

MNE 2016 Scientific Program

Tuesday Morning 20 September 2016

8:30	Opening		
9:00	Dave Egglestone Emerging Memory: From Technology to Applications		
9:45	Franz Kreupl Carbon-based Materials as Key-Enabler for "More-than-Moore" Devices		
10:30	10:30 - 11:00 Break/Coffee/Exhibition		
	C11.1 Applications 1 - sensors Chair: Victor Cadarso "Strauß"	D6 Applications Chair: Luigi Sasso "Stolz"	B1 Pattern transfer Chair: Rafael Taboryski "Schubert"
11:00	C11-1-inv Nanosensor Devices for Multi Gas Detection – Aspects of CMOS and Smart System Integration Anton Köck et al.	D6-1-1 Light-triggered In Situ Formation of Multifunctional Silk Fibroin Hydrogel System for Synergistic Photothermal Chemotherapy of Breast Cancer Ling-Chu Yang et al.	B1-1-1 High Resolution Printed Patterning by 250mm Wide Seamless Roller Mold with Sub-micron Pattern Naoto Ito et al.
11:15		D6-1-2 Flexible electrodes for micro-electromyography Enrique Escobedo-Cousin et al.	B1-1-2 High aspect ratio metal gratings by casting into microstructured silicon template Lucia Romano et al.
11:30	C11-1-1 Mirco fabricated all optical pressure sensor Andreas Havreland et al.	D6-1-inv Acoustic devices for molecular diagnostics and point-of-care applications Electra Gizeli et al.	B1-1-3 A damascene process for gold micro- and nano- structures Mouawad MERHEJ et al.
11:45	C11-1-2 Piezo- and Flexoelectricity in AlN-based Flexible MEMS for Tactile Applications Vincenzo Mariano Mastronardi et al.		B1-1-4 Top-down Fabrication of (111)-Silicon Nanowire Arrays for Flexible Field-Effect Transistors Achieving Large-Scale Integrated Electronic Circuits Sangmin Lee et al.
12:00	C11-1-3 Sub-wavelength slit and plasmonic grating integration in Ge-based metal-semiconductor-metal photodetectors for sensing application Mario Lodari et al.	D6-1-3 Nanoimprinted quasi 3D Nanosquares to Detect Low Cell Concentration Stella Pang et al.	B1-1-inv Systematic study of high throughput fabrication of nano holes and nano pillars in polymer foils by roll-to-roll-extrusion coating Swathi Murthy et al.
12:15	C11-1-4 Fabrication of Hollow-Gold-Nanoparticle/Spin-On-Glass Composite Thin Film with Ultrahigh Broadband Absorbance for Novel Silicon-based Photodetector Ling-Chu Yang et al.	D6-1-4 Sample Preparation lab on-Chip for Detection of Foodborne Pathogens Katerina Tsougeni et al.	
	12:30 - 13:30 Lunch		

Tuesday Afternoon 20 September 2016

Tuesday Afternoon 20 September 2016			
	C1.1 MEMS / NEMS 1 - actuation Chair: Andris Sternberg	A4.1 Soft lithography 1 Chair: Steve Lenk	B7 (Nano-) Metrology Chair: Monika Fleischer
	"Strauß"	"Stolz"	"Schubert"
13:30	C1-1-inv Scanning magnetoresistance microscopy enabled by AFM cantilevers with integrated magnetic sensors Margaret Costa et al.	A4-1-1 A Cost-Efficient Fabrication Method of Dissolvable Micro-needle for Drug Delivery Xu Wang et al.	B7-1-1 Nanometer-resolution, wide-field optical measurement of time-varying sub-micron fluid film thicknesses for viscosity determination Hannah Gramling et al.
13:45		A4-1-2 Nanoimprint Lithography of T-shaped Nanostructures Michael Mühlberger et al.	B7-1-2 Quantitative DC-free Kelvin Probe Force Microscopy Dominik Kohl et al.
14:00	C1-1-1 Cantilever array with optomechanical read-out and integrated actuation for scanning probe microscopy Thomas Michels et al.	A4-1-3 Fabrication of high aspect ratio and sub-5 µm wide patterns by capillary force assisted printing through a thermal imprinting process Ryohei Hokari et al.	B7-1-3 Doped nanodiamonds and their application for nanoelectronics sensing applications Thomas Hantschel et al.
14:15	C1-1-2 A Flexible Two Dimensional Force Mapping Sensor Using PDMS Nanocomposite Jin-Woo Choi et al.	A4-1-4 Nanoimprint lithography as a new tool for cavity-resonator-integrated guided-mode resonance filter fabrication Sylvain Augé et al.	B7-1-4 Dopant profiling in the scanning helium ion microscope Augustus Chee et al.
14:30	C1-1-3 MEMS magnetic field modulators for ultra-low DC field detection Rosana Dias et al.	A4-1-5 Vacuum ultraviolet light assisted nano-pattern transfer to fabricate nanostructure with heterogeneous materials Yuki Hashimoto et al.	B7-1-inv Metrology for single nanometer manufacturing Richard Koops et al.
14:45	C1-1-4 Toward high sensitivity of SAW gyroscope by using floating thin piezo membrane Keekeun Lee et al.	A4-1-6 An etch-free fabrication of uniform, ordered, micro- and nanoscale through-hole membrane Him Cheng Wong et al.	
15:00 - 15:30 Break/Coffee/Exhibition			
	C6 Device and system modelling Chair: Thomas Schrefl	D2 Lab-on-a-Chip Chair: Silvan Schmid	B2 Plasma etching Chair: Sandra Wolff
	"Strauß"	"Stolz"	"Schubert"
15:30	C6-1-1 Experimental and finite element investigations of nano metal-semiconductor contacts Moh'd Rezeq et al.	D2-1-inv A monolithically integrated mid-infrared lab-on-a-chip Borislav Hinkov et al.	B2-1-1 A monolithic micro-optical interferometer etched into fused silica Martin Hoffmann et al.
15:45	C6-1-2 Characterization of Thermal-Piezoresistive MEMS Resonators for Sensing Applications Claudia Coelho et al.		B2-1-2 Deep plasma etching of Parylene C patterns for biomedical applications Aurélie Lecestre et al.
16:00	C6-1-3 Exploring an improvement SET-FET hybrid behavior by using different FET types Esteve Amat et al.	D2-1-1 Integrated hollow microneedle-optofluidic biosensor for minimally-invasive low-volume therapeutic drug detection Victor J. Cadarso et al.	B2-1-3 Optical emission monitoring for optimisation of atomic layer etch (ALE) processes Andy Goodyear et al.
16:15	C6-1-4 Performance Simulation of InP HEMTs With 10 nm T Shape Gates Jianan Deng et al.	D2-1-2 UV-NIL of a water-soluble resist for nano-patterning of proteins Marco Lindner et al.	B2-1-4 Process induced poling and plasma induced damage of thin film PZT Jiahui Wang et al.
16:30 - 18:00 Exhibition / Poster Session			

Wednesday Morning 21 September 2016

8:30	<p>Nico de Rooij Micro Electro Mechanical Systems — Technology and Applications</p>		
9:15	<p>MNE Fellow Award + MEE YI Award</p>		
9:30	<p>Veena Misra Self-Powered Health and Environmental Monitoring for Wellness</p>		
10:15	<p>10:15 - 10:45 Break/Coffee/Exhibition</p>		
	<p>Young Investigator Award lecture Chair: Stefan Sylvest Keller</p>	<p>A7 Tip based patterning Chair: Jens Gobrecht</p>	<p>D4 Micro / Nanofluidics for bio / life sciences Chair: Electra Gizeli</p>
	"Strauß"	"Stolz"	"Schubert"
10:45	<p>YIA-1 Oriented Assembly of Silicon Nanowires by Contact Printing for Flexible Electronics Ravinder Dahiya et al.</p>	<p>A7-1-1 Devices with sub15 nm features fabricated with thermal scanning probe lithography Martin Spieser et al.</p>	<p>D4-1-1 Bumping Dynamics of Bacteria and Blood Cells in Asymmetric Deterministic Lateral Displacement Devices Keith Morton et al.</p>
11:00		<p>A7-1-2 Fowler-Nordheim electron emission simulations in scanning probe lithography using active cantilever Steve Lenk et al.</p>	<p>D4-1-2 Cell rheology in microfluidic perfusion: computational and experimental approach Markus Gusenbauer et al.</p>
11:15		<p>A7-1-3 Thermal scanning probe lithography on a glassy supramolecular film creates a combination of topography and fluorescent nanostructures Samuel Zimmermann et al.</p>	<p>D4-1-3 Microfluidic traps for droplet-cell pairing and adhesion studies Jacques Fattaccioli et al.</p>
11:30		<p>A7-1-4 Expanding the Scale of Atomically Precise STM Lithography James Owen et al.</p>	<p>D4-1-4 Photothermal assembling of bacteria for rapid counting Takuya Iida et al.</p>
11:45		<p>A7-1-5 High-aspect ratio nanopatterning via combined thermal scanning probe lithography and dry etching Yuliya Lisunova et al.</p>	<p>D4-1-5 Concentrate exosome using ion depletion zone in microfluidic device Kei Hayashida et al.</p>
12:00		<p>A7-1-inv Advanced Scanning Probe Lithography for nanopatterning and nanoelectronics Ricardo Garcia et al.</p>	<p>D4-1-6 A novel control system for concentration of bio-substances by utilizing combination technique of ion concentration polarization and electrophoresis Katsuo Mogi et al.</p>
12:15			<p>D4-1-7 Large-scale and multiplex biopatterning combining automated microfluidic inking and micro-contact printing Julie Foncy et al.</p>
12:30	<p>12:30 - 13:30 Lunch</p>		

