

Nanotech Northern Europe 2007



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Nanotech
Northern Europe
2007
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NTNE2007
Congress & Exhibition
27-29 March 2007
Helsinki, Finland

Program

Event Partners





Program: Tuesday 27th March

	Pre-Congress Workshop: FinNano Annual Seminar (Ballroom)	
	<i>Chair: Markku Lämsä, Programme Manager, Tekes</i>	
9:00	<i>Opening: Petri Peltonen, Director, Technology Department, Ministry of Trade and Industry</i>	
9:20	<i>FinNano Programme Status: Markku Lämsä, Programme Manager, Tekes</i>	
9:35	<i>National Strategy for Nanotechnology in Finland: Pekka Koponen, Managing Director, Spinverse</i>	
9.50	<i>FinNano Research Project: Päivi Törmä, Professor, University of Jyväskylä</i>	
10:10	<i>FinNano Company Project: Antti Valtakari, Managing Director, Montreal Sports</i>	
10:30	Coffee (Coffee & Lunch area, Exhibition Hall)	
11:00	<i>"Nanolife" - Nanobiotechnology Vision for Finland: Juhani Luotola, Orion Diagnostica</i>	
11:25	<i>Nanotechnology in the EU Framework Programme 7: Nicholas Deliyannis, European Commission</i>	
11:55	<i>Introduction to partnering program: Laura Juvonen, Programme Coordinator, Spinverse</i>	
12:00	Lunch and Exhibition (Coffee & Lunch area, Exhibition Hall)	
12:30	FinNano poster session	
13:30	FinNano (Ballroom 1)	FinNano (Ballroom 2)
	<i>Nanotechnology Materials and Processes</i>	<i>Nanotechnology Solutions for Electronics</i>
	<i>Chair: Anneli Ojapalo, Director, New Concept Development & IPR, Perlos Corporation</i>	<i>Chair: Veli-Pekka Leppänen, CEO, Nanocomp Oy</i>
	<i>Nanopatterned, porous inorganic films - synthesis and applications (15mins). Mika Linden, Åbo Akademi</i>	<i>Organic solar cell based on layered molecular (15mins). Helge Lemmetyinen, Tampere University of Technology</i>
	<i>Isotropic Liquid Crystalline Nanocomposite as an Advanced Packaging Material for Future MEMS and NEMS Systems (15mins). Markku Lyyra, VTI Technologies Oy</i>	<i>Molecular Scale Memory Elements (15mins). Andreas Johansson, University of Jyväskylä</i>
	<i>Production of cobalt and nickel nanoparticles by hydrogen reduction (15mins). Johanna Forsman, VTT, Fine Particles</i>	<i>Nanofabrication Development at Micronova - TTK (15mins). Veli-Matti Airaksinen, Helsinki University of Technology</i>
	<i>Advanced catalytic products by utilization of nanotechnology (15mins). Toni Kinnunen, Ecocat</i>	<i>Optical magnetic metamaterials (15mins). Sergei Tretyakov, Helsinki University of Technology</i>
	<i>Versatile Atomic Layer Deposition System - A Flexible Research Platform and a Reliable Production Unit (15mins). Sami Sneck, Beneq</i>	<i>Institute for Semiconductor Technology & Nanoelectronics (15mins). Udo Schwalke, Darmstadt University of Technology</i>
	<i>Nanotechnology for a Mass Production Industry (15mins). Thad Maloney, KCL</i>	
15:00	Closing coffee	
15:30	Grand Opening (101)	
	<i>Visions 2007 is the joint opening for Nanotech Northern Europe and ChemBio Finland 2007</i>	
	<i>Panelists:</i> President & CEO Jukka Viinanen , Orion Corporation Professor Erkki Ruoslahti , Burnham Institute for Medical Research and the University of California Managing Director Mark Sutton , 3M Finland and Baltic Countries Director General Jukka Pekkarinen , Ministry of Finance	
	<i>Challengers:</i> Senior Adviser Nina Etelä , Nordic Innovation Centre Professor Markus Mäkelä , University of Turku	
	The panel is hosted by Journalist Leena Brandt .	
17.00	Networking reception (Winter Garden)	



