

254th ACS National Meeting & Exposition, August 20-24, 2017, Washington, DC

ACS Meeting Theme: Chemistry's Impact on the Global Economy

Program Chair: Ramanathan Nagarajan (Ramanathan.Nagarajan.Civ@mail.mil)

Deadline for online submission of abstracts 5 April 2017

Go to <https://callforpapers.acs.org/dc2017/COLL> and then follow instructions to submit your abstract to the selected COLL Division symposium

Sci-Mix

ONLY if you are willing to present your work as a POSTER at the SCI-MIX, sign-up for the SCI-MIX.

Authors submitting abstracts online, whether for oral or poster presentation, will be asked to indicate during abstract submission, their interest in participating in Sci-Mix.

Sci-Mix is a poster session involving all Divisions of ACS, with the Divisions selecting what presentations to include in the Sci-Mix. The number of posters at Sci-Mix to be selected by a Division is limited to 10% of the total number of papers presented in that Division. Therefore, selection to present Sci-Mix posters is a special recognition conferred by the Division to the authors. Sci-Mix poster presentations are duplicates of the presentations made at the oral or poster sessions of the Division. Please note that this is the only kind of duplicate presentation allowed by ACS.

If you are making an oral presentation in the Division but have been selected to the Sci-Mix, you will also have to prepare the work for the poster presentation at Sci-Mix. Sci-Mix is traditionally held on Monday evening at 8:00 PM.

Topical Symposia – Assignment of Oral vs Poster Presentations

All topical symposia listed below are planned to include mainly oral sessions. However, depending on the number of abstracts submitted to a symposium and the constraints on scheduling, authors requesting oral presentations may be assigned poster presentations.

Technical Symposia

Symposium Organizer	Symposium Title
Wolfgang Parak, Biophotonics Group, University of Marburg, D-35037 Marburg, Germany, +49- 6421 28-24161; wolfgang.parak@physik.uni-marburg.de Pablo del Pino, BioNanoTools Laboratory, Center for Research in Biological Chemistry and Molecular Materials (CiQUS), Universidade de Santiago de Compostela, Calle Jenaro de la Fuente s/n, 15782 Santiago de Compostela, Spain. +34-881-815-700; pablo.delpino@usc.es Jesse V. Jokerst, Department of NanoEngineering, University of California, San Diego, La Jolla, California, USA 92093-0448; +1-858-246-0896; jjokerst@ucsd.edu	Multimodal imaging with colloids