Wednesday Afternoon 21 September 2016

Wednesday Afternoon 21 September 2016			
	C1.2 MEMS / NEMS 2 - processing Chair: Robert Kirchner	A3 Electron and ion beam lithography Chair: J. Alexander Liddle	D5 System design and fabrication Chair: Rudolf Heer
	"Strauß"	"Stolz"	"Schubert"
13:30	C1-2-1 Fabrication of 3D Air-core MEMS Inductors Hoa Thanh Le et al.	A3-1-inv Definition of sub-20nm nanowire structures featuring well-defined sidewall modulations Jens Bolten et al.	D5-1-1 Tapered and nanostructured optical fibers for simultaneous optical control and electrical readout of neural activity in the living mouse brain Marco Pisanello et al.
13:45	C1-2-2 Optimized SU-8 pyrolysis for fabrication of pyrolytic carbon microelectrodes Yasmin Mohamed Hassan et al.		D5-1-2 Fabrication of Cellulose Structures via Focused Electron Beam Induced Conversion: Approaching the Nanoscale Harald Plank et al.
14:00	C1-2-3 Fabrication of Large-area Tunnelling Pizeoresistive Polymer Sheets Embedded with Microdome Structures Chao-chi Yeh et al.	A3-1-1 Double patterning for high throughput electron beam lithography Alexei Bogdanov et al.	D5-1-3 Hot punching for drug loading into microcontainers Stephan Sylvest Keller et al.
14:15	C1-2-4 Ultrashort pulse laser dicing of thin silicon wafers: increasing the cutting speed with burst mode Matthias Domke et al.	A3-1-2 Fabrication of PMMA Retinal Tack Using X-ray Lithography and Long-term In-vivo Biocompatibility Evaluation for Progressive Observation Using Optical Coherent Tomography Sangmin Lee et al.	D5-1-4 Light-emitting diodes with designed top metal electrode Irina Khmyrova et al.
14:30	C1-2-5 Torsion test of microstrip line printed on flexible substrate using silver ink-jet printing Sung-min Sim et al.	A3-1-3 A Quantitative Comparison between Helium Ion and Electron Beam Lithography on PMMA Resist Xiaoqing Shi et al.	D5-1-inv Microsieve electrode array (μ SEA): fabrication and characterization Bart Schurink et al.
14:45	C1-2-6 Variable Capacitors using Extended MEMS Parallel-plate actuators Eurico Moreira et al.	A3-1-4 High resolution imaging and sub 10nm nanostructuring with He and Ne ions Peter Gnauck et al.	
15:00	15:00 - 15:30 Break/Coffee/Exhibition		

	C11.2 Applications 2 - memory Chair: Borislav Hinkov	A1 Photon lithography Chair: Paul Alkemade	D1.1 Sensing 1 - biomolecules Chair: Anton Köck
	"Strauß"	"Stolz"	"Schubert"
15:30	C11-2-1 3D Monolithic Integration of Multiple Memristor Crossbar Layers with CMOS Qiangfei Xia et al.	A1-1-1 High Rotational Symmetry Photonic Structures Fabricated with Multiple Exposure Displacement Talbot Lithography Christian Dais et al.	D1-1-1 Extending the measurement range of microfluidic quartz-crystal-microbalance (QCM) sensors through specialized mass amplifying immunoassays Jan-Wilhelm Thies et al.
15:45	C11-2-2 Tuneable ZrOx resistive memory with multistate switching behavior Ruomeng Huang et al.	A1-1-2 High lateral and vertical resolution grayscale lithography using EUV interference lithography Roberto Fallica et al.	D1-1-2 Enzymatic biosensors based on electrodeposited alginate hydrogels Augusto Marquez et al.
16:00	C11-2-3 Spin-Current Operation in a Cu Nano-Ring Marjan Samiepour et al.	A1-1-3 Very short period grating printing combining UV interferential exposure and mechanical strain Maxime Bichotte et al.	D1-1-3 Homogeneous mix & measure protein detection by monitoring the rotational dynamics of magnetic nanorods Joerg Schotter et al.
16:15	C11-2-4 Shift of the magnetic vortex nucleation field due to the presence of magnetic bias fields Tobias Wurft et al.	A1-1-4 Characteristics of Energy Distributions of EUV Tool at the Wafer-level. Jinseok Heo et al.	D1-1-4 Use of Metal Nanoparticle Arrays to Develop Cost-effective Plasmonic Biosensors for Immediate Detection of Volatile Biogenic Amines as Food Freshness Indicator Aileen Sun et al.
16:30	16:30 - 18:00 Exhibition / Poster Session		
19:00	19:00 Conference Dinner		

Thursday Morning 22 September 2016

8:00	Takehiko Iwanaga Nanoimprint System Development and Status for High Volume Semiconductor Manufacturing		
8:45	Michiel Vellekoop Gel-technology in microfluidics and biochips		
9:30	Poster Award + μ-n-Graph Award + Conference Announcements		
10:00	10:00 - 10:30 Break/Coffee/Exhibition		
	C7.1 Micro / Nano devices for physical science 1 Chair: Zahid Durani	A9 Novel techniques Chair: Andreu Llobera	C2 Micro and nano fluidic systems Chair: Marijn van Veghel
	"Strauß"	"Stolz"	"Schubert"
10:30	C7-1-inv CMOS BEOL compatible process for the fabrication of single electron transistors, using TiN/Al₂O₃/TiN junctions Bruno Lee Sang et al.	A9-1-1 FABRICATION OF POLYMER MICRO DEVICES WITH ULTRASOUND Julia Kosloh et al.	C2-1-1 Nanofluidic Liquid Cell with Integrated Electrokinetic Pump for In Situ TEM J. Alexander Liddle et al.
10:45		A9-1-2 Nanostructured catalyst for Metal Assisted Chemical Etching of Silicon Lucia Romano et al.	C2-1-2 Nanofluidic trapping devices for detecting critical reaction concentrations Michael Gerspach et al.
11:00	C7-1-1 Fabricating single electron devices in silicon for room temperature operation using electron beam lithography and geometric oxidation Dixi Liu et al.	A9-1-3 Computational study on novel focused beam processing in 3-dimensional space Yoshihiko Hirai et al.	C2-1-3 Functionalized Nanofluidic System for Trapping Nano-objects Deepika Sharma et al.
11:15	C7-1-2 Electrodeposition of Functional Semiconducting Metal Chalcogenide: GeSbTe Phase Change and Resistive Switching Memory Ruomeng Huang et al.	A9-1-4 Roll-2-Roll Nano-Imprinting – Journey to seamless wide-web functional film Wilfried Schipper et al.	C2-1-4 Influence of Experimental parameters on The Device Continuously Sampling Micro-Nano Size Particles Using Liquid-Based Gating Mechanism Sakata Kenshiro et al.
11:30	C7-1-3 Membrane templated activated carbon for electric double layer supercapacitors Vasileios Papadimitriou et al.	A9-1-5 A simple fabrication process for stepwise gradient wrinkle patterns with spatially controlled wavelength based on selective oxygen plasma treatment Jeong Su Lee et al.	C2-1-5 Ultrasonic welding for the integration of thin-film metal electrodes in injection molded polymeric lab-on-disc systems Marco Matteucci et al.
11:45	C7-1-4 Direct-Write Fabrication of Electric and Thermal High-Resolution Nanoprobes on Self-Sensing AFM Cantilever Harald Plank et al.	A9-1-6 Single-digit nanofabrication: ultrahigh density sub-10 nm TiO₂ features via the self-aligned double patterning process Stefano Dallorto et al.	C2-1-6 Roll to plate production of gravity driven, micro fluidic sensors based on electrowetting on dielectrics Thomas Fischinger et al.
12:00	C7-1-5 Non-destructive material characterisation by oscillating microprobes Boris Goj et al.	A9-1-7 All-Printed Capacitors with Continuous Solution Dispensing Technology Yang Ge et al.	C2-1-inv Microchannels equipped with force sensors for the investigation of the mechanical forces exerted by living cells during migration. Emma Desvignes et al.
12:15	C7-1-6 TMAH Developer Intrusion into Resist Film Analyzed by C-V Method of MIS Structure Hodaka Shirataki et al.	A9-1-8 Fabrication and development of high brightness nano-aperture ion source Xinxin Xu et al.	
12:30	12:00 - 13:30 Lunch		

