



Leopoldina
Nationale Akademie
der Wissenschaften

Leopoldina news

2 | 2020

Deutsche Akademie der Naturforscher Leopoldina –
German National Academy of Sciences

Halle (Saale), 9 April 2020



The Leopoldina advises on
the coronavirus pandemic

Table of contents

- ▶ 3 Editorial

- ▶ 4 National Academy Leopoldina advises on the coronavirus pandemic

- ▶ 5 G7 and G20 Academies call for solidarity

- ▶ 6 A decade of scientific freedom for a receptive society

- ▶ 7 The Leopoldina celebrates the inauguration of its new President

- ▶ 8 Interview with Melina Schuh ML: “The reasons for infertility have always been poorly understood”

- ▶ 9 Young Academy members embark on an expedition into the Anthropocene

- ▶ 10 Revolution in printing technology: additive manufacturing requires applied research

- ▶ 11 Crossing boundaries in science communication

- ▶ 12 European Academies

- ▶ 13 People

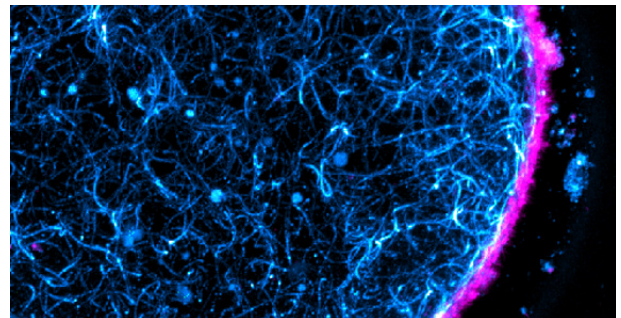
- ▶ 14 Imprint

▶ 6



President of the Leopoldina: Jörg Hacker held the office of President of the Leopoldina from February 2010 to February 2020.

▶ 8



Interview with Melina Schuh: The Leopoldina member and Max Planck Institute Director speaks about the development of human egg cells.

▶ 10



Additive manufacturing: A new joint statement by the Leopoldina, acatech and the Union of German Academies zooms in on new fields of application.

The Leopoldina on social media:



Editorial

Dear Members and Friends of the Leopoldina,

In my first editorial as President of the Leopoldina, I am writing to you in an extraordinary and challenging time. The spread of the coronavirus means that the situation in Germany, as elsewhere, is becoming increasingly difficult, and the effects are palpable in both our personal and our professional lives. Like everyone else, individuals and institutions alike, the Leopoldina recognises that we must work together and do everything we can to contain the spread of the virus and protect the health of those around us.

The Leopoldina has therefore made the decision to cancel or postpone all Academy events planned between now and the end of June. Events mentioned in this newsletter which are planned for a later date may also be subject to change. Up-to-date information can be found on our website. Not only will our website be updated regularly, but the business office of the Leopoldina will remain open and can be reached via telephone and email. Our staff are working from home wherever possible and are making every effort to ensure that the Academy can continue to fulfil its role despite the circumstances. This includes advising politicians and society at large on coping with and combating the coronavirus pandemic.



*Gerald Haug
President of the Leopoldina*

Image: David Ausserhofer

On 3 April, we published our second ad-hoc-statement “Coronavirus Pandemic – Measures Relevant to Health” („Coronavirus-Pandemie – Gesundheitsrelevante Maßnahmen”) (see page 4 et seq.). Our first ad-hoc-statement “Coronavirus Pandemic in Germany: Challenges and Options for Intervention” was presented on 21 March. In both papers, we draw together interdisciplinary scientific expertise and discuss measures that can be taken to help curb the coronavirus pandemic and gradually bring public life back to normal. I would like to take this opportunity to thank all of the ad-hoc-statements’ authors for drafting them both in such a short period of time. We will continue to provide active support in the coming weeks to those responsible for designing and adjusting measures and ensuring that they reflect social considerations.

For now, I hope that you enjoy reading our newsletter despite the circumstances and that you stay healthy and safe!

National Academy Leopoldina advises on the coronavirus pandemic

Working groups are addressing medical and health policy aspects of the crisis as well as its legal, economic, social and psychological ramifications

