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SEASONS GREETINGS

*Dear colleagues,
dear staff members,
dear students,*

I would like to take this opportunity to thank you very much for your commitment and your time - be it at work, during your studies or perhaps also in your free time - which you spent at and for the School of Science in the last year. I am very happy to see how our school has continued to grow together over the past years. There are many examples of successful interdisciplinary cooperation, and our regular network events were once again well attended. As the Chairman of the School of Science, I am very proud of our joint achievements and of the fact that our school is known within the university for its commitment, motivation, its innovativeness and its team spirit. For this I would like to thank you all very much. I wish you and your families and friends a Merry Christmas, relaxing holidays and all the best for the New Year!



*Yours,
Clemens Kirschbaum*

RESEARCH

Fungus produces active agent in a medicinal herb

Tatarinow's aster is used in traditional Chinese medicine to treat a number of ailments; the plant contains an active ingredient known as astin – and it is this agent which cancer researchers are now investigating. However, the plant does not produce the astins itself, as was assumed for a long time; instead, they are made by a fungus that lives in the tissue of the flowers. The discovery was made by an international team including Dr. Linda Jahn, Professor Jutta Ludwig-Müller and Professor Karl-Heinz van Pée of the Technische Universität Dresden and Dr. Thomas Schafhauser and Professor Wolfgang Wohlleben from the University of Tübingen. The researchers were successful in isolating the fungus, *Cyanodermella asteris*, and in cultivating it independently of the host plant. They have therefore laid the foundations for large-scale biotechnological production of astins. The study has been published in the latest *Proceedings of the National Academy of Sciences*.

<https://tu-dresden.de/mn/der-bereich/news/pilz-als-untermieter-produziert-wirkstoff-der-heipflanze>



The Cyanodermella asteris fungus was isolated from the flowers of Tatarinow's aster. It can be cultivated independently of the plant itself. © Linda Jahn

AWARDS

Federal Cross of Merit for Honorary Professor Dr. Rainer Gebhardt

On 4 December 2019, Dr. Rainer Gebhardt, mathematician from Chemnitz and honorary professor for the history of mathematics at TU Dresden, was awarded the Order of Merit of the Federal Republic of Germany for his many years of honorary commitment in the field of education. Dr. Rainer Gebhardt, himself a direct descendant of the famous Annaberg mathematician Adam Ries, founded the Adam Ries-Bund in 1991, a charitable association of which he is still chairman today. His aim is to preserve and communicate the cultural heritage of Adam Ries. The Adam Ries-Bund regularly organizes internationally acknowledged colloquia on mathematics of early modern times and organizes the annual international Adam Ries competition for pupils in grade 5.

Dr. Gebhardt's many years of intensive collaboration with the Chair of Didactics of Mathematics at TU Dresden culminated in his appointment as Honorary Professor of the History of Mathematics in 2010, in particular in recognition of his support for scientific research into early modern mathematics and the development of the cultural-historical significance of mathematics for the general public.

<https://tu-dresden.de/mn/der-bereich/news/bundesverdienstkreuz-fuer-honorarprofessor-der-tu-dresden-dr-rainer-gebhardt>



The President of the Federal Republic of Germany, Frank-Walter Steinmeier (right) awarded Rainer Gebhardt (left) with the Order of Merit of the Federal Republic of Germany at the Bellevue Palace.

© Johanna Gebhardt

Croatian Society of Natural Sciences honours biologist Jutta Ludwig-Müller



The Croatian Society of Natural Sciences acknowledges since 1997 foreign scientists who have made substantial contributions to the Croatian Natural Science field by awarding the Spiridion Brusina Medal. This year's awardee is Prof. Dr. Jutta Ludwig-Müller from the Faculty of Biology, who is honoured for her accomplishments in the field of plant biology and the promotion of Croatian science within a period of 20 years. Prof. Ludwig-Müller remembers how her cooperation with Croatian institutions began: "My first postdoctoral fellow at TU Dresden about 19 years ago was Dr. Gordana Rusak from Zagreb, who is now a professor at the Faculty of Biology there. Since then I have been able to accompany many doctoral students and post-docs from Zagreb here in Dresden in their research and career development. I cooperate with the Faculty of Biology of the University of Zagreb and the Research Institute Rudjer Boskovic (IRB) in Zagreb. I have also been a member of the IRB advisory board for many years. Through various bilateral projects, I have initiated research cooperation in Croatia, especially in Zagreb, which have resulted in 18 joint publications. In a joint Alexander von Humboldt Institute partnership with the IRB, it was also possible to purchase some lab equipment in Croatia".

The award ceremony took place on 30 November 2019 in Zagreb. The medal was presented by the President of the Croatian Society of Natural Sciences, Prof. Dr. Zrinka Kovarik.

