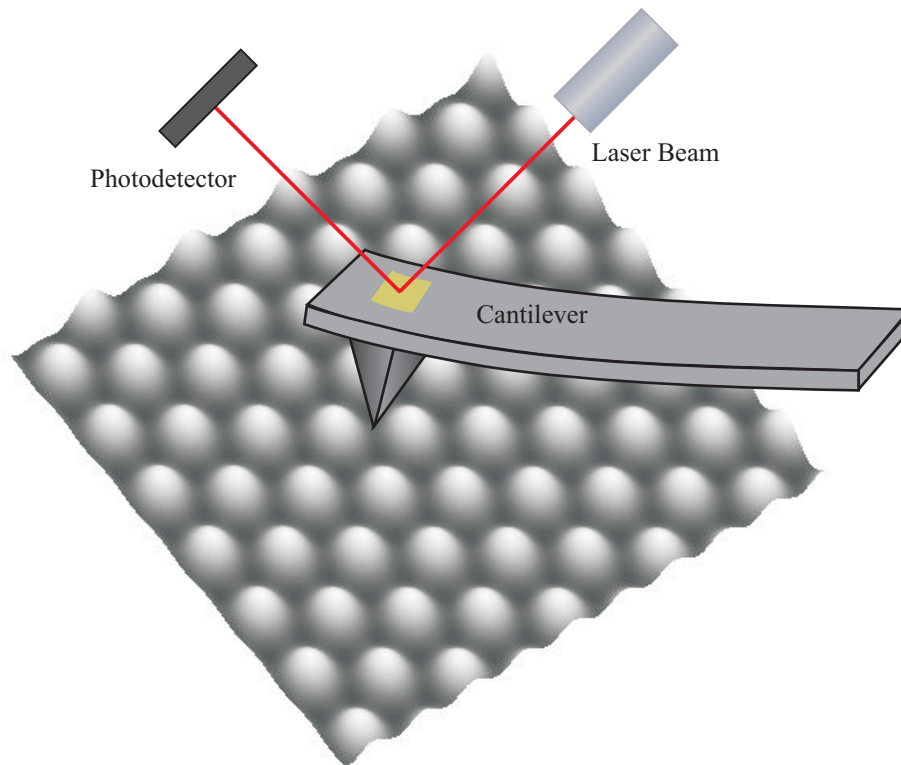


Chinese-German Symposium
Nanomanufacturing and Nanotribology

Berlin University of Technology, Germany

May 29 - June 1, 2011

- Preliminary Program -



Organization & Contact

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Location

The Symposium will take place at the TU Berlin, main building, rooms H-2036 / H-2037, Str. des 17. Juni 135, 10623 Berlin.

30 May 2011

07:45 – 08:30 Registration

08:30 – 08:40 Valentin Popov / Jianbin Luo:

Opening

08:40 – 09:00 Prof. Han - director of Bureau of International Cooperation (NSFC):

Welcome speech

Overviews of research activities in China

09:00 – 09:20 Guobiao Wang:

Overview of NSFC Premier Research Plan on NanoManufacturing

Beijing, China

09:20 – 09:40 Zhongqun Tian:

Some Progresses in Electrochemical Micro- and Nano-machining

Xiamen, China

09:40 – 10:00 Zhuangde Jiang:

Research Progresses of Micro-Nano Technology in Institute of Precision Engineering (IPE) of Xi'an Jiaotong University (XJTU)

Xi'an, China

10:00 – 10:20 Huadong Yu:

Current Research in Optical Engineering at CUST

Changchun, China

10:20 – 10:40 coffee break

Nanomaterials

10:40 – 11:00 Sergey Psakhie:

A new class of advanced filtering and sorption materials for highly effective removal of viruses, bacteria and endotoxins for medicine and food industry.

Tomsk, Russia

11:00 – 11:20 Franz Faupel:

Metal-Polymer Nanocomposites for Functional applications

Kiel, Germany

11:20 – 11:40 Mady Elbahri:

Nanochemistry : from synthesis to nanodevices and bionanotechnology

Geesthacht, Germany

11:40 – 12:00 Yucheng Ding:

Large Area and High Aspect Ratio Nano-patterning for Polymer Solar Cell Manufacturing Based on Electrically Enhanced Nanoimprinting