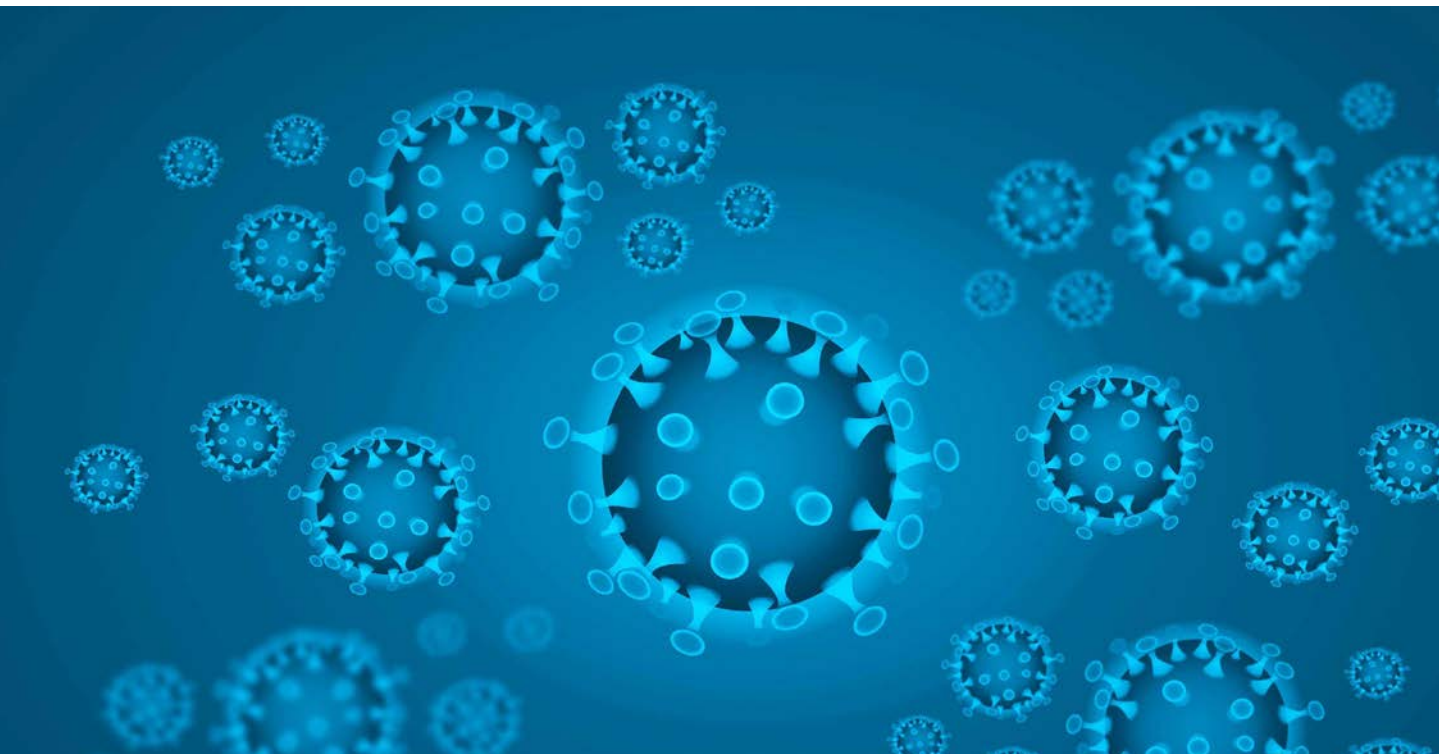


Image: iXimus_Pixabay

The coronavirus SARS-CoV-2 and the resulting respiratory disease COVID-19 are spreading rapidly across the globe. The Leopoldina has brought together two interdisciplinary working groups which will carry out ongoing assessments of the current situation and lend their support to policymakers and wider society by issuing ad-hoc-recommendations.

The common goal is to combat the spread of the SARS-CoV-2 virus and the resulting COVID-19 respiratory disease in Germany as effectively as possible. In doing so, it must be taken into consideration that the information available on which political actions are based is continuously changing.

The Leopoldina published an initial

ad-hoc-statement on 21 March titled “Coronavirus Pandemic in Germany: Challenges and Options for Intervention”, in which it set out potential

“Efforts must focus on protecting people with a higher risk of developing serious forms of the COVID-19 disease.”

Ad-hoc-statement “Coronavirus Pandemic in Germany: Challenges and Options for Intervention”, p. 1

health policy measures for preventing the further spread of the virus. The recommendations focus on three key measures: curbing the epidemic, pro-

tecting vulnerable groups and strategically increasing the capacity of public health and care systems.

The statement notes that some of these measures are scientifically proven to be effective and necessary, while others were suggested on the basis of projections and political considerations. The development of medications and vaccines must be made an absolute priority. The authors underscore that this must be done with due consideration for medical ethics.

The working group subsequently consulted on ways to flesh out and refine the recommended measures, updated the first ad-hoc-statement and presented a second ad-hoc-statement on 3 April under the title “Coronavirus Pandemic – Measures Relevant to Health”. This paper focuses on health-

related measures that could help public life gradually return to normal. Three measures are considered to be of particular importance: the widespread use of face masks, the short-term analysis of mobile data and the expansion of testing capacities.

The authors of both ad-hoc-statements agree that efforts in the coming weeks and months need to focus on intensive medical care, pharmaceutical intervention and protective measures in public spaces as well as making sufficient testing capacity available. At the same time, as the shutdown continues, preparations must be made to carefully and selectively restart the economy and public life.

“The public has shown a great deal of willingness to implement the recommended measures. Transparent communication can help to strengthen this willingness further.”

Ad-hoc-statement “Coronavirus Pandemic – Measures Relevant to Health”, p. 3

More advice on this extensive and complex topic is provided by another Leopoldina working group whose members delve into the pandemic’s legal, economic, social and psychological aspects. ■ CW, JK, DW

Ad-hoc-statements from the Leopoldina on the coronavirus pandemic

► “Challenges and Options for Intervention”

(21 March 2020)

► “Measures Relevant to Health”

(3 April 2020)

G7 and G20 Academies call for solidarity

Developing medications and vaccines for coronavirus together



In the run-up to this year’s virtual G7 summit, the member states’ National Academies of Sciences have called for greater international solidarity in the fight against the COVID-19 pandemic.

