



つくばイノベーションアリーナ
Tsukuba Innovation Arena



筑波大学
University of Tsukuba



ドイツ科学・イノベーションフォーラム
German Research and Innovation Forum
Tokyo

German-Japanese Workshop “Nanomaterials for Energy Applications”

Tuesday, October 25, 2011, 13: 10-17:00

University of Tsukuba, International Conference Hall

The development of sustainable energy systems is among the most pivotal challenges of the 21st century. Advancements in nanotechnology have the potential to provide novel affordable and sustainable solutions to the world's growing energy needs via paradigm-changing approaches. These nanotechnology solutions require the development of a new understanding of how energy converts at interfaces and surfaces and how to tailor and produce functional materials. Although the range of new nanomaterials has greatly expanded and their energy conversion, transport and storage have been demonstrated, the relation between structure and function remains unclear and strategies for synthesizing and processing nanomaterials in the required quantities are missing. Potential applications of nanomaterials in the energy sector are, for example, fuel cells, lithium ion batteries, thermoelectrics and photovoltaics.

Partners/Organizers:

- German Research and Innovation Forum Tokyo (DWIH Tokyo)
- Center for Nanointegration Duisburg-Essen (CeNIDE)
- Tsukuba Innovation Arena for Nanotechnology (TIA Nano)
- University of Tsukuba

Program:

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|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13:10 – 13:13 | Opening
Regine Dieth, Deutsches Wissenschafts- und Innovationshaus Tokyo |
| 13:13 – 13:20 | Welcome Greetings
Prof. Dr. Nobuhiro Yamada, President of the University of Tsukuba |
| 13:20 – 13:35 | Introduction of the University of Duisburg Essen
Prof. Dr.-Ing. Jörg Schröder, Vice-Rector for Research, Junior Academic Staff & Knowledge Transfer |
| 13:35 – 13:55 | Introduction of TIA Nano - Mission, Research and Planning
Dr. Teruo Kishi, Chairman, Executive Board TIA Nano |

- 13:55 – 14:20 **Nanoscience at University of Duisburg-Essen**
Prof. Dr. Axel Lorke, Experimental Physics, Member of the University Council and Board Member of CeNIDE
- 14:20 – 14:40 **Introduction of Nanoelectronics in TIA Nano - Mission, Research and Planning** Dr. Toshihiko Kanayama, Vice President of AIST
- 14:40 – 15:05 **Nano Energy Technology Center: Innovative materials from university-based research to applications**
Prof. Dr. Christof Schulz, Mechanical and Process Engineering, Director CeNIDE
- 15:05 – 15:30 Coffee Break (in the NanoArt exhibition room)
- 15:30 – 15:50 **Introduction of Nanogreen in TIA Nano - Mission, Research and Planning**
Dr. Junichi Sone, Vice president of NIMS
- 15:50 – 16:15 **Laser-generated functional nanomaterials for energy applications**
Prof. Dr. Stephan Barcikowski, Technical Chemistry
- 16:15 – 16:40 **Introduction of Fraunhofer IPA's activities in the field of nano carbon for energy efficient applications**
Ivica Kolaric, Fraunhofer IPA
- 16:40 – 17:00 **Educational program for Nanoelectronics and Nanogreen Innovations**
Prof. Dr. Kenji Shiraishi, Chair of Doctoral Program Course in Frontier Science, University of Tsukuba