Program: Wednesday 28th March

8:45	Keynote session (101cd)	
	<i>Chair:</i> Professor Yrjö Neuvo , Technology Advisor, formerly CTO of Nokia Corporation	
	<i>Welcome:</i> NTNE 2007 Event Director Pekka Koponen , Managing Director, Spinverse	
	<i>Recent Performance of Nonpolar/Semipolar/Polar GaN-based Blue LEDs and LDs (30mins).</i> Professor Shuji Nakamura , University of California, Santa Barbara, USA	
	<i>Mastering the interface to physical world (30mins).</i> Tapani Ryhänen , Head of Nano Sciences Laboratory, Nokia Research Center	
10:00	Coffee (Coffee & Lunch area, Exhibition Hall)	
10:30	Photonics 1: Nanophotonics for ICT (101cd)	Nanomaterials 1: Nanostructured materials (Ballroom 1)
	<i>Chair:</i> Harri Lipsanen , Professor of Nanotechnology, Helsinki University of Technology	<i>Chair:</i> Tapani Ryhänen , Head of Nano Sciences Laboratory, Nokia Research Center
	<i>Electromagnetic Coherence in Nanophotonics (25mins).</i> Ari Friberg , Royal Institute of Technology, Sweden	<i>Nanomaterials and nanosciences (25mins).</i> Marc Drillon , Institute of Physics and Chemistry of Materials, Strasbourg
	<i>Display Applications of Carbon Nanotube Composite (20mins).</i> In Taek Han , Samsung	<i>(20mins).</i> Elmar Keßenich , BASF
	<i>Performance of Quantum Dots-in-a-Well Infrared Photodetectors – Status and Prospects (15mins).</i> Linda Höglund , Acreo, Sweden	<i>Zinc oxide and titania nanostructured layers by wet chemical methods (15mins).</i> Malle Krunks , Tallinn University of Technology, Estonia
	<i>Single Polymer Nanowire Nanolasers (15mins).</i> Gareth Redmond , Tyndall National Institute, Ireland	<i>Colloidal synthesis and growth mechanism of asymmetric nanocrystal heterostructures (15mins).</i> Raffaella Buonsanti , CNR-INFM, Lecce, Italy
12:00	Lunch and Exhibition (Coffee & Lunch area, Exhibition Hall)	
13:00	Poster session and Partnering program (Coffee & Lunch area, Exhibition Hall)	
14:00	Electronics 1: Nanowires (101cd)	Nanomaterials 2: Nanoparticles - applications (Ballroom 1)
	<i>Chair:</i> Heli Jantunen , University of Oulu, Finland	<i>Chair:</i> Ari Ivaska , Åbo Akademi
	<i>Nanotech and Portable Electronics (20mins).</i> Tim Harper , Cientifica Ltd	<i>(25mins).</i> Mamoun Muhammed , KTH, Sweden
	<i>Piezoelectric nano-wires (25mins).</i> Nava Setter , Ecole Polytechnic Federal Lausanne, Switzerland	<i>A Nordic project on enhanced functionality of self-cleaning and antibacterial surface coatings (FUNCOAT) (15mins).</i> Jyrki Mäkelä , Tampere University of Technology
	<i>The superconducting single-electron transistor as a tool for quantum measurements (15mins).</i> Sorin Paraoanu , University of Jyväskylä	<i>Theoretical investigation of the motion of magnetic nanoparticles in a magnetic field gradient (15mins).</i> Vincent Schaller , Chalmers University of Technology, Sweden
		<i>Liquid Flame Spray made Titania and Titania-Silver Nanoparticle deposits Functionality as Photocatalyst for Organic- and Biofilm Removal (15mins).</i> Mikko Aromaa , Tampere University of Technology, Finland
15:30	Coffee (Coffee & Lunch area, Exhibition Hall)	
16:00	Instruments 1: Atomic imaging and characterisation (101cd)	
	<i>Chair:</i> Risto Nieminen , Helsinki University of Technology, Finland	
	<i>Transmission Electron Microscopy without Aberrations (25mins).</i> Crispin Hetherington , University of Oxford	
	<i>Ultra-high resolution nano-characterisation and analysis using advanced S/TEM (15mins).</i> Dominique Hubert , FEI	
	<i>Time-of-Flight SIMS Applications: From Semiconductor to Biology (15mins).</i> Sven Kayser , ION-TOF	
	<i>DHM technology for 3D non-contact dynamical measurements (15mins).</i> Frédéric Montfort , ST Instruments	
17:30	<i>ionLiNE a New Tool Concept for Nanofabrication in Surface Science and Thin Film Engineering (15mins).</i> Andreas Rampe , Raith	
19:00	Helsinki City Reception	



