

# Nanofair 2010 - Program

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Tuesday, 6 July

8:00 Registration

Room 1	
9:00	Welcome address <b>Hansjörg König</b> Staatssekretär, Saxon State Ministry for Higher Education, Research and the Fine Arts  <b>Dirk Hilbert</b> , Deputy mayor of the city of Dresden <b>Andreas Leson</b> , Conference Chairman, Fraunhofer IWS

Plenary Session		Chair Andreas Leson
9:30	Graphene: magic of flat carbon <b>Andre Geim (plenary)</b> <i>University of Manchester, Manchester, United Kingdom</i>	
10:15	Nanotechnology a sustainable answer to global challenges <b>Rüdiger Iden (plenary)</b> <i>BASF SE, Ludwigshafen, Germany</i>	

11:00 Coffee break with technical exhibition

Room 1		Room 2	
Materials/composites I		Surfaces	
Chair Alex Dommann		Chair Gerd Bachmann	
11:30	Material aspects in organic electronics, esp. OLEDs and OPV <b>Jan Blochwitz-Nimoth (invited)</b> <i>Novalad AG, Dresden, Germany</i>	11:30	Nanostructured polymeric materials by templating strategies <b>Wolfgang Knoll (invited)</b> <i>Austrian Institute of Technology GmbH, Wien, Austria</i>
12:00	Embryonic states of fluorapatite-gelatine-nanocomposites and their intrinsic electric field driven morphogenesis <b>Elena Rosseeva et al.</b> <i>Max Planck Institute for Chemical Physics of Solids, Dresden, Germany</i>	12:00	Nanocomposites for functional applications by physical vapor deposition processes <b>Thomas Strunskus</b> <i>Christian-Albrechts-University Kiel, Kiel, Germany</i>
12:20	Self-catalytic growth of straight Si nanowires with high aspect ratio on Si (100) substrate by simple sputter deposition <b>P. K. Giri et al.</b> <i>Indian Institute of Technology Guwahati, Guwahati, India</i>	12:20	Nanobonding – New developments and applications <b>Christian Walz et al.</b> <i>Innojoin GmbH &amp; Co KG, Bremen, Germany</i>
12:40	Nanosphere lithography: a cost effective technology towards large scale integration of nanostructures into microsystems <b>Claus Burkhardt et al.</b> <i>NMI Naturwissenschaftliches und Medizinisches Institut an der Universität Tübingen, Reutlingen, Germany</i>	12:40	Durable active corrosion protection with added features <b>Hans Götz</b> <i>KERONA GMBH, Ingelfingen, Germany</i>

13:00 Lunch break with technical exhibition

Room 1		Room 2	
Materials/composites II		Life sciences I	
Chair Witold Łojkowski		Chair Manfred Stamm	
14:00	The UK national strategy for nanotechnology <b>Colin Johnston (invited)</b> <i>Dept. Of Materials, University of Oxford, Oxford, Great Britain</i>	14:00	Biomimetic functionalization of nanoparticles for targeted medical imaging application <b>Marcus Textor et al. (invited)</b> <i>ETH Zürich, Zürich, Switzerland</i>
14:30	Perspectives of atomic clusters in technology <b>Andreas Schmidt-Ott</b> <i>Delft University of Technology, Delft, The Netherlands</i>	14:30	Customized design of gold nanomarkers using ultrashort pulsed lasers <b>Annette Barchanski et al.</b> <i>Laser Zentrum Hannover e. V., Hannover, Germany</i>
14:50	Synthesis and characterisation of different kinds of carbon nanofibres - Herringbones/platelets - <b>Albrecht Leonhardt et al.</b> <i>Leibniz Institute for Solid State and Materials Research, Dresden, Germany</i>	14:50	Dendritic glycopolymers - functional nanomaterials for life science application <b>Brigitte Voit et al.</b> <i>Leibniz Institute of Polymer Research, Dresden, Germany</i>
15:10	New possibilities for applications based on carbon nanotubes <b>Oliver Jost et al.</b> <i>Fraunhofer Institute for Material and Beam Technology IWS, Dresden, Germany</i>	15:10	Size controlled preparation of nanoparticles and safe-to-handle nanoparticle dispersions by the use of ionic liquids <b>Frank Stiemke et al.</b> <i>IoLiTec Ionic Liquids Technologies GmbH, Heilbronn, Germany</i>

15:30 Coffee break with technical exhibition

Room 1		Room 2	
Energy		Life sciences II	
Chair Matthias Werner		Chair Brigitte Voit	
16:00	Silicon heterojunction solar cells with nanolayer passivation <b>Wolfgang Fahrner (invited)</b> <i>University of Hagen, Hagen, Germany</i>	16:00	Structural basis of multidrug recognition <b>Akihito Yamaguchi (invited)</b> <i>ISIR, Osaka University, Osaka, Japan</i>
16:30	Expanding the dye solar cells technology to smart windows, logic gates and sensors <b>Henrique E. Toma et al.</b> <i>Instituto de Química, Universidade de São Paulo, Brazil</i>	16:30	Design and production of biofunctional surfaces for applications ranging from medicine technology and diagnostics to environmental technology <b>Günter Tovar</b> <i>Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB, Stuttgart, Germany</i>
16:50	Nanofibers – a new material form for advanced Li-ion batteries <b>Milos Dusek</b> <i>Elmarco s.r.o., Liberec, Czech Republic</i>	16:50	Integration of carbon nanotubes in microelectrode arrays for neurostimulation and biosensing applications <b>Martin Stelzle</b> <i>NMI Naturwissenschaftliches und Medizinisches Institut an der Universität Tübingen, Reutlingen, Germany</i>
17:10	Scaling-up of ICP technology for continuous production of metallic nanopowders for battery applications <b>Marc Leparoux et al.</b> <i>EMPA, Materials Science and Technology, Thun, Switzerland</i>	17:10	Tailoring microstructure to optimise electrical resistance and gas sensing properties of tin dioxide films <b>David Rickerby et al.</b> <i>European Commission Joint Research Centre, Ispra VA, Italy</i>