Thursday Afternoon 22 September 2016

Thursday Afternoon 22 September 2016			
	C11.3 Applications 3 - fabrication Chair: Roman Beigelbeck	A4.2 Soft lithography 2 Chair:	B3 Beam induced deposition Chair: Claus J. Burkhardt
	"Strauß"	"Stolz"	"Schubert"
13:30	C11-3-inv Resistive memories using Cu nanoparticles embedded amorphous SiC Junqing Fan et al.	A4-2-1 Industrial platform assessment for volume manufacturing by nanoimprint lithography within INSPIRE project Martin Eibelhuber et al.	B3-1-1 Tailored surface smoothening of the inherent roughness of micro-lenses fabricated with 2-photon-lithography Robert Kirchner et al.
13:45		A4-2-2 High Resolution Glassy Carbon Molds for Precision Glass Molding Karin Prater et al.	B3-1-2 Systematic study of the fabrication parameters for line doubled X-ray zone plates Felix Marschall et al.
14:00	C11-3-1 UV nanoimprint lithography and lift-off processes for fabricating split-ring resonators with 20 nm gaps Takuya Uehara et al.	A4-2-3 Computational study of material optimization on de-molding process for mold replication in nanoimprint Yoshihiko Hirai et al.	B3-1-inv Engineering of hydrogel materials for 3D printing Gioia Della Giustina et al.
14:15	C11-3-2 Single digit fabrication for bi-metallic plasmonic nanostructures Valentin Flauraud et al.	A4-2-4 Versatile reversal imprinting process by use of water soluble film Hiroaki Kawata et al.	
14:30	C11-3-3 Metal Assisted Chemical Etching of Silicon for Speckle-based X-ray Imaging Joan Vila-Comamala et al.	A4-2-inv Nanoimprint and additive manufacturing - a vision Michael Mühlberger et al.	B3-1-3 Low Cost Fabrication of 4H-SiC Junction Barrier Schottky Diode Using Excimer-Laser Doping from Molten Al Tanemasa Asano et al.
14:45	C11-3-4 Fabrication options for Si3N4 photonic circuits used in different application scenarios Jens Bolten et al.		B3-1-4 Gas assisted purification of Electron Beam Induced Deposited noble metal nanostructures – Challenges and Applications in nanoelectronics Mostafa Moonir Shawrav et al.
15:00	15:00 - 15:30 Break/Coffee/Exhibition		
	C1.3 MEMS / NEMS 3 - energy harvest Chair:	A6 Directed Self Assembly Chair: Helmut Schiff	D1.2 Sensing 2 Chair: Zoran Djuric
15:30	C1-3-1 A new architecture of high performance AlN vibrational energy harvester Francesco Guido et al.	A6-1-1 Novel Si-containing high-χ block-copolymer for nanolithography application:PS-b-PDMSB Antoine Legrain et al.	D1-2-1 Fabrication and characterization of 3D pyrolytic carbon microelectrodes forelectrochemistry Suhith Hemanth et al.
15:45	C1-3-2 Simple two-step fabrication of a paper-based triboelectric nanogenerator with pencil-trace electrode Je Hoon Oh et al.	A6-1-2 Directed self-assembly of block copolymers: a commensurability study using elliptical guiding patterns for contact multiplication Shayma Bouanani et al.	D1-2-2 An Inkjet-Printed Electrochemical Sensor for Selective Detection of Hydrogen Peroxide Jin-Woo Choi et al.
16:00	C1-3-4 An Infrared Photodetector Using PbS Quantum Dots Capped with Isopropylamine Jin-Woo Choi et al.	A6-1-3 Pattern transfer challenges of the Sequential Infiltration Synthesis (SIS) of Directed self-assembly (DSA) for line/space applications Boon Teik Chan et al.	D1-2-3 CMOS integrable Gas Sensor Devices based on CuO- and ZnO – Nanowire Arrays Robert Wimmer-Teubenbacher et al.
16:15		A6-1-4 Focused ion beam implantation for the nucleation of self-catalyzed III-V nanowires Suzanne Lancaster et al.	D1-2-4 Sea urchin egg mass measurement using piezoresistive cantilever and sedimentation measurement method Hayato Sone et al.

	Poster Session	Special Session SNM Chair: Ivo Rangelow
16:30	16:30 - 18:00 Exhibition / Poster Session	SNM-1-1 Introduction to the SNM project Ivo W. Rangelow et al.
16:45		SNM-1-2 Multibeam Scanning Electron Microscope (MB SEM) – versatility and flexibility Cornelius W. Hagen et al.
17:00		SNM-1-3 Oxidation and Thermal Scanning Probe Lithography Armin Knoll et al.
17:15		SNM-1-4 Scanning Probe Lithography using low-energy electrons Marcus Kästner et al.
17:30		SNM-1-5 Advanced Etching for Nanodevices and 2D materials Jean-François de Marneffe et al.
17:45		SNM-1-6 Beyond CMOS devices and their integration in CMOS technology Francesc Perez-Murano et al.
18:15		
22:00	22:00 Young people party meeting (Praterdome)	

Friday Morning 23 September 2016

Friday Morning 23 September 2016			
	C7.2 Micro / Nano devices for physical science 2 - optical devices Chair: Kees Hagen	A5 Materials for micro- and nanolithography Chair: Ricardo Garcia	B4 3D nanomanufacturing Chair: Evangelos Gogolides
	"Strauß"	"Stolz"	"Schubert"
8:30	C7-2-1 Application of Down Shifting Photo Luminescent ZnO Quantum Dots in Solar Cells Aldo Zazueta Raynaud et al.	A5-1-inv The Nanolithography Toolbox J. Alexander Liddle et al.	B4-1-1 Enhanced colloidal lithography for fabrication of well-defined-area silicon nanowires Gerry Hamdana et al.
8:45	C7-2-2 A lithographic approach for quantum dot - photonic crystal nanocavity coupling in dilute nitrides Annamaria Gerardino et al.		B4-1-2 Investigation of Lateral Resist Development for 3D Electron Beam Patterning Corinna Kaspar et al.
9:00	C7-2-3 Anomalous Red-Shift of the Down-Shifted Photoluminescent Emission Peaks of Carbon and CdTe Quantum Dots J Elias Pelayo Ceja et al.	A5-1-1 Cylinder microstructure on Non-planar and Functional surface based on photopatternable TiO₂ sol-gel and colloidal photolithography Loic Berthod et al.	B4-1-3 A Micro Test Platform for In-Situ Mechanical and Electrical Characterization of Nanostructured Multiferroic Materials Randy Fechner et al.
9:15	C7-2-4 Mass-production compatible technique for fabrication of strip-loaded waveguides Janne Laukkanen et al.	A5-1-2 Characterization of Spatially Confined Polymer Softening for Ultra-Smooth Surfaces Roel Hoekstra et al.	B4-1-4 Fully Controlled Al₂O₃ and ZnO Nanotubes Fabrication Ling Xie et al.
9:30	C7-2-5 Wafer scale plasmonic device fabrication for surface-enhanced vibrational spectroscopy Uwe Huebner et al.	A5-1-3 Sensitivity enhancement of high-resolution molecular resist for EUV lithography Alex Robinson et al.	B4-1-inv Fabrication of 3 Dimensional Photonic Crystals with Waveguides for Visible Light Scott Dhuey et al.
9:45	C7-2-6 High aspect ratio silicon diffraction lenses with ultra-high efficiency and tunability for hard X-ray experiments Maxime Lebugle et al.		
10:00	10:00 - 10:30 Break/Coffee		
10:30	Peter Ertl Chips-in-Organs & Organs-on-a-Chip		
11:15	Closing Remarks		

Poster Presentations

A. Micro- and Nanopatterning

A1 Photon lithography

Tue-A1-1

A new stitching soft X-ray interference lithography technique

Jun Zhao et al.

Tue-A1-2

Continuous and high-speed photolithography via roll-type equipment

Sungho Lee et al.

Tue-A1-3

The Study of Focus Shift Issue due to TIS Sensor Coating Degradation under ArFi Scanner

Kyung-hwan Joo et al.

Tue-A1-4

Fabrication of 3D micro-objects by two-photon lithography on PVA as water-soluble sacrificial layer for single-cell manipulation

Farideh Abhari et al.