Program: Wednesday 28th March

10:30		Workshop: Nanotechnology and Safety (201)
		<i>Chair: Jorma Jokiniemi, VTT, Finland</i>
		<i>Detecting nanoparticles (15mins). Arto Kekki, Dekati</i>
		<i>(15mins). Jyrki Heino, University of Turku</i>
		<i>Industrial H&S aspects on nanomaterials (15mins). Katriina Heikkilä, Kemira Pigments</i>
		<i>(15mins). Maila Puolamaa, EU Commission</i>
		<i>Outline of nanostandardization and nanosafety research in China (20mins). Qian Liu, NCNST, China</i>
14:00	Photonics 2: Controlling light by nanostructured materials (Ballroom 2)	Workshop: Nanotechnology and environment, health & safety (201)
	<i>Chair: Markus Pessa, ORC, Tampere University of Technology, Finland</i>	<i>Chair: Del Stark, CEO, European Nanotechnology Trade Alliance</i>
	<i>Enhancement of the Luminescence from Single InAs/GaAs Quantum Dots by Application of an Electric Field (25mins). Per-Olof Holtz, Linköping University</i>	<i>(20mins). Markus Pridoehl, Degussa GmbH</i>
	<i>Surface plasmon enhanced emissive devices (15mins). Janne Simonen, Technical University of Tampere, Finland</i>	<i>(20mins). Stephan Schaller, triple innova</i>
	<i>Resonance effects in nanostructured magneto-optic gratings (15mins). Jari Turunen, University of Joensuu, Finland</i>	<i>Understanding the potential toxicology of nanomaterials and its importance for nanomanufacturing (20mins). Terry Wilkins, Leeds University</i>
	<i>MONA - Merging Optics and Nanotechnologies: The Nanophotonics Technology (15mins). Suvi Haukka, presenting on behalf of the MONA consortium</i>	<i>CENARIOS - The first certifiable nanosafety label for industry and retail companies (20mins). Christoph Meili, Die Innovationsgesellschaft</i>
16:00	Nanomaterials 3: Nanoparticles - manufacturing (Ballroom 1)	
	<i>Chair: Mamoun Muhammed, KTH, Sweden</i>	
	<i>Synthesis of nanoparticles with a plasma torch (15mins). Frederik Cambier, CRIF, Belgium</i>	
	<i>RF Thermal Plasma Synthesis of Nanocrystalline Zirconia (15mins). János Szépvölgyi, IMEC CRC HAS, Hungary</i>	
	<i>Improved catalyst annealing process for the rapid growth of carbon nanotubes by microwave plasma-enhanced chemical vapor deposition (15mins). Alexander Malesevic, VITO, Belgium</i>	
17:30		