Image: Rawf8 | Adobe Stock

This year’s G7 summit, from 10 to 12 June, will take place as a video conference for the first time ever. The heads of state and government who were set to come together at Camp David/USA will now be meeting virtually in response to the global spread of the SARS-CoV-2 coronavirus.

The national academies of sciences in Germany, France, the United Kingdom, Italy, Japan, Canada and the USA have addressed a joint statement to the heads of state and government of the G7 countries, calling for greater international solidarity in the fight against the COVID-19 pandemic. They highlight the fact that global scientific dialogue, worldwide cooperation in developing medications and vaccines, and coordinated and evidence-based development of health policy measures are more crucial than ever in light of the current situation.

Three other statements are devoted to advances in digital medicine, the global recession of insect populations and the resulting decline in biodiversity, and the importance of fundamental research in guaranteeing scientific progress.

The statements were drafted under

the leadership of the National Academy of Sciences, and experts from the Leopoldina played a major role in this work. The academies held multiple consultation sessions to agree on the recommendations provided, which will be published leading up to the G7 summit.

Providing advice for the annual summit of the G7 countries is a strategic responsibility that forms a core part of the Leopoldina’s international policy advice work. Together with the other G7 academies, the Leopoldina identifies issues with scientific relevance that fit into the summit’s agenda while also broadening the political focus.

Since 2017, the National Academies have engaged in similar dialogue for the G20 summits. As part of this year’s Science 20 consultations, the academies of sciences also addressed an urgent call for global solidarity to the extraordinary virtual summit of the G20 heads of state and government held on 26 March. ■ CHW

- G7 “Critical Need for International Cooperation”
- G20 “COVID-19 Pandemic”

A decade of scientific freedom for a receptive society

Looking back on Jörg Hacker's time in office as the 26th President of the Leopoldina



Jörg Hacker was a much sought-after conversation partner during his time in office, as seen here at the 2015 dialogue forum of the G7 Academies of Sciences in Berlin.

Image: Markus Scholz | Leopoldina

In February 2010, Jörg Hacker ML succeeded Volker ter Meulen ML to become the 26th President of the Leopoldina. It was already clear then that science would face growing pressure to help provide sustainable solutions to urgent societal issues.

Jörg Hacker's work as President was therefore shaped by the questions of how a carefully considered focus on freedom of research and instruction would promote the long-term benefits of science and what role the academies should play in this. The

Leopoldina's various activities in the past ten years have given rise to concrete solutions in keeping with three of Jörg Hacker's strategic goals: establishing widespread trust in the Academy's science-based advice, integrating a broad range of scientific and societal perspectives on important topics for the future, and supporting the globalisation of science and society by forging closer links between German, European and global projects.

"Dare to do more" – in many of his speeches and publications, Jörg Hacker underscored the importance of pushing the boundaries of science. He was

not only highlighting the importance of science in laying the groundwork for a receptive society, but also calling on

„Dare to do more.“

Jörg Hacker,
26th President of the Leopoldina

scientists to do more themselves to ensure that their findings feed into public debate, helping to shape people's opinions and support political decision-making. This commitment has enabled the Leopoldina to engage with scientific to-

pics of great societal relevance over time and be heard far and wide as the “voice of science” (Federal Chancellor Angela Merkel).

Many of the Leopoldina’s publications and events focused on antibiotic research and genome editing and were thus closely related to Jörg Hacker’s specialist field of infection biology. Meanwhile, statements concerning climate and environmental policy, such as “Bioenergy – Chances and Limits” (2012) and “Clean air – Nitrogen oxides and particulate matter in ambient air” (2019), also contributed to objectivising public debate.

While focusing on an increasingly diverse range of topics, the Leopoldina has also developed new and different forms of dialogue with wider society. Anyone who wants to ensure successful dialogue must be prepared to engage with the expectations of the other party without surrendering their own independence. On a global level, this was particularly evident in the Leopoldina’s cooperation with the National Academies of the G7 and G20 member states, which prepare statements for the regular meetings of their heads of government. Meanwhile, Jörg Hacker used his role in the scientific advisory

*The Leopoldina is the
“voice of science”.*

Federal Chancellor Angela Merkel

committee of former UN Secretary-General Ban Ki-moon – another avenue for providing targeted advice to high-ranking decision-makers – to highlight the essential role that fundamental research plays in sustainable development.

These highly visible activities of the Leopoldina and its President were accompanied by gradual change in individual elements of its organisational structure. This included the introduction of a committee for identifying outstanding scientists who have crossed

the boundaries between the individual Sections of the learned society thanks

Anyone who wants to ensure successful dialogue must be prepared to engage with the expectations of the other party without surrendering their own independence.

to the interdisciplinary nature of their research. Moreover, the 2012 founding of the Leopoldina Centre for Science

Studies established a place for the Academy to reflect on the role it plays in society.