<p>Luis M. Liz-Marzán, Bionanoplasmonics Laboratory, CIC biomaGUNE, Paseo de Miramón 182, 20009 Donostia – San Sebastián, Spain. +34-943-005-300; lizmarzan@cicbiomagune.es</p>	
<p>Prakash R. Rai, Department of Chemical Engineering, University of Massachusetts, Lowell, MA 01854; 978-934-4971; Prakash_Rai@uml.edu Stephanie A. Morris, Office of Cancer Nanotechnology Research, National Cancer Institute/NIH, Bethesda, MD, 20892-2580; (301)-594-6876; morriss2@mail.nih.gov</p>	<p>Nanotheranostics for Cancer Applications</p>
<p>Kazuo Sakurai, Department of Chemistry and Biochemistry, University of Kitakyushu 1-1, Hibikino, Wakamatsu-ku, Kiktakysyu, Fukuoka, 808-0135, Japan; (093) 695-3294; sakurai@kitakyu-u.ac.jp Marc A. Ilies, Department of Pharmaceutical Sciences, Temple University School of Pharmacy, Philadelphia, PA 19140; 215-707-1749; mailies@temple.edu</p>	<p>Targeted nanosystems for therapeutic applications: New concepts, dynamic properties, efficiency and toxicity</p>
<p>Ramanathan Nagarajan (NAGU), Natick Soldier Research, Development & Engineering Center, General Greene Avenue, Natick MA 01760; 508-233-6445; Ramanathan.Nagarajan@us.army.mil</p>	<p>Basic Research in Colloids, Surfactants and Nanomaterials</p>
<p>Yugang Sun, Department of Chemistry, Temple University, Philadelphia, PA 19122; ygsun@temple.edu Brendan G. DeLacy, U.S. Army Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD 21010; brendan.g.delacy.civ@mail.mil Yu Han, Physical Science and Engineering Division, King Abdullah University of Science and Technology, Kingdom of Saudi Arabia; Yu.Han@kaust.edu.sa</p>	<p>Photoresponsive Nanoparticles: From Fundamentals of Excitation to Applications</p>
<p>Srinivasa R. Raghavan, Dept. of Chemical & Biomolecular Engineering, University of Maryland, College Park, MD 20742; (301) 405-8164; sraghava@umd.edu Vijay T. John, Department of Chemical & Biomolecular Engineering, Tulane University, New Orleans, LA 70118; (504) 865-5883; vj@tulane.edu</p>	<p>Self-Assembly of Synthetic and Biological Surfactants – Translating Fundamentals to Applications</p>
<p>Valentin Rodionov, Department of Chemical & Life Science & Engineering, KAUST Catalysis Center (KCC), King Abdullah University of Science and Technology, Thuwal 23955-6900, Kingdom of Saudi Arabia; Valentin.Rodionov@kaust.edu.sa Qian Wang, Department of Chemistry and Biochemistry, University of South Carolina, Columbia, SC 29208; wang263@mailbox.sc.edu</p>	<p>Frontier of the interface of materials and biology: Click Chemistry Approaches to Bio-Inspired Materials</p>
<p>Robert Hickey, Department of Materials Science and Engineering, Penn State University, University Park, PA 16802; (814) 863-7521; rjh64@psu.edu Christine Keating, Department of Chemistry, Penn State University, University Park, PA 16802; (814) 863-7832; keating@chem.psu.edu Lauren Zarzar, Department of Materials Science and Engineering and Department of Chemistry, Penn State</p>	<p>Responsive, Programmable Assembly of Active Colloids for Functional Materials</p>

University, University Park, PA 16802; (814) 865-1316; ldz4@psu.edu	
Raphael Levy, Institute of Integrative Biology, University of Liverpool, Liverpool L69 3BX, UK; +44 151 795 4468; Rapha@liverpool.ac.uk Zhihong Nie, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD 20742; (301) 405-1874; znie@umd.edu Niveen Khashab, Division of Physical Science and Engineering, King Abdullah University for Science and Technology (KSA), Thuwal 23955-6900, Kingdom of Saudi Arabia; niveen.khashab@kaust.edu.sa	Noble Metal Nanoparticles for Bioimaging, Sensing, and Actuation
Ethan Crumlin, Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, CA 94720; 510-486-6235; ejcrumlin@lbl.gov Hirohito Ogasawara, Stanford Synchrotron Radiation Lightsource, SLAC National Accelerator Laboratory, Menlo Park, CA 94025; 650-926-4597; hirohito@slac.stanford.edu Iradwikanari Waluyo, National Synchrotron Light Source II, Brookhaven National Laboratory, Upton, NY 11973; 631-344-3421; iwaluyo@bnl.gov	In Situ Investigation of Energy Systems using Ambient-Pressure X-ray Photoelectron Spectroscopy
Jing Zhao, Department of Chemistry, University of Connecticut, Storrs, CT 06269; (860) 486-2443; jing.zhao@uconn.edu Amanda Haes, Department of Chemistry, University of Iowa, Iowa City, Iowa 52242; 319-384-3695; amanda-haes@uiowa.edu Shengli Zou, Department of Chemistry, University of Central Florida, Orlando, Florida, 32816; 407-823-4123; Shengli.Zou@ucf.edu	Colloidal Metal and Semiconductor Nanostructures: Theory, Synthesis, and Application
Ramanathan Nagarajan (NAGU), Natick Soldier Research, Development & Engineering Center, General Greene Avenue, Natick MA 01760; 508-233-6445; Ramanathan.Nagarajan@us.army.mil Kathleen J. Stebe, School of Engineering and Applied Sciences, University of Pennsylvania, Philadelphia, PA; 215-898-4515; kstebe@seas.upenn.edu David A. Weitz, Department of Physics, Harvard University, Cambridge, MA; (617) 496-2842; weitz@seas.harvard.edu	Emulsions, Foams and Dispersions – Symposium in honor of Dominique Langevin at 70 (Invited Only)
Vincent Rotello, Department of Chemistry, University of Massachusetts, Amherst MA, 01003; (413) 545-2058; rotello@chem.umass.edu	Bioconjugate Chemistry Lecturer Award Symposium (Invited Only)
Ramanathan Nagarajan (NAGU), Natick Soldier Research, Development & Engineering Center, General Greene Avenue, Natick MA 01760; 508-233-6445; Ramanathan.Nagarajan@us.army.mil	Langmuir Lectures, NanoLetters Award Lecture, ACS Materials and Interfaces Award Lecture (Invited Only)
Ramanathan Nagarajan (NAGU), Natick Soldier Research, Development & Engineering Center, General Greene Avenue, Natick MA 01760; 508-233-6445; Ramanathan.Nagarajan@us.army.mil	Fundamental Research in Colloids, Surfaces and Nanomaterials (POSTER SESSION)