Program: Thursday 29th March

8:45	Keynote session (101cd)	
	<i>Chair: Professor Yrjö Neuvo, Technology Advisor, formerly CTO of Nokia Corporation</i>	
	<i>Multifunctional Nanoparticles: Vascular Zip Codes in Targeted Delivery of Nanodevices (30 mins). Professor Erkki Ruoslahti, Burnham Institute, CA, USA</i>	
	<i>An Integrated Science Perspective on Driving Innovation with Materials at the Nanoscale (30 mins). E. James Prendergast, Vice President, Chief Technology Officer, DuPont Electronic & Communication Technologies</i>	
10:00	Coffee (Coffee & Lunch area, Exhibition Hall)	
10:30	Nanobio 1: Drug and gene delivery (101cd)	Photonics 3: Waveguides (Ballroom 1)
	<i>Chair: Erkki Ruoslahti, Burnham Institute, CA, USA</i>	<i>Chair: Ari Friberg, KTH, Sweden</i>
	<i>Polymer Therapeutics as Nanomedicines for Cancer Therapy (25mins). Ruth Duncan, Welsh School of Pharmacy, Cardiff University, UK</i>	<i>Nanophotonics (25mins). Lars Thylén, KTH, Sweden</i>
	Industrial Speaker to be confirmed	<i>Fabrication and replication of 2D photonic crystal waveguides (15mins). Jurriaan Huskens, University of Twente</i>
	<i>Magnetic Nanoparticles: functional tools for bio and clinical applications (15mins). Hongchen Gu, Research Institute of Micro/Nano Science and Technology, Shanghai Jiaotong University, China</i>	<i>Silicon nanophotonics: Light emission, wavelength-selective waveguiding and laser-induced thermal effects (15mins). Leonid Khriachtchev, University of Helsinki</i>
	<i>Effects of Survivin siRNA conjugated Carbon nanotube on Human MCF-7 Cells (15mins). Bifeng Pan, Shanghai Jiao Tong University, China</i>	<i>Nanostructured ridge waveguide lasers fabricated by nano-imprint lithography (15mins). Tapio Niemi, Tampere University of Technology</i>
12:00	Lunch and Exhibition (Coffee & Lunch area, Exhibition Hall)	
	Poster session and Partnering program (Coffee & Lunch area, Exhibition Hall)	
14:00	Nanobio 2: Nano-bio-materials (101 cd)	Nanomaterials 4: Wires and tubes (Ballroom 1)
	<i>Chair: Arto Urtti, University of Helsinki</i>	<i>Chair: Risto Nieminen, Helsinki University of Technology, Finland</i>
	<i>Fabrication of nanomaterials using peptide motifs (25mins). Shuguang Zhang, MIT, United States</i>	<i>Electronic transport in nanowires at different length scales (25mins). Antti-Pekka Jauho, Technical University of Denmark</i>
	<i>Designing nano-bio materials from the bottom-up: an interdisciplinary modeling approach (20mins). Gerhard Goldbeck-Wood, Accelrys</i>	<i>Novel Static and Dynamic Mechanical Response of Transitional Metallic Nanorods (15mins). Adrian Koh, National University of Singapore</i>
	<i>Lipid Membrane Nanotechnology (15mins). Nikos Hatzakis, Nano-Science Center, University of Copenhagen</i>	<i>Chip-cooling with carbon nanotubes (15mins). Krisztian Kordas, University of Oulu</i>
	<i>Molecular Profiling using NanoPatterning of Extra-Cellular Matrix Components (15mins). Frederic Zenhausern, Center for Applied NanoBioscience, ASU, United States</i>	
15:30	Coffee (Coffee & Lunch area, Exhibition Hall)	
16:00	Nanobio 3: Nanosensors and diagnostics (101cd)	Nanomaterials 5: Polymers (Ballroom 1)
	<i>Chair: Juhani Luotola, Technology Manager R&D, Orion Diagnostica Oy</i>	<i>Chair: Antti-Pekka Jauho, Technical University of Denmark</i>
	<i>State-of-the-art Nanotechnology for Diagnostics (15mins). Hesaam Esfandyarpour, Stanford University, United States</i>	<i>Derived polythiophenes for gas sensing and ion sensing in solution (15mins). John Mortensen, Roskilde University Center, Denmark</i>
	<i>The use of nanoparticles in Allergy Diagnostic in vitro test systems (15mins). Mats Nystrand, Phadia</i>	<i>Shaping of polypyrrole nanoparticle (15mins). Burkhard Shultz, Institute of Thin Film and Microsensor Technology, Germany</i>
	<i>Nanocrystals for biosensors applications (15mins). Arben Merkoçi, Institut Català de Nanotecnologia, Spain</i>	<i>Self-organization of light-harvesting molecules in monomolecular layers (15mins). Hans Bettermann, University of Dusseldorf, Germany</i>
17:30	<i>"Soft" nanolithographic patterning of surfaces for design of functional assemblies and nanoarrays of proteins (15mins). Ramunas Valiokas, Institute of Physics, Lithuania</i>	<i>Compliant elastomer electrodes for polymer actuators (EAP) (15mins), Mika Paaajanen, VTT, Finland</i>