The 27th President of the Leopoldina Gerald Haug hearkened back to the words of the first Federal President of Germany Theodor Heuss in his inaugural speech on 20 February 2020, referring to his predecessor as the embodiment of the “pathos of sobriety” suited to public discourse in a modern democracy. Jörg Hacker combined the objectivity of scientific study with a passion for opening up the world through research, working together with many different partners in many different disciplines to promote the benefits of science for the common good. ■ ART

INAUGURATION OF LEOPOLDINA’S NEW PRESIDENT



At the event to celebrate the change in office in Halle on 20 February 2020, microbiologist Jörg Hacker ML (second from left) handed the chain of office belonging to the President of the National Academy of Sciences Leopoldina to climate researcher Gerald Haug ML (centre). Gerald Haug was elected for a five-year term that began on 1 March 2020. In his inaugural speech, he started by touching on “just how much responsibility falls onto the President of the Leopoldina’s shoulders” and “the wealth of opportunities they have to advance the world of science and its dialogue with society.” Jörg Hacker headed the Academy for ten years and is retiring at the end of two terms. State Minister Hendrik Hoppenstedt (right) gave a speech on Chancellor Angela Merkel’s behalf. Saxony-Anhalt Minister-President Reiner Haseloff (left) gave a welcoming address at the event to mark the change in office. Federal Minister of Education and Research Anja Karliczek (second from right) was among the first in line to offer her congratulations.

Image: Markus Scholz | Leopoldina

“The reasons for infertility have always been poorly understood”

Leopoldina member Dr. Melina Schuh discusses her research on the development of human egg cells

Melina Schuh ML is one of the outstanding scientists elected to the Leopoldina in 2019. The Director of the Max Planck Institute for Biophysical Chemistry in Göttingen has now given an interview discussing her research.

Among other things, you research the development of human egg cells. Surprisingly, we still know relatively little about this topic – why is that?

Melina Schuh: Mammalian egg cells are not easy to study in general. They normally develop inside the body, so it's hard to access them. It's even more complicated in human beings, which is why hardly any studies have been conducted on human egg cells.

So, for example, the development process of an egg cell was completely unclear until now?

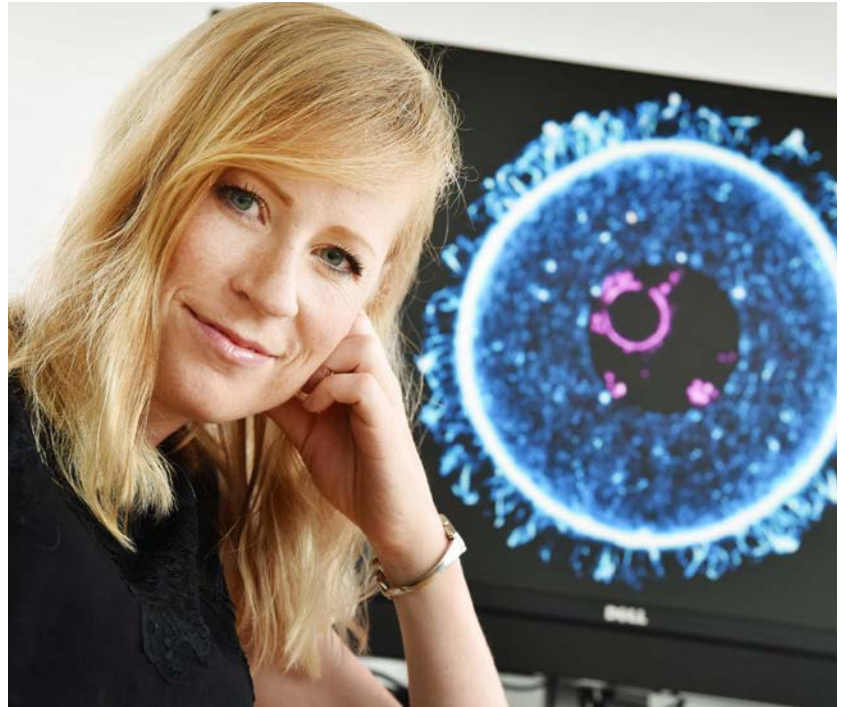
Schuh: Prior to fertilisation, an egg undergoes a special form of cell division called meiosis. We were able to witness this cell division for the first time in living human egg cells using high-performance microscopes.

What was the challenge there?

Schuh: Meiosis in human egg cells is a very slow process that happens inside the body and takes more than a full day. We therefore had to recreate the natural biological environment as closely as possible under the microscope and handle the cell very carefully so as not to disrupt the development process. And we've just now managed to do so for the first time.

Where do you get the human egg cells for your research?

Schuh: We work exclusively with unfertilised egg cells intended for fertility treatment that have proven unusable. To be used in fertility treatment, egg cells need to have reached a certain stage of



Melina Schuh is the Director of the Max Planck Institute for Biophysical Chemistry in Göttingen (Germany) and conducts research on the development of egg cells which are ready to be fertilised. The biochemist was elected to the Leopoldina in 2019. In the same year, she received the Gottfried Wilhelm Leibniz Prize from the German Research Foundation.

