Welcome to the 3rd International Conference NANOSENS 2010!

NANOSENS 2010 highlights latest developments of nanosensors for industrial applications!

Future trends in semiconductor and sensor technology foresee the assembly and integration of devices at multiple levels, ranging from nano- to micro- and macroscale. The nanoscale provides enhanced performance, the microscale implements various material platforms to achieve a broad range of functionalities, and the macroscale enables interaction with the real world.

TOPICS:
- HETEROGENEOUS INTEGRATION
- NANOSENSORS FOR BIOMEDICAL AND ENVIRONMENTAL APPLICATIONS
- FUNCTIONAL LAYERED SYSTEMS
- 3D-SYSTEM INTEGRATION

NANOSENS 2010 POSTER AWARD
All poster contributions will participate in the poster competition! An independent jury will award prices to the best posters.

SOCIAL EVENT
A get-together is organised at a traditional „Wiener Heurigen“ in the evening of the first conference day (included in the registration fee).

HOTEL ACCOMMODATION
A list of hotels can be found on the conference-website www.nanosens.at.

EXHIBITION
The exhibition is an excellent opportunity to receive maximum marketing exposure in addition to gathering knowledge and networking with key experts in the fields of Nanotechnology.

REGISTRATION
Please register online on our conference website www.nanosens.at
Closing date: 28 November 2010

CONFERENCE FEE
Early bird fee: € 370,- (until 7 November 2010)
Regular fee: € 420,-
Student fee: € 250,-
One-day-tickets: € 250,-
(all prices excl. 10% VAT)
8:15  Registration
9:00  Welcome & Opening

Wolfgang Knoll, Scientific Managing Director
AIT Austrian Institute of Technology GmbH, Austria

Alexander Pogany, Research Policy Expert, Federal Ministry of Transport, Innovation and Technology, Austria

Hubert Brückl and Anton Köck, Health & Environment Department, Nano Systems, AIT Austrian Institute of Technology GmbH, Austria

Heterogeneous Integration

9.20  III-V Nanowires and their Potential for Integration with Silicon
Lars Samuelson (plenary), Nanometer Structure Consortium, Lund University, Sweden

10.05  Nano- & Heterogeneous Integration Technologies for Chemical Sensing
Maximilian Fleischer (invited), Siemens AG - Corporate Research & Technology, Munich, Germany

10:40  Coffee Break

11:10  Integrated Optical Sensor Array based on ring-shaped Organic Photodiodes and organic LEDs
Tobias Abel, Graz University of Technology, Austria

11:25  Nanofabrication of high frequency piezoresistive nanoelectromechanical 3C-SiC
Rachida Boubekri, Laboratoire de Photonique et Nanostructures, France

11:40  An in-line Probe Integrating Infrared Spectroscopy and Ultrasonic Manipulation of Cells
Stefan Radel, Vienna University of Technology, Austria

11:55  Functional Chip Surfaces in a Diagnostic Test System for Cancer Screening
Ursula Sauer, Health & Environment Department, AIT Austrian Institute of Technology GmbH, Seibersdorf, Austria

12:10  Lunch Break/Poster Session/Exhibition Show
Nanosensors for Biomedical and Environmental Applications

13:10 A Nanoscale Artificial Nose for Screening and Diagnosing Disease by Breath Testing
Hossam Haick (invited), Technion - Israel Institute of Technology, Israel

13:45 Biosensoric Applications of Metal Nanoparticles
Wolfgang Fritzschke (invited), Institute of Photonic Technology IPHT, Jena, Germany

14:20 Self-Consistent 3D Simulations of BioFETs
Stefan Baumgartner, Wolfgang Pauli Institute, University of Vienna, Austria

14:35 switchSENSE – a novel biosensing principle to detect and analyze molecules on a chip, Ulrich Rant, Walter Schottky Institut, Technische Universität München, Germany

14:50 Coffee Break/Poster Session/Exhibition Show

15:50 FIB-Nanotomography of Biological Cell Tissue and Investigation of Interfaces between Tissue and Biocompatible Materials
Peter Gnauck, Carl Zeiss NTS GmbH, Oberkochen, Germany

