

Day One: Tuesday, June 10, 2014

Session 1 (AM)

Chair: K. Shima

- 09:55-10:00 **Opening Remarks**  
*Prof. Kazuki Morita, Univ. of Tokyo*
- 10:00-10:40 **Invited: Mechanics of Ultrathin Films of Graphene and Graphene Oxide**  
*Prof. Tobin Filleter, Univ. of Toronto* . . . 4
- 10:40-11:00 **Synthesis of Single Walled Carbon Nanotubes with Small Diameter by Using Cu/Co Bimetallic Catalyst**  
*Hua An, Univ. of Tokyo*
- 11:00-11:20 **Scanning Tunneling Microscopy Measurement and Manipulation of Phthalocyanine Molecules on Metal Surfaces**  
*Taylor Stock, Univ. of Toronto*
- 11:20-11:40 **Break**
- 11:40-12:00 **Material Potential of Ultrathin Highly-doped Germanium for ULSI Technology**  
*Shoichi Kabuyanagi, Univ. of Tokyo*
- 12:00-12:20 **Novel Spray-formed, Metallic Foam Core Sandwich Structures for High Temperature Heat Exchanger Applications**  
*Saeid Salavati, Univ. of Toronto*
- 12:20-12:40 **Hot-wire-assisted Atomic Layer Deposition of Highly Pure and Conformal Metal Films in the Non-oxidization Ambient**  
*Guangjie Yuan, Univ. of Tokyo*
- 12:40-13:40 **Lunch**

Session 2 (PM)

Chair: J. Tam and J. Zuliani

- 13:40-14:20 **Invited: Development of Multilayered Steels Consisting of High Cu Containing Steel**  
*Prof. Shoichi Nambu, Univ. of Tokyo* . . . 16
- 14:20-14:40 **Electromagnetic Levitation of Silicon and Silicon-Iron Alloy Droplets**  
*Paul Wu, Univ. of Toronto*
- 14:40-15:00 **Investigation of Metastable Dissolution of Graphite into Fe-Si Alloy for Application to Rapid SiC Solution Growth**  
*Taka Narumi, Univ. of Tokyo*
- 15:00-15:30 **Break (group photo)**
- 15:30-15:50 **Kinetics of Chemical Vapor Deposition Using  $\text{CH}_3\text{SiCl}_3/\text{H}_2$  for SiC Film Coating into the High Aspect Ratio Features**  
*Kohei Shima, Univ. of Tokyo*
- 15:50-16:10 **Fatigue Challenges and Mechanical Damage Evolution in Automobile PEM Fuel Cells**  
*Roshanak Banan, Univ. of Toronto*
- 16:10-16:30 **AE Characterization of the Effect of Confinement Layer on Laser Shock Peening**  
*Tomoki Takata, Univ. of Tokyo*
- 16:30-16:50 **Break**
- 16:50-17:10 **Two-dimensional Observation of Grain Movements in Elongated and Aligned Grain Structure during High Temperature Deformation**  
*Hiroshi Masuda, Univ. of Tokyo*
- 17:10-17:30 **Fatigue Life Assessment of Front End Accessory Drive Systems**  
*Maryam Talimi, Univ. of Toronto*

- 17:30-17:50 **A Bicrystal Study on Diffusion-atomic/electronic Structures Relationship in Alumina GBs**  
*Yuliu You, Univ. of Tokyo*
- 18:00-20:00 **Student party at lounge of Bldg. E**

## Day Two: Wednesday, June 11, 2014

### Session 3 (AM)

Chair: T. Narumi

- 10:00-10:40 **Invited: Porous Structures and Surface Areas**  
*Prof. Donald Kirk, Univ. of Toronto* . . . 34
- 10:40-11:00 **Novel Recycling Process of Gold from Electrical and Electronic Equipments Using “Organic Aqua Regia”**  
*Akihiro Yoshimura, Univ. of Tokyo*
- 11:00-11:20 **Performance of Activated Oil Sands Fluid Coke in Electrical Double-layer Capacitors**  
*Jocelyn E. Zuliani, Univ. of Toronto*
- 11:20-11:40 **Break**
- 11:40-12:00 **Effect of Basicity on the Time-Temperature Transformation Diagram of Synthetic Slags**  
*Sherry Esfahani, Univ. of Toronto*
- 12:00-12:20 **Separation Technology of Tramp Elements in Aluminium Alloy Scrap by Using the Semisolid Processing**  
*Thet Thet Cho, Univ. of Tokyo*
- 12:20-12:40 **Effect of Thermal Pre-Treatment on REE Extraction from Ionic Clays**  
*Frank Cheuk, Univ. of Toronto*
- 12:40-13:40 **Lunch**

### Session 4 (PM)

Chair: M. Talimi

- 13:40-14:20 **Invited: A 3D Integrated Model of Cardiomyocytes Revealed the Importance of Intracellular Structure for Contractile Function**  
*Prof. Asuka Hatano, Univ. of Tokyo* . . . 46
- 14:20-14:40 **Bio-Inspired Advanced Materials**  
*Jason Tam, Univ. of Toronto*
- 14:40-15:00 **Break**
- 15:00-15:20 **Synthesis of Superhydrophobic Nanocomposite Coatings Using Electrodeposition**  
*Daniel Iacovetta, Univ. of Toronto*
- 15:20-15:40 **The Development of Biocompatible Shape Memory Polymer (SMP) Blends and Foams for Biomedical and Clinical Applications**  
*Janice Song, Univ. of Toronto*
- 15:40-16:00 **Applicability of FFS Assessment Using Partial Safety Factors Evaluated by Infinite Plate**  
*Qiang Qu, Univ. of Tokyo*
- 16:00-16:05 **Closing Remarks**  
*Prof. Charles Q. Jia, Univ. of Toronto*
- 16:30-18:00 **Lab tour of Institute of Industrial Science (IIS)**
- 19:00-21:00 **Banquet at *Lever son Verre* Restaurant**