

**5th Annual Conference on
FOUNDATIONS OF NANOSCIENCE:
SELF-ASSEMBLED ARCHITECTURES AND DEVICES (FNANO08)**



DATES of FNANO08: April 22 – April 25, 2008

FNANO08 Announcement: [[PDF](#)] [[TXT](#)] [[HTML](#)]

<http://www.cs.duke.edu/~reif/FNANO/FNANO08/FNANO08announce.html>

FNANO08 Webpage: <http://www.cs.duke.edu/~reif/FNANO/>

LOCATION: Snowbird Cliff Lodge, Snowbird, Utah

HOTEL Accommodations: <http://www.cs.duke.edu/~reif/FNANO/FNANO08/venue.html>

FNANO08 Conference Registration pages

If you are a Contributing Speaker, regular participant, or student participant (and **NOT** a Track Chair, Track co-Chair, Invited Speaker, Keynote Speaker, Conference Organizer, or Assistant): click here:

<http://fnano08.cs.duke.edu/registration/direct.php>

- **ONLY** *If you are a Track Chair, Track co-Chair, Invited Speaker, Keynote Speaker, Conference Organizer, or Assistant:* click here:

<http://fnano08.cs.duke.edu/registration/indirect.php>

SUPPORTING ORGANIZATIONS: Air Force Office of Scientific Research ([AFOSR](#)) and [Nanorex, Inc.](#)

SPONSORING SOCIETY: International Society For Nananoscale Science, Computation and Engineering ([ISNSCE](#)).

FNANO Program Schedule:

LOCATION: [Snowbird Cliff Lodge](#), [Snowbird](#), UT,

Dates of FNANO Conference: April 22 - April 25, 2008.

FNANO08 Program Chair: [John H. Reif](#) <reif@cs.duke.edu>, Department of Computer Science, Duke University, Durham, NC

FNANO08 Program CoChair:

- [Paul Weiss](#) <stm@psu.edu>, Department of Chemistry, Pennsylvania State University, University Park, PA

Conference Reception Desk: Location: Outside Ballroom

Talk Durations:

***Invited Talks:** (20 min.+ 5 min question period after talk) = 25 min. total duration

Keynote Talks: (30 min.+ 5 min question period after talk) = 35 min. total duration

Poster Presentations: During assigned Track Poster Presentation Times & at 6 PM – 7 PM of day of Track, as indicated below.

Tuesday, April 22, 2008

Track on Top-down Meets Bottom-up, Session A: 8:50 AM – 10:40 AM Tuesday, April 22

- **Description:** *Talks & posters in this track combine bottom-up self-assembly with top-down methods such as lithography or an external patterning force (e.g., electromagnetic field or chemical gradient).*
- **Track Chair:** [Marya Lieberman](#) <mlioberm@nd.edu>, Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN

Duration: (1 Keynote Talk + 2 other talks) = 35+25 min. = 50 min.

Location: Ballroom 1

Keynote Talk: Abiological Self-Assembly: Predesigned Metallacycles and Metallacages via Coordination
Speaker: Peter Stang [Stang@chem.utah.edu](#) (Dept of Chemistry, University of Utah, Salt Lake City, Utah)

Invited Talk: Building Devices Layer-by-Layer

Speaker: Paula Hammond [hammond@mit.edu](#) (Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge MA)

Refreshment & Poster Session 9:40 AM – 10:45 AM Tuesday, April 22

Location: Outside Ballroom 1

Posters for Track on Top-down Meets Bottom-up

Poster: Fabrication of Micro-Clusters Based on Close-Packed Monolayer

Presenter: Sunghoon Kwon [salee30@gmail.com](#) (Dept. of Electrical Engineering, Seoul National University, Seoul, Korea)

Authors: Seung Ah Lee and Sunghoon Kwon (Seoul National University)

Poster: Chemically Directed Surface Alignment and Wiring of Self-Assembled Nanoelectrical Circuits

Presenter: Jianfei Liu ljf6362@gmail.com (Department of Chemical Engineering)

Authors: Jianfei Liu, Hector Becerril, Michael Lee, Kyle Nelson, Elliot Bird, Laurie Hutchins, Hiram Conley, Dean Wheeler, Robert Davis, Adam Woolley, Matthew Linford and John Harb (Brigham Young University)

Poster: Nanomanufacturing Using Template Directed Assembly of Nanoscale Elements

Presenter: Joey Mead Joey_Mead@uml.edu (Department of Plastics Engineering, University of Massachusetts Lowell, Lowell, MA)

Authors: Joey Mead (University of Massachusetts Lowell) Ahmed Busnaina (Northeastern University), Glen Miller (University of New Hampshire), Carol Barry (University of Massachusetts Lowell), Nicol McGruer (Northeastern University) and Jacqueline Isaacs (Northeastern University)

Track on Top-down Meets Bottom-up, Session B: 10:45 AM – 11:35 AM Tuesday, April 22

- **Description:** Talks & posters in this track combine bottom-up self-assembly with top-down methods such as lithography or an external patterning force (e.g., electromagnetic field or chemical gradient).
- **Track Chair:** [Marya Lieberman](mailto:mliieberm@nd.edu) <mliieberm@nd.edu>, Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN

Duration: (2 other talks) = 2*25 min. = 50 min.

Location: Ballroom 1

Invited Talk: Nascent Metal Atom-Molecule Interactions - From Nanostructure Creation to Fabrication of Device Contacts

Speaker: David Allara dla3@psu.edu (Pennsylvania State University, University Park, PA)

Contributed Talk: Single-Electron Transistors made by chemical patterning of silicon dioxide substrates and selective deposition of gold nanoparticles

Presenter: Gleb Finkelstein gleb@duke.edu (Physics Department, Duke University, Durham, NC)

Authors: Ulas Coskun, Henok Mebrahtu, Paul Huang, David Sebba, Jeremy Huang, Adriana Biasco, Alex Makarovski, Anne Lazarides, Thom LaBean and Gleb Finkelstein (Duke University)

Track Self-assembly of Peptide-Protein Nanostructures: 11:35 AM – 12:00 PM Tuesday, April 22

- **Track Chair:** [Mehmet Sarikaya](mailto:sarikaya@u.washington.edu) <sarikaya@u.washington.edu>, (Genetically Engineered Materials Science and Engineering Center, Materials Science and Engineering, University of Washington, Seattle, WA)
- This Track is supported by [UW-MRSEC](#) via NSF

Invited Talk: Molecular specifications for protein and polypeptides which interact with and direct the assembly of inorganic solids

Speaker: John Evans jse1@nyu.edu (Laboratory for Chemical Physics, New York University, NY)

Duration: (1 other talk) = 25 min.

