

## Program for workshop

<b>Monday 11. June</b>	
<b>10.30</b>	<b>Registration opens</b>
<b>11.30</b>	<b>Lunch</b>
<b>Oral session 1: Nano materials science I</b>	
Chair: Jostein Grepstad, NTNU	
12.30	Welcome: Jostein Grepstad, NTNU
12:45	<i>Petra Rudolf, University of Groningen, Surface and thin films group</i> <b>Molecular motors at surfaces</b>
13:25	<i>Kristin Høydalsvik, NTNU, Dept. of Physics</i> <b>Investigations of co catalyst nanoparticles in the Fischer-Tropsch synthesis using in situ SAXS</b>
13:40	<i>Abdul Mazid Munshi, NTNU, Dept. of Electronics and Telecommunications</i> <b>GaAs nanowires grown on Si substrates: crystal phase perfection, heterostructures, and position control</b>
13:55	<i>Isabelle Berbezier, Institut Matériaux Microélectronique Nanosciences de Provence, Im2np</i> <b>Self assembly of semiconductor nanostructures</b>
<b>14:35</b>	<b>Coffee break</b>
<b>Oral session 2: Energy harvesting, integration, and packaging</b>	
Chair: Aasmund Sudbø, UiO	
14:55	<i>Lars Egil Helseth, University of Bergen, Dept. of Physics and Technology</i> <b>Optical monitoring of nanostructures</b>
15:20	<i>Luca Petricca, Vestfold University College, IMST</i> <b>A review on energy storage systems</b>
15:35	<i>Torleif André Tollefsen, Vestfold University College, IMST / SINTEF</i> <b>Reliable HT electronic packaging – Optimization of a Au-Sn SLID joint</b>
15:50	<i>Håkon Sagberg, GasSecure AS</i> <b>Designing and etching grating-like surfaces on infrared MEMS</b>
16:15	<b>Poster presentations</b> (short presentation of all poster contributions)
<b>Poster session 1: Materials, energy harvesting, microsystems packaging</b>	
Chair: Bjørn Torger Stokke, NTNU	
16.30	<b>Poster session</b>
<b>18.30</b>	<b>Joint dinner at the hotel</b>

## Program for workshop

<b>Tuesday 12. June</b>	
<b>Oral session 3: Sensors, transducers, and ASICs</b>	
Chair: Trond Ytterdal, NTNU	
09:00	<i>Gjermund Kittilsland, Sensor AS</i> <b>Technology challenges MEMS versus CMOS</b>
09:25	<i>Amir Hasanbegovic, University of Oslo, Dept. of Informatics</i> <b>Towards radiation tolerance testing of low power / low energy ASICs at the Oslo Cyclotron Laboratory: proton beam characterization</b>
09:40	<i>Kangqiao Zhao, NTNU, Dept. of Electr. and Telecomm./ Dept. of Circulation and Imaging</i> <b>A fully integrated TX/RX HV ASIC for high-frequency CMUT medical imaging applications</b>
09:55	<i>Hans Chr. Bolstad, Q-free AS</i> <b>Micro/Nano technologies for use in intelligent traffic systems</b>
10:20	<i>Petra Rudolf, University of Groningen, Surface and thin films group</i> <b>Women in science</b>
<b>10:50</b>	<b>Coffee break</b>
<b>Oral session 4: BioMEMS I</b>	
Chair: Nils Høivik, HiVe	
11:10	<i>Ralf Richter, Biosurfaces Unit, CIC biomaGUNE, Donostia-San Sebastian</i> <b>Biofunctionalized surfaces – functionalization and in situ characterization methods</b>
11:50	<i>Juan Antonio Leñero-Bardallo, University of Oslo, Dept. of Informatics.</i> <b>Advantages of bio-inspired frameless vision sensors over frame-based vision systems</b>
12:05	<i>Marit Sletmoen, NTNU, Dept. of Physics</i> <b>Measuring the piconewton intermolecular binding forces that control interactions between biomacromolecules</b>
12:30	<i>Kristin Elisabeth Haugstad, NTNU, Dept. of Physics</i> <b>Self association of mucins possessing the T and Tn carbohydrate cancer antigens studied by AFM force spectroscopy</b>
<b>12:45</b>	<b>Lunch</b>
<b>Oral Session 5: BioMEMS II</b>	
Chair: Thomas Tybell, NTNU	
13:45	<i>Edvard Moser, The Kavli Institute for Systems Neuroscience and Centre for the Biology of Memory, NTNU</i> <b>Reading the brain code for space</b>
14:25	<i>Ingelin Clausen, SINTEF Microsystems and nanotechnology</i> <b>MEMS for medical applications</b>
14:50	<i>Kristin Imenes, Vestfold University College, IMST</i> <b>New packaging methods for smart implantable microsensors</b>
15:15	<i>Fjodors Tjulkins, Vestfold University College, IMST</i> <b>Encapsulation for a tri-axial accelerometer for use in a post-operative period heart monitoring system</b>
15:30	<b>Poster presentations</b> (short presentation of all poster contributions)
<b>Poster session 2: BioMEMS, optical systems, sensors, transducers, ASICs</b>	
Chair: Bjørn Torger Stokke, NTNU	
15.45	<b>Poster session</b>
<b>18:00</b>	<b>Guided tour and workshop dinner at the Archbishop's Palace</b>