Tue-A1-5

Impact of the Non-Ideal Extreme Ultra-Violet (EUV) Mask Stack for 1x nm Patterning and the Effect on the Anamorphic High-NA Lithography

Ki-Ho Ko et al.

Tue-A1-6

Impact of transmission non-uniformity of wrinkled EUV pellicle for N5 patterning with various illuminations including anamorphic systems

In-seon Kim et al.

Tue-A1-7

The impact of locally deformed multi-stack pellicle and its optimization for extreme ultraviolet lithography

Guk-Jin Kim et al.

Tue-A1-8

Thermal and mechanical stresses of multilayer extreme ultraviolet pellicle

Eun-Sang Park et al.

Tue-A1-9

Molecular dynamics study of pattern formation in extreme ultraviolet lithography

Masaaki Yasuda et al.

Tue-A1-10

EUV Interference lithography at the Swiss Light Source of the Paul Scherrer Institute

Elizabeth Buitrago et al.

Tue-A1-11

Negative Pattern Formation in Positive Resist Layer by EB / UV Hybrid Lithography

Tomohiro Maruyama et al.

A2 Mask technology

Tue-A2-12

Layer Dependency on Extreme-Ultraviolet Transmission and Non-Uniform Thickness of Multi-Stack Extreme-Ultraviolet Pellicle Membrane

Sung-Gyu Lee et al.

A3 Electron and ion beam lithography

Tue-A3-13

Novel characteristics of single atom tips fabricated by local electron bombardment

Moh'd Rezeq et al.

Tue-A3-14

Optics for zone plate based X-ray microscopy

Stefan Rehbein et al.

Tue-A3-15

Advances in Ice Lithography in Denmark and China

William Tiddi et al.

Tue-A3-16

Hough Transform as a quality test tool for electron beam lithography

Oktay Goktas et al.

Tue-A3-17

Dependence of fogging electron current on the collection field

Yoshifumi Hagiwara et al.

Tue-A3-18

Dependence of the working distance and the applied bias on the surface potential distribution of insulating specimen irradiated by electron beam

Takuya Kawamoto et al.

Tue-A3-19

Combined e-beam lithography using different energies

Stanislav Krátký et al.

Tue-A3-20

Taylor-made contacted plasmonic nano-bowties with nanometer gaps on insulating substrates

Florian Laible et al.

Tue-A3-21

Recent improvements and applications of Proton Beam Writing: An outlook towards fast writing at sub 10 nm

Jeroen A van Kan et al.

Tue-A3-22

Investigation of a double layer PMMA resist for the fabrication of the Honeycomb surface lattices

Nebile Isik Goktas et al.

Tue-A3-23

Monte Carlo simulation and processing study toward 2 nm HSQ single lines by electron beam lithography

Yifang Chen et al.

Tue-A3-24

E-beam grayscale exposures into acrylic-glass plate

Stanislav Krátký et al.

Tue-A3-25

Advanced SPM probes made from commercial AFM probes by EBL and FIB

Jan Soltys et al.

Tue-A3-26

Development of trajectory simulation of fogging electrons in a vacuum specimen chamber

Kazumasa Terada et al.

Tue-A3-27

Sub-20 nm gaps in HSQ for ultra-scaled nanoelectronic devices

Maneesha Rupakula et al.

A4 Soft lithography

Wed-A4-28

Soft Lithography for Double-Scale Structuring and Mobility of Micro/Nano Air Pockets as Plastron on Superhydrophobic Surfaces
Sasha Hoshian et al.

Wed-A4-29

A Roll-to-Plate UV-nanoimprint tool for micro and nano-optical applications
Michael Mühlberger et al.

Wed-A4-30

Quantification and reduction of deformations in multilayer soft-NIL stamps
Michael Förthner et al.

Wed-A4-31

Towards inkjet printing on 3D printed surfaces for NIL applications
Anita Fuchsbauer et al.

Wed-A4-32

Black silicon and its replication to polymers: from antibacterial to self-cleaning applications
Aritz Retolaza et al.

Wed-A4-33

Fabrication of the large area mold using roll to plate equipment via visually tolerable tiling method
Jihoon Lee et al.

Wed-A4-34

Nanoimprinting on chalcogenide MIR-fiber end-facets to reduce coupling losses
Mikkel Lotz et al.

Wed-A4-35

Metal nano-pattern fabrication by applying a soft UV-NIL resist onto a neutral developable lift-off layer
Michael Haslinger et al.

Wed-A4-36

Improvement of transfer performance for antireflection structured with antifouling effect
Hikari Eto et al.

Wed-A4-37

Improvement of transfer durability of pillar shaped release agent-free replica mold on UV-NIL
Gen Nakagawa et al.

Wed-A4-38

Fabrication of Polymeric Magnetic Pillars with Tuneable Properties
Anas Al-Azawi et al.

Wed-A4-39

Consecutive Imprinting Performance of Large Area UV Nanoimprint Lithography using Bi-layer Soft Stamps in Oxygen-containing Atmosphere
Martin Hoffmann et al.

Wed-A4-40

Evaluation of molecular orientation induced by simplified double nanoimprint-graphoepitaxy
Makoto Okada et al.

Wed-A4-41

Viscoelasticity of Cyclo Olefin Polymer and Imprinting Transfer
Kenji Monden et al.

Wed-A4-42

Metallic antireflection structures made from silver ink using liquid transfer imprint technique
Tomoya Uchida et al.

Wed-A4-43

Overcoming the limitation of spin-coating on unconventional substrates by liquid transfer imprint lithography
Jung Wuk Kim et al.

Wed-A4-44

Fabrication sequence for silicon nitride based PIC using a NIL approach
Jung Wuk Kim et al.

Wed-A4-45**Computational study on induced strain in direct nanoimprint process for molecular ordering**

Masaaki Yasuda et al.

Wed-A4-46**Realization of residue-free ultra-violet nanoimprinting lithography using a soft patterned mold**

Su Shen et al.

Wed-A4-47**Inkjet-printing of working stamp material for UV-based nanoimprint lithography**

Michael Mühlberger et al.

Wed-A4-48**High Precision UV Nanoimprint Process using Condensable Gas of Trans-1,3,3,3-tetrafluoropropene for Microlens Arrays**

Kenta Suzuki et al.

Wed-A4-49**Fabrication of nano-steps for total internal reflection fluorescence microscopy by using roll-typed liquid transfer imprint lithography**

Hiroshi Kigami et al.

Wed-A4-50**Fin structures fabrication for solid oxide fuel cell air electrode using micro molding**

Jun Taniguchi et al.

Wed-A4-51**Depth analysis of molecular orientation induced by nanoimprint-graphoepitaxy**

Makoto Okada et al.

Wed-A4-52**Direct fabrication of plasmon-magnetic nanoparticles for biomolecular sensing by UV-NIL and lift-off**

Lukas Häusler et al.

Wed-A4-53**Fine-tuning highly periodic Au nanodisc arrays for plasmon resonance-controlled transparent SERS substrates using UV-NIL based double-layer lift-off process**

Julian Barnett et al.

A5 Materials for micro- and nanolithography**Wed-A5-54****Fabrication of double layer with magnetite and aluminium to obtain new polarization characteristics**

Young Tae Cho et al.

Wed-A5-55**Processing of the e-beam resist CSAR 62 at low temperatures**

Silvia Diewald et al.

Wed-A5-56**Growth of ZnO Nanowires on Multi-Layered Polymer Structures Fabricated using UV Liquid Transfer Imprint Lithography**

Namwon Kim et al.

Wed-A5-57**Fabrication of high-aspect ratio nanostructures on the flexible substrates using nanoimprint lithography technology**

SangHee Jung et al.

A6 Directed Self Assembly**Thu-A6-58****Large Block Copolymer Self-Assembly for Fabrication of Sub-wavelength Structures for Antireflective Surfaces**

Parvaneh Mokarian-Tabari et al.

Thu-A6-59**Directed self-assembly in nanoimprint guide for sub-10 nm lithography**

Koji Asakawa et al.

A7 Tip based patterning

Thu-A7-60

Experimental analysis of micro-nano mechanical patterning of soft thin film on hard substrate

Eun-chaee Jeon et al.

Thu-A7-61

Localized Photocatalytic Chemical Etching Using TiO₂-coated AFM Probe

Takayuki Shibata et al.

Thu-A7-62

Low-energy electron exposure phenomena in Fowler-Nordheim single digit scanning probe lithography with active probes

Yana Krivoschapkina et al.

Thu-A7-63

Fabrication and Operation of Inverted Pyramidal Microplasma Devices Arrays for Maskless Nanoscale Material Direct Writing

Li Wen et al.

Thu-A7-64

Scanning probe microscopy lithography on CVD graphene grown on Ge(100) substrates

Andrea Notargiacomo et al.

A8 Stencil based patterning

Thu-A8-65

Simple overprinting technique for thick conductive patterns

Ken-ichi Nomura et al.