Location: Ballroom 1

Lunch Break: 12:00 PM – 1:00 PM Tuesday, April 22

Track on Self-Assembled Surface Chemistry: 1:00 PM – 2:25 PM Tuesday, April 22

- **Track Chair:** [Lloyd Smith](mailto:smith@chem.wisc.edu) <smith@chem.wisc.edu>, (Department of Chemistry, University of Wisconsin, Madison, WI)
- **CoChair:** [Paul Weiss](mailto:stm@psu.edu) <stm@psu.edu> (Department of Chemistry, Pennsylvania State University, University Park, PA)

Duration: (1 Keynote Talk + 2 other talks) = 35+2*25 min. = 1hr 25 min.

Location: Ballroom 1

Keynote Talk: Microscale Self-Assembly of Mammalian Cells for Bio-Electronic Integration

Speaker: Richard Mathies rich@zinc.cchem.berkeley.edu (Department of Chemistry, University of California, Berkeley, California)

Authors: Erik S. Douglas, Ravi A. Chandra, Carolyn R. Bertozzi, Matthew B. Francis, and Richard A. Mathies (UCB/UCSF Joint Graduate Group in Bioengineering and Department of Chemistry, University of California, Berkeley)

Invited Talk: Carbon films enable light-directed synthesis of high-density DNA arrays on metal substrates

Speaker: Lloyd M. Smith smith@chem.wisc.edu (Department of Chemistry, University of Wisconsin-Madison, Madison, WI)

Contributed Talk: Block-oligonucleotide Brushes: Controlled Structure and Hybridization Properties

Speaker: Dmitri Petrovykh petrovykh@nrl.navy.mil (Naval Research Laboratory, Washington, DC)

Authors: Dmitri Petrovykh (University of Maryland and Naval Research Laboratory), Aric Opdahl (University of Wisconsin) and Lloyd Whitman (Naval Research Laboratory)

Track on Viral Self-Assembly: 2:25 PM – 3:50 PM Tuesday April 22

- **Track Chair:** [Adam Zlotnick](mailto:adam-zlotnick@ouhsc.edu) <adam-zlotnick@ouhsc.edu>, Dept of Biochemistry & Molecular Biology, University of Oklahoma, Oklahoma City, OK

Duration: (1 Keynote Talk + 2 other talks) = 35+2*25 min. = 1hr 25 min.

Location: Ballroom 1

Keynote Talk: Cellular Automata and Molecular Automata that Infect Cells (Viruses)

Speaker: Alasdair C. Steven stevena@mail.nih.gov (Laboratory of Structural Biology, National Institute of Arthritis, Musculoskeletal and Skin Diseases, National Institutes of Health, Bethesda, MD)

Invited Talk: Viral Particles as Programmable Nanobuilding Blocks: Construction and Functionalization

Speaker: Nicole Steinmetz nicoles@scripps.edu Department of Cell Biology, The Scripps Research Institute, 10550 N. Torrey Pines Rd., La Jolla CA

Invited Talk: Determining Asymmetric Structures within Icosahedrally Symmetric Shells

Speaker: David Belnap belnap@chem.byu.edu Department of Chemistry and Biochemistry, Brigham Young University, Provo, UT.

Refreshment & Poster Session 3:50 PM – 4:45 PM Tuesday, April 22

Location: Outside Ballroom 1

Posters on Track on Self-Assembled Surface Chemistry

Poster: Dipole amplification: a new principle for the self-assembly of asymmetric monomers on metal surfaces

Presenter: Owain Vaughan ophv2@cam.ac.uk (Department of Chemistry, University of Cambridge, Cambridge, UK)
Authors: Owain Vaughan, Ali Alavi, Federico Williams and Richard Lambert (University of Cambridge)

Poster: Growth and Stability of Siloxane Self Assembled Monolayers on Gallium Nitride

Presenter: Christina Arisio carisio@nd.edu (Department of Chemistry and Biochemistry, Notre Dame, IN)
Authors: Christina Arisio, Catherine Cassou and Marya Lieberman (University of Notre Dame)

Poster: NanNanoshaving and Nanografting of Water Soluble Polymers on Glass Surfaces

Presenter: Hiram Conley hiramconley@gmail.com (Brigham Young University, Provo, UT)

Authors: Hiram Conley, Brian Davis, Katherine Hurd, Jodi Knoble, Matthew Linford and Robert Davis (Brigham Young University)

Poster: Surface modification for DNA nanostructure attachment on silicon

Presenter: Koshala Sarveswaran, ksarvesw@nd.edu (Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN)

Authors: Koshala Sarveswaran (University of Notre Dame), Alexi Lykoudis (St Joseph High School), Marya Lieberman (University of Notre Dame)

Poster: Selecting and Driving Nanoscale Assembly in Monolayer Films through Tailored Intermolecular Interactions

Presenter: Thomas Mullen, tmullen@psu.edu (Department of Chemistry, The Pennsylvania State University, University Park, PA)

Authors: T. J. Mullen, C. Srinivasan, M. J. Shuster, S. E. Brunker, L. M. Dominak, J. N. Hohman, A. A. Dameron, M. W. Horn, C. D. Keating, A. M. Andrews, and P. S. Weiss (The Pennsylvania State University)

Poster for (Special) Track on Cluster-Assembled Materials

Poster: Exploring photonic properties of multi-component nanoparticle system through DNA directed self-assembly

Presenter: Qiangbin Wang, qiangbin.wang@asu.edu (The Biodesign Institute, Arizona State University, Tempe, AZ)

Authors: Qiangbin Wang, Yan Liu, Jaswinder Sharma and Hao Yan (The Biodesign Institute, Arizona State University)

(No Posters for Track on Viral Self-Assembly)

(Special) Track on Cluster-Assembled Materials: 4:45 PM – 5:45 PM Tuesday, April 22

- **Track Chair:** [Paul S. Weiss](mailto:stm@psu.edu) <stm@psu.edu>, (Departments of Chemistry and Physics, Pennsylvania State University, University Park, PA)

