technology is engendering an entirely new range of useful applications. Examples include applications for administering medication and the large number of complex sensors that now make driving safer.

Prof. Johannes Buchmann ML from the Technische Universität Darmstadt gave a talk on a current hot topic – internet security. He explained that the phenomenon of cloud computing, i.e. the transferral of computer applications to external servers, entails many security issues. “The difficulty of dividing numbers



From the origins of the universe to energy production – astronomer Günther Hasinger captivated his large audience.

Photo: Markus Scholz

into prime factors is what makes the internet safe”, he said. “Quantum-computer resistant cryptography is ineffective as long as internet users are taken in by fake sites where they are asked to enter confidential data.” Buchmann’s conclusion is that internet security is an interdisciplinary challenge.

Butterflies, wheels, and a queen were the focus of a lecture by Prof. Günter Ziegler ML from the Freie Universität Berlin. He described the mathematical challenge of dividing polygons into as many components of equal surface and size as one wants as “butterflies”, while the use of these components in fields such as optimal transport are like “wheels”. “I actually want to break a wheel on a butterfly, and test a big theory on small examples”, was how Ziegler, a Communicator award winner, described his approach. But he concluded that number theory, explained using the example of Pascal’s triangle, is the undisputed “queen” of mathematics.

“Frustrated Lewis pairs” was the title of a lecture by Prof. Gerhard Erker ML

from Münster University in which he described a new concept for developing catalysts. In most chemical reactions, the reduction of the activation energy by catalysts is based on metals. Erker and his working group, however, have developed interesting concepts for catalysts that work without metal.

The Leopoldina Lecture delivered by Prof. Günther Hasinger ML, an astronomer from the University of Hawaii, rounded off the symposium. His lecture ranged from the origins of the universe to power generation from hot plasma. “We are all made of stardust,” he concluded after his impressive account of the origins of the cosmos. Hasinger was optimistic about the prospects for recreating the power of the sun down here on Earth through the use of fusion energy, saying that the first commercial reactor could be up and running by 2055. (ca)

New members of Class I receive certificates



Jörg Hacker with Jörg Bendix, Christoph Clauser, Liqiu Meng, and Roland Zengerle (from left).

The 18 new members of Class I – Mathematics and the Natural and Engineering Sciences were presented with their certificates during the first class's annual symposium. The new members received their certificates from President Prof. Jörg Hacker ML in the ceremony on 20 March: Prof. Jörg Bendix ML, Philipps-Universität Marburg; Prof. Kurt Binder ML, Johannes Gutenberg University Mainz; Prof. Immanuel Bloch ML, MPI of Quantum Optics, Garching; Prof. Holger Braunschweig, University of Würzburg; Prof. Johannes Buchmann ML, TU Darmstadt; Prof. Anthony K. Cheetham ML, University of Cambridge; Prof. Christoph Clauser ML, RWTH Aachen; Prof. Gerhard Erker ML, University of Münster; Prof. Markus Gross ML, ETH Zurich; Prof. Günther Hasinger ML, University of Hawaii; Prof. Helmut Hofer ML, IAS School of Mathematics Princeton; Prof. Manfred Kappes ML, KIT, Karlsruhe; Prof. Liqiu Meng, TU München; Prof. William H. Miller, University of California, Berkeley; Prof. Andreas Pfaltz, University of Basel; Prof. Robert Schögl, Fritz Haber Institute of the Max Planck Society, Berlin; Prof. Tamar Seideman, Northwestern University, Evanston; and Prof. Roland Zengerle, University of Freiburg.



Jörg Hacker with Immanuel Bloch, Kurt Binder, Günther Hasinger (from left).



Jörg Hacker with Holger Braunschweig, Anthony K. Cheetham, Gerhard Erker, Manfred M. Kappes (from left).



Jörg Hacker with William H. Miller, Andreas Pfaltz, Robert Schögl and Tamar Seideman (from left).



Jörg Hacker with Markus Gross, Johannes Buchmann and Helmut Hofer. (from left)

Events

To 8 July



EXHIBITION OF THE LEOPOLDINA AND STIFTUNG MORITZBURG, THE STATE ART MUSEUM OF SAXONY-ANHALT HALLE (SAALE): "DAS ANTLITZ DER WISSENSCHAFT" (THE FACES OF SCIENCE)
 Stiftung Moritzburg - the state art museum of Saxony-Anhalt, Friedemann-Bach-Platz 5, 06108 Halle (Saale)/Germany

June

12 June

4.30 p.m.

