

# Dinner with Nobel Laureates

At Lake Constance, young scientists exchange views with the best researchers in their disciplines

The Meeting in Lindau is a forum for discussions on research issues for the future and provides scope for personal encounters. The Nobel Laureates even talk about setbacks in their careers.

They are the colleagues who have received the highest accolade that can be bestowed upon a scientist: 34 Nobel Laureates came to Lindau this time in order to pass on their experience to 600 junior scientists from almost 80 countries. The 63rd Meeting lasted one week and was dedicated completely to chemistry. Important issues were the innova-

tive generation, conversion and storage of energy and “green chemistry,” which is intended to be as environmentally-friendly as possible. A large number of doctoral students and postdocs from the Max Planck institutes attended. Eleven of them were invited to the Meeting by the MPG, many others via foundations, for example.

The focus of the conference is on personal encounters. For this purpose, the MPG traditionally organizes an academic dinner with Nobel Laureates from its own ranks. This year, the che-

mist Gerhard Ertl, Emeritus Scientific Member of the Fritz Haber Institute, was there. Max Planck Director Wolfgang Lubitz from the MPI for Chemical Energy Conversion, who is a Member of the Board of Trustees and thus plays a leading role in the organization of the entire Meeting, was also at the Hotel Helvetia for the dinner with the junior scientists, which lasted for several hours.

On the other days of the Meeting, participants were afforded further opportunities for dialogue: in addition to the 30 lectures by the Nobel Laureates, open-topic discussions were also held. “I had a crowd of more than 100 students. And we had a very lively discussion,” Ertl later said in an interview. After some initial reluctance, the participants then posed personal and critical questions. They wanted to know, for example, what setbacks the scientist had experienced in his career. The 76-year-old Ertl related that he had once erroneously published incorrect analyses. “I was sure it would mean the end of my career. Ultimately, it turned out to not be as big a deal as I had feared.” He used the example to explain that researchers should never allow themselves to be pressured during their research. “Things don’t always work out right from the start. Patience is very important.”

Such genuine answers impressed the attendees. The Nobel Laureates were also taken with the young researchers. “I was impressed by the competence, the curiosity and energy of the young scientists,” said Hartmut Michel, Director at the MPI of Biophysics and 1988 chemistry Nobel Laureate. He sees the Meeting as something positive for all, as it offers the “unique opportunity for the intercultural exchange of knowledge and ideas across several generations, and for setting up networks”.

During the academic dinner of the MPG in Lindau: Chemistry Nobel Prize Laureate Gerhard Ertl and Max Planck Director Wolfgang Lubitz (2nd row left) with junior scientists.



## What have you taken home with you from the Meeting in Lindau?

**Tobias Zimmermann, 27, doctoral student at the Max Planck Institute für Kohlenforschung (Coal Research), Mülheim**

I really enjoyed the academic dinner held by the Max Planck Society, because we were in small groups of around 20 and so it was possible to come into direct contact with the Nobel Laureates. Professor Ertl and his wife are very nice! I realized in general during the Meeting that the Laureates are very down to earth people with whom it is possible to talk on equal terms, and who also enjoy a joke. It is comforting to know that Nobel Laureates have to wrestle with the same problems in the laboratory as do other researchers. I found their attitudes really inspiring: for them, science equals passion, I sensed that immediately in the discussions. For them it's not about publications and success, but about the research - and this is the only way to achieve breakthroughs for which Nobel Prizes are then awarded. I was especially impressed by the Israeli physicist Dan Shechtman, who had to fight for a long time until his views were recognized - that certainly made an impression. It's phenomenal how much he believes in his research. This fits well with what Serge Haroche shared with us: "You need trust and time."



**Karl-Heinz Dostert, 27, doctoral student at the Fritz Haber Institute of the MPG, Berlin**

I found it remarkable that the Nobel Laureates frequently think outside the box of their current research and get involved in major societal issues. Steven Chu, for example, physics Nobel Laureate and former US Secretary of Energy, made some very pointed remarks about climate change, and in a language that could be understood by a wide audience. In the Presentation Skills workshop I also noted how experienced Nobel Laureates deal with the public. I was able to learn a few things by observing them. If I ever get the opportunity to present my work during the "Long night of the sciences," I would now do many things differently. One important point: for us, science is quickly taken for granted, because we are deeply involved in our field. It is important to put ourselves in the shoes of non-scientists. Then we'll be able to better explain our work. The academic dinner held by the Max Planck Society was very good for making contacts. We were of course from different institutes and were able to get to know each other. It was a good starting point for getting together again during the course of the Meeting and talking further.