Multimodal imaging with colloids

Organizers:

Wolfgang Parak, Biophotonics Group, University of Marburg, D-35037 Marburg, Germany, and Bioengineered Particles Laboratory, CIC biomaGUNE, Paseo de Miramón 182, 20009 Donostia – San Sebastián, Spain; +49- 6421 28-24161; wolfgang.parak@physik.uni-marburg.de

Pablo del Pino, BioNanoTools Laboratory, Center for Research in Biological Chemistry and Molecular Materials (CiQUS), Universidade de Santiago de Compostela, Calle Jenaro de la Fuente s/n, 15782 Santiago de Compostela, Spain; +34-881-815-700; pablo.delpino@usc.es

Jesse V. Jokerst, Department of NanoEngineering, University of California, San Diego, La Jolla, California, USA 92093-0448; +1-858-246-0896; jjokerst@ucsd.edu

Luis M. Liz-Marzán, Bionanoplasmonics Laboratory, CIC biomaGUNE, Paseo de Miramón 182, 20009 Donostia – San Sebastián, Spain; +34-943-005-300; llizmarzan@cicbiomagune.es

Colloidal nanoparticles are useful in anatomic and molecular imaging including fluorescence, magnetic resonance (MRI), positron emission tomography (PET), single photon emission computed tomography (SPECT), computed tomography (CT), surface enhanced Raman scattering (SERS), ultrasound, and photoacoustic imaging. The advantages of nanoparticles in imaging include high signal intensity, long-term signal stability, active and passive targeting, and multimodal approaches that combine several modalities onto a single particle-based platform. This symposium will highlight applications of these colloids in medical imaging and all related aspects including particle synthesis, particle characterization (colloidal properties, functional contrasting properties), particle functionalization for active targeting, interaction of colloids with cells, and cellular labelling from *in vitro* to *in vivo* labelling as well as the biodistribution of colloids and multifunctional particles for multiple contrasting properties, toxicity, and fate of the particles. Appropriate topics include, but are not limited to:

- Nanoparticle synthesis and characterization
- Self-assembled nanoparticle colloids
- Biofunctionalization
- Colloidal stability in biofluids
- Contrast properties
- Biodistribution
- Cellular labelling
- Active versus passive targeting
- Cytotoxicity
- Responsive particles and labels
- Biodegradable nanoparticles

Nanotheranostics for Cancer Applications

Organizers:

Prakash R. Rai, Department of Chemical Engineering, University of Massachusetts, Lowell, MA 01854; 978-934-4971; Prakash_Rai@uml.edu

