

IW-SMART at ICM&P2011

**International Workshop on
Smart Materials and Related Technologies 2011**

**Monday, June 13, 2011
Oregon State University, USA**

Organized by Active Material Systems Technical Section (AMS-TS) of JSME M&P Division

Organizers: Hiroshi Asanuma (Chiba University), Yasubumi Furuya (Hirosaki University), Satoshi Kishimoto (National Institute for Materials Science (NIMS)) and Wataru Nakao (Yokohama National University)

The organizers have planned one-day workshop for discussion on the next roadmap of Smart/Intelligent Materials and Structural Systems including some new directions such as development of Smart Mechanical Material Systems, applications to Manufacturing and Processing fields, and so on. The organizers hope that you will understand what smart materials are, will be able to imagine your own smart materials, and might be changed by attending this workshop!

PROGRAM (tentative)

1) 9:00-9:40 Opening/Keynote “An introduction to IW-SMART and Smart Materials and Structural Systems such as Smart Mechanical Material Systems”

Hiroshi Asanuma (Chiba University), Satoshi Kishimoto (NIMS) and Wataru Nakao (Yokohama National University)

2) 9:40-10:00 Invited Lecture “Gel mechanics, gel photonics, and gel robotics”

Hidemitsu Furukawa and Ruri Hidema (Yamagata University)

3) 10:00-10:20 Invited Lecture “Laser polymerization of C60 fullerene nanowhiskers”

Kun'ichi Miyazawa and Ryoei Kato (NIMS)

4) 10:20-10:40 Invited Lecture “Metallic photo-polymerization of C60 thin film by optical vortex irradiation: A key technology for the PS-molecule application”

Nobuyuki Aoki, Tatsuya Doi, Xiaojun Wei, Kyouhei Koyama, Katsuhiko Miyamoto, Takashige Omatsu, Jonathan P. Bird* and Yuichi Ochiai (Chiba University, University at Buffalo, SUNY*)

5) 10:40-11:00 Invited Lecture “Shape memory characteristics of Ti-based alloys fabricated by PM process”

Hideki Kyogoku and Akira Terayama (Kinki University)

6) 11:00-11:15 Invited Lecture “Metallic cellular materials containing polymer and ceramics for multi-functional materials”

Satoshi Kishimoto (NIMS)

7) 11:15-11:30 Invited Lecture “Self-healing ceramics - Properties and strategies”

Wataru Nakao (Yokohama National University)

11:30-12:00 Discussion

(12:00-13:30 Lunch Break)

8) 13:30-14:10 Keynote/Special Lecture “Bioinspired active materials and morphing structures with applications to future aerospace vehicles”

Minoru Taya (Boeing-Pennell Professor, Professor of Mechanical Engineering, Director for CIMS (Center for Intelligent Materials and Systems), University of Washington)

9) 14:10-14:30 Invited Lecture “Built-in broadband ultrasonic system for active and passive health monitoring of composite structures”

Yoji Okabe (Institute of Industrial Science, The University of Tokyo)

10) 14:30-14:50 Invited Lecture “Cure monitoring of polymers and polymer based composites by optical fiber sensors”

Tatsuro Kosaka (Kochi University of Technology), Katsuhiko Osaka and Yoshihiro Sawada (Osaka City University)

11) 14:50-15:10 Invited Lecture “Strain sensors made from polymer nanocomposites with two kinds of MWNTs”

Ning Hu (Chiba University)

12) 15:10-15:25 Invited Lecture “Development of Active Laminates and Composites as Smart Mechanical Material Systems”

Hiroshi Asanuma (Chiba University)

15:25-16:00 Discussion and closing