Deutsche Forschungsgemeinschaft
German Research Foundation

Leibniz Lecture

Falko Langenhorst **Gottfried Wilhelm Leibniz Prize 2007**

Asteroid Dust under the Microscope

Thursday, December 12, 2019, 7 p.m.

Goethe-Institut
530 Bush Street
San Francisco, CA

In 2003, the Japanese Aerospace Exploration Agency (JAXA) launched the space mission Hayabusa I to reach its destination, the asteroid Itokawa, two years later. The Hayabusa spacecraft was the first one to land on an asteroid and to return precious sample materials to Earth. In a way, the mission was to travel through time to the origin of the solar system, because the dust particles are the oldest relics of the formation of planetesimals.

The returned particles were studied by a consortium of international expert teams, revealing unique and, in part, unexpected results on solar system processes, in particular on the phenomenon of space weathering, which is unknown on Earth. This lecture will report on the technical and scientific challenges and results of these investigations with a special emphasis on the observations at the nanometer scale.

Falko Langenhorst studied mineralogy at the Universities of Giessen and Münster and received his PhD at the Institute of Planetology of the University of Münster in 1993. In 2004 he became Professor of General and Applied Mineralogy at the Friedrich Schiller University, Jena, and then in 2008 Professor of Experimental Geosciences at the University of Bayreuth. Since 2011, he is back at the University of Jena on a newly founded Professorship for Analytical Mineralogy of Micro- and Nanostructures. Since 2017 he is also Affiliate Professor of the University of Hawaii at Manoa. He was awarded the prestigious Leibniz Prize by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) in 2007.

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The **Gottfried Wilhelm Leibniz Prize** is the highest honor awarded in German research. Established in 1985, the prize provides an unparalleled degree of freedom to outstanding scientists and academics to pursue their research interests. Up to ten prizes are awarded annually with a maximum of €2.5 million per award. Prize recipients are awarded the prize solely on the basis of the scientific quality of their work. The Leibniz Prize honors the well-known scientist and humanist Gottfried Wilhelm Leibniz (1646-1716), who was a leading figure in the fields of philosophy, mathematics, physics and theology.

The **German Research Foundation (DFG)** is the central, self-governing organization funding science and basic research in Germany. Serving all branches of science and the humanities, its members comprise German research universities, non-university research institutions, scientific associations and the Academies of Science and the Humanities.

The chief task of the DFG is to fund the best research projects by scientists and academics at universities and research institutions, which are selected on the basis of a multi-layered peer review process. The DFG is a cornerstone of Germany's strength as a research nation and it plays a key role in structuring academic research in Europe.

The DFG organizes Leibniz Lectures in different regions across the world in order to promote the prize, the research conducted by the prize holders, and the high quality of German science in general.

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