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Place: University of Bergen, Department of Physics and Technology (IFT), room 292, Allégaten 55

Date of meeting: 2009-08-20, 10:00-12:00

Invitees: Public

Prepared by: LEH, EK

Open Workshop

Nano- and Microstructures for Sensor Applications: New Capabilities at UoB

A new Electron Beam Lithography system will in the near future be available at the University of Bergen at IFT. Associate Professor Bodil Holst is in the lead for this activity.

Electron beam lithography is a technique where an electron beam is scanned over a photoresistive layer which thereafter is exposed in order to create a pattern. This is followed by an etching process in order to create a one- or two-dimensional structure. This is similar to conventional optical lithography applied in semiconductor processing, but with a spatial resolution that is at least ten times better. Nano- and microstructures can be made on substrates of glass, silica, etc. The new UoB-equipment is capable of writing wafer-sizes substrates with a spatial resolution down to 10 nanometers.

The new equipment will make available nano- and microstructures with a state-of-the art precision which is not available elsewhere in Norway. Some of the applications for such structures are optical, acoustic, and electromagnetic sensor technology within a wide range of application areas. The potential advantages are (amongst others) increased sensitivity, small footprint, low manufacturing cost, and low power consumption. This new capability opens up interesting possibilities for the technological community in the Bergen region.

The workshop will start with a presentation titled **Electron Beam Lithography** given by Andreas Remscheid from <http://www.raith.com/> which develops electron beam lithography systems. This will be followed by an open discussion on the capabilities of the system where Associate Professor Bodil Holst will participate.

Welcome!