Image: Frank Vinken / Max Planck Society

maturity. For our research, we receive egg cells which have not yet reached this stage and are thus not suitable for fertility treatment, but can still help our studies.

What research questions remain unanswered?

Schuh: For us, the egg cell is interesting both from a fundamental research perspective and in the context of fertility treatment. In the fertilisation process, the chromosomes from the egg cell and the sperm cell are combined. To ensure that this process results in the right number of chromosomes, the egg cell must divide the chromosome pairs in half prior to fertilisation. It must be exactly half – no more, no less. If an egg cell has the wrong number of chromosomes, the em-

bryo will usually stop developing at a very early stage. The woman will miscarry or simply won't become pregnant. This is a common reason why women over the age of 40, in particular, find they are unable to conceive. We want to find out why egg cells so frequently have the wrong number of chromosomes particularly in older women.

This lends particular societal relevance to your research.

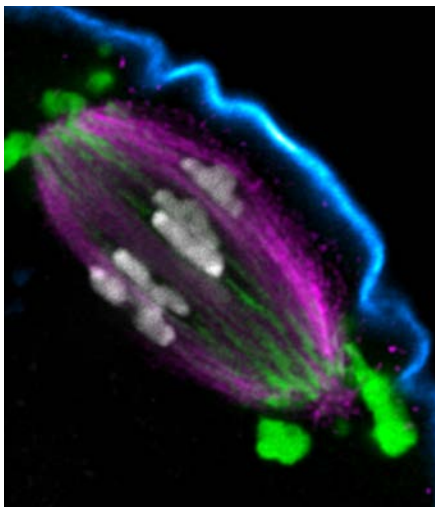
Schuh: In our society, the average age that women give birth is steadily rising, and infertility is becoming an increasingly relevant issue. The exact reasons for this have always been poorly understood. We hope that our research will be able to help increase the success rates of fertility treatment in the long term.

What possibilities does your Leopoldina membership afford you to advocate for a reproductive medicine law that's more in keeping with the times?

Schuh: In June 2019, the Leopoldina published an excellent statement on reproductive medicine which touched on a critical area where Germany is lagging behind other countries. There is a regulation in force here which states that only fertilised egg cells which are ultimately to be transferred into the patient may be further cultivated. All others must be frozen at a very early stage of development.

But it's impossible to know at this early stage which of the egg cells will divide, because some of them might have defects, correct?

Schuh: Precisely. So it would be better if we could cultivate the egg cells for a longer period before selecting a single well-de-



A human egg cell during division under the microscope

Image: Agata Zielinska, Melina Schuh / Max Planck Society

veloped embryo to be transferred. Transferring multiple embryos increases the probability of a multiple birth, which entails health risks for the mother and children. That's why we believe the law should change.

You hold a high-ranking position as a scientist and are yourself a mother of four. How do you manage a healthy work-life balance?

Schuh: It's not always easy. I try to de-

legate things like household chores and gardening so I have the time to concentrate on my family and my career. At work, I try to stay focused and prioritise the most crucial tasks. After work and at the weekend, I make sure I'm really there for my children. I can often get a little more work done after they've gone to sleep.

Successful women like you who have built such an impressive career are still in the minority within the scientific community. What needs to change?

Schuh: There certainly needs to be more high-quality childcare available. At our institute in Göttingen, we have an excellent daycare centre which accepts children even before their first birthday. This is particularly important for the scientific community since things evolve so fast, making it difficult to take long periods of parental leave. Daycare services like ours enable women to return to work sooner, which is imperative in certain professions and positions. So I would be pleased if the opportunities I have were made available to more families throughout Germany. They have already been commonplace for a long time in many other countries, such as England, France and the USA.

■ THE INTERVIEW WAS CONDUCTED BY BENJAMIN HAERDLE

LIFE SCIENCE SYMPOSIUM

[Postponed]

The Leopoldina's Life Science Symposium was set to take place on 14 May. The members of Class II – Life Sciences planned to use this year's meeting to discuss topics including immunity and immune cells, pain research, epigenetics and biochemistry, and biodiversity and taxonomy.

Due to the measures introduced to curb the spread of the SARS-CoV-2 virus, the event has now been postponed, along with the evening lecture by Melina Schuh ML. Information on an alternative date will be published on our website.

▶ Information

Expedition into the anthropocene

Research trip to Ecuador follows in Humboldt's footsteps



Talking to Dr. Ferrán Cabrero of Amazon State University (UEA) about the retreat of the Abras glacier on Chimborazo.

Image: Miriam Akkermann / Young Academy

Six members of the Young Academy travelled to Ecuador from 22 February to 9 March as part of Expedition Anthropocene. Working on the assumption that scientists can only overcome the challenges of climate change by collaborating across disciplines, they aimed to explore modern avenues for doing so and the limits to these possibilities.