Duration: (1 Keynote Talk+ 1 invited talk) = 35+1*25 min = 1hr

Location: Ballroom 1

Keynote Talk: From Superatoms to Cluster Assembled Materials

Speaker: A. Welford Castleman, Jr. awc@psu.edu (Departments of Chemistry and Physics, Pennsylvania State University, University Park, PA)

Authors: A. W. Castleman, Jr., (Departments of Chemistry and Physics, Pennsylvania State University) and S. N Khanna (Department of Chemistry, Virginia Commonwealth University)

Invited Talk: Invited Talk: Building with Artificial Atoms: Routes to Nanocrystal Based Materials and Devices

Speaker: Christopher B Murray cbmurray@sas.upenn.edu (University of Pennsylvania)

Author: Christopher B Murray

Combined Poster Session for All Posters of Day & Reception: 6:00 PM – 7:00 PM Tuesday, April 22

Location: Golden Cliff Room

Wednesday, April 23, 2008

Track on Fullerene Nanostructures: 8:00 AM – 9:50 AM Wednesday, April 23

- **Track Chair:** [Jie Liu](mailto:j.liu@duke.edu) <j.liu@duke.edu>, Department of Chemistry, Duke University, Durham, NC

Duration: (1 Keynote Talk + 3 other talks) = 35+3*25 min. = 1hr 50 min.

Location: Ballroom 1

Keynote Talk: Aligned Arrays and Random Networks of Single Walled Carbon Nanotubes for Digital and RF

Analog Electronics

Speaker: John Rogers jrogers@uiuc.edu (University of Illinois, Urbana, IL)

Author: John Rogers

Invited Talk: Growth of Ultralong Single-Walled Carbon Nanotubes on Substrates

Speaker: Yan Li yanli@pku.edu.cn (College of Chemistry and Molecular Engineering, Peking University, Beijing, China)

Authors: Zhong Jin, Weiwei Zhou, Yu Liu, Yan Zhang, Jingyong Wang and Yan Li (Peking University)

Invited Talk: Aligned Carbon Nanotube Membranes: Transport Enhancement and Gatekeeper Activity

Speaker: Bruce Hinds bjhinds@engr.uky.edu (University of Kentucky)

Authors: Mainak Majumder, Karin Keiss, Xin Su, Xin Zhan, Bruce Hinds (University of Kentucky)

Contributed Talk: Growth of High Density Aligned Single Walled Carbon Nanotubes Using Cu Catalysts on Quartz Substrates

Speaker: [Jie Liu](mailto:j.liu@duke.edu) <j.liu@duke.edu>, (Department of Chemistry, Duke University, Durham, NC)

Author: [Jie Liu](mailto:j.liu@duke.edu) <j.liu@duke.edu>

Refreshments 9:50 AM – 10:05 AM Wednesday, April 23

Location: Outside Ballroom 1

FNANO ISNSCE Nanoscience Prize Talk: 10:05 PM -11:05 PM Wednesday, April 23

Conference Keynote Talk: Combining "Bottom-up" and "Top-down" in Making Nanostructures and Assemblies

Speaker: [George Whitesides](mailto:gwhitesides@gmwgroup.harvard.edu) <gwhitesides@gmwgroup.harvard.edu>, (Department of Chemistry, Harvard University, Cambridge, MA)

Location: Ballroom 1

Track Self-Assembly of Peptide-Protein Nanostructures: 11:05 AM – 12:30 PM Wednesday, April 23

▪ **Track Chair:** [Mehmet Sarikaya](mailto:sarikaya@u.washington.edu) <sarikaya@u.washington.edu>, (Genetically Engineered Materials Science and Engineering Center, Materials Science and Engineering, University of Washington, Seattle, WA)

▪ This Track is supported by [UW-MRSEC](#) via NSF

Duration: (1 keynote + 2 other talks) = 35+2*25 min. = 1hr 25 min.

Location: Ballroom 1

Keynote Talk: Genetically Designed Peptides as Building Blocks for Nanotechnology

Speaker: [Candan Tamerler](mailto:tamerler@itu.edu.tr) <tamerler@itu.edu.tr>, (Molecular Biology and Genetics, Istanbul Technical University, Istanbul, Turkey)

Invited Talk: Peptides as Smart Molecular Linkers in Hybrid Nanophotonics

Speaker: Hilmi Volkan Demir volkan@bilkent.edu.tr (Bilkent University, Nanotechnology Research Center, Bilkent, Ankara, Turkey)

Invited Talk: Knowledge-Based Design of Inorganic-Binding Peptides

Speaker: Ersin Emre Oren eeoren@u.washington.edu (Materials Science and Engineering, University of Washington, Seattle, WA)

Authors: Ram Samudrala (University of Washington), Ersin Emre Oren (University of Washington), Candan Tamerler (Istanbul Technical University), Mehmet Sarikaya (University of Washington)

Lunch Break: 12:30 PM – 1:30 PM Wednesday, April 23

Track on Biomedical Nanotechnology: 1:30 PM – 3:20 PM Wednesday, April 23

- **Track Chair:** [Carston R. Wagner](mailto:wagne003@tc.umn.edu) <wagne003@tc.umn.edu>, Department of Medicinal Chemistry, University of Minnesota, Minneapolis, MN
- **Track coChair:** [Thomas LaBean](mailto:thl@cs.duke.edu) <thl@cs.duke.edu>, Department of Computer Science, Duke University, Durham, NC

Duration: (1 keynote + 3*invited talks) = 35+3*25 min. = 1hr 50 min.

