

Session Topic 16 -- Applications

Chairs: Jack Agee, Rice University
 Connie Luthy, Medical Product Innovation
 Alice Chow, Rice University

TUESDAY, Room M11 Commercialization

| Paper ID | Time | Title | Authors & Affiliations |
|-----------|---------------------|--|---|
| PID642666 | 10:00 - 10:30 | <i>Practical Issues In Commercial And Regulatory Development Of Nanotechnology, The Good, the Bad and the Ugly</i> | Charles R McConachie, McConachie Law, USA |
| PID621944 | 10:30 - 11:00 | <i>Strategies for Closing the ITRS Funding Gap</i> | Yaw Obeng, NIST, USA; Stephen Knight, NIST, USA; and Joaquin Martinez de Pinillos , NIST, USA |
| PID596422 | 11:00 - 11:30 | <i>Licensing Nanotechnology</i> | Robert Harrison, 24IP Law Group, Germany |
| PID621879 | 11:30 - 12:00 | <i>Developing New Nanotechnology Products</i> | Connie L. Luthy, PhD, MBA, Medical Product Innovation, USA |
| | 12:00 - 2:00 | Lunch | |

TUESDAY, Room M11 Defense

| Paper ID | Time | Title | Authors & Affiliations |
|-----------|--------------------|--|--|
| PID594733 | 2:00 - 2:45 | <i>Development of Nanoenergetic Gas-Generators</i> | Karen Martirosyan, University of Houston, USA; Leizheng Wang, University of Houston, USA; and Dan Luss, University of Houston, USA |
| | 2:45 - 3:00 | Break | |
| PID595692 | 3:00 - 3:30 | <i>ARRIpede: An Assembled Micro Crawler</i> | Rakesh Murthy, UT Arlington, USA; Dan Popa, UT Arlington, USA; and Aditya Das, UT Arlington, USA |
| PID597490 | 3:30 - 4:00 | <i>Analysis of Electromagnetic Effect on the electrorheological Properties of Nano-Laden Systems</i> | Jose Gutierrez, UTPA, USA; Mircea Chipara, UTPA, USA; Karen Lozano, UTPA, USA; Carlos Ramos, UTPA, USA; and Steven French, UTPA, USA |
| PID595596 | 4:00 - 4:30 | <i>CONTACT – Nanotechnology Research for Air Force Applications</i> | Jack Agee, Rice University, USA; and Alice Chow, Rice University, USA |

WEDNESDAY, Room M11 Medical/Life Sciences

| Paper ID | Time | Title | Authors & Affiliations |
|-----------|---------------|---|--|
| PID588647 | 10:00 - 10:30 | <i>Inlaid Carbon Nanofiber Nanoelectrode Array as Highly Efficient Dielectrophoresis Device for Bacteria Trapping</i> | Jun Li, Kansas State University, USA |
| PID552338 | 10:30 - 11:00 | <i>Nanoparticles for Uveal Melanoma Treatment</i> | Sheng Zhang, The University of Texas at Arlington, USA; Jun Zhou, The University of Texas at Arlington, USA; Zhibing Hu, The University of North Texas at Denton, USA; Ashwin Nair, The University of Texas at Arlington, USA; and Liping Tang, The University |

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|-----------|---------------------|--|--|
| PID596534 | 11:00 - 11:30 | <i>Interdigitated Array Electrodes with Nano Gaps Using Optical Lithography and Controlled Undercut Method</i> | Joon Sub Shim, University of Cincinnati, USA; Michael Rust, University of Cincinnati, USA; and Chong H. Ahn, University of Cincinnati, USA |
| PID596602 | 11:30 - 12:00 | <i>Methods to Measure Material Viscoelastic Properties using Sharp, Flat and Buckling Tips inside ESEM</i> | Mohd Ridzuan Ahmad, Nagoya University, Japan; Masahiro Nakajima, Nagoya University, Japan; Seiji Kojima, Nagoya University, Japan; Michio Homma, Nagoya University, Japan; and Toshio Fukuda, Nagoya University, Japan |
| | 12:00 - 2:00 | Lunch | |

WEDNESDAY, Room M11 Manufacturing

| Paper ID | Time | Title | Authors & Affiliations |
|-----------|--------------------|--|---|
| PID595697 | 2:00 - 2:25 | <i>Design and Manufacturing of a Fourier Transform Microspectrometer</i> | Aditya Das, UT Arlington, USA; Jeongsik Sin, UT Arlington, USA; Dan Popa, UT Arlington, USA; and Harry Stephanou, UT Arlington, USA |
| PID596488 | 2:25 - 2:45 | <i>Automatic Tool Changer for SPMs</i> | Mattias Neitzel, Fraunhofer IFF, Germany; Ulrich Schmucker, Fraunhofer IFF, Germany; and Mikhail Zubtsov, Fraunhofer IFF, Germany |
| | 2:45 - 3:00 | Break | |