Xi'an, China

12:00 – 13:20 lunch

Nanopositioning and nanofabrication

- 13:20 – 13:40 Linmao Qian:
Friction-induced nanofabrication on single-crystalline silicon
Chengdu, China
- 13:40 – 14:00 Han Ding:
Nano-positioning with large-stroke: key technologies & applications
Wuhan, China
- 14:00 – 14:20 Dongming Guo:
Ultra-Precision Machining Technology in IC Manufacturing
Dalian, China
- 14:20 – 14:40 Wenhao Huang:
The SPM stability and standardization
Hefei, China
- 14:40 – 15:00 coffee break

Nanomanufacturing technologies

- 15:00 – 15:20 Eckhard Quandt:
Strain sensors based on magnetic tunnel junctions
Kiel, Germany
- 15:20 – 15:40 Yaolong Chen:
Manufacturing Technologies for Precision Optics
Xi'an, China
- 15:40 – 16:00 Lan Jiang:
Short Laser-Pulse Control of Electron Dynamics in Micro/Nano Manufacturing
Beijing, China
- 16:00 – 16:20 Zuobin Wang:
Laser Interference Nanomanufacturing Technology and Applications
Changchun, China
- 16:20 – 16:40 coffee break

Fluids, biological nanosystems

- 16:40 – 17:00 Yuhong Liu:
Effect of Alkyl Chain and Fluoroalkyl Silane on the Water-Based Lubrication Behaviors
Beijing, China
- 17:00 – 17:20 Yu Tian:
Shear Thickening in Electrorheological / Magnetorheological Fluids
Beijing, China
- 17:20 – 17:40 Andrea Danani:
Nanostructured materials and drug delivery systems of DNA/siRNA
Manno, Switzerland

31 May 2011

Multi scale tribology

- 09:00 – 09:20 Jianbin Luo:
Tribology in Nanomanufacturing
Beijing, China
- 09:20 – 09:40 Kirsten Schiffmann:
Phenomena in Microwear Experiments: Friction, Wear, Fatigue, Elastic-Plastic Deformation and Material transport
Braunschweig, Germany
- 09:40 – 10:00 Martin Müser:
Multi-scale modeling of tribological phenomena
Saarbrücken, Germany
- 10:00 – 10:20 Markus Heß:
Reduction method in Contact mechanics
Berlin, Germany
- 10:20 – 10:40 coffee break

Atomic Scale Friction

- 10:40 – 11:00 Enrico Gnecco:
Anisotropy effects in atomic-scale friction
Madrid, Spain
- 11:00 – 11:20 Hendrik Hoelscher:
Analysis of Friction at Atomic-Scale Step Edges
Karlsruhe, Germany
- 11:20 – 11:40 Udo Schwarz:
Measuring Friction, Atom by Atom: From Visualizing Atomic Surface Force Fields to Friction Measurements by Nanoparticle Manipulation
New Haven, USA
- 11:40 – 12:00 André Schirmeisen:
A Bottom-up View of Sliding Friction: From Hopping Atoms to Superlubric Nanoparticle
Münster, Germany
- 12:00 – 13:20 lunch

Physics of Friction

- 13:20 – 13:40 Ernst Meyer:
Atomic friction and non-contact dissipation
Basel, Switzerland
- 13:40 – 14:00 Heinz Sturm:
Nanotribology and Vibrating Contacts
Berlin, Germany
- 14:00 – 14:20 Valentin Popov:
Influence of ultrasonic oscillations on friction
Berlin, Germany

14:20 – 14:40 Michael Urbakh:
Dynamics of Friction in Multicontact Systems
Tel Aviv, Israel

14:40 – 15:00 coffee break

Nanohandling, nanometrology and self-assembly

15:00 – 15:20 Sergey Fatikow:
Robot-based Nanohandling
Oldenburg, Germany

15:20 – 15:40 Harald Bosse:
Nanometrology for manufacturing process control at the nm-scale
Braunschweig, Germany

15:40 – 16:00 Christine Selhuber-Unkel:
Self-assembly of gold nanostructures for controlling cell adhesion
Kiel, Germany

16:00 – 16:20 Bo Wang:
Size selected clusters under the STM
München, Germany

16:20 – 16:40 coffee break

17:00 – 18:00 guided tour:
Laboratory of the Institute of Mechanics

19:00 – 21:00 diner

01 June 2011

08:30 – 09:00 bus ride

09:00 – 12:00 guided tour:
Federal Institute for Materials Research and Testing

12:00-13:30 lunch

13:30 – 16:00 guided tour:
Fritz-Haber-Institute (Max-Planck Society)

16:00 – 16:30 bus ride