Location: Ballroom 1

Keynote Talk: Bionanofabrication with Biomolecules and Hydrated Polymers at Surfaces

Speaker: Ashutosh Chilkoti chilkoti@duke.edu (Department of Biomedical Engineering, Duke University, Durham, NC)

Invited Talk: Rational Design of Biomimetic Nanostructures via Self-Assembly of Helical Peptides

Speaker: Vincent P. Conticello vcontic@emory.edu (Department of Chemistry, Emory University, Atlanta, GA)

Invited Talk: Self-assembling nucleic acid probe tiles for nanomedicine

Speaker: Hao Yan hao.yan@asu.edu (The Biodesign Institute, Arizona State University, Tempe, AZ)

Invited Talk: Multifunctional Mesoporous Silica Nanoparticles for Biomedical Applications

Speaker: Victor S.-Y. Lin vsylin@iastate.edu (Department of Chemistry, Iowa State University, Ames, IA)

Refreshment & Poster Session 3:20 PM – 4:05 PM Wednesday, April 23

Location: Outside Ballroom 1

Poster for Track Self-assembly of Peptide-Protein Nanostructures

Poster: Self-Assembly of Peptide-grafted HPMA Copolymers and Their Potential for Sustained Release of Biomacromolecules

Presenter: Jiyuan Yang jiyuan.yang@utah.edu (University of Utah, Salt Lake City, UT)

Authors: Jiyuan Yang and Jindrich Kopecek (University of Utah)

Posters for Track on Biomedical Nanotechnology

Poster: Surface modifications of gold substrates for bacteriophage attachment to develop highly-specific cantilever-based bacteria sensors

Presenter: Dr. Amit Singh <amit2@ualberta.ca> (Post Doc Fellow, National Institute of Nanotechnology, University of Alberta, Edmonton, Alberta, Canada)

Authors: Amit Singh (National Institute of Nanotechnology), Nick Glass (National Institute of Nanotechnology), Luc Gervais (National Institute of Nanotechnology), Murat Gel (National Institute of Nanotechnology), M Tolba (Canadian Research Institute for Food Safety, University of Guelph) Luba Brovko (Canadian Research Institute for Food Safety, University of Guelph), Mansel Griffiths (Canadian Research Institute for Food Safety, University of Guelph), Stephane Evoy (National Institute of Nanotechnology)

Poster: Expanding Structural Diversity of D, L-Peptide Foldamers

Presenter: John Kulp john.kulp@nrl.navy.mil (Naval Research Laboratory, Washington, DC)

Authors: John Kulp and Thomas Clark (Naval Research Laboratory)

Poster: Biocompatible pH Responsive Nanovalves: The Next Generation of Antitumor Drugs Delivery Systems

Presenter: Niveen Khashab niveen@chem.ucla.edu (Northwestern / UCLA)

Authors: Niveen Khashab (Northwestern / UCLA), Y-W Yang (UCLA), S. Angelos (UCLA), J. Fraser Stoddart

(Northwestern / UCLA) and
Jeffrey Zink (UCLA)

Poster: Self-Assembling Diblock Copolymer of Poly [N-(2-hydroxypropyl)methacrylamide] and a β -Sheet Peptide

Presenter: Larisa Radu larisa.radu@utah.edu (Department of Pharmaceutics and Pharmaceutical Chemistry, University of Utah, Salt Lake City, Utah)

Authors: Larisa Cristina Bors Radu (Department of Bioengineering), Jiyuan Yang (Department of Pharmaceutics and Pharmaceutical Chemistry), Jindrich

Kopecek (Departments of Bioengineering and Pharmaceutics and Pharmaceutical Chemistry) University of Utah

Poster: Specific detection of proteins using nanomechanical resonators

Presenter: Csaba Guthy guthy@ualberta.ca (Dept. of Electrical and Computer Engineering, University of Alberta, Alberta, Canada)

Authors: Csaba Guthy (Department of Electrical and Computer Engineering), Lee

Fischer (Department of Electrical and Computer Engineering), Vincent Wright (Department of Chemistry), Amit

Singh (Department of Electrical and Computer Engineering), Jillian Buriak (Department of Chemistry) and Stephane Evoy (Department of Electrical and Computer Engineering) University of Alberta.

Poster: Electron beam lithography on self-assembled monolayers of poly(ethylene glycol) for nanoscale biomolecule patterning

Presenter: Bo Gao bgao@nd.edu (Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN)

Authors: Bo Gao (Department of Chemistry and Biochemistry), Gary Bernstein (Department of Electrical

Engineering) and Marya Lieberman (Department of Chemistry and Biochemistry) University of Notre Dame.

Poster: Chemically Controlled Assembly of Polyvalent Single-Chain Antibody Nanorings

Presenter: Carston R. Wagner wagne003@tc.umn.edu (Department of Medicinal Chemistry, University of Minnesota, Minneapolis, MN)

Authors: Carston R. Wagner (University of Minnesota, Depts. of Medicinal Chemistry, Chemistry), Qing Li

(University of Minnesota, Chemistry), David Hapka (College of Pharmacy, Minneapolis), Hua Chen (University of Minnesota, Therapeutic Radiation), Daniel A. Vallera (University of Minnesota, Dept. of Therapeutic Radiation)

Poster: Preparation of Nickel-NTA-DNA Conjugates for Binding of Histidine-Tagged Proteins to DNA Nanostructures

Presenter: Abhijit Rangnekar abhijit@chem.au.dk (Department of Chemistry, Aarhus University, Denmark)

Authors: Abhijit Rangnekar, (Aarhus University, Department of Chemistry), Thomas H LaBean, (Duke University, Durham, NC), Kurt Vesterager Gothelf, (Aarhus University, Department of Chemistry)

Poster: Photo-Responsive Bacteriorhodopsin-Containing Hydrogels from Nano to Micro

Presenter: Ishtiaq Saaem ali.saaem@duke.edu (Department of Biomedical Engineering, Duke University, Durham, NC)

Authors: Ishtiaq Saaem, (Duke University, Department of Biomedical Engineering), Jingdong Tian (Duke Institute for Genome Sciences & Policy, Department of Biomedical Engineering)

Poster: Self-Assembling DNA Nanostructure Scaffolds for Multivalent Thrombolytic Delivery

Presenter: Hanying Li <hl29@duke.edu> (Duke University, DUMC, Durham, NC 27710)

Authors: Hanying Li (Duke University), Daniel Kenan (Duke University, Department of Pathology) and Thomas LaBean (Duke University, Department of Computer Science)

Track on Nanoplasmonics & Nanotovoltaics: 4:05 PM – 5:55 PM Wednesday, April 23

- **Track Chair:** [Eray Aydil](mailto:aydil@tc.umn.edu) <aydil@tc.umn.edu>, Department of Chemical Engineering and Materials Science, (University of Minnesota, Minneapolis, MN)

Duration: (1 Keynote+ 3 other talks) = 35+3*25 min. = 1hr 50 min.

Location: Ballroom 1

Keynote Talk: Why has doping been difficult in semiconductor nanocrystals?