Program: Thursday 29th March

10:30	Instruments 2: Characterization (Ballroom 2)	Nanoforum Workshop: Nanotechnology Business Development (201)	
	<i>Chair: Veli-Matti Airaksinen</i> , Micronova	<i>Chair: To be announced</i>	
	<i>Relevant characterization techniques for thin films and coatings at liquid and solid interfaces (15mins). Tapani Viitala</i> , KSV Instruments	<i>Success Factors for Building a Nanotech Business (20mins). J. Malcolm Wilkinson</i> , Technology For Industry	
	<i>Direct visualization and analysis of nanoparticles using a new laser-based, single particle tracking system (15mins). Bob Carr</i> , NanoSight Ltd	<i>Immaterial Rights in Fledgling SMEs (20mins). Markku Simmelvuo & Jukka Korhonen</i> , Papula-Nevinpat	
	<i>Characterization of Materials and Multilayer Structures of OLED by Spectroscopic Ellipsometry (15mins). Vincent Couraudon</i> , SOPRA	<i>Global Trends in Venture Capital(20mins). Markku Maula</i> , Helsinki University of Technology	
	<i>BiolmageXD – New Software for Visualizing and Analyzing Nanoparticles in Living Cells (15mins). Pasi Kankaanpää</i> , Biolmage XD	<i>March forward to the industrialization of Nanotechnology (20mins). Shicheng Mu</i>	
14:00	Electronics 3: Nanosensor systems (Ballroom 2)	Nanoforum Workshop: Nanotechnology Commercialisation (201)	
	<i>Chair: Jouko Korppi-Tommola</i> , University of Jyväskylä	<i>Chair: Pekka Koponen</i> , Spinverse Consulting	
	<i>Study on Spin-Valve GMR Sensor and Its Applications (25mins). Tian-Ling Ren</i> , Tsinghua University, China	<i>Academic Entrepreneurship (20mins). Russell Cowburn</i> , Imperial College	
	<i>(25mins). Philippe Andreucci</i> , Leti / MINATEC	<i>Nanotechnology and venture capital (20mins). Aymeric Sallin</i> , NanoDimension	
	<i>Printed devices based on inorganic nanoparticles (15mins). Mark Allen</i> , VTT, Finland	<i>Case Study - NIL Technology (20mins). Brian Bilenberg</i> , NIL Technology	
	<i>Nano- and biosensing systems at CSEM (15mins). Erika Györvary</i> , CSEM	<i>Cathal Mahon</i> , CAT Science Park	
16:00	Electronics 2: New FETs? (Ballroom 2)	15.45 Nanoforum Workshop: Industrial perspectives (201)	
	<i>Chair: Jouko Korppi-Tommola</i> , University of Jyväskylä, Finland	<i>Chair: Pekka Koponen</i> , Spinverse Consulting	
	<i>Top-down Nanotechnology Breakthrough (20mins). Paula Goldschmidt</i> , Intel Corporation	<i>Bayer's Experiences of Commercialising Nanotechnology (20mins). Péter Krüger</i> , Bayer MaterialScience AG	
	<i>Fabrication-Process for CNTFETs Based on Sacrificial Catalyst: Device Characterization and Conductive-AFM Measurements (15mins). Lorraine Rispal</i> , Darmstadt University of Technology, Germany	<i>Industrial Panel Discussion, featuring: Nicolas Deliyannis</i> , European Commission	
	<i>Deposition Defined Nanometer Scale Dots (15mins). Karsten Wolff</i> , University of Paderborn, Germany	<i>Lars Gädda</i> , Senior Vice President, R&D, M-real <i>Matti Kleimola</i> , Professor, Senior Advisor, formerly CTO of Wärtsilä	
- 17.30	<i>Novel Flash Memory Cell with LaAlO₃ as Tunneling Dielectrics for beyond Sub-50 nm Technology (15mins). Yaohui Zhang</i> , China	17:00 Nanoforum Workshop Reception - 17:45 18:00 Venue Closes	