Thu-A8-66

A Novel Fabrication of Dissolvable Microneedle Patch for Transdermal Drug Delivery

Libo Wu et al.

A9 Novel techniques

Thu-A9-67

Tuning the Surface Wettability of Thermoplastic Microchannels in Manufacturable Ways

Zhenfeng Wang et al.

Thu-A9-68

Selective Immobilization of Metal Nanoparticles Using Self-assembly Techniques

Hiroki Yamamoto et al.

Thu-A9-69

Direct Electron-Beam Patterning of Alkanethiol-Stabilized Nanoparticle Layers

Patrick Reissner et al.

Thu-A9-70

New 3D structuring process, by ion implantation and selective wet etching

Lamia Nouri et al.

Thu-A9-71

OLED Dry-Film Morphology Compensation and Evaluation

Cheng-yao Lo et al.

Thu-A9-72

Direct Bonding of Amorphous ALD Al₂O₃ with Silicon Nitride Thin Films

Simone Laganá et al.

Thu-A9-73

Spatial Confinement of Nanograss for Manipulating Condensation

Nikolaj Kofoed Mandsberg et al.

Thu-A9-74

Aluminium-assisted anisotropic chemical vapor etching of silicon dioxide

Reo Kometani et al.

Thu-A9-75

Through-Graphene Etching of Porous Si by Electroless Metal Assisted Chemical Etching

Christoforos Panteli et al.

Thu-A9-76

Nanostructured Perovskite via Ultrafast Nano Imprinting Lithography

Nicola Cefarin et al.

Thu-A9-77

Blister-actuated Laser Induced Forward Transfer for micro printing of overlapping droplets

Lars Hecht et al.

Thu-A9-78

Local modification of submicron periodic patterns by combining zone plates with displacement Talbot lithography

Philip Shields et al.

Thu-A9-79

Facile and cost-effective fabrication of fluorine-free superhydrophobic surfaces via salt dissolution assisted etching

Donghyeon Yoo et al.

B. Micro- and Nanofabrication

B1 Pattern transfer

Tue-B1-80

Wet etching of oxynitride on silicon nitride films using HF-last process

Irina Kiryushina et al.

Tue-B1-81

Preparation of hybrid electrode using ZnO nanorods / silver nanowires for UV sensor applications and its electrical characteristics

Da-hyeok Lee et al.

Tue-B1-82

Stability of flexible composite stamps with thermal nanoimprint

Marc Papenheim et al.

Tue-B1-83

Line Edge Roughness Evaluation on Patterns with Serrated Curvatures

Cheng-yao Lo et al.

Tue-B1-84

Atomic layer deposition instrument for in-situ environmental TEM imaging of ALD process

Matteo Todeschini et al.

Tue-B1-85

Roll-to-roll extrusion coating process for high speed replication of micron-sized periodic pattern

Nastasia Okulova et al.

Tue-B1-86

Investigation with complementary characterization methods of adhesion layer effect on nanostructure of gold ultra-thin films

Matteo Todeschini et al.

Tue-B1-87

Enhancing the resolution and stability of bioimprinted casein microdevices

Azadeh Hashemi et al.

Tue-B1-88

3D multi-scale fractal network fabrication using Hele-Shaw cell

Tanveer ul Islam et al.

B2 Plasma etching

Wed-B2-89

High selectivity and anisotropic dry etching of GaAs/GaAlAs with Cl₂ based plasma using ICP/RIE system.

Stephane Guilet et al.

Wed-B2-90

Atomic layer etching by self-limited ion implantation for precise silicon nitride and Low-k spacer etching

Nicolas Posseme et al.

Wed-B2-91**Application of hierarchically-structured polyaniline films in supercapacitors**

Lin Zhen-Wei et al.

Wed-B2-92**Novel Hybrid Photosensitive Mask for Etching High-Aspect-Ratio Structures**

Lei Chen et al.

Wed-B2-93**Anisotropic Etching of Yb-doped Ta₂O₅ Channel Waveguide Laser Device**

Xingzhao Yan et al.

Wed-B2-94**Optimized Process Analysis for SiO₂ etch using CFD Simulation**

Han-Bit Kim et al.

Wed-B2-95**Precision 3-D Nanomachining of Silicon Nanowires**

Katarzyna Korwin-mikke et al.

Wed-B2-96**Microfabricated Lenses on Silicon Using Plasma Etching**

Zhong Ren et al.

Wed-B2-97**Ultra vertical and smooth X-ray single Kinoform lens by deep reactive ion etch on silicon**

Xin Li et al.

Wed-B2-98**Silicon etching with vertical and smooth walls achieved via a low power Reactive Ion Etching process**

Gianluca Greci et al.

Wed-B2-99**Realisation of etching Indium-included materials in atomic layer etch process via repeated cycling of chloride formation and its plasma removal for GaN-based power device fabrications**

Xu Li et al.

B3 Beam induced deposition**Wed-B3-100****Control of upward growth on the three-dimensional nanostructure fabrication by focused-ion-beam chemical vapor deposition**

Mizue Sekine et al.

Wed-B3-101**Effects of direct nano patterning on gold and silicon surfaces with helium ion microscope**

Etsuo Maeda et al.

Wed-B3-102**Thin films prepared with a Kaufman broad ion-beam source for a top-down micromachining process of MEMS/NEMS resonators**

Miloš Hrabovský et al.

Wed-B3-103**Reference markers generated by Electron Beam Induced Deposition enabling easy functionalization of random deposited nanomaterials with e-beam lithography**

A.christiaan Zonneville et al.

Wed-B3-104**Fabrication of micro-bridges with piezo-resistors deposited with electron beam**

Magdalena Moczala et al.

B4 3D nanomanufacturing**Thu-B4-105****Trapped-mode in ion-beam folded 3D bi-flake structures**

Zhe Liu et al.

Thu-B4-106**Complex 3D structures via repeated hybrid imprint and sacrificial layer techniques**

Christian Steinberg et al.

Thu-B4-107**3D microprinting resolution enhancement method in micro-stereolithography for microneedle array fabrication**

Haeryung Kim et al.

Thu-B4-108**Fabrication of template grown metallic nanocones for use as field emitter cathode**

Farough Roustaei et al.

Thu-B4-109**Fabrication of catalyst membrane for long-length nanocarbon growth—Atmospheric pressure CVD fill of Fe and Fe_xO_y to nano-through-holes of self-standing anodic alumina**

Eiichi Kondoh et al.

Thu-B4-110**Single-digit resolution grayscale patterns using electron beam lithography**

Robert Kirchner et al.

Thu-B4-111**3D Nano-Printing of Plasmonic Gold Structures: Beyond Current Limitations**

Harald Plank et al.

Thu-B4-112**Electroplated 3D metal free forms casted from 3D photoresist molds**

Ulrich Mescheder et al.

Thu-B4-113**Drag reduction of stable Biomimetic superhydrophobic steel surface by acid etching under an oxygen rich environment**

Haifeng Zhang et al.

B5 3D microprinting**Tue-B5-114****New lithography method for fabricating densely arrayed lenticular lenses**

Toshiyuki Horiuchi et al.

Tue-B5-115**Precision deposition of melt-electrospun microfibers to build 3D microfibrillar structure**

Young Hun Jeong et al.

Tue-B5-116**High-resolution 3D hydrogel structures for biological studies**

Laura Brigo et al.

Tue-B5-117**Micro-masonry for the simple fabrication of nanoplate resonators with integrated electrostatic transduction**

Thierry Leichle et al.

Tue-B5-118**Exploiting the Combination of 3D Polymer Printing and Inkjet Ag-Nanoparticle Printing for Advanced Packaging**

Matic Krivec et al.

Tue-B5-119**Controlled fabrication of hollow microneedles by bulk photopolymerization**

Swapnil Ransing et al.

B6 Inspection and process diagnostics and control**Wed-B6-120****The in-situ observation of graphene with gas flowing**

Mikihiro Kato et al.

Wed-B6-121**Highly Tunable ZnO films grown by Atomic Layer Deposition**

Kian Shen Kiang et al.

B7 (Nano-) Metrology

Thu-B7-122

Precise measurement of thin film thickness in 3D-NAND device with CD-SEM

Takeyoshi Ohashi et al.

Thu-B7-123

Enhancement of Mechanical Properties in Au Films Electroplated with Supercritical Carbon Dioxide for Application in MEMS

Haochun Tang et al.

Thu-B7-124

Controllable Mechanical Properties of Au Films by Pulse Electroplating for MEMS Accelerometer

Chun-Yi Chen et al.

Thu-B7-125

Characterization of nanostructures from visual color

Nikolaj Feidenhans'l et al.

Thu-B7-126

Effect of annealing atmosphere on photocatalytic activity of ZnO nanostructure doping Bismuth thin film by sol-gel method

Sirirat Rattanachan et al.