Speaker: David Norris dnorris@umn.edu (Chemical Eng. & Materials Sci., University of Minnesota, Minneapolis, MN)

Invited Talk: Exploiting the optical properties of metal nanostructures in solar cells

Speaker: Peter Peumans ppeumans@stanford.edu (Dept of Electrical Engineering, Stanford University, CA)

Invited Talk: Doped silicon nanocrystal inks for low-cost photovoltaics and printed electronics

Speaker: Uwe Kortshagen uk@me.umn.edu (University of Minnesota, Minneapolis, MN)

Authors: Xiaodong Pi and Uwe Kortshagen (University of Minnesota)

Invited Talk: Long-Range Surface Plasmons for Integrated Optic Applications

Speaker: Aloyse Degiron degiron@ee.duke.edu (Duke University, Durham, NC)

(No Posters for Track on Nanoplasmonics & Nanotovoltaics)

Combined Poster Session for All Posters of Day & Reception: 6:00 PM – 7:00 PM Wednesday, April 23

Location: Golden Cliff Room

Thursday, April 24, 2008

Track on Molecular Motors, Session A: 8:30 AM – 9:45 AM Thursday, April 24

- **Track Chair:** [Andrew Turberfield](mailto:a.turberfield@physics.ox.ac.uk) <a.turberfield@physics.ox.ac.uk>, (Department of Physics, Oxford University, Oxford, UK)

Duration: (3 other talks) = 3*25 min. = 1hr 15 min.

Location: Ballroom 1

Invited Talk: Raiding Nature's Toolbox: Adapting Microtubules and Motor Proteins for Nanoscale Materials Assembly

Speaker: Erik Spoerke edspoer@sandia.gov (Sandia National Laboratories, Albuquerque, NM)

Authors: Erik Spoerke, George Bachand, Andrew Boal, Haiqing Liu, Judy Hendricks and Bruce Bunker (Sandia National Laboratories)

Invited Talk: Engineering Biomolecular Motility

Speaker: Niles Pierce niles@caltech.edu (Caltech, Pasadena, CA)

Authors: Harry M.T. Choi, Suvir Venkataraman, Peng Yin, Robert M. Dirks, Colby R. Calvert, Paul W.K. Rothmund, Erik Winfree, Niles A. Pierce (Caltech)

Invited Talk: Coordinated Motion of a Synthetic Molecular Motor

Speaker: Andrew Turberfield a.turberfield@physics.ox.ac.uk (Clarendon Laboratory, Oxford, United Kingdom)

Authors: Jonathan Bath, Simon Green, Anthony Genot, Andrew Turberfield (University of Oxford, Department of Physics)

Refreshment & Poster Session 9:45 AM – 10:30 AM Thursday, April 24

Location: Outside Ballroom 1

Posters for Track on Molecular Motors

Poster: Tracks for DNA motors

Presenter: Anthony Genot a.genot@physics.ox.ac.uk (University of Oxford, Department of Physics, Clarendon Laboratory, Oxford, United Kingdom)

Authors: Anthony J. Genot, Jon Bath and Andrew J. Turberfield (Oxford University)

Poster: A Contractile DNA Machine

Presenter: Daniel Lubrich phyld@nus.edu.sg (Department of Physics, National University of Singapore, Singapore)

Authors: Daniel Lubrich, Jie Lin and Jie Yan (National University of Singapore)

Posters for Track on Self-Assembled DNA Nanostructures

Poster: A route to DNA polyhedra and cages

Speaker: Chengde Mao mao@purdue.edu (Purdue University, Dept. of Chemistry, West Lafayette, IN)

Poster: Shaping nanoscale devices and tools using DNA

Presenter: William Shih william_shih@dfci.harvard.edu (Dana-Farber Cancer Institute Boston, MA)

Authors: Hendrik Dietz and William Shih (Dana-Farber Cancer Institute)

Poster: Self-assembling DNA nanostructures as platforms for placement of fluorophores on silicon

Presenter: Kyoung Nan Kim kkim4@nd.edu (Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN)

Authors: Kyoung Nan Kim, Vladimir V. Protasenko, Jay P. Giblin, Masaru K. Kuno, Marya Lieberman (University of Notre Dame)

Poster: Programmable self-assembly for the construction of aperiodic address spaces on heat-resistant periodic DNA arrays

Presenter: Miho Tagawa tagawa@genta.c.u-tokyo.ac.jp (Department of Life Sciences and Institute of Physics, The University of Tokyo, Tokyo, Japan)

Authors: Miho Tagawa, Koh-ichiroh Shohda, Akira Suyama (University of Tokyo)

Poster: In Vivo Replication of Artificial DNA Nanostructures

Presenter: Chenxiang Lin chenxiang.lin@asu.edu (Biodesign Institute, Arizona State University, Tempe, AZ)

Authors: Chenxiang Lin (Arizona State University), Sherri Rinker (Arizona State University), Xing Wang (New York University), Yan Liu (Arizona State University), Nadrian Seeman (New York University), Hao Yan (Arizona State University)

Poster: Facile In situ Generation of Dithiocarbamate Ligands for Stable Gold Nanoparticle-Oligonucleotide Conjugates

Presenter: Hao Yan hao.yan@asu.edu (The Biodesign Institute, Arizona State University, Tempe, AZ)

Authors: Jaswinder Sharma, Rahul Chhabra, Hao Yan, Yan Liu (Arizona State University)

Poster: Deterministic Positioning of Photonic Elements on Self-assembled DNA Nanostructures

Presenter: Hao Yan hao.yan@asu.edu (The Biodesign Institute, Arizona State University, Tempe, AZ)

Authors: Rahul Chhabra (Arizona State University), Jaswinder Sharma (Arizona State University), Yan Liu (Arizona State University), Shengli Zou (University of Central Florida), Hao Yan (Arizona State University)

Poster: Training tyros with tiny tinkertoys: Preparing future Citizen-Scientists for success at the nanoscale and beyond

Presenter: Philip Lukeman psl@csupomona.edu (Department of Chemistry, California State Polytechnic University, Pomona, CA)

Authors: Alexander Mittal (NYU Chemistry), John Sadowski (NYU Chemistry), Shane Mulligan (NYU Chemistry), Robert Barish (NYU Chemistry), Aaron Rifkin (NYU Chemistry), Michael O'Connor (NYU Chemistry), Mary L Stevenson, Meghna Desai, Miriam Boer, Elizabeth A Phipps, Arsalaan K Ahmed, Nadrian C Seeman, Philip S Lukeman

Poster: DNA Directed Assembly of Nanoparticles Linear Structure for Nanophotonics