THURSDAY, Room M11 Manufacturing

| Paper ID | Time | Title | Authors & Affiliations |
|-----------|-----------------------|--|---|
| PID596576 | 9:00 - 9:45 | <i>Fabrication of Very Large Area of Sub-100 nm Nanopillars Using Nanosphere Lithography</i> | Shih-Hsin Chang, University of Texas at Arlington, USA; and Yaowu Hao, University of Texas at Arlington, USA |
| | 9:45 - 10:00 | Break | |
| PID596711 | 10:00 - 10:30 | <i>A Novel Anti Nano-Silver Particle Bacteria</i> | Chi-Yea Yang, Biotechnology; Yu-Hsin Kao, Biotechnology; and Tan Yi Huang, Biotechnology |
| PID596831 | 10:30 -- 11:00 | <i>Computer Integrated Plasma Nano Manufacturing Workcell</i> | Jiangbo Zhang, Michigan State University, USA; Ning Xi, Michigan State University, USA; King Lai, Michigan State University, USA; Jeffri Narendra, Michigan State University, USA; Timothy Grotjohn, Michigan State University, USA; and Jes Asmussen, Mich |
| PID622004 | 11:00 -- 11:30 | <i>The electrodeposition of high-strength nanocrystalline metals and alloys as a means to augment the performance of electrical conductors</i> | Edward Yokley, Integran Technologies USA, Inc., USA; Ian Winfield, Integran Technologies USA, Inc., USA; Iain Brooks, Integran Technologies, Inc., Canada; Gino Palumbo, Integran Technologies, Inc., Canada; and Robert Heard, Integran Technologies USA, Inc. |
| | 11:30 -- 12:00 | Poster Session (Manufacturing, Medical) | |
| | 12:00 - 2:00 | Lunch | |
| | 2:00 - 3:00 | Poster Session (Cont'd -- Medical) | |

THURSDAY, Room M11 Posters - Manufacturing and Medical Applications

| Paper ID | Time | Title | Authors & Affiliations |
|---|---------------|--|---|
| Poster Session (Thursday 11:30am -- 12:00 and 2:00pm - 3:00pm) | | | |
| PID551917 | Manufacturing | <i>Rhodopsin Photon Receptor Energetics: Studies of Biomolecular Sensing and Processing</i> | Marina Lyshevski, Microsystems and Nanotechnologies, USA; Sergey Lyshevski, RIT, USA |
| PID590690 | Manufacturing | <i>Micro Regular Octahedron and Truncated Octahedron Cavities on <111> Oriented Silicon Wafer</i> | Hui Ju, Nagoya University, Japan |
| PID596031 | Medical | <i>Combined Multi-target Molecular Ultrasonography and Photothermal Therapy Using Cancer Targeting Gold Nano Rod Probes</i> | Dar-Bin Shieh, National Cheng Kung University, Taiwan; An An Ding, National Cheng Kung University, Taiwan; Ya-Na Wu, National Cheng Kung University, Taiwan; Ying-Yi Chen, National Chung Cheng University, Taiwan; Churng-Ren Chris Wang, National Chung Cheng |
| PID596003 | Medical | <i>Photoactive Compound-Triplex-Forming Oligonucleotide Linked Gold Nanoparticle as an Artificial Gene Specific DNA Cleaver Assembly</i> | Tsung-Lin Tsai, National Cheng Kung University, Taiwan; Dar-Bin Shieh, National Cheng Kung University, Taiwan; and Wu-Chou Su, National Cheng Kung University, Taiwan |
| PID596297 | Medical | <i>HER-2 Antibody Conjugated Gold Nano Rod for in Vivo Photothermal Therapy</i> | Ann-Ann Ding, National Cheng Kung University, Taiwan; and Dar-Bin Shieh, National Cheng Kung University, Taiwan |
| PID596451 | Medical | <i>An Iron Oxide Nanoparticle Drug Carrier for Improved Cancer Chemotherapy in Drug Resistance Line</i> | Ping-Chin Wu, National Cheng Kung University, Taiwan; Tsung-Lin Tsai, National Cheng Kung University, Taiwan; Fong-Yu Cheng, National Cheng Kung University, Taiwan; Chen-Sheng Yeh, National Cheng Kung University, Taiwan; and Dar-Bin Shieh, National Che |
| PID596469 | Medical | <i>Modeling and Control of Electroporation-mediated Gene Delivery</i> | Ou Ma, New Mexico State University, USA; and Mingjun Zhang, The University of Tennessee, USA |