

2 - 3 December 2010, Tech Gate Vienna, Austria

## PROGRAM



NANOSENSORS  
FOR  
INDUSTRIAL  
APPLICATIONS

# INVITATION

Welcome to the 3rd International Conference NANOSSENS 2010!

**NANOSSENS 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
- NANOSSENSORS FOR BIOMEDICAL AND ENVIRONMENTAL APPLICATIONS
- FUNCTIONAL LAYERED SYSTEMS
- 3D-SYSTEM INTEGRATION

## NANOSSENS 2010 POSTER AWARD

All poster contributions will participate in the poster competition! An independent jury will award prizes 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](http://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.

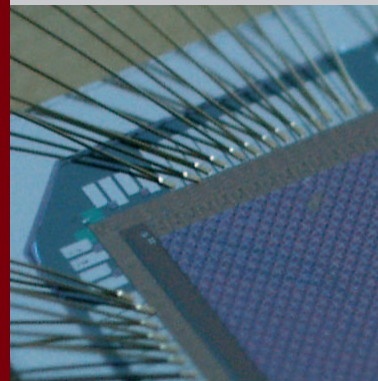
## REGISTRATION

Please register online on our conference website [www.nanosens.at](http://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

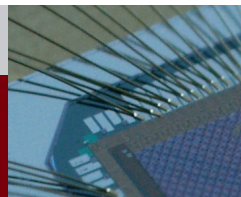
11:55 **Functional Chip Surfaces in a Diagnostic Test System for Cancer Screening**  
**Ursula Sauer**, Health & Environment Department, AIT Austrian Institute of  
Technology GmbH, Seibersdorf, Austria

12:10 **Lunch Break/Poster Session/Exhibition Show**

## PROGRAM

2<sup>ND</sup> DECEMBER 2010Nanosensors 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 Fritzsche (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. Tzierkezos**, 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

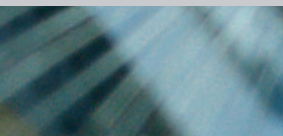
- 9.20 Spintronic platforms for biological and biomedical applications**  
**Paulo J.P. de Freitas (invited)**, INESC Microsistemas e Nanotecnologias INESC, Portugal
- 9.55 Nanosystems for Biomedical Applications**  
**Gerald Urban (invited)**, IMTEK - Institute for Mikrosystem Technology, University 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 WO<sub>3</sub> 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**



# PROGRAM

3<sup>RD</sup> DECEMBER 2010

## 3D-System Integration

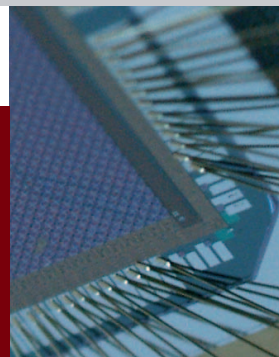
- 13.00 Integrated MEMS Solutions for Biomedical Applications**  
**Hoc Khiem Trieu (invited)**, Fraunhofer Institute of Microelectronic Circuits and Systems IMS, Duisburg, Germany
- 13.35 Opportunities for 3D IC and Sensor Integration**  
**Martin Schrems (invited)**, austriamicrosystems AG, Austria
- 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

I [www.nanosens.at](http://www.nanosens.at)

E [office@nanosens.at](mailto:office@nanosens.at)

P +43-(0)50550-4300

F +43-(0)50550-4399

## VENUE

AIT Austrian Institute of Technology GmbH

Tech Gate Tower

Donau-City-Strasse 1

1220 Vienna, Austria

How to get there:

[www.ait.ac.at/contact/contact\\_](http://www.ait.ac.at/contact/contact_techgate_en.html)

[techgate\\_en.html](http://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



THIS CONFERENCE IS  
SUPPORTED BY



We make it visible.



## COOPERATION PARTNER

