

# MP<sup>3</sup>-2007

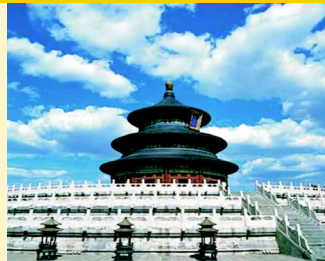
14th -16th September 2007  
Beijing International Convention Center, China  
<http://www.materials.org.sg>

The 6th International Conference on Materials  
Processing, Properties and Performance

## Symposia

Right by the Site of Olympic 2008, See it Before the Games!

- 1) 2nd Symposium on Ultralight Materials and Structures (Ultralight 2007: Wei Zhou)
- 2) 2nd Symposium on Fuel Cells Science & Technology: Bridging Processing and Performance (FCST: San Ping Jiang)
- 3) 3rd Symposium on Materials In Devices And Systems (MIDAS: R.V. Ramanujan)
- 4) Computational Methods in Materials Research and Development (CMM: Zhi Zeng )
- 5) Nanomaterials and Nanostructures (NMN: Weiping Cai)
- 6) Superalloys, Intermetallics and Related Materials (SIM: Yanfang Han)
- 7) Synthesis and Properties of Surface Coatings (SPS: Shengkai Gong)
- 8) Toughening and Toughness Measurement of Films and Coatings (TTM: Sam Zhang)



## Track Record

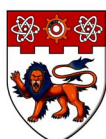
- 1<sup>st</sup> MP<sup>3</sup>: Singapore 2002
- 2<sup>nd</sup> MP<sup>3</sup>: Yokohama, Japan 2003
- 3<sup>rd</sup> MP<sup>3</sup>: Singapore 2004
- 4<sup>th</sup> MP<sup>3</sup>: Chiba, Japan 2005
- 5<sup>th</sup> MP<sup>3</sup>: Singapore 2006
- 6<sup>th</sup> MP<sup>3</sup>: Beijing, China 2007

## Important Deadlines

- Abstract submission: **May 31, 2007**
- Notice of Acceptance: **June 15, 2007**
- Full manuscript: **July 15, 2007**
- Early Bird Registration: **July 15, 2007**

General Chair: Prof. K. A. Khor  
Vice Chairs: Prof. Huibin Xu  
Prof. Sam Zhang  
Prof. Weiping Cai

## Organized By:



**NANYANG  
TECHNOLOGICAL  
UNIVERSITY**



**中国科学院固体物理研究所**  
Institute of Solid State Physics, Chinese Academy of Sciences



**北京航空航天大学**  
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## Submission of Abstracts

Abstract of 150-200 words is submitted online at the conference website:

<http://www.materials.org.sg>

Contact Ms Ng Siu Din (ASSDNG@ntu.edu.sg) should you encounter problem.

**Registration Fees:**

**Student with valid student ID: USD150 (this entitles a proceedings book on CD; lunch and dinner; but no banquet).**

**Regular registration: USD550 (this entitles all conference privileges, hard copy Proceedings Book, lunch, dinner and conference banquet)**

**On-site registration: USD650.**

## Call for papers

### **Toughening and Toughness Measurement of Films and Coatings (TTM) (Chair: Sam Zhang)**

With recent development of superhard thin films and coatings, the development of toughening methodology in thin films and/or coatings become more and more important. This symposium welcome contributions for all aspect of methodology development in toughening and toughness measurement of ceramic films and coatings, nanocomposite films and coatings, engineering and functional films and coatings.