Stephanie A. Morris, Office of Cancer Nanotechnology Research, Center for Strategic Scientific Initiatives, National Cancer Institute/NIH, Bethesda, MD, 20892; (301)-594-6876; morriss2@mail.nih.gov

This symposium will consider investigations focused on the applications of multifunctional nanoparticles in oncology. This includes fundamental studies focused on synthesis and characterization of novel multifunctional nano-theranostics, their efficacy in *in vitro* models of cancer, and studies focused on their use *in vivo*. Appropriate topics include, but are not limited to:

- Diagnostic nanotechnology
- Drug-free theranostics

- Image-guided drug delivery
 - Integrated platforms for therapy monitoring
 - Multimodal imaging contrast agents
 - Nanoparticles for imaging and therapy
 - Nanotoxicology of theranostics
 - Novel imaging systems
 - Novel drug delivery platforms
 - Photodynamic and/or Photothermal theranostics
 - Photo or Sono-triggered theranostics
 - Theranostics for image-guided surgery
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Targeted nanosystems for therapeutic applications: New concepts, dynamic properties, efficiency and toxicity

Organizers:

Kazuo Sakurai, Department of Chemistry and Biochemistry, University of Kitakyushu, 1-1, Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka, 808-0135, Japan; (093) 695-3294; sakurai@kitakyu-u.ac.jp

Marc A. Ilies, Department of Pharmaceutical Sciences, Temple University School of Pharmacy, 3307 N Broad Street, Philadelphia, PA 19140; 215-707-1749; mailies@temple.edu

Nanomedicine integrates technology from different scientific concentrations to efficiently pack drugs in nanoparticles, reliably transport them to target organs or cells and selectively release the drug cargo into target cells and tissues. Even after several decades of research, active targeting of nanoparticles remains challenging and rather inefficient as targeted nanocarriers must navigate several extracellular barriers to reach target cells. The pharmacokinetics and pharmacodynamics of the targeted drug-loaded particles depend heavily on particle size, shape, chemistry, surface charge, softness, density of targeting ligands and many other parameters. Particle types for targeting are extremely diverse and include inorganic nanoparticles, liposomes and other lipid-based nanoparticles, natural and synthetic polymer-based nanoparticles, dendrimers and carbon-based nanoparticles such as fullerenes, and others. This symposium is focused on recent development in targeting nanomedicines and their static and dynamic characterization through the use of cutting edge technologies. It attempts to identify and present new paradigms and ideas to meet the practical demand in different biomedical areas, to reveal new developments and to identify new clinically relevant targets and strategies for raising targeting efficiency and reducing toxicity of the multifunctional nanocarriers.

Basic Research in Colloids, Surfactants and Nanomaterials

Organizer:

Ramanathan Nagarajan (NAGU), Natick Soldier Research, Development & Engineering Center, General Greene Avenue, Natick MA 01760; 508-233-6445; Ramanathan.Nagarajan.Civ@mail.mil

This symposium is scheduled for all national meetings and accepts papers in all areas of colloids, surfactants and nanomaterials that are not already included in other thematic symposia. Experimental, theoretical and computational studies on all areas are encouraged for submission. Past examples of sessions within this symposium include metal, metal oxide, carbon, polymer and bio nanoparticles, nanoparticle synthesis, surfactant and block copolymer self-assembly, nanoparticle assemblies, physics and chemistry of interfaces, surface patterning, colloidal properties of surfactants and block copolymers, emulsions and dispersions and nanomedicine.

