

UDE: Major Success for the Faculty of Physics New Collaborative Research Centre

The competition was of a very high standard: Numerous groups of researchers applied for a new Collaborative Research Centre (SFB). "In view of the large, nationwide competition, we are very happy that the Deutsche Forschungsgemeinschaft opted for our application", said a very pleased Prof. Dr. Uwe Bovensiepen, Head of the Ultrafast Dynamics at Interfaces group of researchers in the Faculty of Physics of the University of Duisburg-Essen (UDE). "At the same time, this decision confirms our leading role in an important field of physics", explained the future SFB spokesperson.

Thematically, in the new SFB 1242 the researchers will be working on the "non-equilibrium dynamic of condensed matter in the time domain". It will be initially funded for four years and begins from 1 July. Background info: Solid matter, for example a piece of metal, appears unchangeable at first glance. Yet the atoms and electrons it contains can be excited and transferred from their ground state to a state of higher energy. Impacts of atoms and electrons in general cause excitations of various degrees of freedom of matter to interact with each other in a very specific way.

The new SFB of the UDE brings together scientific activities from physics and chemistry and pursues the objective of bringing about a cross-material, microscopic understanding of such non-equilibrium states. Prof. Bovensiepen: "We will continue to develop the methods of theoretical physics and interlink them in order to describe the entire development in time and space – from the moment the stimulus acts, across secondary processes, up to a state of near equilibrium."

If we succeed and fully understand what is happening, new stimuli and concepts could emerge for science and for new applications. For example, completely new material properties could be created, which exist exclusively in non-equilibrium. Possible applications are, for example, silicon wafers in solar technology or isolators in electrical devices.

Further information:

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