**Vera Krewald, 26, doctoral student at the Max Planck Institute for Chemical Energy Conversion, Mülheim**

The week was overwhelming. I particularly liked the panel discussions of the Nobel Laureates, especially the one on the topic "Why communicate?," with Simon Engelke, Walter Gilbert, Brian Kobilka, Harry Kroto, Ada Yonath and Beatrice Lugger. They made it clear that we as scientists have a social responsibility and that we must also be good at communicating our findings. I was surprised how easy it was to strike up a conversation with the Nobel Laureates. There were no obstacles whatsoever. During the rounds of discussions in the afternoons, in particular, you could simply ask questions, even several. It is comforting that research setbacks are completely normal, even for Nobel Laureates. Their message to us: what you must do is to quickly get back on your feet again. It was also great to make contact with many other chemists who are undertaking research in similar projects. I am working on the dissociation of water and was able to discuss this on numerous occasions. I even met somebody from the US with whom I will soon collaborate on a project.





# A Celebration of Life

In Dresden, an institute becomes a theatrical stage – for everyone involved, an experiment that is a rousing success



“Ziffer, Zelle, Zebrafisch” (“Cipher, cell, zebrafish”) poses questions, lots and lots of questions – about what life actually is, and the role that science plays in it. Answers to these questions come about as if by chance; answers that long remain in the memory, thanks to the play’s strong visual language.

Shakespeare is history. Vineeth Surendranath made a hobby of roles like Macbeth when he lived in India. Now the 34-year-old scientist is conducting research for his doctoral thesis at the MPI of Molecular Cell Biology and Genetics in Dresden and, in his spare time, appears on the stage as what he really is: a quintessential scientist who poses questions, experiments, experiences setbacks in the process and nevertheless makes progress. “It’s great that this becomes clear in the play and that the audience gets an idea of how we work, what we think, and what spurs us on,” he says. “Ziffer, Zelle, Zebrafisch” was conceived for children eight

years of age and older, and is performed at the Institute itself in a seminar room that can seat an audience of 50. Mainly school classes have thus far attended more than 25 performances, all of which were sold out.

The play is an experiment for everyone involved. For the makers from the Theater Junge Generation (TJG), a theater especially for the younger generation, and for the independent ensemble “Cie. Freaks und Fremde” and its director Heiki Ikkola, who were looking for a change of perspective. For the researchers, whose work is mirrored artistically, and for the audiences who don’t sit at a distance in the orchestra, but in a circle against the wall while the rest of the space is the stage.

The audience is thus directly involved in the multifaceted play whose plot unfolds thanks to the efforts of the actors Ivana Sajevec and Sabine Köhler who take the stage initially as

above: Conquering the laboratory table: Sabine Köhler (left) and Ivana Sajevec at the play at the MPI of Molecular Cell Biology and Genetics

below: Theatrical: Vineeth Surendranath as zebrafish



fruit flies, later become researchers who conduct wild experiments, and repeatedly ask themselves the question: What is life?

And because there isn't just one answer to this question, they team up with the children to find different ones, and to pose new ones. In the process, knowledge is imparted over and over again. As, for example, when Ivana Sajevec, puppeteer at the TJG, brings a clown marionette to life that defines specialist terms like a living lexicon. With terms that children can relate to, this is a good way to teach the researchers' vocabulary: experiment, model organism – the clown is often part of the action.

He also disappears occasionally, for example when the actors journey to the cell: a red net becomes the symbol for the smallest living unit of all organisms, filled with balloons which represent the cell's components. The mitochondria, the endoplasmic reticulum

and the DNA - everything that plays a central role is introduced and celebrated with live music by Daniel Williams.

While knowledge from the world of science continues to be conveyed in this way, the play, which lasts a bit more than an hour, also turns its attention to knowledge about the world of science. This is where Vineeth Surendranath – who until now has stood silently in the room, reading books, analyzing samples – comes in. Not as a fastidious-serious researcher in a white coat, but casually in t-shirt and jeans.

#### TOUR OF INSTITUTES PLANNED

In the middle of the play a kind of talk show develops, where the children ask questions, including, for example, why fruit flies and zebrafish, the model organisms at the Institute, are being genetically modified. "We can observe something that is not a person, but yet still

find something out about humans. This helps us to be more successful at treating illnesses," he explains. What should also become clear is that scientists experiment because they are curious. And that: "Experiments are like games, sometimes you win, sometimes you lose." In other words: They can go wrong.

