

#### Newsletter

#### **Contents**:

1. Awards <u>GFF's Teaching Award goes to</u> <u>Department of Chemistry and</u> <u>Food Chemistry</u>

2. Research <u>Freigeist research group to</u> <u>research nanomotors</u>

3. Teaching Method of the Month

<u>The "partner interview -method</u>

4. Events

<u>"Physik am Samstag" an event</u> for senior students to experience <u>physics</u>

5. Funding Opportunities and Grant Calls <u>Promoting German-Polish</u> research cooperation

Proposals by TU Project Scouts

6. International Affairs Intercultural Events



Electron microscope image of nanoscale Janus particles, which the Freigeist group is going to test regarding their capacity as photocatalytic nanomotors. Credits: Juliane Simmchen

# AWARDS

<u>GFF: Teaching Award goes to Department of Chemistry/FC and special</u> recognition is awarded to the Department of Psychology

This year, the board of the Association of Friends and Sponsors of TU Dresden e.V. (GFF) faced a challenging task. Sixteen projects applied for the Teaching Award, endowed with 10.000 $\in$ . Due to the large number of submissions of high quality and innovative character, the board decided to share the prize money and rewarding another four projects with special recognition of their efforts. Prof. Weigand (Inorganic Molecular Chemistry) and Prof. Henle (Food Chemistry) received the first Teaching Award of  $5.000\in$  for their new concept of training in connection to practical application (mini brewery). A group of University Professors, the Centre for Interdisciplinary Learning and Teaching (ZiLL) and its subsidiary "FLik-Modul Risiko" received the second Teaching Award endowed with  $5.000\in$ . Moreover, a special recognition of  $3.000\in$  was awarded to Junior Professor Stefan Scherbaum of the Department of Psychology for his project on implementing an E-Learning programme.

### RESEARCH

#### Freigeist research group to reserach nanomotors

Dr. Juliane Simmchen will tread new paths in chemistry. She was awarded 844.000€ by the 'Freigeist' Fellowship of the VolkswagenStiftung. This will enable her to establish a research group at the Chair of Physical Chemistry (Prof. Alexander Eychmüller). With photocatalytic reactions on the surface of nanoparticles, the Freigeist group wants to research sunlight driven nanomotors. In combining the two innovative fields of photocatalysts and nanomotors, Dr. Simmchen wants to open new horizons for the use of nanomotors driven by renewable energy in several environmental and analytical applications. So far, micromotors have been chemically or magnetically driven, often under the use of toxic chemicals. Photocatalytic micromotors, however, could be used for environmental remediation. Not only would using a renewable energy source (namely sunlight) drastically improve the general impact for the environment, sunlight driven micromotors would also increase the mixing and catalytic degradation of organic pollutants. Another potential application lies in novel sensors based on the observation of motion of fluorescently labelled molecules or biological markers. This might pave the way for high sensitivity detection and facilitate the mostly complex sample preparation though selfpropelled isolation of the species in focus.

#### **TEACHING METHOD OF THE MONTH**

#### Knowledge-activation through the "partner interview"-method

Prior knowledge of students is a decisive factor for learning success. The method "partner interview" offers lecturers and students alike the possibility to activate existing prior knowledge, make it retrievable for impending learning processes and to identify possible knowledge gaps. Furthermore it arouses interest in the syllabus, fosters active participation of all students and creates a positive atmosphere and learning environment. This is how the method works: The lecturer builds teams of two people and gives them a few questions related to the necessary prior knowledge or syllabus. The students interview each other in turn. The partner interview is then integrated into future teaching. For more information about this method and a detailed description, please click <u>here</u>. The <u>Higher Education Didactics and Key Competencies team</u> is happy to help you in your preparations and offers advice on alternative methods.



"Physik am Samstag" 2014. Credits: Dr. Walter Keller

# **INTERNATIONAL AFFAIRS**

Upcoming intercultural events

The International Office School of Science is regularly organizing events in its intercultural series "Living together". German and international students and members of the School of Science are very welcome to join the events and exchange ideas, experiences and fun. Please note, that the events are public, however, registration is required. Here is a choice of some of the upcoming events:

**3 November**: sightseeing bus tour Dresden

**25 November:** theater workshop

**26 November:** Christmas excursion to the "Erzgebirge"

**30 November:** Workshop "Understanding the Germans"

More information and registration for all events at:

<u>https://tu-</u> <u>dresden.de/mn/internationales</u>

Contact person: Maria Richter-Babekoff (Tel. 0351 463 33013)

# **EVENTS**

#### "Physik am Samstag" an event for senior students to experience physics

November 5th marks the beginning of the 17th "Physik am Samstag" series. Over 500 senior school students from Dresden and surroundings have registered and are eager to experience current topics in physics. The series will be started off by Prof. Gesche Pospiech with the lecture entitled "Alles fließt -Physikalisches rund ums Wasser" and corresponding experiments. The four following events include: November 12th "Vom Radfahren zum Gedankenlesen - die Physik des Drehimpulses" (Prof. Hans-Henning Klauss, Institute of Solid State Physics), November 19th "Moderne Kosmologie" (Prof. Michael Soffel, Chair of Astronomy), November 26th "Krebstherapie mit Protonenstrahlen" (Prof. Wolfgang Enghardt, OncoRay) and December 3rd "Vom Schweben auf Magnetfeldern: die Physik hinter dem "Back to the Future II" Lexus Hoverboard" (Prof. Ludwig Schultz, IFW). Participants who have attended a minimum of four lectures will receive a "Physik am Samstag"- diploma signed by the Rector of the TU Dresden himself. Last year 350 of these diploma were awarded. The organisation team would like to express their special thanks to all sponsors (Globalfoundries, Deutsche Physikalische Gesellschaft, Association of Friends and Sponsors of TU Dresden e.V as well as Techniker Krankenkasse ), without whose support this event would not be possible.

http://samstag.physik.tu-dresden.de/

# CURRENT ANNOUNCEMENTS ON FUNDING OPPORTUNITIES AND GRANT CALLS

Promoting German – Polish research cooperation

Beethoven – this is the name of the joint funding initiative between the *National Science Centre* (NCN) and the German Research Foundation (DFG). This initiative which was founded in 2014 aspires to promote German-Polish research projects of excellent scientific quality. A joint German-Polish research team can apply for Beethoven for a period of 24 or 36 months in the fields of **chemistry**, **mathematics, physics and astrophysics as well as materials sciences.** Application deadline is **December 15th 2016**. Please find further information here: www.dfg.de/download/pdf/foerderung/internationales /partner /polen /dfg ncn 2016 call for proposals.pdf

BMBF announcements proposed by the TU Project Scouts

The documents by the Federal Ministry of Education and Research (BMBF) are available in German only. The TUD Project Scouts are offering formal and strategic advice and support for these and other projects.

BMBF Bekanntmachung - Neue Formate der Kommunikation und Partizipation in der Bioökonomie https://www.bmbf.de/foerderungen/bekanntmachung-1249.html Deadline 30. November 2016

BMBF Bekanntmachung - Photonik nach Maß - Funktionalisierte Materialien und Komponenten https://www.bmbf.de/foerderungen/bekanntmachung-1245.html Deadline 30. November 2016

**Publisher:** Prof. Clemens Kirschbaum, Dean of the Faculty of Mathematics and Natural Sciences, Chairman School of Science **Editor:** Nicole Gierig, Public Relations Advisor, School of Science **Contact:** Nicole.Gieria@tu-dresden.de. Tel. 0351 463 33 013