The team used methods from the fields of glaciology, biology, chemistry, acoustic ecology, computer science and medicine to detect the effects of human activity at different altitudes and in different vegetation zones as well as the impact of climate change on the local population. While evidence of glacial retreat allowed the team to draw initial conclusions straight away, they still need to analyse their data on factors including biodiversity, changes in terms of acoustic ecology, and microplastic presence in the ice. It will also be important to analyse their experiences and find shared language, approaches and methods in order to ensure that the much-vaunted interdisciplinary approach actually works. ■ YB, AR

▶ Expedition Anthropocene

Revolution in printing technology: additive manufacturing requires applied research

Joint statement by the Leopoldina, acatech and the Union of German Academies

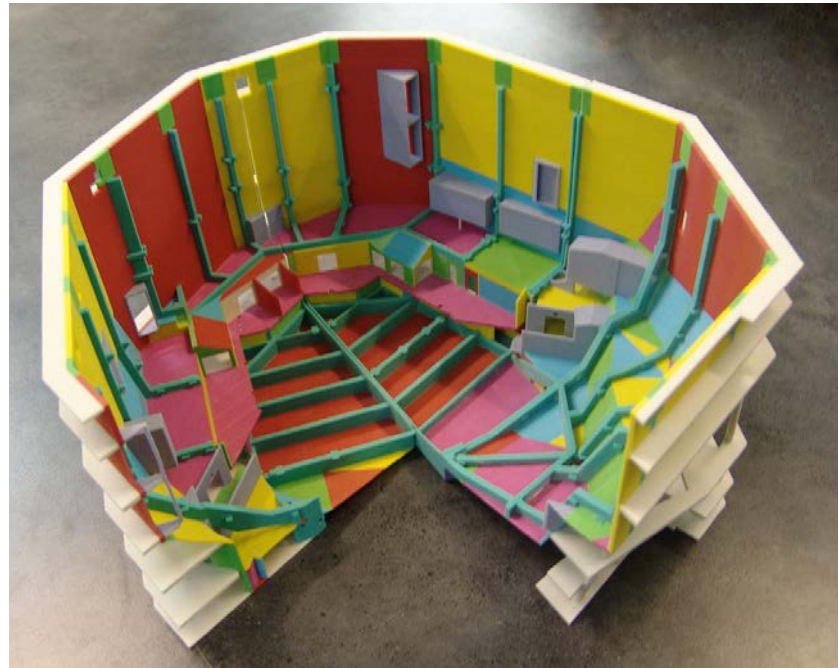
Research and development in materials sciences, mechanical engineering and computer science is constantly opening up new fields of application for additive manufacturing – otherwise known as 3D printing. The Leopoldina, the Union of the German Academies of Sciences and Humanities, and the National Academy of Science and Engineering – acatech have published the joint statement “Additive Manufacturing – Developments, Possibilities and Challenges”, which looks at the potential offered by this new manufacturing technology.

The developments underway in additive manufacturing are almost as revolutionary as those in communication technology. When 3D printing first emerged, it was mostly used by industrial businesses and sectors such as medical, dental and hearing technology. The statement “Additive Manufacturing – Developments, Possibilities and Challenges” looks at the prospects opened up by this new technology.

„Additive manufacturing enables single or small series production with almost unlimited creative freedom.“

“Additive Manufacturing” statement, p. 8

3D objects are created by building up layer after layer of material. This makes it possible to produce affordable customised products as well as items with a complex shape or delicate internal structure. 3D printing is currently used to manufacture dentures, archi-



Hamburg's Elbphilharmonie concert hall is one example of 3D models used in construction. The building consists of many different surfaces and entrances with complex and sometimes oblique shapes. A 3D-printed colour model using polymer plaster made it easier to construct the different levels of the concert hall.

Image: Rapidobject GmbH Leipzig

tectural models and lighter aircraft parts, among other things.

But some recent projects aim to create entire buildings or bridges. New materials make it possible to generate parts with new properties. For example, smart components are being developed which include sensors for measuring stability. Medical researchers are now looking at using 3D printing for producing not just custom-fit implants but organic tissues.

The Leopoldina, the Union of the German Academies of Sciences and Humanities, and acatech have drawn up a series of recommendations to support this work and ensure the findings are widely accessible. The focus is on refining the manufacturing technologies and materials used. To enable practical application, there is also a need to research user-friendly model-

ling software for managing the complex interplay of material properties, manufacturing conditions and product specifications.

The recommendations also aim to interlink the individual fields of research more closely and to forge closer ties between basic and applied research on the one hand and industry on the other. This will make it possible to guarantee the safety and sustainability of additive manufacturing thanks to universal quality standards, norms and regulations, to adapt training and degree courses, and to boost acceptance of technology among the general public.

■ EW

Statement
“Additive Fertigung”
(only available in German)

Crossing boundaries in science communication

Workshops and a panel discussion to shed light on the relationship between science and policy

Should research institutes change the way they engage with public debate, or become more actively involved? Leopoldina Vice President Regina Riphahn met with research policymakers to discuss this issue under the title “Crossing boundaries: How public should research be?” on 27 January in Berlin.

The most recent efforts by the German Federal Ministry of Education and Research (BMBF) and the parties that make up the federal government aiming to strengthen science communication have provided fresh momentum, indicating that politicians expect more from research – including in terms of its contribution to society – than it currently delivers.