16:05 Biomaterials and Scaffolds for Advanced Therapies in the Regeneration of Connective Tissues
Nuno M. Neves, 3B’s Research Group, University of Minho, European Institute of Excellence / Tissue Engineering and Regenerative Medicine, Portugal

16:20 Detection of Mercury Based on Interaction of Single-strand DNA and Hybridized DNA with Gold Nanoparticles
Sam Fong Yau Li, National University of Singapore, Singapore

16:35 Multi-walled carbon nanotubes in electrochemical sensors and biosensors
Nikos G. Tsierkezos, Technische Universität Ilmenau, Germany

16:50 Gas sensing with vertical functionalized InAs nanowires
Peter Offermans, Holst Centre/imec-nl, Eindhoven, Netherlands

17:05 Take Advantage of your 50/50 Chance for Subsidies in the Research Support in Austria
Matthias Bruck, ABA· Austrian Business, Vienna, Austria

18:30 Evening Event - „Wiener Heurigen“
9.00 National Funding for Nanosciences and Nanotechnology  
*Margit Haas*, FFG-Austrian Research Promotion Agency, Austrian Nano Initiative, Austria

9.10 European Funding for Nanosciences, Nanotechnologies, Materials and new Production Technologies (NMP) in FP7  
*Gerald Kern*, FFG - Austrian Research Promotion Agency, European and International Programmes, Austria

**Functional Layered Systems**

9.20 Spintronic platforms for biological and biomedical applications  
*Paulo J.P. de Freitas (invited)*, INESC Microsistemas e Nanotecnologias INESC, Portugal

9.55 Nanosystems for Biomedical Applications  
*Gerald Urban (invited)*, IMTEK - Institute for Mikrosystem Technology, University of Freiburg, Germany

10:30 Coffee Break

11:00 Transparent Conductive Oxide Nanoparticle Functionalization for Surface Plasmon Resonance Sensors  
*Jovan Matovic*, Vienna University of Technology, ISAS - Institute for Sensors and Actuators Systems, Austria

11.15 Detection of Neutral Nanoparticles using a Superconducting Wire  
*Markus Marksteiner*, University of Vienna, Quantum & Nanophysics, Austria

11.30 Measurement and Monitoring System for Forming Processes based on Piezoresistive Thin Film Systems  
*Saskia Biehl*, Fraunhofer-Institute for Surface Engineering and Thin Films, Braunschweig, Germany

11.45 Flame-made Pt-doped WO3 Sensors for Hydrogen  
*Sukon Phanichphant*, Materials Science Research Center, Faculty of Science, Chiang Mai University, Chiang Mai, Thailand

12:00 Lunch Break  
Poster Session / Exhibition Show
3D-System Integration

13.00 Integrated MEMS Solutions for Biomedical Applications  
Hoc Khiem Trieu (invited), Fraunhofer Institute of Microelectronic Circuits and Systems IMS, Duisburg, Germany

13.35 Opportunities for 3D IC and Sensor Integration  
Martin Schrems (invited), austriamicrosystems AG, Austria

14:10 Lithography and Wafer Bonding Solutions for 3D Integration  
Thorsten Matthias, EV Group, Austria

14.25 Calibrated Nanoscale Measurements using a Scanning Microwave Microscope  
Hans-Peter Huber, University of Linz, Christian Doppler Laboratory, Austria

14.40 ENIAC-Austria Plattform  
Johann Massoner, Infineon Technologies Austria AG, Austria

14:50 Coffee Break

15:20 Nano/Bio/CMOS Interfaces and Systems for electrochemical sensing  
Sandro Carrara (invited), EPFL Lausanne, Switzerland

15:55 Poster Award Ceremony
Closing Celebration

17:00 End of the Conference!
NANOSENS 2010
2 - 3 December 2010

INFORMATION AND REGISTRATION
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Donau-City-Strasse 1
1220 Vienna, Austria
How to get there:
www.ait.ac.at/contact/contact_techgate_en.html

IMPORTANT DEADLINES
Early registration discount:
7 November 2010
Closing date for registration:
28 November 2010

LOCAL ORGANISATION
AIT Austrian Institute of Technology GmbH
Hubert Brückl, Anton Köck
Kerstin Formanek

IN COOPERATION WITH
Techkonnex - High-Tech Promotion
Margit Malatschnig

COOPERATION PARTNER

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