Presenter: Baoquan Ding bding@lbl.gov (Molecular Foundry, Lawrence Berkeley National Lab, Berkeley, CA)

Authors: Baoquan Ding, Stefano Cabrini, Ronald Zuckermann, Jeffrey Bokor (Molecular Foundry, Lawrence Berkeley National Lab)

Poster: Self-Assembled DNA Nanostructures for Label-free RNA Assays and Protein Cooperative Aptamer Binding

Speaker: Yonggang Ke younggang.ke@asu.edu (Biodesign Institute at Arizona State University, Tempe, AZ)

Authors: Yonggang Ke, Sherri Rinker, Stuart Lindsay, Yung Chang, Yan Liu, Hao Yan (Arizona State University)

Poster: T-Motif: A Novel Non-crossover Motif for DNA Nanostructures

Speaker: Shogo Hamada hamada@mrt.dis.titech.ac.jp (Tokyo Institute of Technology, Yokohama-city, Japan)

Authors: Shogo Hamada and Satoshi Murata (Tokyo Institute of Technology)

Poster: Asymmetric Double-Crossover Arrays

Speaker: William Sherman wsherman@bnl.gov (Brookhaven National Laboratory, Upton, NY)

Authors: Kumara Mudalige and William Sherman (Brookhaven National Laboratory)

Track on Molecular Motors, Session B: 10:30 AM – 11:30 AM Thursday, April 24

- **Track Chair:** [Andrew Turberfield](mailto:a.turberfield@physics.ox.ac.uk) <a.turberfield@physics.ox.ac.uk>, (Department of Physics, Oxford University, Oxford, UK)

Duration: (2 other talks) = 2*25 min. = 50 min.

Location: Ballroom 1

Contributed Talk: An Approach to Molecular Robotics

Speaker: Kyle Lund kyle.lund@asu.edu (Biodesign Institute, Arizona State University, Tempe, AZ)

Authors: Kyle Lund, Hao Yan (Biodesign Institute and Department of Chemistry and Biochemistry, Arizona State University), Steven Taylor, Renjun Pei, Milan Stojanovic (Department of Medicine, Nephrology, Columbia University)

Contributed Talk: Towards Programmable Molecular Machines

Presenter: Ho-Lin Chen holinc@gmail.com (California Institute of Technology, Pasadena, CA)

Authors: Ho-Lin Chen (California Institute of Technology), Anindya De (Indian Institute of Technology, Kanpur), Ashish Goel (Stanford University)

Track on Self-Assembled DNA Nanostructures, Session A: 11:30 AM – 12:30 PM Thursday, April 24

- **Track Chair:** [Nadrian Seeman](mailto:ncs1@feynman.acf.nyu.edu) <ncs1@feynman.acf.nyu.edu>, (Department of Chemistry, New York University, New York, NY)
- **coChair:** [Hao Yan](mailto:hao.yan@asu.edu) <hao.yan@asu.edu>, Center for Single Molecule Biophysics, The Biodesign Institute, Arizona State University, Tempe, AZ

Duration: (1 Keynote Talk + 1 other talk) = 35+1*25min = 1hr

Location: Ballroom 1

Keynote Talk: Dynamic DNA Templates for Patterning Materials in Two-and Three-Dimensions
Speaker: [Hanadi Sleiman](mailto:hanadi.sleiman@mcgill.ca) <hanadi.sleiman@mcgill.ca>, (McGill University, Montreal, QC, Canada)

Contributed Talk: Programming Biomolecular Self-Assembly Pathways
Speaker: Peng Yin py@caltech.edu (Caltech, Pasadena, CA)
Authors: Peng Yin, Harry M.T. Choi, Colby R. Calvert and Niles A. Pierce (Caltech)

Lunch Break: 12:30 PM – 1:30 PM Thursday, April 24

Track on Self-Assembled DNA Nanostructures, Session B: 1:30 PM – 2:45 PM Thursday, April 24

- **Track Chair:** [Nadrian Seeman](mailto:ncs1@feynman.acf.nyu.edu) <ncs1@feynman.acf.nyu.edu>, (Department of Chemistry, New York University, New York, NY)
- **coChair:** [Hao Yan](mailto:hao.yan@asu.edu) <hao.yan@asu.edu>, Center for Single Molecule Biophysics, The Biodesign Institute, Arizona State University, Tempe, AZ

Duration: (3 other talks) = 3*25min. = 1hr 15 min.

Location: Ballroom 1

Contributed Talk: Non-canonical base pairs for structural DNA nanotechnology
Presenter: Paul Paukstelis paul@icmb.utexas.edu (University of Texas at Austin, Institute for Cellular and Molecular Biology, Austin TX)
Authors: Paul Paukstelis (Institute for Cellular and Molecular Biology, University of Texas at Austin)

Contributed Talk: DNA-nanotube-based alignment media for NMR structure determination of membrane proteins
Speaker: William Shih william_shih@dfci.harvard.edu (Dana-Farber Cancer Institute Boston, MA)
Authors: Shawn Douglas (Dana-Farber Cancer Institute), James Chou (Harvard Medical School), William Shih (Dana-Farber Cancer Institute)

Contributed Talk: DNA lattices and protein arrays
Speaker: Daniele Selmi daniele.selmi@st-hughs.ox.ac.uk (University of Oxford, Department of Physics, Clarendon Laboratory, Oxford, United Kingdom)
Authors: Daniele Selmi (Department of Physics, Oxford University), Jonathan Malo (Department of Physics, Oxford University), Peter Harding (Department of Biochemistry, Oxford University), Helen Attrill (Department of Biochemistry, Oxford University), Anthony Watts (Department of Biochemistry, Oxford University), Andrew Turberfield (Department of Physics, Oxford University)

Refreshment & Poster Session 2:45 PM – 3:45 PM Thursday, April 24

Location: Outside Ballroom 1

Posters for Track on Computational Tools for Self-assembly

Poster: Analysis and Optimization of DNA Self-Assembly in Simulation
Presenter: Derrel Blain drblain@bellsouth.net (University of Memphis)
Authors: Derrel Blain and Max Garzon (University of Memphis)

Poster: NanoEngineer-1: A CAD-Based Molecular Modeling Program for Structural DNA Nanotechnology
Presenter: Damian Allis damian@somewhereville.com (Department of Chemistry Syracuse University, Syracuse, NY)
Authors: Mark Sims, Bruce Smith, Brian Helfrich, Ninad Sathaye, K. Eric Drexler (all of Nanorex Inc.), Damian Allis (Syracuse University and Nanorex, Inc.), Tom Moore, Russell Fish, Manoj Rajagopalan, Piotr Rotkiewicz (all of

Nanorex, Inc.)