## Program for workshop

<b>Wednesday 13. June</b>	
<b>Oral session 6: Optical micro- and nanosystems</b>	
Chair: Astrid Aksnes, NTNU	
09:00	<i>Olav Solgaard, Stanford University</i> <b>Nanotechnology applied to scaling of optical systems</b>
09:40	<i>Guohua Liu, Vestfold University College</i> <b>Translation of free-standing crystalline TiO<sub>2</sub> nanotube membrane towards photoconductive devices</b>
09:55	<i>Kim Trinh Tran Thi, Vestfold University College, IMST</i> <b>Concepts and devices for speckle reduction in DMD laser projectors</b>
10:10	<i>Jon Thomas Kringlebotn, Optoplan AS</i> <b>Reliable large-scale fibre-optic ocean bottom seismic cable system for permanent reservoir monitoring</b>
10:35	<i>Kay Gastinger, Director of NTNU NanoLab</i> <b>NORFAB - The Norwegian infrastructure for micro- and nanofabrication</b>
<b>10:50</b>	<b>Coffee break</b>
<b>Oral session 7: Nano materials science II</b>	
Chair: Dag Wang, SINTEF	
11:10	<i>Andrej Kuznetsov, University of Oslo, Dept. of Physics</i> <b>Point defect balance and dopant localization in ZnO</b>
11:35	<i>Helge Malmbekk, University of Oslo, Dept. of Physics</i> <b>Comparative study of hydrogen related defects in p- and n-type silicon</b>
11:50	<i>Vidar Fauske, NTNU, Dept. of Physics</i> <b>Transmission electron microscopy study of defects at the interface between GaAs nanowires and a Si-111 substrate</b>
12:05	<i>Guo Xiaodong, University of Bergen, Dept. of Physics and Technology</i> <b>Synthesis of ZnO nanoflowers and their wettabilities and photocatalytic properties</b>
12:20	<i>Dag Høvik, Research Council of Norway</i> <b>NANO 2021</b>
<b>12:40</b>	<b>Lunch</b>

