

## TUD 2028 – SYNERGY AND BEYOND

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- \_International Conference at the Deutsches Hygiene-Museum
- \_1<sup>st</sup> Scientific Area Network goes public!

## EXCELLENCE &amp; RESEARCH CLUSTERS

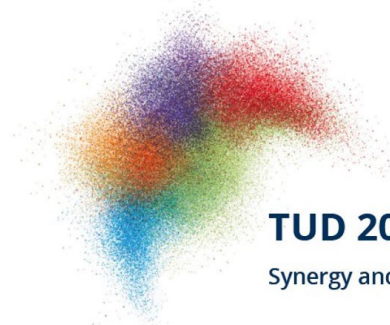
- \_Infomercial about ct.qmat
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## Dear Readers,

Some of the measures of the [Excellence Application](#) are already in full swing. For others, staff is currently being recruited and projects are being planned in detail. The majority of measures will gain momentum over the course of the year: Funding programmes and new services will be available, appointment procedures will be completed, and new Centres are to be established.

To implement and invigorate these measures, we need the support of all members of our University. We would be delighted if you would regularly inform yourself about the University of Excellence (EXU) funding line, the Clusters of Excellence, and the Research Clusters (committees, information events, TUD website, press relations, and social media). Please feel free to recommend our Excellence Newsletter to other readers, [subscription](#) is completed with just a few clicks.

We would like to encourage you to actively participate in the EXU measures, for example by using the services and funding formats as well as by participating in calls for applications and events such as [TUD in Dialogue](#) or the [Future Labs](#).

**TUD 2028**

Synergy and beyond

Last but not least, we would like to encourage you to contribute your experience and expertise so that together we can achieve our 'TUD 2028' goals.

Do not hesitate to send your questions, wishes and tips to [exzellenz@tu-dresden.de](mailto:exzellenz@tu-dresden.de).

## Administrative workshops have started



Within the Area of Activity *Talent* of TU Dresden's *Excellence Application*, the **recruitment and retention of excellent researchers** is a pivotal measure. In order to facilitate the onboarding of newly appointed chairs, *administrative workshops* have been conceived.

Focused on specific topics, the **Directorates of the Central University Administration (ZUV)** present themselves with their tasks, responsibilities and contact persons - especially those relevant for newly appointed scholars. They provide advice for smooth application procedures, discuss practical examples, and leave ample room for individual questions.

The kick-off information event was held on 4<sup>th</sup> February 2020. The next topics will be IT and Personnel (21<sup>st</sup> April 2020), Student Affairs & Continuing Education and Property Management, Technology & Security (15<sup>th</sup> May 2020), as well as Research Promotion & Transfer and Occupational Health & Safety (11<sup>th</sup> June 2020).

## Award for Excellence in Doctoral Supervision to be conferred

As in previous years, the Graduate Academy (GA) will confer the *Award for Excellence in Doctoral Supervision*. Doctoral students and postdocs can still nominate their doctoral supervisor for the GA supervisor award until

**16<sup>th</sup> March 2020**. The award is **endowed with 3,000 EUR**.

In addition, the GA offers an *intensive workshop on 'Good doctoral supervision'* exclusively for professorial staff on 3<sup>rd</sup> April 2020. You can register via email by 23<sup>rd</sup> March.

## Scientific symposium 'Global Challenges: Humanity 4.0'

transCampus, the cooperation between King's College London and TU Dresden, has entered the **debate on scientific progress and new solutions** with a series of public symposia.



The first event in Dresden will take place on **20<sup>th</sup> April 2020**: Leading researchers from Dresden and London will give presentations on '**Global Challenges: Humanity 4.0**'. Following the presentations, there will be opportunity for discussions in smaller groups.

The event will be held in English. Registration for the event is free of charge.

## International Conference at the Deutsches Hygiene-Museum Dresden

The **6<sup>th</sup> Congress 'The Changeable Campus of the Future'** will take place on **22<sup>nd</sup> and 23<sup>rd</sup> April 2020** in the *Deutsches Hygiene-Museum Dresden*. With the support of DRESDEN-concept (DDc), a programme has been designed that addresses the **interaction between technology, space and teaching in the city**.

The event serves as a platform for practitioners from the education sector, delegates from the relevant institutions as well as for companies to actively participate in the **development of new learning environments**, to gain experience and to network. It's the first time the event takes place in Dresden.

### 1<sup>st</sup> Scientific Area Network goes public!

In collaboration with [Deutsches Hygiene-Museum Dresden](#), [DRESDEN-concept \(DDc\)](#) is holding the **1<sup>st</sup> Scientific Area Network goes public! (SAN)** on the topic of **'Insights into our food'** on 5<sup>th</sup> May 2020 from 6pm to 9pm.

