CONTENTS

Six highschool students had the chance to gain insights into chemistry studies at TU Dresden for one week during their winter holidays. © Alina Markova

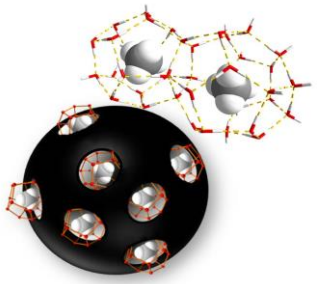
RESEARCH

New Emmy Noether Junior Research Group at the Institute of Theoretical Physics

Dr. Tobias Meng of the Institute of Theoretical Physics was accepted by the German Research foundation (DFG) into the Emmy Noether Programme. This will enable him to establish a new research group "Quantum Design: understanding, creating, and controlling novel states of matter", with funding of up to 1,08 million Euro over the next five years. Tobias Meng successfully competed against numerous candidates in the international selection procedure of the German Research Foundation. "Being accepted into the Emmy Noether Programme is a great honour," says the physicist. "Our research group can't wait to start their work in April."
The Emmy Noether Programme enables to support outstanding young researchers to lead their own junior research group, thus qualifying them for a leading scientific role, especially university teaching. The funding period is usually five years.

Daimler and Benz fellowship awarded to chemist Dr. Lars Borchardt

Junior research group leader Dr. Lars Borchardt (Chair of Inorganic Chemistry I) was awarded a two year fellowship of 40.000€ by the renowned Daimler and Benz Foundation. In his research topic „Ein alternativer Energiespeicher – Methanhydrat in porösen Kohlenstoffen" Dr. Borchardt would like to use methane hydrate as a model for the development of an alternative and powerful energy storage technology through porous carbon materials.



Nano carbons with large quantities of methane hydrate in their pore systems. © Lars Borchardt

Large quantities of methane gas are trapped in ice in deep-sea. These compounds (clathrate) store up to 205 liters of methane in one litre of water. Past research never considered methane hydrate as a possible storage technology, especially in the automobile insdustry, due to the slow development process and release of methane. Dr. Borchartd would like to circumvent this process with the help of porous carbon. Within the pore system of these carbons, large quantities of methane hydrate can be stored and methane released rapidly. In the coming two years, Dr. Borchardt plans to optimize carbon materials for such a procedure thereby contributing towards the discussion of an alternative energy saving technology.

PROMOTION OF SCHOOL STUDENTS

Chemistry-Camp – Holidays in the experimental lab

From February 20 to 24, six senior grade school girls from Saxon schools participated in this year's Chemistry-Camp. The event is an initiative of the priority programme "Material Synthesis near Room Temperature" and offers first insights into chemistry studies at TU Dresden and possible career opportunities for girls. Following an extensive introduction to practical chemical work, the girls started their hands-on experience. In supervised experiments, they created high-temperature superconductors, synthesized Indigo and learned

EVENTS

Course offers by the Center for Continuing Education
(in German only)

Programm für Lehrende: Effektive Vorlesungen (insbesondere für die MINT-Fächern), 23.03.2017

Programm für Lehrende: Kompetenzorientiert Prüfen - Prüfen für das Lernen, 27.03. - 28.03.2017

Umgang mit Plagiaten: Haltung zum wissenschaftlichen Lesen und Schreiben vermitteln am 30. März 2017

Programm für Wissenschaftlerinnen und Wissenschaftler: Vorträge in der Lehre lebendig gestalten, 11.05. - 12.05.2017

LiT.Shortcut: Blackbox Selbststudium. Optimierung der Selbststudienphase der Studierenden (insbesondere für die MINT-Fächer) , 22.06.2017

Programm für Professorinnen und Professoren: Interaktive Gestaltung von Lehrveranstaltungen in technischen Fächern, 28.09.2017 - auch für Lehrende am Ende ihre Habilitationsphase und Juniorprofessor/innen

The AMCS (Auditorium Mobile Classroom Service) tool is a joint development of the Chair of Learning and Instruction (Dr. Felix Kapp) and the Chair of Computer Networks at the Faculty of Computer Science. AMCS is also used in several lectures and seminars in the Department of Psychology. © Jasmin Mühlbach

fundamental preventive and analytical working techniques. The last day concluded with each student giving a short presentation on one of the experiments. The results of their own work, such as dyed handkerchiefs or self-made glass pearls, could of course be taken home as a keepsake.

International Masterclass: Project Day for schools „Particle Physics“

On 10 March, the Institute for Nuclear and Particle Physics opened its doors to over 100 curious senior school students. Together, they embarked on an exciting adventure into the world of particle physics, analyzed data form the CERN supercollider in Geneva and discussed their findings via video conference with other school research groups across the globe. Prof. Michael Kobel and Dr. Uta Bilow (IKTP) centrally organize the "International Masterclasses" at TU Dresden. This year they will take place between 1 March and 11 April in 47 countries with over 13.000 students participating!

NEWCOMERS

Two new professors at the Department of Mathematics

The Department of Mathematics is happy to welcome two new professors this coming summer semester: Prof. Dr. Arno Fehm took over the chair of Algebra on 13 February. His research interests comprise the field of algebra, number theory and mathematical logic, especially Galois Theory and model theory. Prof. Fehm's latest employment was at the University of Manchester.

Prof. Arno Fehm. ©Algebra/Zschalig

Prof. Dr. Ulrich Krähmer is the new chair for Geometric Methods on 1 February of this year. Prior to that, he worked at the University of Glasgow. Some keywords of his main research interests are homological algebra, noncommutative geometry, Hopf algebras, quantum groups and Dirac operators.

Prof. Ulrich Krähmer. © Jean Jackson

We would like to wish Prof. Fehm and Prof. Krähmer all the best for their new position here at TU Dresden.

TEACHING METHOD OF THE MONTH

Teaching Nuclear and Particle Physics with an Audience-Response-System

The physics students' council and the jDPG nominated Dr. Frank Siegert (Institute of Nuclear- and Particle Physics) for the Ars Legendi-Faculty Prize for good teaching. The reason for the nomination lies in the extremely positive reception of his lecture "Teilchen- und Kernphysik" among his students. Since the winter term 2015/16, Dr. Siegert uses the audience response system AMCS in his lecture. Dr. Felix Kapp (Psychology of Learning and Instruction), who is one of the developers of AMCS, supported Dr. Siegert in its application. Among the many advantages of the system, Dr. Siegert emphasizes the fast and easy repetition of the curriculum, the change of activities during the lecture and the direct feedback for the lecturer. Even beyond the use of AMCS in the lecture, Dr. Siegert observed an increased interactivity. *If you are interested in the use of AMCS for your lecture, you are welcome to contact Felix Kapp (felix.kapp@tu-dresden.de).*

Publisher: *Prof. Clemens Kirschbaum, Dean of the Faculty of Mathematics and Natural Sciences, Chairman School of Science. Office hours: Wednesday, 9.30 a.m. - 10.30 a.m. For appointment, call 0351-463-3 7512.*
Editor: *Nicole Gierig, Public Relations Advisor, School of Science*
Contact: *Nicole.Gierig@tu-dresden.de, Tel. 0351 463 33 013*