Photoresponsive Nanoparticles: From Fundamentals of Excitation to Applications

Organizers:

Yugang Sun, Department of Chemistry, Temple University, Philadelphia, PA 19122; ygsun@temple.edu

Brendan G. DeLacy, U.S. Army Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD 21010; brendan.g.delacy.civ@mail.mil

Yu Han, Physical Science and Engineering Division, King Abdullah University of Science and Technology, Kingdom of Saudi Arabia; Yu.Han@kaust.edu.sa

Photons represent an important class of energy carriers that interact with nanoparticles significantly different from bulk materials. Benefiting from the impressive advance in nanoparticle synthesis and fabrication, nanoparticles with tailored structures have been extensively investigated to efficiently harness light for a broad range of applications including solar heating, photovoltaics, smart windows, photocatalysis, artificial photosynthesis, etc. This symposium will cover optically sensitive semiconductor nanostructures, plasmonic nanostructures, and their corresponding hybrid structures. Both experimental and theoretical efforts have been devoted to comprehensively understanding the fundamental steps (e.g., exciton generation, charge separation, charge transfer, exciton relaxation) involved in photo-excitation in these nanostructures. These basic research have led to a promising progress in utilizing solar energy. Specifically, a broad range of topics from theory/modeling to spectroscopy to solar-energy conversion will be highlighted in this symposium:

- Controlled synthesis of semiconductor nanoparticles
- Controlled synthesis of plasmonic nanoparticles
- Controlled synthesis of semiconductor/plasmonic hybrid nanostructures
- Spectroscopic study of the aforementioned photoresponsive nanostructures
- Ultrafast spectroscopy (e.g., transit absorption, time-resolved x-ray absorption, etc.)
- Charge transfer and recombination at interfaces
- Mapping of charge distribution and field distribution
- Theory and modeling of photo-excitation and hot-carrier generation
- Assembly of the aforementioned nanostructures and their optical properties
- Photovoltaics
- Photocatalytic water splitting
- Photocatalytic reactions for environmental remediation
- Photocatalytic CO₂ reduction
- Photothermal generation of water steam
- Photoresponsive drug delivery and therapy
- Sensing (e.g., photodetection, gas monitoring, SERS, etc.)
- Self-adjustable materials for smart windows
- Phase changing materials: dielectric to metallic phase transitions and its impact on optical response

Self-Assembly of Synthetic and Biological Surfactants – Translating Fundamentals to Applications

Organizers:

Srinivasa R. Raghavan, Dept. of Chemical & Biomolecular Engineering, University of Maryland, College Park, MD 20742-2111; (301) 405-8164; sraghava@umd.edu

Vijay T. John, Department of Chemical & Biomolecular Engineering, Tulane University, New Orleans, LA 70118; (504) 865-5883; vj@tulane.edu

The sessions will concentrate on aspects of surfactant and lipid self-assembly to structures that have a clear function. We look for examples of self-assembly that mimic nature, that lead to new concepts in therapeutics, novel nanoscale phenomena, polymer-surfactant interactions, and supramolecular assembly. Abstracts that have an aspect of use-inspired fundamental work are strongly encouraged.

Frontier of the interface of materials and biology: Click Chemistry Approaches to Bio-Inspired Materials

Organizers:

Valentin Rodionov, Department of Chemical & Life Science & Engineering, KAUST Catalysis Center (KCC), King Abdullah University of Science and Technology, [Thuwal 23955-6900](http://Thuwal.23955-6900), Kingdom of Saudi Arabia; Valentin.Rodionov@kaust.edu.sa

Qian Wang, Department of Chemistry and Biochemistry, University of South Carolina, Columbia, SC 29208, USA; wang263@mailbox.sc.edu

Our Symposium will cover the development of bio-inspired materials and hierarchically organized structures with nanoscale features using synthetic and self-assembly methods. In particular, it will focus on the application of “click chemistry” approaches in solving challenges in modern materials sciences. Dozens of leading scientists who are working at the forefront of the interface of materials chemistry and biology will be invited to give lectures. Around 100 attendees would be expected to attend this symposium. We plan to organize 4 sections with 6-8 speakers for each section. The convergence of chemists, materials scientists, biologists and engineers in the field will further advance the materials approach to biological problems.