SEMINAR ON THE HISTORY OF SCIENCE:

PROF. DR. MARGIT SZÖLLÖSI-JANZE, MUNICH:

"NATURWISSENSCHAFT UND DEMOKRATISCHE PRAXIS: FRITZ HABER - ALBERT EINSTEIN - MAX PLANCK"

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

13 June

1.00 p.m.

LEOPOLDINA SYMPOSIUM:

"REGULATIONSMECHANISMEN DER ERREGERABWEHR"

Altes Stadthaus, Berlin, Jüdenstraße 34-42, 10117 Berlin/Germany

Scientific organization: Wolfram

Sterry ML (Berlin), Thomas Krieg ML

(Cologne)

15 to 16 June

2.00 p.m.

LEOPOLDINA SYMPOSIUM:

"RISIKO: ERKUNDUNGEN AN DEN GRENZEN DES WISSENS"

Gustav Stresemann Institute, Langer Grabenweg 68, 53175 Bonn-Bad Godesberg/Germany

Scientific organization:

Hans-Georg Bohle ML (Bonn)

16 June

9.30 a.m.

LEOPOLDINA SYMPOSIUM:

"FÜRSORGLICHE FORSCHUNG - FORSCHUNG DER FÜRSORGEN"

University Hospital Bonn, Biomedical Center, Great Lecture Hall, Sigmund-Freud-Straße 25, 53127 Bonn/Germany

19 June

6.30 p.m.

DOKUMENTARY FILM:

"SPOKEN WITH LOVE" BY DAN WOLMAN (ISRAEL 2007), ON THE OCCASION OF THE EXHIBITION "DAS ANTLITZ DER WISSENSCHAFT"

Leopoldina, Jägerberg 1, 06108 Halle (Saale)/Germany

20 to 22 June

10.00 a.m.

LEOPOLDINA CONFERENCE:

"PHYSIK, PHILOSOPHIE UND FRIEDENSFORSCHUNG". CONFERENCE ON THE OCCASION OF CARL FRIEDRICH VON WEIZSÄCKER'S 100TH BIRTHDAY

Leopoldina, Jägerberg 1, 06108 Halle (Saale)/Germany

21 June

4.00 p.m.

CARL FRIEDRICH VON WEIZSÄCKER

AWARD 2012:

AWARD CEREMONY ON THE OCCASION OF THE LEOPOLDINA CONFERENCE "PHYSIK, PHILOSOPHIE UND FRIEDENSFORSCHUNG".

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

July

6 July

5.00 p.m.

LEOPOLDINA NIGHT ON THE OCCASION OF THE 11TH LONG NIGHT OF SCIENCES IN HALLE:

- 5.00 p.m.: Opening by Prof. Dr. Jörg Hacker ML and Prof. Dr. Jutta

Schnitzer-Ungefug

- 5.00-11.30 p.m.: Exhibition "Es betrifft Dich!"
- 6.00-10.00 p.m.: Exhibition "Das Antlitz der Wissenschaft", Stiftung Moritzburg – the state art museum of Saxony-Anhalt, Friedemann-Bach-Platz 5, 06108 Halle/Germany
- 7.00 p.m.: Leopoldina-Science-Slam
- 9.00 p.m.: Leopoldina-Fishbowl "Was darf die Wissenschaft?" Discussion with Prof. Dr. Jörg Hacker ML, Prof. Dr. Klaus Tanner ML, Prof. Dr. Claudia Dalbert, Dr. Christina Berndt, Moderation: Dr. Carsten Könneker, editor in chief of "Spektrum der Wissenschaft"
- 11.00-11.45 p.m.: Lecture: "Leopoldina - Nationale Akademie der Wissenschaften" by Prof. Dr. Jutta Schnitzer-Ungefug

Leopoldina, Jägerberg 1, 06108 Halle (Saale)/Germany

9 to 27 July

EXHIBITION:

"ES BETRIFFT DICH! - GESUNDHEIT UND GESUNDHEITSFORSCHUNG". CREATED BY THE SCIENCE CENTER PHÄNOMENTA FLENSBURG

Monday to Friday, 9 to 20 July, 10.00 a.m. - 2.00 p.m.; 23 to 27 July, 2.00 - 6.00 p.m.; group registration: www.leopoldina.org/de/es-betrifft-dich

Leopoldina, Jägerberg 1, 06108 Halle (Saale)/Germany

10 July

2.00 p.m.

