



Photonics RoadMap for SMEs

Jouko Strand, Micropolis Ltd

Seminar in Oulu Thursday 7th May 2009

**Theme: Introduction to Nanophotonics; highlights in Silicon nanophotonics; nanoscale processes;
Printed Intelligence**

Place: VTT, Kaitoväylä 1, FI-90571 Oulu, Finland

**Time: Seminar 8:30 – 12, After the Seminar ca.13-14:30 Tour at VTT Labs incl. Printed
Intelligence Pilot Plant**

8:30 Opening

Jouko Strand, Project Director, Micropolis Ltd

8:40 - 9:00 Emerging Nanophotonics; Silicon Nanophotonics (with ALD)

ALD Atomic Layer Deposition in Silicon Nanophotonics , sensor wave guides, fibres, PV
Prof. Seppo Honkanen, Helsinki University of Technology, Photonics Group

9:05-9:30 Silicon-Organic Hybrid Photonics;

Prof. Wolfgang Freude, Universitaet Karlsruhe, IPQ Institute of Photonics and Quantum
Electronics

9:30-10:00 Coffee Break

10:00-10:20 NIL, Nanoimprint lithography – a low cost method for company usage

Applications in Photonics

Ph.D Tapio Niemi, ORC Optoelectronics Research Centre, Tampere University of Technology

10:20-10:40 Manipulation of light applying nanostructures - Diffractive optical elements

Ph.D Pekka Savander, Vice President, Nanocomp Ltd

10:40-11:05 VTT introduction; VTT approach for photonics integration

Research Prof. Pentti Karioja, VTT

11:05-11:30 Printed Intelligence- Applications and Technologies; Low cost diagnostics

Markku Känsäkoski, Customer Manager, VTT Printed Electronics and Optics

11:30-11:50 Roll-to-roll Printed Optoelectronics; OLEDs, Organic Solar Cells

Markus Tuomikoski, Team leader in Printed Electronics and Optics, VTT

12-13 Lunch at VTT

13:00-14:30 Tour at VTT Labs: Printed Intelligence Pilot Plant, Micromodules, Precis. Mechanics/Optics