## Poster session 1: List of posters

1	<i>Cuong Phu Le, Vestfold University College, IMST</i> <b>An electrostatic energy harvester with utilization of internal impact</b>
2	<i>Son Duy Nguyen, Vestfold University College, IMST</i> <b>MEMS Electrostatic energy harvester with nonlinear springs and vertical sidewall electrets</b>
3	<i>Uyen Phuong Do, Vestfold University College, IMST</i> <b>Glucose energy harvesters</b>
4	<i>Zhaochu Yang, Vestfold University College, IMST</i> <b>Power generation from conductive droplet sliding on innately charged film</b>
5	<i>Ani Duan, Vestfold University College, IMST</i> <b>Reducing the bond frame width in Cu/Sn SLID wafer level packaging</b>
6	<i>Thi-Thuy Luu, Vestfold University College, IMST</i> <b>Optimization of Cu/Sn SLID wafer level bonding based upon intermetallic formation</b>
7	<i>Hoang-Vu Nguyen, Vestfold University College, IMST</i> <b>Anisotropic conductive film interconnects for fine-pitch MEMS</b>
8	<i>Chi Kwong Tang, University of Oslo, Dept. of Physics</i> <b>Deep level transient spectroscopy on proton-irradiated Fe-contaminated p-type Si</b>
9	<i>Dong Chul Kim, NTNU, Dept. of Electronics and Telecommunications</i> <b>Investigation of electrical contacts to wurtzite GaAs nanowires by polarization dependent photocurrent spectroscopy</b>
10	<i>Erik Folven, NTNU, Dept. of Electronics and Telecommunications</i> <b>Controlling the relative spin alignment in AFM/FM nanostructures</b>
11	<i>Hans B. Normann, University of Oslo, Dept. of Physics</i> <b>Formation of shallow front emitters for solar cells by RTP</b>
12	<i>Håvard Granlund, NTNU, Dept. of Physics</i> <b>Mapping of lamellar ordering in injection-molded polypropylene</b>
13	<i>Lyubomir Ahtapodov, NTNU, Dept. of Electronics and Telecommunications</i> <b>Optical characterization of single GaAs/AlGaAs nanowires with combined photoluminescence spectroscopy and transmission electron microscopy on the same nanowire</b>
14	<i>Magnus Nord, NTNU, Dept. of Physics</i> <b>Transmission electron microscopy characterization of La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub>/SrTiO<sub>3</sub> ferroelastic thin films</b>
15	<i>Mari Helene Farstad, NTNU, Dept. of Physics</i> <b>Water absorption on TiO<sub>x</sub> thin films on Au(111)</b>
16	<i>Martin Møller Greve, University of Bergen, Dept. of Physics and Technology</i> <b>Testing optical properties of metal nano-particles in large arrays, fabricated by electron beam lithography (EBL)</b>
17	<i>Maryam Gholami Mayani, NTNU, Dept. of Physics</i> <b>Photoluminescence study of InAs/GaAs quantum dots grown by molecular beam epitaxy</b>
18	<i>Mohammadreza Nematollahi, NTNU, Dept. of Physics</i> <b>Pulsed laser deposition of intermediate band solar cells</b>
19	<i>Naveengoud Ganagana, University of Oslo, Dept. of Physics</i> <b>Formation of defect-impurity complexes with high thermal stability in p-type Cz-silicon</b>
20	<i>Fredrik Martinsen, NTNU, Department of Physics</i> <b>Purification of metallurgical grade silicon micro-flakes through a multi-step segregation procedure</b>

## Poster session 2: List of posters

1	<i>Anh Tuan Thai Nguyen, Vestfold University College, IMST</i>
	<b>A miniaturization of circuit-packaging for implantable accelerometer sensor system</b>
2	<i>Lars Holhjem, Vestfold University College, IMST</i>
	<b>Development of biomedical sensor for measuring ischemia</b>
3	<i>Luis André Lourenço Fernandes, Vestfold University College, IMST</i>
	<b>Hydration Sensor</b>
4	<i>Nhut Tran-Minh, Vestfold University College, IMST</i>
	<b>Prevention and care in nurse rooms using automatic collection, transfer, registration and diagnosis of important health parameters of blood</b>
5	<i>Tatyana Sherstova, NTNU, Dept. of Physics</i>
	<b>Application of AFM to determine friction between polyelectrolyte multilayer films and colloidal probes</b>
6	<i>Thuy Thu Nguyen, Vestfold University College, IMST</i>
	<b>Transmural myocardial strain distribution measured at high spatial and temporal resolution</b>
7	<i>Xinyan Zhao, Vestfold University College, IMST</i>
	<b>2nd generation of immuno-NASBA LOC devices for monitoring waterborne pathogens in aquatic environment</b>
8	<i>Aasmund Sudbø (for Jo Gjessing), University of Oslo, Dept. of Informatics</i>
	<b>Photonic crystals for light trapping in solar cells</b>
9	<i>Zhaomin Tong, Vestfold University College, IMST</i>
	<b>Optimized motor driving method for polarization diversity in laser speckle reduction</b>
10	<i>Jon Olav Grepstad, NTNU, Dept. of Electronics and Telecommunications</i>
	<b>Optical detection of single biomolecules using photonic-crystal membranes</b>
11	<i>Bao Quoc Ta, Vestfold University College, IMST</i>
	<b>Local synthesis and direct integration of CNTs into microsystems for sensor applications</b>
12	<i>Tung Manh, Vestfold University College, IMST</i>
	<b>2-2 composite acoustic matching layers for high frequency ultrasound transducers made by anisotropic wet etching of silicon</b>
13	<i>Jarand Gauteplass, University of Bergen, Dept. of Physics and Technology</i>
	<b>Pore-level multiphase flow investigation in etched silicon wafer micromodels</b>

### Best student presentation and best poster awards committee:

Bjørn T. Stokke, NTNU

Anne Borg, NTNU

Nils Høivik, HiVe