Vineeth Surendranath must always react spontaneously in his role, and obviously enjoys himself. "I am surprised how profoundly children at this age can already think," he says, looking back to his performances to date. "Ziffer, Zelle, Zebrafish" is being performed again in November. "The play has received a very positive response and other institutes are interested," says Florian Frisch, who is responsible for public relations at the MPI and co-initiator of the cooperation. Enquiries are currently ongoing at foundations in order to be able to fund further performances and finance a tour to various research institutions.



MAX-PLANCK-GESELLSCHAFT

#### Call for Nominations



## Max Planck Research Award 2014

### The International Research Award of the Alexander von Humboldt Foundation and the Max Planck Society

The Alexander von Humboldt Foundation and the Max Planck Society jointly confer the Max Planck Research Award, which is funded by the German Federal Ministry for Education and Research, on exceptionally highly-qualified German and foreign scientists. The researchers are expected to have already achieved international recognition and to continue to produce outstanding academic results in international collaboration – not least with the assistance of this award.

Every year, two research awards are conferred on internationally renowned scientific researchers. One of the awards should be given to a researcher working in Germany and the other to a researcher working abroad. As a rule, each Max Planck Research Award is endowed with 750,000 Euros. Nominations of qualified female scientific researchers are especially welcome.

On an annually-alternating basis, the call for nominations addresses areas within the natural and engineering sciences, the life sciences, and the human and social sciences.

The Max Planck Research Award 2014 will be conferred in the area of natural and engineering sciences in the subject

### Quantum Nano Science

113 years after the foundation of quantum theory by Max Planck, researchers succeed in controlling materials with ever higher precision to realize exotic quantum states. Thus nano structured materials and devices arise, that by exploiting the most bizarre features of quantum mechanics – take discretisation, superposition, entanglement and many body systems as examples – are designed for special purposes. Such phenomena form the focus of the relatively young experimental field of Quantum Nano Science that has emerged at the interfaces of nano science, quantum optics, photonics, materials technology and quantum information.

The Rectors/Presidents of German universities or research organisations and the scientific heads of institutes of these organisations are eligible to nominate candidates. Nominations must be submitted to the Alexander von Humboldt Foundation. Applications by prospective candidates themselves are not possible. The deadline for nominations is **31 January 2014**.

Further information can be obtained from the

**Alexander von Humboldt-Stiftung, Bonn (Germany)**  
[www.humboldt-foundation.de/web/max-planck-award.html](http://www.humboldt-foundation.de/web/max-planck-award.html)  
E-Mail: [ursula.michels@avh.de](mailto:ursula.michels@avh.de)

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# Top Ranking in the Competition for Starting Grants

Max Planck Society holds an uncontested first place

Eight MPG scientists were successful in the sixth and last round of the competition for ERC Starting Grants in the 7th EU Research Framework Programme. The MPG now has a total of 66 Starting Grants, which are awarded to aspiring young researchers, and thus ranks third in European comparison, just behind the University of Cambridge with 67 Grants and the French Centre National de la Recherche Scientifique (CNRS) with 117. If the German rankings are taken into consideration since the Starting Grants were first awarded by the European Re-

search Council (ERC), the MPG holds an uncontested first place, ahead of the Helmholtz Association with 28 grants. The universities then follow at some distance.

In the current round, the successful Max Planck researchers were Ellen Backus (Max Planck Institute for Polymer Research), Saskia Hekker (MPI for Solar System Research), Adam Lange (MPI for Biophysical Chemistry), Johannes Letzkus (MPI for Brain Research), Mikko Myrskylä (MPI for Demographic Research), Arne W. Nolte (MPI for Evolutionary Biology), Swet-

lana Schauermaun (Fritz Haber Institute) and Christian Theobalt (MPI for Informatics). They all receive up to two million euros, spread over a period of five years.

Contrary to the ERC's list of results, the MPG's statistics do not include Armin Djamei (MPI of Molecular Plant Physiology) and Oriol Romero-Isart (MPI of Quantum Optics) in these statistics; although they submitted their application with the MPI, they are now moving to the University of Innsbruck and the Gregor Mendel Institute in Vienna.

The advertisement features a collection of digital pressure gauges from Keller Druck, arranged on a dark background. The gauges are in various colors: orange, yellow, green, blue, and silver. Each gauge has a digital display showing numerical values. In the top center, there is a stylized orange bird in flight. On the right side, there is a classical statue of David, shown in a contemplative pose. The text 'ingenious contribution to the advancement of mankind' is written in a light orange, serif font in the center-right area. The website 'www.keller-druck.com' is printed in white at the bottom left.

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