Responsive, Programmable Assembly of Active Colloids for Functional Materials

Organizers:

Robert Hickey, Penn State University, Department of Materials Science and Engineering, University Park, PA 16802; (814) 863-7521; rjh64@psu.edu

Christine Keating, Penn State University, Department of Chemistry, University Park, PA 16802; (814) 863-7832; keating@chem.psu.edu

Lauren Zarzar, Penn State University, Department of Materials Science and Engineering and Department of Chemistry, University Park, PA 16802; (814) 865-1316; ldz4@psu.edu

The organized motion, assembly, and responsive nature of colloids and complex fluids is of increasing relevance, especially as the drive for “smart”, responsive, and active matter continues to advance. Collective behavior of assemblies of particles that are designed to selectively interact amongst themselves or with their environment serve as platforms both for the design of new materials with functional properties and also as a model to help us understand collective behavior of natural systems. This symposium will encompass recent developments in synthesis, fabrication, and characterization of colloids for emerging applications. Appropriate topics include but are not limited to:

- Properties and applications of responsive colloids or particles that change shape, optical behavior, function, chemistry etc.
 - Strategies for the directed assembly or disassembly of particles for hierarchical materials
 - Approaches to the synthesis of dynamic or responsive colloids
 - Directed motion of particles; colloidal motors
 - Colloids for dynamic sensing, actuation, and displays
 - Colloids with switchable surface properties
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Noble Metal nanoparticles for Bioimaging, Sensing, and Actuation

Organizers:

Raphael Levy, Institute of Integrative Biology, University of Liverpool, Liverpool L69 3BX, UK; +44 151 795 4468; Rapha@liverpool.ac.uk

Zhihong Nie, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD 20742; (301) 405-1874; znie@umd.edu

Niveen Khashab, Division of Physical Science and Engineering, King Abdullah University for Science and Technology (KSA), Thuwal 23955-6900, Kingdom of Saudi Arabia; niveen.khashab@kaust.edu.sa

This topic has seen an explosive growth in terms of publications and public funding in the last 20 years. The very high expectations result from the combination of the physical properties of the core that can be used for imaging/sensing/actuating and of the bio(chemical) properties of the functionalised nano-object, which “because of its size” has often been claimed to have the special ability to cross biological barriers. The general aim will be to identify the key areas where nanoparticles can really have an impact in biological imaging, sensing and medicine, as well as the scientific, engineering, economic and cultural challenges that need to be addressed to realize this potential, including transformations in the ways we plan, share, evaluate and discuss scientific findings. This meeting will be completely different from other meetings in this area because its entire focus will be on discussion of the challenges that we face and how to address them, in addition to presentation of each individual scientist latest sets of data. The meeting will bring together scientists from a variety of fields including Biology, Chemistry, Physics and Medicine. The scientific community will gain a much needed robust discussion of myths, real opportunities and challenges in the application of nanoparticles for biological imaging, sensing and medicine.

In Situ Investigation of Energy Systems using Ambient-Pressure X-ray Photoelectron Spectroscopy

Organizers:

Ethan Crumlin, Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, CA 94720; 510-486-6235; ejcrumlin@lbl.gov

Hirohito Ogasawara, Stanford Synchrotron Radiation Lightsource, SLAC National Accelerator Laboratory, Menlo Park, CA 94025; 650-926-4597; hirohito@slac.stanford.edu

Iradwikanari Waluyo, National Synchrotron Light Source II, Brookhaven National Laboratory, Upton, NY 11973; 631-344-3421; iwaluyo@bnl.gov

Ambient pressure X-ray photoelectron spectroscopy (AP-XPS) is a powerful tool for the in situ investigation of surface processes under close to realistic conditions with applications ranging from catalysis, environmental science, and atmospheric chemistry. It is sensitive to the chemical environment of the probed atom, as well as quantitative with inherent surface sensitivity and element specificity. This symposium will focus on the application of AP-XPS in studying non-equilibrium transformations in energy systems under working reaction conditions, such as heterogeneous catalysis, fuel cells, and batteries. We will also explore technical developments that will overcome current experimental challenges as well as modernize the technique. The list of potential invited speakers consists of US-based and international scientists from universities, national laboratories, and synchrotron facilities covering the potential topics listed below.