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# Call for papers

## Third MIDAS Symposium - Materials In Devices And Systems (Chair: R.V. Ramanujan)

The Third MIDAS symposium invites papers in the area of materials used in devices and systems. Currently there is an urgent need for novel materials in devices and systems for

- Information Storage and Retrieval
- Computing and Communication
- Energy Conversion
- Portable Multifunctional Devices
- Home, National and International Security

The development of these devices and systems will require novel materials and innovative ways of using these materials in the following interest areas:

- Magnetic Materials
- Microelectronic Materials
- Energy related materials
- Self Assembled Materials
- Photonic Materials
- Rare Earth Materials

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## Synthesis and properties of surface coatings (SPS) (Chair:

### Shengkai Gong)

- Superhard films
- High temperature coatings
- Surface protection techniques
- Nanocomposite films and coatings
- Engineering and functional films and coatings

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Fuchi Wang (Beijing Institute of Technology, China)  
Chungen Zhou (Beihang University, China)

## The 2nd International Symposium on Ultralight Materials and Structures -Ultralight2007

The driving need for weight reduction, particularly in portable microelectronics, telecommunication and automotive applications, has stimulated engineers to be more adventurous in their choice of materials. Ultralight magnesium alloys and other materials with open or closed cell structures are being increasingly used. New steels and composites are being adopted to achieve ultralightness in structures through innovative structural design and new manufacturing processes. Topics of interest include but are not restricted to:

- Casting, Welding, Machining and New Shaping Processes of Mg, Al and Ti Alloys
- Electrochemical & Mechanical Properties
- Development of New Alloys, MMCs and Foams
- Ultralight Structures through Materials Selection and Innovative Design
- Numerical Modeling and Simulation
- Special Characterization Techniques with EBSD etc.

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## Nanomaterials and Nanostructures (NMN) (Chair: Weiping Cai)

- Synthesis and characterization of nanostructures and nanomaterials
- Growth mechanism and property characterization of nanomaterials
- Simulations of Nanomaterials
- Nanostructured patterns and devices
- Applications of nanomaterials

### Organizing Committee:

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# Call for papers

## 2nd FCST Symposium - Fuel Cells Science & Technology: Bridging Processing and Performance (Chair: San Ping Jiang)

The 2nd Symposium on Fuel Cells Science & Technology: Bridging Processing and Performance (2nd FCST) will provide an international forum for the presentation and discussion of the latest developments on fuel cells including solid oxide fuel cells (SOFCs), molten carbonate fuel cells (MCFCs), polymer electrolyte fuel cells (PEFCs), direct methanol fuel cells (DMFCs), direct alcohol fuel cells (DAFCs), micro fuel cells, bio-fuel cells, and microbial fuel cells. Papers are solicited on all aspects of fuel cells and related issues. Selected papers from the Fuel Cell symposium will be submitted to the Journal of Power Sources for consideration of publication. Following is a partial list of topics to be addressed:

- Materials for cell components (electrode, electrolyte, interconnect, seals)
- Fabrication and processing methods for powders, cell components, and complete cells
- Synthesis and characterization of Pt alloy catalysts and non-precious metal catalysts for low temperature fuel cells
- Characterization, electrochemical performance, interface and reaction mechanism
- Catalyst, cell, stack and system modeling, and stack design, their performance and stability
- Fuel reforming, processing and utilization
- Power generation, transportation, prototype fuel cell system, fuel cell

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## Superalloys, Intermetallics and related materials (SIM) (Chair: Yanfang Han)

- Mechanical properties: plastic deformation, fatigue, fracture, creep, corrosion
- Microstructure controlling
- Deformation Mechanisms
- Failure analysis methodology
- Creep-fatigue interaction
- Influence of environment on fatigue behaviors
- Mechanical Testing, Advanced Analytical Techniques
- Life predication

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Ji Zhang (Central Iron & Steel Research Institute, China)

## Computational Methods in Materials Research and Development (CMM) (Chair: Zhi Zeng)

- Computational Materials Design and Processing
- Modeling Microstructural Characterization and Evolution;
- Applications of Materials Modeling and Simulation;
- Ab Initio and Atomistic Calculations
- Materials and Modeling; Processing-Related Issues
- Computer Aided Design and Drafting

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