Poster: On Hardware Accelerated Design of Non-Crosshybridizing DNA Libraries Using the LLCS and Pairwise Nearest-Neighbor Model

Duplex Stability Metrics

Presenter: Daniel Burns, burnsd@rl.af.mil (AFRL/RITC, Rome Research Site, Rome, NY)

Authors: Qinru Qiu (Binghamton University), Prakesh Mukre (Binghamton University), Qing Wu (Binghamton University), Daniel Burns (Air Force Research Laboratory, Information Directorate) and Thomas Renz (Air Force Research Laboratory, Information Directorate)

Poster: Software package for the design and analysis of DNA nanostructures

Presenter: Ebbe S. Andersen esa@mb.au.dk (Department of Molecular Biology, University of Aarhus, Denmark)

Authors: Ebbe S. Andersen (Department of Molecular Biology), Morten M. Nielsen (Department of Molecular Biology), Mingdong Dong (Department of Physics and Astronomy), Flemming Besenbacher (Department of Physics and Astronomy), Jorgen

Kjems (Department of Molecular Biology), Kurt V. Gothelf (Department of Chemistry)

Track on Computational Tools for Self-assembly 3:45 PM – 5:10 PM Thursday, April 24

- **Track Chair:** [Mark Sims](mailto:mark@nanorex.com) <mark@nanorex.com>, Nanorex, Inc., Bloomfield Hill, MI

Duration: (1 keynote + 2 invited talks) = 35 + 2*25 min. = 1hr 25 min.

Location: Ballroom 1

Keynote Talk: A Review of Computational Tools for the Study of Self-Assembled Nanostructures

Speaker: [Mark Sims](mailto:mark@nanorex.com) <mark@nanorex.com>, (Nanorex, Inc., Bloomfield Hill, MI)

Invited Talk: Computational protein Design with Rosetta

Speaker: Ingemar Andre ingemar@u.washington.edu (Dept. Biochemistry, University of Washington)

Authors: Ingemar Andre and David Baker (University of Washington)

Invited Talk: Interactive Assembly of Molecular Structures

Speaker: [Oliver Kreylos](mailto:kreylos@cs.ucdavis.edu) <kreylos@cs.ucdavis.edu>, (University of California, Davis)

Author: Oliver Kreylos

Combined Poster Session for All Posters of Thursday 24 & Friday 25 Receptions: 6:00 PM – 7:00 PM Thursday, April 24

Location: Golden Cliff Room

NanoEngineer-1 Workshop 7 PM - 8 PM Thursday, April 24

Workshop Chair: [Mark Sims](mailto:mark@nanorex.com) <mark@nanorex.com>, (Nanorex, Inc., Bloomfield Hill, MI)

Friday, April 25

Track on Principles and Theory of Self-Assembly, Session A: 8:00 AM – 9:25 AM Friday, April 25

- **Track Chair:** [Max Garzon](mailto:mgarzon@memphis.edu) <mgarzon@memphis.edu>, Department of Computer Science, The University of Memphis, Memphis, TN
- **Track coChair:** [Natasha Jonoska](mailto:jonoska@tarski.math.usf.edu) <jonoska@tarski.math.usf.edu>, (Department of Mathematics, University of South Florida, FL)

Duration: (1 Keynote Talk + 2 other talks) = 35+2*25 min. = 1hr 25 min.

Location: Ballroom 1

Keynote Talk: Improving nucleic acid secondary structure prediction via refined models

Speaker: Anne Condon condon@cs.ubc.ca (The Department of Computer Science, University of British Columbia, Vancouver, B.C., Canada)

Invited Talk: Simple Equilibrium Model for Tripodal Particle Aggregation

Speaker: James T. Kindt jkindt@emory.edu (Theoretical/Computational Chemistry, Emory University)

Invited Talk: Drying-mediated hierarchical self-assembly of nanoparticles

Speaker: Eran Rabani rabani@tau.ac.il (School of Chemistry, Tel Aviv University, Israel)

Refreshment & Poster Session 9:25 AM – 10:10 AM Friday, April 25

Location: Outside Ballroom 1

Posters on Principles and Theory of Self-Assembly

Poster: Metric Models of Hybridization and Gibbs Energy Landscapes

Presenter: Max Garzon mgarzon@memphis.edu (The University of Memphis)

Authors: Max Garzon and Vinhthuy Phan (The University of Memphis)

Poster: Towards Minimum Tile Self-Assembled Counters

Presenter: Ho-Lin Chen holinc@gmail.com (Caltech, Pasadena, CA)

Authors: Ho-Lin Chen (Caltech)

Poster: On-Line Self Assembly

Presenter: Neeraj Koul neeraj@cs.iastate.edu (Iowa State University, Ames, IA)

Authors: Neeraj Koul and Jim Lanthrop (Iowa State University)

Poster: Autonomous Reactivating Whiplash PCR for Locally Programmable Molecular Computation

Presenter: Urmi Majumder urmim@cs.duke.edu (Duke University, Dept of Computer Science, Durham, NC)

Authors: John Reif and Urmi Majumder (Duke University)

Poster for Track on Self-assembled Computer Circuit and System Architectures

Poster: Side-by-side Iron Phthalocyanine Dimer

Presenter: Wei He whe@nd.edu (Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN)

Authors: Wei He and Marya Lieberman (Department of Chemistry, University of Notre Dame)

Poster for Track on Self-assembled Computer Circuit and System Architectures

Poster: Side-by-side Iron Phthalocyanine Dimer

Presenter: Wei He whe@nd.edu (Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN)

Authors: Wei He and Marya Lieberman (Department of Chemistry, University of Notre Dame)

Posters for Track on Self-assembly Across Scales

Poster: Super-hydrophobic polymer structure for fluidic self-assembly process

Presenter: Ray Hua Horng huahorng@nchu.edu.tw (National Chung Hsing University, Institute of precision engineering)

Authors: C. C. Chiang (Department of Materials Science and Engineering) G. B. Lin (Institute of precision engineering), Ray Hua Horng (Institute of precision engineering), Dong Sing Wu (Department of Materials Science and Engineering) all from National Chung Hsing University.