- Heterogeneous catalysis
 - Fuel cells
 - Batteries
 - Instrumentation and future developments
-

Colloidal Metal and Semiconductor Nanostructures: Theory, Synthesis, and Application

Organizers:

Jing Zhao, Department of Chemistry, University of Connecticut, Storrs, CT 06269; (860) 486-2443;
jing.zhao@uconn.edu

Amanda Haes, Department of Chemistry, University of Iowa, Iowa City, Iowa 52242; 319-384-3695;
amanda-haes@uiowa.edu

Shengli Zou, Department of Chemistry, University of Central Florida, Orlando, Florida, 32816; 407-823-4123; Shengli.Zou@ucf.edu

The proposed symposium focusses on recent development in the synthesis, characterization and application of colloidal nanostructures consisting of metal, semiconductor and metal-semiconductor hybrids from both experimental and theoretical points of view.

We would like to discuss new synthetic methods to fabricate metal and semiconductor and hybrid nanostructures; properties of these materials including optical, catalytic, electronic, etc. We will also discuss the interaction between the components in the hybrid metal-semiconductor structures. These nanoparticles can be employed as superior new catalysts, photonic and electronic components.

We plan to organize 6 sessions for the symposium. Each session will include 5-6 invited and 2-3 contributed talks from speakers presenting to a diverse group. We will devote effort to include a blend of experimentalists and theoreticians, working in many areas related to metal/semiconductor nanostructures. The invited speakers will come from both the US and abroad. We will invite a large number of female speakers (including two of the organizers) to promote female excellence in science.

Session 1: Metal nanostructures

Session 2: Semiconductor nanocrystals

Session 3: Hybrid metal-semiconductor nanostructures

Session 4: Theory

Session 5: Optical properties

Session 6: Catalysis

Emulsions, Foams and Dispersions – Symposium in honor of Dominique Langevin at 70 (Invited Papers Only)

Organizers:

Ramanathan Nagarajan (NAGU), Natick Soldier Research, Development & Engineering Center, General Greene Avenue, Natick MA 01760; 508-233-6445; Ramanathan.Nagarajan@us.army.mil

Kathleen J. Stebe, School of Engineering and Applied Sciences, University of Pennsylvania, Philadelphia, PA; 215-898-4515; kstebe@seas.upenn.edu

David A. Weitz, Department of Physics, Harvard University, Cambridge, MA; (617) 496-2842; weitz@seas.harvard.edu

This symposium consisting of invited papers from international scientists will honor the contributions of Dominique Langevin to various aspects of colloid and interface science with special emphasis on emulsions, foams and dispersions and coincide with the celebration of her 70th birthday.

**Bioconjugate Chemistry Lecturer Award Symposium
(Invited Papers Only)**

Organizer:

Vincent Rotello, Department of Chemistry, University of Massachusetts, Amherst MA, 01003; (413) 545-2058; rotello@chem.umass.edu

**Langmuir Lectures, NanoLetters Award Lecture, ACS Materials and Interfaces Award
Lecture
(Invited Papers Only)**

Organizer:

Ramanathan Nagarajan (NAGU), Natick Soldier Research, Development & Engineering Center, General Greene Avenue, Natick MA 01760; 508-233-6445; Ramanathan.Nagarajan.Civ@mail.mil

**Fundamental Research in Colloids, Surfaces and Nanomaterials
(POSTER SESSION)**

Organizer:

Ramanathan Nagarajan (NAGU), Natick Soldier Research, Development & Engineering Center, General Greene Avenue, Natick MA 01760; 508-233-6445; Ramanathan.Nagarajan.Civ@mail.mil

Posters addressing any aspect of colloids, surfaces and nanomaterials will be appropriate for submission to this symposium. All posters presented by graduate and undergraduate students will be judged by a panel of scientists. Student poster presenters should be prepared to give a 3 minute pitch to the judges who may come to review the posters. Based on the technical content of the poster and the effectiveness of the pitch, the judges will select the best 4 or 5 poster presentations for the COLL Division awards.
