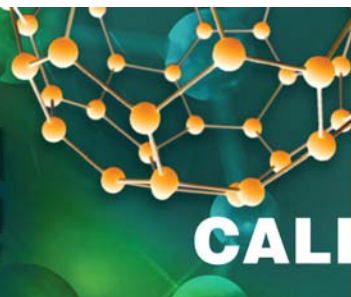




2009 MRS
spring meeting
San Francisco, CA • April 13-17



Abstract Deadline: November 3, 2008

www.mrs.org/spring2009

REMINDER:
In fairness to all potential authors,
late abstracts will not be accepted.

CALL FOR PAPERS

MRS Symposium U: Electrofluidic Materials and Applications—Micro/Biofluidics, Electrowetting, and Electrospinning

The field of electrofluidics has greatly expanded in recent years. It now covers several subspecialties: electro-osmosis, electrophoresis, dielectrophoresis, electrospinning, electrowetting, etc. The impact of advances in electrofluidics is being felt in many areas including lab-on-chip, molecular biology, drug discovery/delivery, chem/bio detection, medical diagnostics, tissue engineering, liquid electronics and photonics, displays and electronic paper, etc.

While the effect of the electric field on fluid manipulation is at the heart of electrofluidics, the specific application is, in great measure, determined by the other materials present in, or adjacent to, the fluid. Such key materials include host fluids, ambient fluids, dispersions, and hydrophobic/hydrophilic polymers, to name a few. This first MRS symposium on electrofluidics aims to bring together a cross section of participants working on various materials involved in electrofluidic research and applications. By assembling this critical mass of researchers that normally does not interact, this symposium has the opportunity to make a major impact on the development of the field. This symposium will try to help define the field of electrofluidics by addressing some of the key aspects and issues such as: (a) define the opportunities and challenges of electrofluidics; (b) discuss and define the materials base necessary for various applications; (c) discuss the ranges and physical limits of electrofluidics in terms of fluid volume and transport, effect of electric field, etc.; (d) compare gas-based and liquid-based fluidic devices; and (e) promote further linkage between fundamental electrofluidics research and biotech, medical, and industrial applications.

Topics of interest include (but are not limited to):

- Electrowetting materials and devices
- Novel electrofluidic-derived materials (e.g., electrospinning)
- Electrophoretic, dielectrophoretic, and electro-osmotic devices
- Electrical control of magnetic and optical particle dispersions
- Materials for electrofluidic sensors
- Optofluidic materials and devices
- Electrofluidic separations
- Gas-based physical and chemical sensors
- Applications of electrofluidics in biotech, medical, and chemical industry

A special session for young scientists (graduate-student/post-doctoral fellows) is being planned. Abstracts will be selected for this session on a competitive basis. To be considered for this session, send a brief request to Dr. Andrew Steckl (a.steckl@uc.edu) with the six-digit MRS Control ID number that you will receive after submitting your abstract.

Invited speakers (tentative) **include:**

Robert Austin (Princeton Univ.), **Olgica Bakajin** (Lawrence Livermore National Lab), **Robert Barber** (Daresbury Lab, United Kingdom), **Harold Craighead** (Cornell Univ.), **Uri Dinnar** (Technion Univ., Israel), **Robert Hayes** (Liquivista, The Netherlands), **Jason Heikenfeld** (Univ. of Cincinnati), **Takehiko Kitamori** (Univ. of Tokyo, Japan), **Abraham Lee** (Univ. of California-Irvine), **Luke Lee** (Univ. of California-Berkeley), **Bing-Cheng Lin** (Dalian Univ., China), **Je-Kyun Park** (Korea Advanced Institute of Science and Technology, Korea), **Darrell Reneker** (Univ. of Akron), **David Ross** (National Inst. of Standards and Technology), **Gregory Rutledge** (Massachusetts Inst. of Technology), **Juan Santiago** (Stanford Univ.), **Uri Sivan** (Technion - Israel Inst. of Technology, Israel), **Mark Wallace** (Oxford Univ., United Kingdom), **Itamar Willner** (Hebrew Univ., Israel), **Gary Wnek** (Case Western Reserve Univ.), **Yuval Yaish** (Technion - Israel Univ. of Technology, Israel), and **Jing-Tang Yang** (Tsing Hua Univ., Taiwan).

Symposium Organizers

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