SYMPOSIUM OF THE LEOPOLDINA CLASS III - MEDICINE:

"ERFOLGE DER KLINISCHEN MEDIZIN"

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

10 July

6.30 p.m.

LEOPOLDINA LECTURE ON THE OCCASION OF THE SYMPOSIUM OF LEOPOLDINA CLASS III:

"PERSONALISIERTE MEDIZIN: MARKETING-IDEE ODER ECHTER FORTSCHRITT", PROF. DR. MICHAEL HALLEK ML, COLOGNE

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

19 to 20 July

4.30 p.m.**LEOPOLDINA SYMPOSIUM:**

"RATIONALITY AND DEMOCRACY"

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

📍 Scientific organization:

Klaus Fiedler ML (Heidelberg)

August

23 to 31 August**LEOPOLDINA PHOTO EXHIBITION:**

"NEUE BILDER VOM ALTER(N)"

St Gallen University, Dufourstrasse 50, 9000 S. Gallen/Switzerland

September

2 - 7 September**11TH INTERNATIONAL CONFERENCE ON SUBSTORMS:**

COOPERATION OF THE TECHNICAL UNIVERSITY BRAUNSCHWEIG AND THE LEOPOLDINA

Hotel Bergström, Bei der Lüner Mühle, 21335 Lüneburg/Germany

📍 Scientific organization: Karl-Heinz Glaßmeier ML (Braunschweig)

5 September to 19 October**LEOPOLDINA PHOTO EXHIBITION:**

"NEUE BILDER VOM ALTER(N)"

Leopoldina, Jägerberg 1, 06108 Halle (Saale)/Germany**12 to 14 September****3RD HUMAN RIGHTS COMMITTEE SYMPOSIUM:**

"HUMAN RIGHTS AND SCIENCE"

Vertretung des Landes Sachsen-Anhalts beim Bund, Sachsen-Anhalt-Saal, Luisenstraße 18, 10117 Berlin/Germany**19 to 22 September****INTERNATIONAL CONFERENCE:**

"INNATE IMMUNITY OF THE LUNG - IMPROVING PNEUMONIA OUTCOME".

CONFERENCE OF THE TRANSREGIONAL COLLABORATIVE RESEARCH CENTER SFB-TR 84 AND THE LEOPOLDINA

Berlin-Brandenburg Academy of Sciences and Humanities, Gendarmenmarkt, Markgrafenstraße 38, 10117 Berlin/Germany**22 to 24 September****9.00 a.m.****LEOPOLDINA ANNUAL ASSEMBLY:**

"DIE ROLLE DER WISSENSCHAFT IM GLOBALEN WANDEL"

Langenbeck-Virchow-Haus, Luisenstraße 58/59, 10117 Berlin/Germany

📍 Scientific organization: Detlev Drenckhahn ML (Würzburg)

October

4 to 6 October**JENA LIFE SCIENCE FORUM 2012:**

"DESIGNING LIVING MATTER - CAN WE DO BETTER THAN EVOLUTION?". COOPERATION OF THE FREGE CENTRE FOR STRUCTURAL SCIENCES OF THE JENA UNIVERSITY, THE ALFRIED KRUPP VON BOHLEN UND HALBACH STIFTUNG AND THE LEOPOLDINA

Jena University, Rosensäle, Conference Hall, Fürstengraben 27, 07743 Jena/Germany

📍 Scientific organization: Bernd Olaf Küppers ML (Jena), Peter Schuster ML (Vienna)

9 October**4.30 p.m.****SEMINAR ON THE HISTORY OF SCIENCE:**

PROF. DR. LOTHAR PELZ, ROSTOCK:

"NS-KINDEREUTHANASIE (1939-1945)"
Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany**14 to 16 October****7TH HEINRICH F. C. BEHR SYMPOSIUM:**

"STAMMZELLEN UND KREBS"

German Cancer Research Center, Im Neuenheimer Feld 280, 69120 Heidelberg/Germany

📍 Scientific organization: Otmar Wiestler ML (Heidelberg)

