Dear Sir or Madam, dear Alumni of TU Berlin,

Studying at TU Berlin has become more attractive than ever before. In the summer semester of 2015, around 2,300 new students began their studies at our university. Around 60 percent of them began a Bachelor’s course and 40 percent a Master’s course. We take this clear increase in the number of applications as evidence that, through our step-by-step removal of restrictions on admission, we are heading in the right direction. Considering the skills shortage in the fields of natural and engineering sciences, we should do our utmost to provide as many young people as possible from Germany and abroad with a high-quality education.

This positive trend can also be observed with regard to international applicants. Among students starting courses with us, 15 percent of Bachelor’s students and 17 percent of Master’s students come from abroad. Currently, most of them come from the People’s Republic of China, Turkey and Poland. Undoubtedly, the ongoing attractiveness of our university for international students is also due to the fact that we are offering an increasing number of courses in the English language. This lowers language barriers tremendously. Therefore, we have set ourselves the ambitious goal of offering 50 percent of all Master’s courses in the English language within the next five years.

This newsletter provides information on a further successful internationalization project. In January 2015, the first Master’s degree certificates were awarded to graduates of the ‘Energy Engineering’, ‘Water Engineering’ and ‘Urban Development’ courses at the TU Campus El Gouna in Egypt. With El Gouna, TU Berlin is the first German university to have established a campus abroad. It offers an education complying with the Federal Republic of Germany’s standards in terms of content and legal status. Offered here are ideal research conditions for addressing the region’s specific challenges – something that is urgently needed in the MENA region.

Study stays abroad are also very popular with German students. However, getting credits earned abroad recognized at home can often be difficult. TU Berlin has now developed a digital information service that, on the one hand, gives students better orientation when planning their curriculum at a partner university and, on the other hand, increases the transparency of our own credits-recognition practice. TU Berlin received an award for this project in the ‘MINTernational Digital’ competition of the Stifterverband.

I remain, yours faithfully

Professor Dr Christian Thomsen
President of TU Berlin
RESEARCH NEWS

Human on a Chip

*TU scientists have developed a mini-organism that is expected to make millions of animal experiments redundant*

According to EU statistics, 11.4 million animals were used for research and development purposes in 2011, most of them for testing. However, the ability of animal experiments to say anything conclusive about possible effects on humans remains limited. Many a costly experiment has been abandoned for this reason. Professor Dr. Roland Lauster and his team at the TU Sub-Department of Medical Biotechnology are currently developing ‘human-on-a-chip’ platforms, that is microscale organ structures that fit onto a chip and react to active substances like real organs. The ‘two-organ chip’ has already been completed and is ready to operate.

MORE

Dance of the Nanovortices

*TU researchers discover new properties of nanovortices*

It is a well-known phenomenon: when a spinning top is spun or rotates on an inclined surface, it does not usually move forward in a straight line, but rather in a series of small arcs. Researchers at TU Berlin and Johannes Gutenberg University Mainz (JGU), together with research teams from the Netherlands and Switzerland, have now made this pattern of movement visible in a magnetic multilayer system – and, moreover, in the form of small magnetic nanovortices. In doing so, the researchers made a new discovery: these nanovortices possess mass. An article on this subject has been published in the renowned scientific journal ‘Nature Physics’.

MORE
RESEARCH NEWS

Photoacoustic Imaging Enables a Penetrating View of Tissue

*Tumor cells produce their own contrast agent*

Dr. Jan Laufer’s research group at TU Berlin has for the first time conducted over several weeks a non-invasive, long-term study of tumors by means of the development of photoacoustic imaging and the introduction of special reporter genes into tumor cells. Photoacoustic imaging enables the three-dimensional display of cells and tissue. Until now, it has mainly been used to visualize blood-vessels. Tumor cells, however, appear transparent and are therefore almost invisible.

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Milestone in Silicon Chemistry

*The potential of transfer hydrosilylation has been ignored by the scientific community until now*

Discovering a chemical mechanism that, to date, has simply been overlooked by science is not something that happens every day to a scientist engaged in basic research. Hence the tremendous excitement of Professor Dr. Martin Oestreich, who works at TU Berlin’s Institute of Chemistry. His research group has discovered a reaction that makes possible so-called ‘ionic transfer hydrosilylation’ under ordinary laboratory conditions and at room temperature – and all without the use of a metal catalyst!

MORE
NEWS

► Mussel Cells in Space
How does zero gravity influence the immune system?

► What to do with Excess Electric Current?
‘Ultra-wet combustion’ offers new storage possibilities for electric current derived from renewable energies

► Networking in Water Science
TU Berlin cooperates with the Norwegian University of Science and Technology (NTNU) in Trondheim

► Flagship of German-Egyptian Science Relations
First Master’s degree graduation ceremony at TU Campus El Gouna

► New International Double-Degree Program ‘Audio Communication and Sonology’
TU Berlin and the Royal Conservatoire in The Hague launch a Master’s Degree Program

► Awarded for Innovation
TU Berlin’s start-ups win main prizes at the start-up competition ‘IKT Innovativ’

► By E-Bus through Berlin
Starting this summer, buses on Berlin’s 204 route will drive through the German capital using cordless charging technology and causing no pollution

► TU Berlin is Successful in the Stifterverband’s ‘MINternational Digital’ Competition
Credits-recognition database ‘Punktlandung – credits transfer’ receives a grant of 50,000 euros
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Publisher:
Prof. Dr. Christian Thomsen, President of the TU Berlin
Press, Public Relations & Alumni Office
Phone: +49 (0)30 314-2 58 66
Alumni@pressestelle.tu-berlin.de
www.alumni.tu-berlin.de

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FURTHER INFORMATION

In case this Newsletter should not appear accurately, you can access it on our website. There you can also obtain further information about the Alumni Program of TU Berlin: www.alumni.tu-berlin.de

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