© Branka Salopek-Sondi

Dr. Kai Wagner receives the 1st Dresden Doctoral Award in Physics

On 10 December, the Dresden Doctoral Award in Physics, sponsored by the Wilhelm and Else Heraeus Foundation, was awarded for the first time at TU Dresden. The award winner is Dr. Kai Wagner, who completed his doctorate on "Spin-wave generation and transport in magnetic microstructures" with summa cum laude at TU Dresden in 2018. From now on, the Faculty of Physics will award the 4,000 Euro prize annually for outstanding research in the field of physics. "I feel very honoured to receive this award for my dissertation, even though there are so many excellent works in physics. It strengthens my decision to continue researching physical questions and to pursue an academic career," comments Kai Wagner on his award.

Since this year he is working as a postdoc at the University of Basel, where he deals with quantum sensors of solid state systems by spin qubit magnetometry. The Dean of the Faculty of Physics, Prof. Dr. Michael Kobel, is happy to be able to establish a new, valuable award for young scientists in the field of physics: "With the help of the Wilhelm



Left to right: Dean of the Faculty of Physics Prof. Michael Kobel, Vice-Dean for Research Prof. Gerhard Rödel, award winner Dr. Kai Wagner, Chairman of the Prize Committee Prof. Jan Budich and supervisor of the doctorate at the HZDR and TUD Young Investigator Dr. Helmut Schultheiß.

© André Wirsig

and Else Heraeus Foundation, it is now possible to duly honor outstanding physics dissertations such as the one of Dr. Wagner, which are thriving in the fruitful joint research environment of TU Dresden and its partner institutions of DRES-DEN-concept.

<https://tu-dresden.de/mn/der-bereich/news/dr-kai-wagner-erhaelt-den-1-dresdner-promotionspreis-physik>

EVENT REVIEWS

TU Dresden team presents DipGene at Synthetic Biology's largest innovation event

A student team of the TU Dresden successfully showcased their DipGene project at the annual iGEM Giant Jamboree, the synthetic biology's largest innovation event, which is hosted by the International Genetically Engineered Machine (iGEM) Foundation. The Giant Jamboree is the culminating event of iGEM's annual, worldwide, synthetic biology competition for students to use genetic engineering to solve local problems all around the world. The student project DipGene developed a new methodology that makes genetic testing as easy as a pH-test. With their simple, cheap and low-tech method to test for the presence of any DNA sequence, they won a prestigious Gold Medal. The three supervisors from the CMCB and the Faculty of Biology Dr. Frank Groß, Prof. Thorsten Mascher and Philipp Popp are very excited about the spirit and the success of the team. "Developing novel scientific ideas from scratch and having to go through each and every process of project development shapes young scientists tremendously – this opportunity in the frame work of the iGEM competition makes it a unique experience for everyone involved," said Philipp Popp, who participated in iGEM himself in 2014 and already supervised the 2017 team of the TU Dresden. *The DipGene project was supported by the School of Science's strategy budget.*

<https://tu-dresden.de/mn/der-bereich/news/igem>



Left to right: first row: Victoria Sarangova, Arnau Pérez Roig, Sebastian Eguiguren, Nikitha Vavilthota.

Second row: Mara Müller, Anastasia Kurzyukova, Paula Santos Otte, Pedro Guillem, Sophie Heidig, Philipp Popp

© iGEM TU Dresden

„Physik am Samstag“ 2019 has come to a successful end



© Physik am Samstag

The five Saturdays in November this year were fully dedicated to physics. The successful series of events "Physik am Samstag" ("Physics on Saturday") for school students, but also for the interested public, attracted more than 500 guests per event to the large physics lecture hall in the Trefftz-Bau. The program offered exciting insights into modern physics and ranged from experiments with ultrasound, physics with protons, light-matter interaction, visualization of quantum phenomena to astronomy. Especially remarkable this year - which was already the 20th year of the event series - was the large number of experiments that were shown during the lectures and could be visited and carried out by the participants afterwards.

Attractive prizes such as a Convertible Notebook HP Envy x360, a Tablet Samsung GALAXY Tab S5e and an Actioncam GoPro HERO 7 attracted the participants of the main quiz. At this point a big thank you to all contributors who supported this great format with a lot of commitment.

STUDIES

Together instead of alone?! Writing groups for semester and final theses

The Schreibzentrum (Writing Centre) of TU Dresden offers guided writing groups. There you will find support during the whole writing process by working together with other students in small groups. Peer tutors of the Writing Centre supervise the work. Further information and registration for the kick-off meeting on **11 January 2020** can be found at:

<https://tu-dresden.de/karriere/weiterbildung/zentrum-fuer-weiterbildung/schreibzentrum/fuer-studierende/lern-und-schreibgruppen>

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