

**China-US Workshop on Material Science**  
**Institute of Physics, CAS, BEIJING May 23 – 25, 2005**

**Scientific Program**

**May 23, morning**

8:30 – 8:45	<a href="#">Opening Ceremony</a>	
8:45 – 9:15	Tony Cheetham	Recent Developments in Hybrid Inorganic-Organic Framework Materials
9:15 – 9:45	Maochun Hong	Porous Frameworks Based on Indium and Organic Ligands
9:45 – 10:05	<a href="#">Group Photo and Coffee Break</a>	
10:05 – 10:35	Omar Yaghi	Metal-Organic Frameworks and Polyhedra (MOF's and MOP's): New Materials Designed for H <sub>2</sub> /CH <sub>4</sub> Storage
10:35 – 11:05	Jun Chen	Inorganic Nanomaterials for Hydrogen and Lithium Storage
11:05 – 11:35	Mark Harmer	Manipulating Carbon Nanotubes and Uses of Sol-gel Chemistry
11:35 – 12:05	Zheng Hu	Some Recent Research Progress in Carbon Nanotubes and One-dimensional AlN Nanostructured Materials

**Lunch Break**

**May 23, afternoon**

1:30 – 2:00	Xuejie Huang	Large Size Lithium Ion Batteries and Its Key Materials
2:00 – 2:30	Jun Liu	Progress in Battery Materials for Electrochemical Energy Storage
2:30 – 3:00	Tao He	New Thermoelectric Materials for Power Generation and Cooling Applications
3:00 – 3:30	Shouhua Feng	Hydrothermal Synthesis of Perovskite Manganite Oxides
3:30 – 3:45	<a href="#">Coffee Break</a>	
3:45 – 4:15	Fred Lange	Solution Routes to Epitaxial ZnO Thin Films
4:15 – 4:45	Yadong Li	Monodisperse Nanocrystals
4:45 – 5:15	Xuedong Bai	In-situ Nanomeasurement inside TEM
5:15 – 5:45	Lihua Qian	CO detector based on Au-decorated SnO <sub>2</sub> nanobelt

**Reception dinner**

### **May 24, Morning**

8:30 – 9:00	Peidong Yang	Inorganic Nanotubes for Nanofluidic Applications
9:00 – 9:30	Xinggao Gong	Carbon Nanotubes and Nano-clusters under Hydrostatic Pressure
9:30 – 10:00	Zhonglin Wang	One Dimensional Semi Conducting and Piezoelectric Nanostructures - Synthesis, growth mechanisms and properties
10:00 – 10:15	<a href="#">Coffee Break</a>	
10:15 – 10:45	Lianmao Peng	Structure, Growth and Modification of Titanate Nanotubes
10:45 – 11:15	William Buhro	Colloidal Semiconductor Quantum Wires: Synthesis, Spectroscopy, and Confinement Effects
11:15 – 11:45	Dongyuan Zhao	Syntheses of Ordered Non-Silica Mesoporous Materials
11:45 – 12:15	Yi Cui	Nanocrystals and Nanowires: From Fundamental Science To Applications

### **Lunch Break**

### **May 24, afternoon**

1:30 – 2:00	Galen Stucky	Some Challenges in the Integration of Semiconductor Microprocessing Technology and Molecular Assembly
2:00 – 2:30	Chen Wang	Self-assembly of Organic Molecular Nanostructures
2:30 – 3:00	Quyen Nguyen	Creating Novel Organic Semiconducting Materials via Self Assembly
3:00 – 3:30	Rachel Segalman	Equilibrium Self-Assembly Of Conjugated Block Copolymers
3:30 – 3:45	<a href="#">Coffee Break</a>	
3:45 – 4:15	Pingyun Feng	Chalcogenide Tetrahedral Clusters and their Superlattices
4:15 – 4:45	Jeff Long	Directed Assembly of Metal-Cyanide Cluster Magnets
4:45 – 5:15	Song Gao	Low Dimensional Azide-bridged Molecular Magnets: Order or Disorder

### **Dinner**

### **6:30 – 8:00 Poster Session**

### May 25, morning

8:30 – 9:00	Jianquo Hou	Electronic Structure and Transport Properties of Single Molecules and Nanoparticles
9:00 – 9:30	Francis Hellman	Nanocalorimetry: Using Si-micromachined Devices for Thermodynamic Measurements of Thin Films and Tiny Crystals
9:30 – 10:00	Jun Hu	Positioning Dissection, Isolation and Sequencing of Single DNA Molecules Based on Nanomanipulation and Single Molecule PCR
10:00 – 10:15	<a href="#">Coffee Break</a>	
10:15 – 10:45	Branton Campbell	Discovering Complex Defect Architectures via Single-crystal Diffuse Scattering
10:45 – 11:15	Eric Stach	In-situ Transmission Electron Microscopy Studies of the Deformation Response of Nanocrystalline Metals
11:15 – 11:45	Kaili Jiang	Controlled Synthesis of Nanowire and Nanotube Arrays
11:45 – 12:15	Zhibin Li	Field Electron Emission of Quasi One-Dimensional Materials of Semiconductors of Wide Energy Band Gaps

### Lunch Break

### May 25, afternoon

1:30 – 2:00	Enge Wang	Surfactant Action in Surface-based Nanostructure Formation
2:00 – 2:30	Alec Wodtke	Do We Know How to Think about Surface Chemistry? Electronically Non-adiabatic Interactions in Molecule Metal-surface Scattering
2:30 – 3:00	Don Tilley	Molecular Design and Synthesis of New Materials and Heterogeneous Catalysts
3:00 – 3:30	Judith Stein	A Historical Perspective on Catalysis and Polymers: The Cornerstone of GE's Advanced Materials Business
3:30 – 3:45	<a href="#">Coffee Break</a>	
3:45 – 4:15	Lei Jiang	Super-hydrophobic Surfaces: From Natural to Artificial
4:15 – 4:45	Hongjun Gao	Bonding Configurations and Collective Patterns of Ge Atoms Adsorbed on Si(111) (7×7)
4:45 – 5:15	Qikun Xue	Novel Properties of Thin Films Modulated by Quantum Size Effects
5:15 – 5:30	<a href="#">Concluding Remark</a>	

### Dinner

### May 26, sightseeing ( Forbidden City, Great Wall )