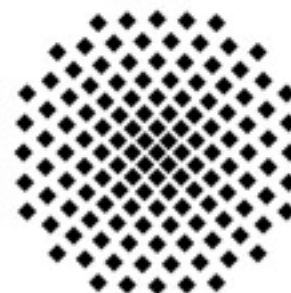


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<http://idw-online.de/de/news585206>Forschungsprojekte, Kooperationen  
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überregional**A new direction in the world of research****NanoBioMater project house opens**

Biocompatible, functional materials for medical engineering, diagnostics and environmental analysis are the focus for the new NanoBioMater project house which celebrated its opening at Stuttgart University on April 25, 2014. Researchers from the natural sciences, material sciences and engineering sciences will in future collaborate to develop novel bio-hybrid materials in the house. The Carl Zeiss Foundation in Stuttgart is providing three quarters of the funding, 750,000 euros, and the University of Stuttgart is supporting the interdisciplinary venture to the tune of 250,000 euros. The project house is building upon the project partners' joint preliminary work which was supported by the Ministry for Science, Research and Art in Baden Württemberg with a total of 600,000 euros from 2009 to 2013.

"We are happy to be able to provide targeted funding to promote innovative research structures at the University of Stuttgart in the shape of this project", states Prof. Wolfram Ressel, Rector of the University, in welcoming the official launch of NanoBioMater, and he thanks the Carl Zeiss Foundation for their commitment. Prof. Hans-Joachim Werner, Vice-Rector for Structure and Research at the University of Stuttgart, emphasised in his address that the project house will lead to tighter integration of natural and applied sciences at the University of Stuttgart, and he declared: "The overriding scientific goal of the research partners is to integrate existing research units into a new organisational structure which will enable interdisciplinary advances to be made in the field of soft functional materials which are of particular interest for later clinical applications."

"The intention is for our project to lead to a research alliance but for the moment we are just happy that our NanoBio project house is on a financially stable footing for the next four years", confirmed Prof. Sabine Laschat, Director of the Institute for Organic Chemistry (IOC) at the University of Stuttgart, who has been responsible for driving the project together with Prof. Thomas Hirth, Director of the Institute for Interfacial Engineering and Plasma Technology (IGVP).

The scientific focus will be on synthetic biogenic hybrid hydrogels. These are very soft, aqueous materials made from different combinations of chemical and biological components which can be produced in almost any structure and shape. They offer an ideal starting point for the development of new, complex biomaterials. "These hydrogels are similar to the tissue in the human body and can serve as the basis for developing replacement organs", explains Prof. Günter Tovar from IGVP, who will coordinate the project house in a core team together with Prof. Christina Wege from the Institute for Biomaterials and biomolecular Systems (IBBS). The hybrid hydrogels offer new opportunities not just for biomedicine but they also open up new possibilities in the field of miniaturised diagnostics in environmental, food and medical analytics. "Nano building blocks from the world of plant viruses serve as structural components which give the hydrogel stability and sensory or bioactive properties", says biologist Wege describing the effectiveness of the project house approach.

Not only is the object of research pursued by the NanoBioMater project house novel, the type of collaboration involved is equally so. Four interdisciplinary post-doctoral researchers acting as team managers in joint laboratories will be

responsible for the input from various technical perspectives. In addition, the four researchers together with the professors involved in the project, represent an intensive interlinking of the University institutes as they are all attached to two further institutes.

As well as the institutes directly involved, IBBS, IGVP, IOC and the Institutes for Material Science (IMW), for Physical Chemistry (IPC), for Polymer Chemistry (IPOC) and for Technical Biochemistry (ITB), the project house will be considerably enriched by a tight network of further cooperating institutes from surrounding fields, from physics to the Fraunhofer Institute for Interfacial Engineering and Biotechnology, IGB, and the Max Planck Institute for intelligent Systems as well as numerous external collaboration partners in the Stuttgart region and the whole country. As well as scientific facilities, businesses also play an important role and are well networked with the NanoBioMater project house.

The guest speech at the opening ceremony was delivered by Prof. Tanja Weil, Director of the Institute for Organic Chemistry, Department of Macromolecular Chemistry and Biomaterials at the University of Ulm, on the subject of "Switchable biopolymers from biogenic components for medical applications".

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