

### Session Topic 3 -- Nanofabrication, Nano Lithography, Nano Manipulation, and Nano imaging

**Chairs:** John Yeow, University of Waterloo  
John Randall, Zyvex

#### TUESDAY, Room M2

Paper ID	Time	Title	Authors & Affiliations
PID620531	10:00-10:30	<i>STM Atom/Molecule Manipulation: Realizing Single Molecule Switches and Devices</i>	Saw-Wai Hla, Ohio University, USA
PID550862	10:30 - 11:00	<i>Fabricating Uncooled IR Nanobolometers on a MEMs Process</i>	Stephen Gilmartin, Analog Devices, Ireland; Khalil Arshak, University of Limerick, Ireland; Damian Collins, Analog Devices, Ireland; Dave Bain, Analog Devices, Ireland; Bill Lane, Analog Devices, Ireland; Olga Korostynska, University of Limerick, Ireland; Arous Arshak, University of Limerick, Ireland; Eamon Hynes, Advanced Manufacturing Control Systems, Ireland; Brendan McCarthy, Tyndall National Institute, Ireland; and Simon Newcomb, Glebe Scientific, Ireland
PID553197	11:00 - 11:30	<i>Controlled Growth of Zinc Oxide Nanorod Array in Aqueous Solution by Zinc Oxide Sol-gel Thin Film in Relation to Growth Rate and Optical Property</i>	Jing-Shun Huang, National Taiwan University, Taiwan; and Ching-Fuh Lin, National Taiwan University, Taiwan
	11:30 -- 12:00	<i>Programming Surfaces and Self-Assembly Functional Devices on Unconventional Substrates</i>	
PID595576	11:30 - 12:00	<i>Fabrication of sub-15-nm PdAu-Gaps on a Si/SiO<sub>2</sub>-Substrate by using Direct Nanotransfer Printing</i>	Sebastian Strobel, Technische Universität München, Germany; Stefan Harrer, Technische Universität München, Germany; Guillermo Penso-Blanco, Technische Universität München, Germany; Giuseppe Scarpa, Technische Universität München, Germany; Gerhard Abstreiter, Technische Universität München, Germany; Paolo Lugli, Technische Universität München, Germany; and Marc Tornow, Technische Universität Braunschweig, Germany
	<b>12:00 - 2:00</b>	<b>Lunch</b>	
	2:00 - 2:25	<i>Patterning and Imaging at the Nanoscale with Far-field Optics via Absorbance Modulation</i>	
PID553692	2:25 - 2:45	<i>Optically Defined Chemical Functionalization of Silicon Nanomechanical Resonators for Mass Sensing</i>	Jeffrey Baldwin, Naval Research Laboratory, USA; Maxim Zalalutdinov, SFA, Inc., USA; Bradford Pate, Naval Research Laboratory, USA; Michael Martin, Naval Research Laboratory, USA; and Brian Houston, Naval Research Laboratory, USA
	<b>2:45 - 3:00</b>	<b>Break</b>	
	<b>3:00 - 5:00</b>	<b>Poster Session</b>	

#### WEDNESDAY

PID555159	9:00 - 9:25	<i>Objects Self-replication in the Nanosystems of Informatics</i>	Stefan Wegrzyn, The Institute of Theoretical and Applied Informatics of the Polish Academy of Sciences, Poland; and Lech Znamrowski, Silesian University of Technology, Poland
PID593581	9:25 - 9:45	<i>A Novel Scanning Probe Array with Multiple Tip Sharpness for Variable-Resolution Scanning Probe Lithography Applications</i>	Murat Kaya Yapici, Texas A&M University, USA; and Jun Zou, Texas A&M University, USA
	<b>9:45 - 10:00</b>	<b>Break</b>	
PID594359	10:00 - 10:30	<i>Assembly of Nanoparticles and Nanoelectrodes on Polymer Nanoinjection Molded Templates</i>	Michael Rust, University of Cincinnati, United States; and Chong Ahn, University of Cincinnati, United States
PID596506	10:30 - 11:00	<i>Growth of Feature-Controlled ZnO Nanotube Arrays by Using Patterned Apertures with Hydrothermal Method</i>	Cha-Hsin Chao, Graduate Institute of Photonics Optoelectronics, Taiwan (R.O.C.); Jing-Shun Huang, Graduate Institute of Photonics Optoelectronics, Taiwan (R.O.C.); and Ching-Fuh Lin, Graduate Institute of Photonics and Optoelectronics, Taiwan (R.O.C.)

**Poster Session (Tuesday 3:00 - 5:00)**

PID596578	Poster	<i>Electric Current Induced Nanofilm Deposition on Carbon Nanotubes</i>	Pou Liu, Nagoya University, JAPAN; Masahiro Nakajima, Nagoya University, JAPAN; Zhan Yang, Nagoya University, JAPAN; and Toshio Fukuda, Nagoya University, JAPAN
PID596497	Poster	<i>Engineering the Bandgap of Carbon Nanotubes</i>	Yilun Luo, MSU, USA; Jiangbo Zhang, MSU, USA; Ning Xi, MSU, USA; Hongzhi Chen, MSU, USA; King Wai Chiu Lai, MSU, USA; Carmen Kar-Man Fung, MSU, USA; and T. J. Tarn, Washington University, St. Louis, USA
PID552760	Poster	<i>Metallated Porphyrin Self Assembled Monolayers as Cu Diffusion Barriers for the Nano-scale CMOS Technologies</i>	Mrunal Abhijith Khaderbad, Indian Institute of Technology Bombay, India; Kaushik Nayak, Indian Institute of Technology Bombay, India; Yedukondalu M, Indian Institute of Technology Bombay, India; Ravikanth M, Indian Institute of Technology Bombay, India; Soumyo Mukherji, Indian Institute of Technology Bombay, India; and V Ramgopal Rao, Indian Institute of Technology Bombay, India
PID554556	Poster	<i>Realization of Nano-Wires in Quartz using Focused Ion Beam and ICP/RIE Etching Process For Single Electron Transistor Fabrication</i>	P. Santosh Kumar Karre, Michigan Technological University, USA; Daw Don Cheam, Michigan Technological University, USA; and Paul L. Bergstrom, Michigan Technological University, USA
PID554564	Poster	<i>Mass Production of Room Temperature Single Electron Transistors using Step &amp; Flash Imprint Lithography and Lift-off Technique</i>	Daw Don Cheam, Michigan Technological University, United States; P. Santosh Kumar Karre, Michigan Technological University, United States; Marylene Palard, University of Texas Austin, United States; and Paul L. Bergstrom, Michigan Technological University, United States
PID596296	Poster	<i>The Behaviors of Direct-Written Nanofibers on Patterned Substrate</i>	Gaofeng Zheng, Xiamen University, China; Honglian Wang, Xiamen University, China; and Daoheng Sun, Xiamen University, China
PID551467	Poster	<i>Planar Molecular Dynamics Simulation of Metallic Nanoparticles Manipulation</i>	Seyed Hanif Mahboobi, Sharif University of Technology, Iran; Ali Meghdari, Sharif University of Technology, Iran; Nader Jalili, Clemson University, United States; and Farshid Amiri, Behsaz Fanavar Sharif Co. , Iran