



**Materials Research Society**  
The Materials Gateway




Home Meetings Publications Membership Career Central Advertise / Exhibit About MRS Store  
My MRS Media Contact Site Map FAQs View Cart

### Inside...

[Call for Papers \(PDF Format\)](#)

Materials Gateway  
Resource Center

[LOGIN](#)

#### Members

My MRS

Access technical papers FREE

View Membership Directory

Enjoy Member-Only discounts

Sign up for alerts and newsletters

Get involved in MRS

#### Join MRS | Member Benefits

Members have access to over 14,000 Proceedings and MRS Bulletin papers and more.

#### Not a Member?

[Preview online publications](#)

#### Registered Users

[View Registered User benefits](#)

My MRS

[Access news from the MRS Bulletin](#)

[Sign up for alerts and newsletters](#)

[Build a library of purchased papers](#)

[Preview membership benefits](#)

[Upgrade to Membership](#)

#### Become a Registered User - Sign Up Now

[Send Us Your Feedback](#)

Home Meetings 2006 Spring Meeting Call For Papers

## Symposium U: Organic and Inorganic Nanotubes - From Molecular to Submicron Structures

[Session Topics](#) | [Invited Speakers](#) | [Organizers](#)



Nanotubular structures have emerged to a highly versatile low-dimensional material system. More importantly, researchers have developed self-organizing and catalytic synthesis techniques with high yield and purity prerequisite for technological applications. The potential applications of organic and inorganic nanotubes are currently envisioned for integrated systems, nanophotonics, catalyses, biological and medical applications.

This symposium will bring together scientists from the carbon nanotube community with the fast-growing research fields on organic and inorganic nanotubes, e.g., from biomaterials, polymers, metals, or semiconductors. Multicomponent nanotubes can exhibit complementary properties, e.g., optical and magnetic properties with high affinities to biological species. Molecular layer or multilayer nanotubes can be functionalized by adsorption of different kinds of molecules on the interior and exterior surfaces for biotechnology applications, while, e.g., concentric multilayer magnetic tubes may be used in magneto-electronic devices. Nanotubular devices as well as hybrid systems based on inorganic and organic nanotubes will be discussed in this symposium.

### Session Topics

Session topics of the symposium will include:

Carbon nanotubes, inorganic nanotubes based on, e.g., metals, semiconductors, and oxides

Organic nanotubes, e.g., polymer nanotubes and nanotubes based on biomaterials

Multilayered and hybrid nanotubes

Characterization of fundamental physical and chemical properties in nanotubes

Organic/inorganic nanotubes for electronics, magnetics, photonics, thermoelectrics, superconductors, and dielectrics

Nanotubes as actuator, sensor, and electromechanical devices (NEMS)

Functionalization and bioconjugation of organic and inorganic nanotubes

Nanotube applications in biotechnology and medicine

Integration of nanotubes in conventional and future electronic devices

### Joint Session

A joint session is anticipated with [Symposium BB: Mechanotransduction and Engineered Cell-Surface Interactions](#).

### Invited Speakers

Invited speakers include: **Joerg Appenzeller** (IBM T.J. Watson Research Ctr.), **Erik Bakkers** (Philips Research Labs., The Netherlands), **Frank Caruso** (Univ. of Melbourne, Australia), **Hicham Fenniri** (Univ. of Alberta, Canada), **Andreas Greiner** (Univ. of Marburg, Germany), **Sumio Iijima** (NEC Corp., Japan), **Ariga Katsuhiko** (National Inst. for Materials Science, Japan), **Shunsaku Kimura** (Kyoto Univ., Japan), **Michael L. Klein** (Univ. of Pennsylvania), **Roger Koeppel**

(Univ. of Arkansas), **Nina Kovtyukhova** (Pennsylvania State Univ.), **Stefan Matile** (Univ. of Geneva, Switzerland), **Catherine J. Murphy** (Univ. of South Carolina), **Virgil Percec** (Univ. of Pennsylvania), **Toshimi Shimizu** (National Inst. of Advanced Industrial Science & Technology, Japan), **Samuel Stupp** (Northwestern Univ.), **David Tirrell** (California Inst. of Technology), **Peidong Yang** (Univ. of California-Berkeley), and **Chongwu Zhou** (Univ. of Southern California).

---

### Symposium Organizers

**Kornelius Nielsch**

Max-Planck-Institute of Microstructure Physics  
Weinberg 2, D-06120  
Halle, Germany  
**Tel** 49-345-5582-902  
**Fax** 49-345-5511-223  
[knielsch@mpi-halle.de](mailto:knielsch@mpi-halle.de)

**Oliver Hayden**

IBM Research GmbH  
Zurich Research Laboratory  
Saeumerstr. 4  
CH-8803 Rueschlikon  
Switzerland  
**Tel** 41-1-724-8468  
**Fax** 41-1-724-8966  
[olh@zurich.ibm.com](mailto:olh@zurich.ibm.com)

**Hiroataka Ihara**

Kumamoto University  
Dept. of Applied Chemistry & Biochemistry  
2-39-1 Kurokami  
Kumamoto 860-8555, Japan  
**Tel** 81-96-342-3661  
**Fax** 81-96-342-3662  
[ihara@kumamoto-u.ac.jp](mailto:ihara@kumamoto-u.ac.jp)

**Deli Wang**

University of California-San Diego  
Dept. of Electrical & Computer Engineering  
MC 0407, 9500 Gilman Dr.  
La Jolla, CA 92093-0407  
**Tel** 858-822-4723  
**Fax** 858-534-0556  
[dwang@ece.ucsd.edu](mailto:dwang@ece.ucsd.edu)



Peer-reviewed materials science  
journal articles online for only \$15  
[www.sciencedirect.com](http://www.sciencedirect.com)



© 1995-2006, Materials Research Society 506 Keystone Drive, Warrendale, PA, 15086-7573, USA  
Phone: 724 779.3003, Fax: 724 779.8313, Email: [Customer Service](#), [Member Service](#), [Feedback](#)