Thu-B7-127

A sensor for low dimensional heat transport measurement

Zarina Umatova et al.

Thu-B7-128

Electron Mobility Extraction in ZnO Nanowire FETs by a Top-Down Approach

Alnazer Mohamed et al.

Thu-B7-129

Two-dimensional junction delineation by energy-filtering in the scanning electron microscope

Augustus Chee et al.

Thu-B7-130

Micromachined active test structure for Scanning Thermal Microscopy probes calibration

Pawel Janus et al.

B8 Self-aligned processes

Wed-B8-131

Self-aligned processing for fabricating coupled-cavity VCSELs

Ludovic Marigo-lombart et al.

Wed-B8-132

The Hydrophobic property of boron nitride nanotube buckypaper

Ling Li et al.

Wed-B8-133

Fine Patterning of Stretchable Gold/silver-nanowire Electrode for thin film Transistors

Tae Young Choi et al.

C. Micro/Nano Devices and Systems

C1 MEMS / NEMS

Tue-C1-134

Solar cell efficiency improvement by harvesting UV light employing silicon quantum dots.

Rosendo Lopez Delgado et al.

Tue-C1-135

Enhanced conversion efficiency of solar cells employing photo luminescent down-shifting CdSe/CdS core shell quantum dots.

Rosendo Lopez Delgado et al.

Tue-C1-136

Mechanical behavior of Ti-27Nb Ni-free biomedical Shape-Memory Alloy Evaluated by Temperature Variable Micro-Compression Test

Takashi Nagoshi et al.

Tue-C1-137

Mechanical Behaviour of Electroplated Gold Evaluated by Micro-Tensile Test for Application in MEMS Accelerometer

Masato Sone et al.

Tue-C1-138

Micro-Bending Tests of Pure Gold Cantilevers for Applications as Movable Components in MEMS Devices

Masato Sone et al.

Tue-C1-139

Analysis of uniformity on reflow velocity of glass-reflowed microlens array

Hye-lim Kang et al.

Tue-C1-140

High Aspect Ratio Copper Filling of Through-silicon-vias by Bottom-Up Electroplating for Fabrication of 3D Air-core MEMS Inductors

Io Mizuhima et al.

Tue-C1-141

Fabrication of SPR chip with multiple air-gaps using SoQ bonding

Yeonsu Lee et al.

Tue-C1-142

Graphene Hydrogels Deposited in SSFF as Cathode Gas Diffusion Layer for Water Management Passive μ -DMFC

Rui Xue et al.

Tue-C1-143

Flexible Thermo-Electrochemical Cell Based on Buckypaper Interdigital Electrodes

Chien-Liang Chu et al.

Tue-C1-144

Mechanical coupling in Doubly Clamped Silicon Beam Nanomechanical Resonators fabricated by focused ion beam implantation

Jordi Llobet et al.

Tue-C1-145

Microfabrication of EM Micropump with Hybrid Magnetic Actuator Membrane

Jumril Yunas et al.

Tue-C1-146

PARYLENE-BASED HOLLOW NANOMECHANICAL RESONATORS FOR BIO-APPLICATIONS

Annalisa De Pastina et al.

Tue-C1-147

Analysis of residual stress in membrane structure of uncooled LSMO microbolometer

Jaroslav Dzuba et al.

Tue-C1-148

Direct mask writing for RIE and diaphragms fabrication for MEMS sensors using ultrashort pulsed laser ablation

Johann Karl Zehetner et al.

Tue-C1-149

Uniformity improvement of a nonthermal atmospheric-pressure plasma jet device with ceramic balls

Hanjun Bae et al.

Tue-C1-150

Fabrication and characterization of pyrolytic carbon string resonators.

Long Nguyen Quang et al.

Tue-C1-151

Optimization of Sensitivity and Efficiency of MOEMS Displacement Readouts

Andreas Kainz et al.

Tue-C1-152

Nonlinear MOEMS Transducer for DC Displacement and Inclination Utilizing Harmonics

Harald Steiner et al.

Tue-C1-153

50 nm thick AlN Films for Actuation and Detection of Nanoscale Resonators

Kaitlin Howell et al.

Tue-C1-154**Preparation and electrical properties of CaCu₃Ti₄O₁₂ thin ceramic film for electrostatic MEMS supercapacitor application**

Gang Li et al.

Tue-C1-155**Graphene Based Mechanical Resonators Fabricated via Direct Dry Transfer**

Tom Larsen et al.

Tue-C1-156**Electrodeposition of Graphene Oxide on Stainless Steel Fiber Felt as Anode Mass Transfer Layer for Passive μ -DMFC**

Rui Xue et al.

Tue-C1-157**Microcantilever magnetometer fabricated from AFM probe by focused ion-beam milling**

Katarina Secianska et al.

Tue-C1-158**Generation of highly transparent superhydrophobic quartz surfaces by the combination of femtosecond laser structuring and wet oxidation**

Sandra Stroj et al.

Tue-C1-306**Silicon Solar Cell Performance Improvement Employing Photo Luminescent Photosystem I and CdTe Quantum Dots.**

Kemeth Mayfield et al.

C2 Micro and nano fluidic systems**Wed-C2-159****Development of Miniature Micro-Powder Feeder Driven by Surface Acoustic Wave for Practical Use**

Tsunemasa Saiki et al.

Wed-C2-160**Combination of Micro-Heater and Water Channel Device and Its Application to Plant Cell Vital Control**

Kazuho Kai et al.

Wed-C2-161**Bubble Trap Analysis for Smooth Fluid Flowing in Micro Channel / Tube Network**

Natsumi Yagi et al.

Wed-C2-162**Fuel Cell Operation in Liquid Environment by Gas-Liquid Interface Control System**

Katsuaki Yamane et al.

Wed-C2-163**Development of a Microfluidic Cuvette Device Integrated with Nanostructures for Spectrophotometric Measurement**

Hyungjun Lim et al.

Wed-C2-164**Characterization of SAN (Self-Assembled Network) Structure Formed in Ultra Thin Film by using AFM (atomic force microscope)**

Tomohiro Maruyama et al.

Wed-C2-165**Characterization of Nanoscale Bubble and Polymer Aggregate Adhered on Substrate by using Atomic Force Microscope (AFM) Tip**

Akira Kawai et al.

Wed-C2-166**Fabrication of superomniphobic nanoserif surfaces**

Ville Rontu et al.

Wed-C2-167**Development of Aerogel Based Optofluidic Microreactors**

Yaprak Özbakir et al.

Wed-C2-168**Influence of Alkylamine Addition on the Hot-Injection Synthesis of CdSe Nanocrystals**

Xiaopeng Huang et al.

Wed-C2-169**Microfluidic thermal chamber array with liquid metal based micro heaters for multi-level temperatures in a chip**

Yun H. Jang et al.

Wed-C2-170

Free jet micromixer to study the early stage interaction of silica nanoparticles with protein by Small Angle X-Ray Scattering
Benedetta Marmiroli et al.

Wed-C2-171

Fabrication of Cyclo Olefin Polymer (COP) microcolumns for reversed phase chromatography
Athina S. Kastania et al.

Wed-C2-172

Laser thermal transfer technology for lab-on paper development
Artur Dybko et al.

C3 Metamaterials and their fabrication**Wed-C3-173**

The Design and Fabrication of Ultra-thin Metallic Nano-strips for Phase Modulation
Jinglei Du et al.

Wed-C3-174

Computational modeling of a metamaterial made of 2D metal arrays in the terahertz regime
Clarissa Vazquez-Colon et al.

Wed-C3-175

MoS₂ Nanosheets Supported on Carbon Nanotubes : An Advanced Catalyst for the Hydrogen Evolution Reaction
Jiamu Cao et al.

Wed-C3-176

Synthesis of Cu/MoS₂ NSs Hybrid as Low-Cost Electrocatalyst for the Hydrogen Evolution Reaction
Jiamu Cao et al.

Wed-C3-177

Carbon riveted Pt-MnO₂-graphene catalyst prepared by in situ carbonized L- ascorbic acid for μ DMFC
Weijian Yuan et al.

Wed-C3-178

Scalable Fabrication of Patchy Particle Film with Highly-Chiroptical Effect based on Micro-Sphere Assembled Technology
Wu Xuannan et al.

Wed-C3-179

Scalable Fabrication of Chiral Mirror Based on Micro-Sphere Assembled Technology
Hou Yidong et al.

Wed-C3-180

Fabrication of hollow coaxial ZnAl₂O₄ high aspect ratio freestanding nanopillars based on the Kirkendall effect
Evgeniy Shkondin et al.

Wed-C3-181

Fabrication and characterization of Au dimer antennas on SiO₂ pillars with enhanced plasmonic response
Pedram Sadeghi et al.