Poster: Soft landing of gold clusters on chemically functionalized silica

Presenter: Valerie Goss vgoss@nd.edu (University of Notre Dame, South Bend, IN)

Authors: Valerie Goss (The University of Notre Dame), Koshala Sarveswaran (The University of Notre Dame), Sungsik Lee (Argonne National Laboratory), Yu Lei (Argonne National Laboratory), Stefan Vejda (Argonne National Laboratory), Marya

Lieberman (The University of Notre Dame)

Poster: Self-Assembled Optical Sensors on Plastic

Presenter: Samuel Kim samkimuw@u.washington.edu (University of Washington, Bellevue, WA)

Authors: Samuel Kim and Babak Parviz (University of Washington)

Poster: Contact Potential Difference for Face Alignment of Submillimeter Components with Chemical Reaction Kinetics

Presenter: Tomoki Tanemura tomoki-t@nms.me.kyoto-u.ac.jp (Kyoto University, Kyoto, Japan)

Authors: Tomoki Tanemura (Kyoto University), Yuichi Higuchi (Kyoto University), Koji Sugano (Kyoto University), Toshiyuki Tsuchiya (Kyoto University), Osamu Tabata (Kyoto University), Karl Bohringer (University of Washington)

Poster: DNA Nanoscaffold Directed Self-Assembly of Carbon Nanotube Devices

Presenter: Hareem Maune htariq@caltech.edu (Caltech, Pasadena, CA)

Authors: Hareem Maune, Si-ping Han, Robert Barish, Marc Bockrath, William Goddard and Erik Winfree (California Institute of Technology)

Track on Principles and Theory of Self-Assembly, Session B: 10:10 AM – 11:00 AM Friday, April 25

Duration: (2 other talks) = 2*25 min. = 50 min.

Location: Ballroom 1

Contributed Talk: A Formal Crystal Description System

Speaker: Gregory McColm mccolm@cas.usf.edu (Department of Mathematics, University of South Florida, Tampa, FL)

Authors: Edwin Clark, Mohamed Eddaoudi and Gregory McColm (University of South Florida)

Contributed Talk: Protein designs in HP models

Speaker: [Arvind Gupta](mailto:arvind@mitacs.ca) <arvind@mitacs.ca>, (Simon Fraser University)

Authors: Alireza Hadj Khodabakhshi, J'an Ma'nuch, Arash Rafiey, Ladislav Stacho and [Arvind Gupta](mailto:arvind@mitacs.ca) (Simon Fraser University)

Track on Self-assembled Computer Circuit and System Architectures: 11:00 AM – 12:50 PM Friday, April 25

- **Track Chairs:** [Philip J. Kuekes](mailto:kuekes@hpl.hp.com) <kuekes@hpl.hp.com>, Hewlett-Packard Corporation, Palo Alto, CA
- **coChair:** [Chris Dwyer](mailto:dwyer@ece.duke.edu) <dwyer@ece.duke.edu>, Dept of Electrical & Computer Engineering, Duke University, Durham, NC

Duration: (1 Keynote + 3 other talks) = 35 + 3*25 min. = 1hr 50 min.

Location: Ballroom 1

Keynote Talk: Molecular Electronics and Alternative Logic Systems

Speaker: Stan Williams stan.williams@hp.com (HP Labs, Palo Alto, CA)

Invited Talk: Imperfection-immune Carbon Nanotube VLSI Logic Circuits

Speaker: Subhashish Mitra subh@stanford.edu (Departments of Electrical Engineering and Computer Science, Stanford University, CA)

Invited Talk: Positioning Single DNA Rafts Atop Lithographically Fabricated Anchor Pads

Speaker: Marya Lieberman mlieberm@nd.edu (University of Notre Dame, Notre Dame, IN)

Contributed Talk: Design of a Self-Assembled Memory Circuit

Speaker: Dustin Reishus reishus@usc.edu (University of Southern California, Los Angeles, CA)

Lunch Break: 12:50 PM – 1:30 PM Friday, April 25

Track on Self-assembly Across Scales: 1:30 PM – 3:20 PM Friday, April 25

- **Track Chair:** [Karl Bohringer](mailto:karl@ee.washington.edu) <karl@ee.washington.edu>, Department of Electrical Engineering, University of Washington, Seattle, WA
- **coChair:** [Babak Amir Parviz](mailto:babak@ee.washington.edu) <babak@ee.washington.edu>, Department of Electrical Engineering, University of Washington, Seattle, WA

Duration: (1 Keynote Talk + 3 other talks) = 35+3*25 min. = 1hr 50 min.

Location: Ballroom 1

Keynote Talk: Micro/Nano assembly as a key to realize NEMS

Speaker: Osamu Tabata tabata@me.kyoto-u.ac.jp (Department of Micro Engineering, Kyoto University, JAPAN)

Invited Talk: Templated Assembly and Transfer of Particle Arrays

Speaker: Heiko Wolf hwo@zurich.ibm.com (IBM Research GmbH, Zurich Research Laboratory, Switzerland)

Authors: Tobias Kraus (Leibniz Institute for New Materials, Germany), Andrea Decker (IBM Research GmbH, Zurich Research Laboratory), Laurent Malaquin (CNRS/Institut Curie, Paris, France), Heinz Schmid (IBM Research GmbH, Zurich Research Laboratory), Cyrill Kuemin (IBM Research GmbH, Zurich Research Laboratory), Antje Rey (IBM Research GmbH, Zurich Research Laboratory), Nicholas D. Spencer (Laboratory for Surface Science and Technology, Department of Materials, ETH Zurich), Heiko Wolf (IBM Research GmbH, Zurich Research Laboratory)

Invited Talk: Approaches to Dynamically Programmable Self-Assembly

Speaker: Hod Lipson Hod.Lipson@cornell.edu (Mechanical & Aerospace Engineering and Computing & Information Science, Cornell University, Ithaca NY)

Contributed Talk: Guided Fluidic Self-Assembly of Microtrains Using Railed Microfluidics

Speaker: Sunghoon Kwon skwon@snu.ac.kr (School of Electrical Engineering and Computer Science, College of Engineering, Seoul National University, Seoul, South Korea)

Authors: Su Eun Chung, Wook Park, Sunghwan Shin, Seung Ah Lee and Sunghoon Kwon (Seoul National University)