November

6 November**4.30 p.m.****SEMINAR ON THE HISTORY OF SCIENCE:**

PROF. DR. DITTMAR DAHLMANN, BONN:

"PETER SIMON PALLAS UND SEIN WISSENSCHAFTLICHES WERK"

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany**20 November to 21 December****LEOPOLDINA PHOTO EXHIBITION:**

"NEUE BILDER VOM ALTER(N)"

MEDIO RHEIN ERFT Bergheim Konrad-Adenauer-Platz 1, 50126 Bergheim-Mitte/Germany**22 to 24 November****LEOPOLDINA CONFERENCE:**

"WISSENSCHAFTSAKADEMIEN IM ZEITALTER DER IDEOLOGIEN. POLITISCHE UMBRÜCHE - WISSENSCHAFTLICHE HERAUSFORDERUNGEN - INSTITUTIONELLE ANPASSUNG". COOPERATION OF THE PROJECT TEAM HISTORY OF THE LEOPOLDINA IN THE FIRST HALF OF THE 20TH CENTURY AND THE LEOPOLDINA

Leopoldina, Jägerberg 1, 06108 Halle (Saale)/Germany

📍 Scientific organization: Rüdiger vom Bruch (Berlin)

December

4 December**4.30 p.m.****SEMINAR ON THE HISTORY OF SCIENCE:**

PROF. DR. MARIACARLA GADEBUSCH

BONDIO, MUNICH:

"UTOPISCHE KÖRPER"

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

January 2013

15 January**4.30 p.m.****SEMINAR ON THE HISTORY OF SCIENCE:**

PROF. DR. MICHAEL HAGNER, ZÜRICH:

"GEGENWART UND ZUKUNFT DES WISSENSCHAFTLICHEN BUCHES"

Leopoldina, Auditorium, Jägerberg 1, 06108 Halle (Saale)/Germany

People

Deceased Members

Bertalan Csillik ML

10 November 1927 - 8 May 2012 Szeged/
Ungarn

Neurosciences Section

The main focus of Bertalan Csillik's work was synapses in the peripheral and central nervous system. He was able to prove the involvement of enzymes in neurotransmission using histochemical methods and was one of the first to recognise the analgesic effect of a class of enzymes called acid phosphatases, a discovery which enabled him to go on to develop new forms of treatment for chronic pain patients. The Leopoldina elected him a member in 1983 in recognition of his pioneering work in pain therapy.

Friedrich Hirzebruch ML

17 October 1927 - 27 May 2012 Bonn/
Germany

Mathematics Section

One of Germany's most eminent mathematicians, Friedrich Hirzebruch had a lasting influence on the development of

modern mathematics in the 20th century. His many achievements included successfully proving a generalisation of the Riemann-Roch theorem. A year after gaining his postdoctoral teaching qualification in 1955 at the age of just 27, he was appointed a professor at the University of Bonn, where he continued his work on the relationships between algebraic geometry and topology. He became the founding director of the Max Planck Institute for Mathematics in Bonn in 1980, which he headed until 1995. The Leopoldina elected him a member in 1963 in recognition of his distinguished achievements.

Hans Richter ML

24 December 1924 - 5 April 2012 Leipzig/
Germany

Earth Sciences Section

Hans Richter worked in the fields of physical geography, geomorphology and thematic mapping. He was elected a Leopoldina member in 1989 in acknowledgment of his internationally recognised achievements.

Heinz Ludwig Sanger ML

18 December 1928 - 4 May 2010

Genetics/Molecular Biology and Cell Biology Section

Heinz Ludwig Sanger specialised in phytovirology and discovered a type of plant pathogens that later became known as viroids. He was later able to determine the structure of these pathogens in every detail – the first time ever that such an undertaking was successful. The Leopoldina elected him a member in 1980 in recognition of his achievements.

Volker Weidemann ML

3 October 1924 - 14 March 2012 Kiel/
Germany

Physics Section

Volker Weidemann presented his research focus on studying the structure and evolution of white dwarf stars. The Leopoldina elected him a member in 1984 for these fundamental findings and further work in the field of astrophysics and cosmology.



Leopoldina
Nationale Akademie
der Wissenschaften

Leopoldina – Nationale Akademie der Wissenschaften

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Abbreviations

ML = Member of the Leopoldina