Michael Meister, state secretary with the German Federal Ministry of Education and Research (BMBF), and Ernst Dieter Rossmann, Chairman of the Committee on Education, Research and Technology Assessment in the German parliament, used the panel discussion to emphasise the duties of accountability and transparency that come with access to public financing. Scientific institutes must communicate research findings more clearly, they say, and be prepared for a critical public to question their topics, methods and conclusions.

Against this backdrop, how should communication strategies be evaluated within the competitive world of research? Regina Riphahn warned that focusing on communication does not do justice to researchers who have strong results but varying levels of success in communicating these to the public. Instead, it rewards topics that are easier to communicate and appear more useful on the surface. This can lead researchers to focus on topics that are better received by the media in particular, she

says. Institutions such as Wissenschaft im Dialog (Science in Dialogue, WiD) are better placed than individuals to meet the expectations of wider society with a professional approach. For Antje Boetius ML, who chairs the WiD steering committee, the important issue

How should communication strategies be evaluated within the competitive world of research?

now is to discuss the impact that science communication should have on society as a whole. For example, should it aim to create an uncritically positive attitude towards new technologies?

Experts in science communication and media tackled these considerations in workshops held before the panel discussion. They maintained that simply in-

creasing the quantity of communication would not improve access to knowledge or the development of expertise. Critical journalism which questions research findings, research policy and research funding is essential for shaping public opinion and ensuring civic engagement and control. Research institutions cannot be expected to fulfil these functions to the same extent, they said.

They proposed taking advantage of the high degree of differentiation among scientific institutes and encouraging them to ensure that their research makes a concrete contribution to society. The workshop participants also agreed that the scientific community alone cannot fully exploit the potential of research to benefit society as a whole. This requires the involvement of specialised institutions, such as lifelong learning centres and universities, as well as journalism. Action should be taken to boost their ability to make use of scientific findings and to reflect specific groups' interest in research as needed.



Panel discussion on science communication with Leopoldina Vice President Regina Riphahn, BMBF state secretary Michael Meister, political scientist Patrizia Nanz, member of parliament Ernst Dieter Rossmann, and marine biologist Antje Boetius (left to right).

Image: Hans-Joachim Rickel | BMBF



Closed-loop plastic recycling – granules can be used to make items including specimen cups and plastic bags.

Image: digitalstock | Adobe Stock

EASAC

Closed-loop plastic recycling

A new report by the European Academies' Science Advisory Council (EASAC), "Packaging plastics in the circular economy", warns that current efforts to resolve the plastic waste crisis are ineffective and misleading. It calls on politicians and industry to address conflicts throughout the plastic life cycle – from production to end of life. According to the report, if plastic use continues to increase, it will be impossible to achieve the goal of reducing the amount of plastic waste in our waters and on land. Instead, systemic reforms are needed along the entire value chain in order to protect the environment, biodiversity and ultimately human health. ■ JMO,NH

► Packaging plastics in the circular economy

EASAC

Regulating genome-edited plants

The European Academies' Science Advisory Council (EASAC) has commented on the Leopoldina's statement, "Towards a scientifically justified, differentiated regulation of genome edited plants in the EU". The statement was in response to a 2018 decision by the European Court of Justice on the legal regulations governing genetically modified organisms (GMO). The European Academies maintain that the current European Union rules are no longer fit for purpose and a radical reform of the legal framework is needed. They point to the significance of new methods of genome editing in light of the climate crisis, global food security issues and social injustice. ■ CSD

► Regulation of genome-edited plants in the EU

European Academies

Data for medical research

In medical research, personal data is often compiled in order to ensure sufficient case numbers for studies, to replicate results and to identify complex correlations. While the European Union's General Data Protection Regulation (GDPR) has harmonised regulations governing the processing of personal data, exchanging data with countries outside of the European Economic Area can be problematic. The European academy associations EASAC, ALLEA and FEAM have initiated a project to strengthen the international exchange of data for research purposes and take legal and ethical issues into account, particularly with regard to data protection. ■ CSD

► Data sharing project

People

Awards and Honours

■ **Antje Boetius** ML, member of the Earth Sciences Section, is assuming the Mercator Professorship at the University of Duisburg-Essen in 2020.

■ **Emmanuelle Charpentier** ML, member of the Human Genetics and Molecular Medicine Section, received the Wolf Prize in Medicine from the Wolf Foundation (Israel) together with Jennifer Doudna.

■ **Caroline Dean** ML, member of the Organismic and Evolutionary Biology Section, received the Wolf Prize in Agriculture from the Wolf Foundation (Israel).

■ **Donald B. Dingwell** ML, member of the Earth Sciences Section, was awarded the Order of Canada, the country's highest civilian honour.

■ **Lars P. Feld** ML, member of the Economics and Empirical Social Sciences Section, was appointed the new chairman of the German Council of Economic Experts.

■ **Herbert Gleiter** ML, member of the Physics Section, was awarded an honorary doctorate from Lanzhou University (China) and was named a fellow of Lanzhou University and the Chinese Academy of Sciences (CAS).