C4 Heterogeneous integration**Wed-C4-182**

One-dimensional quantum dot array fabricated via sequential bonding of carbon nanotubes and molecules
Akira Hida et al.

Wed-C4-183

Characterisation of top-down fabricated Ni_xSi_y-Si heterostructure undoped nanowires
Dipjyoti Deb et al.

C5 System design**Tue-C5-184**

MORE-G – Development of a micro-optical resonator gyroscope
Thalke Niesel et al.

C6 Device and system modelling

Tue-C6-185

Improved Stability of Aluminium Co-sputtered Indium Zinc Oxide Thin-film Transistor

Moonsuk Yi et al.

Tue-C6-186

Characterization of Thermal-Piezoresistive MEMS Resonators for Sensing Applications

Cláudia Coelho et al.

Tue-C6-187

Micro fabrication of the Si₃N₄ grating for antimatter interferometry studies

Monica Bollani et al.

Tue-C6-188

Electrode configurations for layered-plate piezoelectric micro-actuators

Cuong Nguyen et al.

Tue-C6-189

Optimization of 7nm Strained Germanium FinFET Design of Experiments using Taguchi Methodology

Nurul Aida Farhana Othman et al.

Tue-C6-190

Thermal dynamics identification of graphene-based heater by UV laser pulses

Tien-Li Chang et al.

Tue-C6-191

Finite Element Modelling of a Magneto Elastic Broadband Energy Harvester

Lucia R. Alcala Jimenez et al.

C7 Micro / Nano devices for physical science

Thu-C7-192

Efficiency enhancement in UV-visible organic photodetectors via plasma assisted surface passivation of metal oxide cathode interlayers.

Maria Vasilopoulou et al.

Thu-C7-193

Co-sputtering of SiO₂ with InZnO to improve the stability and electrical performance for metal oxide thin-film transistors

Moonsuk Yi et al.

Thu-C7-194

Development of an ultra-sensitive low noise tunnel magnetoresistance sensor

Amandine Bocheux et al.

Thu-C7-195

A Study of PMOSFET Device with Recessed-Silicon Channel SiGe Process Application

Younghun Kim et al.

Thu-C7-196

Fabrication of optimized x-ray quasi-sinusoidal single-order transmission grating and its performance

Xiaoli Zhu et al.

Thu-C7-197

Thermoplasmonic of silver nanoparticles clusters

Francesco Gentile et al.

Thu-C7-198

Defect Migration and Milling of Boron-Nitride Encapsulated Graphene Using a Focused He⁺ beam

Gaurav Nanda et al.

Thu-C7-199

Extraordinary Electric Field Enhancement Arising from Non-noble Metal Substrate-induced Interfacial Plasmonics with Silver Nanoparticles

Aileen Sun et al.

Thu-C7-200

Multifunctional carbon nanobelt conductors for stretchable microelectronic applications

Simas Rackauskas et al.

Thu-C7-201

CMOS MEMS Clamped-Clamped Beam Resonator with Nodal Support

Sheng-hsiang Tseng et al.

Thu-C7-202

Optoelectronic properties of cesium lead halide perovskite nanocrystals organized in ordered nanoscale assemblies

Erika Penzo et al.

Thu-C7-203

Single-Electron Pumps Based on GaAs/AlGaAs Heterostructures - Systematic Investigation of Design Parameters

Thomas Gerster et al.

Thu-C7-204

Filtering acoustic radiation loss in stressed silicon nitride (SiN) nano-mechanical resonators for Quantum Optomechanics

Enrico Serra et al.

Thu-C7-205

Electrically Tunable Plasmonic Nanoantennas

Christoph Riedel et al.

Thu-C7-206

Low cost fabrication method of fast response gas sensors integrating functionalized double walled carbon nanotubes

Lin Yang et al.

Thu-C7-207

Picosecond laser ablation of graphene-PEDOT:PSS for the flexible electronics

Tien-Li Chang et al.

Thu-C7-208

Effects of focused ion beam treatments on stacked magnetic films

Andrea Notargiacomo et al.

Thu-C7-209

Silicon-gold nanopillar plasmonic structures for surface enhanced Raman scattering chemical sensing

Vitas Lendraitis et al.

Thu-C7-210

Fabrication of artificial spin ices on silicon nitride membranes

Mark Rosamond et al.

Thu-C7-211

Dielectric Dispersion Analysis of Resist Materials by Parallel Plate Capacitor Structure

Hodaka Shirataki et al.

Thu-C7-212

Synthesis and Characterization of CdTe Quantum Dots for THz Applications

Arturo Ayon et al.

Thu-C7-213

Solution Processable Carbon Nanoelectrodes for Molecular Electronics

Jingyuan Zhu et al.

Thu-C7-214

Structural and electrical characterization of Ga⁺ FIB treated diamond surface

Andrea Notargiacomo et al.

Thu-C7-215

Focused ion beam modified high sensitive piezoresistive cantilevers

Piotr Kunicki et al.

Thu-C7-216

Broadband microwave detector based on GMR-SV with varying interlayer exchange coupling

Zietek Slawomir et al.

C9 Assembling and packaging technologies

Wed-C9-217

Uneven-Topography-Chip 3D Heterogeneous Integration Using Double Self Assembly Technology for MEMS and Biomedical Microsystem Applications

Hsiao-Chun Chang et al.

Wed-C9-218

The Efficiency Improvement by Enhanced Current Spreading and Temperature Uniformity of LEDs

Chien-ping Wang et al.

Wed-C9-219

A novel optimization algorithm based on TFPA for thermal design of MCMs

Zhenyu Yuan et al.

C10 Reliability

Wed-C10-220

Investigation of Self-Heating Effect on Time Dependent Dielectric Breakdown in FinFETs

Minjung Jin et al.

C11 Applications

Thu-C11-221

Enhanced light extraction in OLEDs by using self-textured AZO anode layer

Bum Ho Choi et al.

Thu-C11-222

Stretchable thin-film transistors fabricated on PDMS substrate with stiff-island structures

Jae Bon Koo et al.

Thu-C11-223

Development of Micro Cone Shape Tube Utilizing for Gas Trap System

Katsuaki Yamane et al.

Thu-C11-224

Charge consumption of electrochromic device with various cell gaps and electrolyte concentrations

Chil Seong Ah et al.

Thu-C11-225

Low-voltage DNTT based thin-film transistors and inverters for flexible electronics

Thorsten Meyers et al.

Thu-C11-226

Low-cost inverter on freestanding flexible substrate using ZnO nanoparticles

Fábio F. Vidor et al.

Thu-C11-227

Diamond diffraction gratings for experiments with intense hard x-rays

Mikako Makita et al.

Thu-C11-228

Spherical Nano-Crystalline ZnO:Bi Films for Increasing Photocurrent in Novel Solar Cell

Thipwan Fangsuwannarak et al.

Thu-C11-229

Broadband Plasmonic Lens Based on Metallic Nanohole Arrays

Yen-yu Chou et al.

Thu-C11-230

Photoresponse in Hybrid Single Walled Carbon Nanotube – Quantum Dot Phototransistors

Simas Rackauskas et al.

Thu-C11-231

Nanofabrication of SiGe stressors for tensile strain creation in Ge membranes

Monica Bollani et al.

Thu-C11-232

Fabrication of comb-shape single electrode based triboelectric nanogenerators via hot embossing process for two-directional contact energy harvesting

Donghyeon Yoo et al.

Thu-C11-233

Fabrication and characterization of Au nanotube array for solar energy applications

Hak-jong Choi et al.

Thu-C11-234

A thermo-activated tactile micro-actuator for displays

Tommaso Dattoma et al.

Thu-C11-235

Detection of residual antibiotics in milk based on plasmonic sensors

Laura Brigo et al.

Thu-C11-236

Silver-based reactive ink for inkjet-printing of conductive lines on textiles

Thomas Obermüller et al.

Thu-C11-238

Assessment of hydrogel formation with nanomechanical IR spectroscopy

Andrea Casci Ceccacchi et al.

Thu-C11-239

Electrical Analysis of Integrated Field Effect Transistors as Electromechanical Transducer for Stress

Nessma Hafez et al.

Thu-C11-240

Fabrication of transparent Ni mesh structure using template-assisted Ni electrodeposition and hot embossing process

Hak-jong Choi et al.

D. MNE for Life Sciences and Biology

D1 Sensing

Tue-D1-241

Gold Graphene Nano Composite as Transducer for Biomolecule Detection

Rudolf Heer et al.

Tue-D1-242

Highly selective cell capture using silicone nanofilament surfaces for the isolation of circulating cells in blood

Yoon Ki Joung et al.

Tue-D1-243

Evanescence-field sensing in the mid-IR by sub-wavelength waveguides

Cristina Consani et al.

Tue-D1-244

Hard UV-NIL nanostructures for bimodal SPRI-SERS biosensors

Jean-françois Bryche et al.