Foyer	
17:30	<b>Poster Session</b>

19:15 Transfer to evening reception

Castle Albrechtsberg	
19:30	<b>Evening reception with buffet</b> <i>Awarding of the Young Researcher Prize</i>

# Nanofair 2010 - Program

Wednesday, 7 July

Room 1	
	<b>Plenary session</b> Chair Gianaurelio Cuniberti
9:00	Nanotechnology: practical systems and integration with MEMS <b>Meyya Meyyappan (plenary)</b> <i>NASA Ames Research Center, Moffett Field, USA</i>
9:30	Silicon photonics for high performance computing <b>Jürgen Michel (plenary)</b> <i>MIT Massachusetts Institute of Technology, Cambridge, USA</i>
10:00	Application of novel materials in advanced transistor technologies for CMOS circuits <b>Manfred Horstmann (plenary)</b> <i>GLOBALFOUNDRIES Dresden, Germany</i>

10:30 Coffee break with technical exhibition

Room 1	
11:00	Soft X-ray microscopy and scattering: unique methods to characterize materials with structures at the nanoscale <b>Harald W. Ade (plenary)</b> <i>North Carolina State University, Raleigh, USA</i>

Room 1		Room 2	
	<b>Electronics</b> Chair Manfred Helm		<b>Analytics I</b> Chair Marcus Textor
11:30	Polarity controllable silicon nanowire Schottky barrier field effect transistors - a building block for reconfigurable systems <b>Thomas Mikolajick et al. (invited)</b> <i>NaMLab gGmbH, Dresden Germany</i>		Electron microscopy and holography of nanobricks of Si and Ge clathrates <b>Paul Simon et al.</b> <i>Max Planck Institute for Chemical Physics of Solids, Dresden, Germany</i>
12:00	Growth of SiC crystals on Si nanostructures for enhanced field emission technology <b>Andreas Markwitz et al.</b> <i>National Isotope Centre, GNS Science, Lower Hutt, New Zealand</i>		NFFA: nanoscience foundries and fine analysis <b>Giorgio Rossi et al.</b> <i>CNR-INFM Laboratorio Nazionale TASC, Trieste, Italy</i>
12:20	Optical modes in ZnO nano- and micro-wire resonators - lasing and strong light-matter coupling <b>Rüdiger Schmidt-Grund et al.</b> <i>University of Leipzig, Leipzig, Germany</i>		SARFUS: access to the nanoworld simply with a standard optical microscope <b>Rémi Corso</b> <i>NANOLANE, Montfort-le-Gesnois, France</i>

12:40 Lunch break with technical exhibition

Room 1		Room 2	
	<b>Materials/composites III</b> Chair Volker Hilarius		<b>Analytics II</b> Chair Ehrenfried Zschech
13:40	Development of hierarchical nanostructures for high performance catalysts <b>Hans-Joerg Fecht (invited)</b> <i>University of Ulm, Ulm, Germany</i>		Nanomaterials and nanoanalysis for hydrogen solid state storage <b>Lars Röntzsch et al. (invited)</b> <i>Fraunhofer Institute for Manufacturing and Advanced Materials (IFAM), Dresden, Germany</i>
14:10	Synthesis of nano-ZnO particles using 30 000 V voltage pulses in water <b>Witold Łojkowski et al.</b> <i>Institute of High Pressure Physics, PAS, Warszawa, Poland</i>		Quantitative Kelvin probe force microscopy on semiconductors under ambient conditions <b>Christine Baumgart et al.</b> <i>Forschungszentrum Dresden-Rossendorf, Dresden, Germany</i>
14:30	Manufacturing, properties and possible applications of self-supporting nanocrystalline diamond foil <b>Matthias A. Lodes et al.</b> <i>University of Erlangen-Nürnberg, Erlangen, Germany</i>		Qualitative and quantitative analysis of nanotechnological material with scanning Auger microscopy <b>Andrey Lyapin et al.</b> <i>Physical Electronics GmbH, Ismaning, Germany</i>
14:50	From lab to market - case study on the successful commercial implementation of ultrathin glasslike coatings on automotive exhaust systems <b>Carsten Ludwig Schmidt et al.</b> <i>EPG AG, Zweibrücken, Germany</i>		Ultratrace element analysis of nanoparticles by total reflection X-ray fluorescence spectrometry <b>Hagen Stosnach et al.</b> <i>Bruker Nano GmbH, Berlin, Germany</i>

15:10 Coffee break with technical exhibition

Room 1	
	<b>Plenary session</b> Chair Andreas Leson
15:40	Lecture of students award winner <b>Noël Wilck</b> <i>RWTH Aachen, Aachen, Germany</i>
15:55	Nanocrystals: past - present - future <b>Alexander Eychmüller (plenary)</b> <i>University of Technology Dresden, Dresden, Germany</i>
16:25	Integrated approach for safe nanomanufacturing <b>Frédéric Schuster (plenary)</b> <i>Commissariat à l'Energie Atomique (CEA), Saclay, France</i>
16:55	Closing remarks

17:10 **End of the conference**