The event is thematically linked to the **special exhibition 'Future Food. Essen für die Welt von morgen'** (21<sup>st</sup> March 2020 – 21<sup>st</sup> February 2021).

In contrast to previous SANs, the focus of this event will be on both networking between researchers and engaging in **dialogue with interested citizens**.

The questions from the general public to the world of research on the topic of nutrition will be gathered prior to the event by a **public call**, and be investigated in discussions with the researchers ([veranstaltungen@dhmd.de](mailto:veranstaltungen@dhmd.de); deadline: 3<sup>rd</sup> April 2020).

Additionally, research results from scientists of the DRESDEN-concept network will be presented in a concentrated form. DDc researchers are invited to participate with a short presentation (maximum five slides in five minutes). Registration including name, institution and short abstract by 27<sup>th</sup> March 2020 to: [lena.herlitzius@tu-dresden.de](mailto:lena.herlitzius@tu-dresden.de)

More information and registration under: [www.sanfood.eventbrite.de](http://www.sanfood.eventbrite.de)

### Infomercial about ct.qmat

There is a [new video](#) from the [American Physical Society \(APS\)](#) about the Cluster of Excellence [ct.qmat](#), which will also be presented at the APS March Meeting 2020 in Denver. Enjoy watching!

### Halfway point for type 1 diabetes prevention study

One of the largest research collaborations on type 1 diabetes in Europe has reached an **important milestone**: The international platform [GPPAD](#) ('The Global Platform for the Prevention of Autoimmune Diabetes') has now successfully included 520 infants from all over Europe in the type 1 diabetes prevention study [POInT](#) (Primary Oral Insulin Trial) – this is half of the planned 1040 participants.

The POInT study aims to train the immune system and thereby **prevent type 1 diabetes in children with an increased genetic risk for this disease**.

### Microscopy courses for children



On 5<sup>th</sup> February 2020, one of the first digital classrooms for microscopy in Saxony has been inaugurated. The project was directed by the team of the Biopolis Dresden Imaging Platform (BioDIP), which includes the [Light Microscopy Core Facility](#), part of the technology platform of the [Center for Molecular and Cellular Bioengineering \(CMCB\)](#) at TU Dresden.

Since 2017, the BioDIP team has been teaching voluntarily at the Bürgerwiese grammar school in Dresden. This commitment convinced Carl Zeiss AG to **donate a classroom equipped with 15 state-of-the-art microscopes**. Each microscope has an integrated HD streaming camera and can be connected to smartphones or tablets. This classroom will now be made available to special-needs schools, middle schools, and grammar schools.

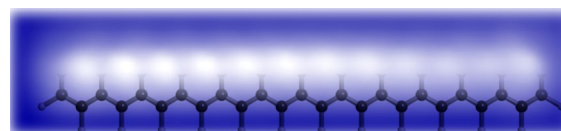
### Nanocar Race II in preparation

Dr. Francesca Moresco, group leader at the Center for Advancing Electronics Dresden (cfaed), is coordinating the European FET OPEN project MEMO (Mechanics with Molecules). Within this project, the international competition Nanocar Race II is organised on a **100 nanometre track on a gold surface** with the aim of testing the performance of molecular machines, important for the development of technologies at the nanoscale.

On 23<sup>rd</sup> March 2020, an international committee will visit the Dresden **race team 'German Azulene Explorer - GAZE'** to evaluate their progress of the preparations for the race, which will take place in 2021. The race team comprises members of Dr. Moresco's group and of another TUD group from the Chair of Materials Science and Nanotechnology as well as two chemists from the Leibniz Institute of Polymer Research Dresden (IPF).

On 24<sup>th</sup> March 2020, a **public talk** on the racing molecules will take place in the museum Technische Sammlungen Dresden.

### Synthesis of dodecacene successful for the first time



STM image and schematic representation of dodecacene overlap in this figure. Twelve bright lobes, representing the 12 benzene rings, are well distinguishable.

A team of international scientists led by Dr. Francesca Moresco (Center for Advancing Electronics Dresden – cfaed, TU Dresden) and Diego Peña Gil (Center for Research in Biological Chemistry and Molecular Materials – CiQUS, Santiago de Compostela University) has achieved a break-through in the field of  **$\pi$ -electron structures research**.

For the first time, they **synthesised a chain of twelve benzene rings**, called **dodecacene**, which is the **longest acene ever obtained to date**. The investigation of the electronic properties revealed an unexpected increase in the energy gap of dodecacene.

The research was conducted as part of the Planar Atomic and molecular scale devices (PAMS) EU project. The scientists have now published their results in the journal ACS Nano.

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