Tue-D1-245

Metal Enhanced Fluorescence on Super-hydrophobic Clusters of Gold Nanoparticles

Francesco Gentile et al.

Tue-D1-246

Environmental monitoring using dnzyme-modified platinum nanoparticle networks

Evangelos Skotadis et al.

Tue-D1-247

Ultra-thin PDMS substrates for high-resolution stiffness measurements with cell stretchers

Francesca Sorba et al.

Tue-D1-248

Raman study of lysozyme amyloid fibrils suspended on super-hydrophobic surfaces by shear flow

Manola Moretti et al.

Tue-D1-249

Selective and Label-Free Detection of Neurotransmitters using Molecularly Imprinted Conducting Polymers

Edward Song et al.

Tue-D1-250

Cell Traction Force Development during Topographical Guided Migration

Stella Pang et al.

Tue-D1-251

Fabrication and application of interdigitated array microelectrodes using the backend-of-line module of a SiGe:BiCMOS technology platform

Philipp Kulse et al.

Tue-D1-252

Electrochemical biosensor based on nanoelectrode arrays by Ultrafast Thermal NIL Technology for Biomolecules detection.

Alessandra Zanut et al.

Tue-D1-253

Plasmonic Nanoholes as SERS devices for biosensing applications

Patrizio Candeloro et al.

Tue-D1-254

Al-doped ZnO Thin Film Sensor for MIS Flexible Force Feedback Device

Shih-Chi Chan et al.

Tue-D1-255

Plasmonic probes for tip-enhanced Raman spectroscopy

Vitas Lendraitis et al.

Tue-D1-256

Optical sensing of DNA via collective coupling of Au nanorods and densely assembled Ag nanoparticles

Shiho Tokonami et al.

Tue-D1-257

Optical observation of the rotational dynamics of plasmon-magnetic nanoparticles for biomolecular sensing

Astrit Shoshi et al.

Tue-D1-258

Interdigitated pyrolytic carbon microelectrodes for real-time electrochemical monitoring of cell populations

Gaetano Panagia et al.

Tue-D1-259

Detection for DNA by MoS₂ Membrane Nanopore

Jingjie Sha et al.

Tue-D1-260

Wolkenstein theory of adsorption and charge transfer on graphene

Zoran Djuric et al.

Tue-D1-261

Perforated SiN membrane resonators for nanomechanical IR spectroscopy

Silvan Schmid et al.

Tue-D1-262

Soft embossing of conductive polymer electrodes on a flexible polymer foil – towards all-polymer wearable micro devices for wound monitoring

Luigi Sasso et al.

Tue-D1-263

three metal-layer interdigitated microelectrodes for multiple gas sensing measurements

Angelos Streklas et al.

Tue-D1-264

Gold Nanopillar Structures for Surface-Enhanced Raman Scattering Based Sensing Applications

Tomas Rindzevicius et al.

D2 Lab-on-a-Chip

Wed-D2-265

Kaleidoscopic patterning of microbeads using a dual optical tweezers system

Yoshio Tanaka et al.

Wed-D2-266

Development of Cell-processing System for On-chip Regulation of Cellular Functions

Keita Yamamoto et al.

Wed-D2-267

The Alveoli-on-a-chip: towards in vitro modelling of the alveolar barrier.

Alexandra LANIECE et al.

Wed-D2-268

Thiol-ene based on-line microreactors for protein digestion and peptide mapping, utilizing a 3D-printed holder for UPLC coupling.

Alexander Jönsson et al.

Wed-D2-269

Inertial microfluidic chip integrated valveless peristaltic pump

Muhammed Bekin et al.

Wed-D2-270

A simple fabrication process for disposable interdigitated electrode arrays with adjustable nanogaps for Lab on a Chip applications

Stefan Partel et al.

D3 Organ-on-a-Chip

Wed-D3-271

Swelling properties of Photocrosslinkable Hyaluronic Acid

Frida Sjögren et al.

Wed-D3-272

A tumor-on-a-chip for drug delivery screening

Chiara Manneschi et al.

D4 Micro / Nanofluidics for bio / life sciences

Thu-D4-273

A microfluidic platform generating shear stress gradient to screen effective endothelial differentiation of human mesenchymal stem cells

Hyung Woo Kim et al.

Thu-D4-274

ION CONCENTRATION POLARIZATION SYSTEM BY UTILIZING A THREE DIMENSIONAL MICRO STRUCTURE FOR HIGH-PERFORMANCE CONCENTRATION TECHNIQUE

Katsuo Mogi et al.

Thu-D4-275

Study on microchain deformation of magnetorheological suspensions in a periodical field

Ya-wei Lee et al.

Thu-D4-276

Magnetic Microfluidic Single Cell Trapping and Analysis Platform

Georgios Kokkinis et al.

Thu-D4-277

A new Micro/Nano Hybrid Substrate for neuronal network formation

Diletta Pozzi et al.

Thu-D4-278

Investigation on picosecond laser-ablated microfluidic micropillar arrays with electrospun nanofibers for trapping structures

Tien-Li Chang et al.

Thu-D4-279

Fabrication of functionalized polyvinyl alcohol/graphene hybrid nanofibers by electrospinning for biomedical application

Tien-Li Chang et al.

Thu-D4-280**Controlling Neuronal Connectivity - A Microfluidic Microelectrode Array for Evaluation of Neurotrophic Factors**

Heinz D. Wanzenboeck et al.

Thu-D4-281**Integrated Micropillars for Cell Migration Studies in Microchannels**

Jin Wei et al.

Thu-D4-282**Adsorption-based chemical and biological microfluidic sensors: Deterministic versus stochastic approach in analysis of sensor response**

Zoran Djuric et al.

D5 System design and fabrication**Thu-D5-283****Fabrication of Pt-Silk Composite Material by a Novel Catalyzation in Supercritical Carbon Dioxide for the Application of Medical Devices**

Wan-ting Chiu et al.

Thu-D5-284**Porous polymer coating of SUS microneedle for transdermal drug delivery**

Asad Ullah et al.

Thu-D5-285**Spatially controlled, free-standing nanofiber membrane integrated transwell for the development of blood-brain barrier model**

Seongsu Eom et al.

Thu-D5-286**Carbon Based Semi-Transparent Microelectrode Arrays**

Pranoti Kshirsagar et al.

Thu-D5-287**Multilayer graphene structures for a gas sensor module with wireless circuits by picosecond laser irradiation**

Tien-Li Chang et al.

Thu-D5-288**Optimization of a Biosensor Device based on a microwave Split-Ring Resonator**

Lisa-Marie Wagner et al.

Thu-D5-289**Roll-to-Roll pilot line for large-scale manufacturing of microfluidic devices**

Stefan Köstler et al.

Thu-D5-290**Fabrication of micropillar arrays of height gradient for cell patterning studies**

Bin Wang et al.

Thu-D5-291**Design and analysis of a metamaterial-based label-free biosensor for detection of DNA backbone frequencies in THz region**

Sahar Mirzaei et al.

Thu-D5-292**Laboratory injection molder for the fabrication of porous PCL scaffolds using NaCl and sucrose crystals as porogen.**

Tania Limongi et al.

D6 Applications**Wed-D6-293****Trajectory manipulation of microchains in an oscillation magnetic field**

Ya-wei Lee et al.

Wed-D6-294**The Seal Ring In The Suction Adhesion Formed By Microstructure Of Suckermouth Fish**

Jinrong Wang et al.

Wed-D6-295**Patterned Parylene C for cell adhesion, spreading and alignment**

Xiaolong Tu et al.

Wed-D6-296

Plasmonic Substrates for Metal Enhanced Fluorescence

Gerhard Hawa et al.

Wed-D6-297

Characterization of suspended DNA by laser Raman spectroscopy

Monica Marini et al.

Wed-D6-298

Culture patch method for primary hippocampal neurons culture

Yadong Tang et al.

Wed-D6-299

Glycosaminoglycan micro-patterned hydrogels promote cell differentiation: effect of Surface chemistry and pattern

Santos Merino et al.

Wed-D6-300

Nanocontact printing of proteins to pattern in-vivo membrane proteins

Marco Lindner et al.

Wed-D6-301

Electrospraying particles for loading into microcontainers for drug delivery

Line Hagner Nielsen et al.

Wed-D6-302

A Portable Fluorescent Sensing System with Multicolor Excitation LEDs

Jin-Woo Choi et al.

Wed-D6-303

Multi-well screening platform with micro-scale topographies for efficient cell proliferation

Seonga An et al.

Wed-D6-304

Characterization of CrC coated copper as proton exchange membrane fuel cell bipolar plates material

Ya-wei Lee et al.

Wed-D6-305

Dispersed Demultiplexing system for ECoG

Juan Pablo Marcoleta et al.