

9th LEIBNIZ CONFERENCE OF ADVANCED SCIENCE
1st German-Russian Symposium on Nanobiotechnology

- **NANOSCIENCE 2009** -
Convergence of Nanoscience and Bioscience
15 - 17 October 2009, Castle Lichtenwalde, Saxony



PROGRAMME

Thursday, 15 October 2009

- 10:00 - 11:00 **Registration**
- 11:00 - 11:15 **Opening**
L.-G. Fleischer, D. Lassner
- 11:15 - 11:30 **Nanobiotechnology today**
L. Heinrich (University of Münster)
- 11:30 - 12:30 **PANEL DISCUSSION**
Nanobiotechnology in Germany and Russia
W. Fritzsche (IPHT, Jena)
L. Heinrich (University of Münster)
S. Petuchov (RUSNANO, Moscow)
A. Savitzky (A. N. Bach Institute, Moscow)
Moderation: C. Patermann (former Director European Commission)
- SESSION 1: Nanosystems und nanocomponents in biology**
Moderation: L.-G. Fleischer, Berlin
V. Mordvinov, Novosibirsk
- 12:30 - 13:00 D. Lassner (IKDT Institute of Cardiac Diagnostics and Therapy GmbH, Berlin)
DNA – A whole nanoworld in one molecule
- 13:00 - 13:30 V. Meister (Biomesogen, Dresden/Halle)
Gene targeting by modified nucleobases
- 13:30 - 14:30 LUNCH
- 14:30 - 15:00 S. Peltek (Institute of Cytology and Genetics, RAS, Novosibirsk)
Fel radiation use for large biomolecules ablation

- 15:00 - 15:45 Th. Horn (Becton Dickinson, Allschwil)
Development of cellular assays for automated microscopy to measure multiple parameters by single cell content analysis
- SESSION 2: Nanoeffects, Nanomaterials, Nanocomponents**
*Moderation: B. Junghans, Dresden
A. Savitzky, Moscow*
- 15:45 - 16:15 C. Radehaus (Technical University, Chemnitz)
Computation of material properties at the nano and atomic scale
- 16:15 - 16:45 H.-G. Meyer (Institute of Photonic Technology, Jena)
Low temperature superconductor electronics
- 16:45 - 17:00 COFFEE BREAK
- 17:00 - 17:30 A. Korukov (Lasercenter Dubna, Dubna)
Treatment of materials by laser beam devices
- 17:30 - 18:00 L. Heinrich (CeNTech/University of Münster, Institute of Biochemistry, Münster)
Gel forming supramolecular polymer complex used as drug delivery matrix
- 18:00 - 18:30 W. Fritzsche (Institute of Photonic Technology, Jena)
Nanoparticles and DNA on chips – Realization of a nanobiotechnology toolbox
- 18:30 - 19:00 Th. Stelzner (Institute of Photonic Technology, Jena)
Synthesis and charakterisation of silicon nanowires: Towards devices and applications
- 19:00 - 19:30 T. Schüler (Universität Jena)
DNA-detection using nanoscale metal structures
- 19:30 RECEPTION FOR PARTICIPANTS

Friday, 16 October 2009

- SESSION 3: Self-organization in macromolecular und colloidal systems**
*Moderation: U. Groß, Berlin
S. Peltek, Novosibirsk*
- 9:00 - 9:30 M. Köhler (Technical University Ilmenau, Ilmenau)
Micro reaction techniques: Challenge between continuous nanoparticle synthesis and fluid-based nanoengineering

- 9:30 - 10:00 W. Neupert (Ludwig Maximilian University, Institute of Physiological Chemistry, München)
Nanopores for transport of proteins through biological membranes: molecular translocation machines of mitochondria
- 10:00 - 10:30 G. Khomutov (M. V. Lomonosov Moscow State University, Faculty of Physics, Moscow)
Inorganic nanoparticles in self-organized biopolymer complexes and self-assembled composite nanobiofilms
- 10:30 - 11:00 S. van Teeffelen (Heinrich Heine University, Institute of Theoretical Physics II, Düsseldorf)
Dynamics of Brownian cycle swimmer
- 11:00 - 11:30 COFFEE BREAK
- SESSION 4: Biocompatibility, nanotoxicity and reliability of nanocomponents**
*Moderation: G. Khomutov, Moscow
M. Köhler, Ilmenau*
- 11:30 - 12:00 U. Gross (IKDT Institute of Cardiac Diagnostics and Therapy GmbH, Berlin)
Biocompatibility of micro or nano biomaterials
- 12:00 - 12:30 A. Hübner (University of Applied Sciences, Mittweida)
Influence of microstructures and coating with amorphous diamond-like carbon on the growth adherent cell lines
- 12:30 - 13:00 M. Maskos (Bundesanstalt für Materialforschung und -prüfung, Berlin)
Interactions between cells and biofunctionalized polyorganosiloxan-nanoparticles
- 13:00 - 13:30 J. Cao (Technical University Ilmenau, Ilmenau)
One- and two-dimensional microtoxicological screenings in nanoliter-fluid segment sequences with fast micro photometric and bead-based fluorimetric read-out
- 13:30 - 14:30 LUNCH
- SESSION 5: Genome project and Personal Genomics**
*Moderation: D. Lassner, Berlin
V. Mordvinov, Novosibirsk*
- 14:30 - 15:00 V. Mordvinov (Institute of Cytology and Genetics, RAS, Novosibirsk)
From basic genetics to biomedical applications
- 15:00 - 15:30 V. Glazko (Timirjasevsky Academy, Moscow)
Interrelation between nano and micro levels in genome organization

15:30 - 16:00 COFFEE BREAK

SESSION 6: Bioinformatic challenge and potential of gene data

Moderation: V. Glazko, Moscow
M. Köhler, Ilmenau

16:00 - 16:30 P. Riege (febit biomed GmbH, Heidelberg)
Microfluidic biochips in the analysis of DNA

16:30 - 17:00 J. Schuchard (MicroDiscovery GmbH, Berlin)
Methods and tools for evaluating high throughput data

Saturday, 17 October 2009

SESSION 7: Nanoapplications in biomedicine and in clinical diagnostics

Moderation: V. Belousov, Moscow
A. Wandrowski, Berlin

9:30 - 10:00 A. Savitzky (A. N. Bach Institute, Moscow)
Fluorescent labeling technology: from tube to animal

10:00 - 10:30 D. Dolgikh (Lomonosov Moscow State University, Moscow)
Nanoengineering of therapeutic and diagnostic antibodies

10:30 - 11:00 R. Hiemann (University of Applied Sciences Lausitz, Senftenberg)
Bead-based multiplex assays for autoimmunity screening

11:00 - 11:30 COFFEE BREAK

11:30 - 12:00 A. Niyazmatov (ROHAT LLC, Moscow)
Nanobeads-based express-diagnostics of bacterial infections

12:00 - 12:30 D. Gloeckl (Institute of Pharmacy, Biopharmaceutics and Pharmaceutical Technology, Greifswald)
Magnetic nanoparticles in medicine: future diagnostic and therapeutic applications

12:30 - 13:00 **Challenges and perspectives of NanoBiotechnology**
D. Laßner und M. J. Köhler

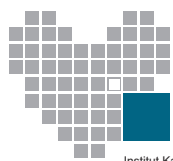
CLOSING REMARKS

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The NanoSummit Germany-Russia has been promoted and sponsored by



The NanoSummit Germany-Russia has been organized by partnership of



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