■ **Günter Klöppel** ML, member of the Pathology and Forensic Medicine Section, was presented with the European Neuroendocrine Tumor Society's Life Achievement Award and also received honorary membership.

■ **Wolfgang Marquardt** ML, member of the Engineering Sciences Section, was accepted into the National Academy of Engineering (USA).

■ **Ole Petersen** ML, member of the Physiology and Pharmacology/Toxicology Section, was awarded the Gold Medal of the Academia Europaea.

■ **Svante Pääbo** ML, member of the Human Genetics and Molecular Medicine Section, received the 2020 Japan Prize from the Japan Prize Foundation.

■ **Peter M. Schlag** ML, member of the Surgery, Orthopaedics, Anaesthesiology Section, was awarded the Johan Georg Zimmerman Medal by the MHH Foundation of the Hannover Medical School.

■ **Ursula M. Staudinger** ML, member of the Psychology and Cognitive Sciences Section, was elected Rector of the TU Dresden.

■ **Wolfgang Wahlster** ML, member of the Informatics Section, was awarded an honorary doctorate from the Czech Technical University in Prague (Czech Republic).

The Leopoldina mourns the loss of honorary member Reimar Lüst

The National Academy of Sciences mourns the loss of honorary member Reimar Lüst. The astrophysicist is viewed as a pioneer of European space exploration research. He was elected a member of the Leopoldina in 1973 and was the spokesperson of the Astrophysics/Astronomy Section from 1991 to 1997. In 1997, the Leopoldina awarded him honorary membership. Reimar Lüst died on 31 March 2020 at the age of 97. President of the Leopoldina Gerald Haug paid tribute to his work, saying: "Reimar Lüst shaped the German, European and global scientific system with his outstanding reputation as an astrophysicist as well as his keen political judgement and prescience."

Lüst conducted research in astrophysics, space exploration and plasma physics. He had been increasingly dedicated to scientific policy since the end of the 1960s. He was Chairman of the German Science Council from 1969 to 1972, President of the Max Planck Society from 1972 to 1984, Director-General of the European Space Agency (ESA) from 1984 to 1990, and President of the Alexander von Humboldt Foundation from 1989 to 1999. He was also Chairman of the Board of the International University Bremen (now Jacobs University Bremen) until 2004.

Astrophysicist Reimar Lüst won many accolades for his work, including the Grand Cross of the Order of Merit of the Federal Republic of Germany, the Adenauer-de Gaulle Prize and a number of honorary doctorates and professorships. Minor planet 4386 was named after him in 1991.

Imprint

Deutsche Akademie der Naturforscher Leopoldina – Nationale Akademie der Wissenschaften

Jägerberg 1
06108 Halle (Saale)
Telefon: +49-345/4 72 39 – 800
Telefax: +49-345/4 72 39 – 809
E-Mail: presse@leopoldina.org

Editing:

Caroline Wichmann (CW)
Daniela Weber (DW)
Julia Klabuhn (JK)
Prof. Dr. Jutta Schnitzer-Ungefug (JSU) (respons.)
Prof. Dr. Dr. Gunnar Berg ML (GB)
Prof. Dr. Thomas Krieg (TK)

Other editors of this issue:

PD Dr. Stefan Artmann, Head of Presidential Office (ART)
Yvonne Borchert, Scientific Coordinator Working Groups and Projects, Global Young Academy (YB)
Dr. Christiane Diehl, Deputy Head, Department International Relations; Executive Director, EASAC Secretariat (CSD)
Dr. Nina Hobbhahn, Scientific Policy Officer EASAC Department International Relations (NH)

Julia Klabuhn, Editor, Department Press and Public Relations (JK)
Johanna Mogwitz, Assistant, Department International Relations (JMO)
Dr. Katja Patzwaldt, Scientific Officer President's Office (KP)
Anne Rohloff, Academic Coordinator Public Relations, Global Young Academy (AR)
Christian Weidlich, Senior Officer, Department International Relations (CHW)
Dr. Elke Witt, Scientific Officer, Department Science - Policy - Society (EW)

Photo credits:

title image: iXimus_Pixabay; images page 2: David Ausserhofer | Leopoldina, Agata Zielinska und Melina Schuh | Max Planck Institute for Biophysical Chemistry, Rapidobject GmbH Leipzig

Design:

unicom Werbeagentur GmbH, Berlin

Copyright:

For the Leopoldina newsletter the copyright and all other rights are held by the Deutsche Akademie der Naturforscher Leopoldina – National Academy of Science, Jägerberg 1,



Leopoldina
Nationale Akademie
der Wissenschaften

06108 Halle (Saale), Germany. Redistribution, including in the form of extracts, is permitted for educational, scientific and private purposes if the source is quoted (unless otherwise explicitly indicated by the article in question). Permission must be sought from the Leopoldina for commercial use.

Links to external websites:

The Leopoldina does its best to select all hyperlinks in Leopoldina news and their contents carefully, but has no influence on the content or design of the pages linked to. The Leopoldina hereby explicitly rejects any liability for the contents of external websites.

Unsubscribe:

Please send an email to presse@leopoldina.org

Abbreviations:

ML = Member of the Leopoldina