

23rd iCeMS International Symposium
Emerging Science for Unlocking Cell's Secrets

May 30 –31, 2017
KUIAS/iCeMS Main Building, Kyoto University

(As of May 19, 2017)

Day 1 (May 30)

- 12:20–12:50 Registration
- 12:50–13:00 Opening Remarks
Susumu Kitagawa (Director of iCeMS)
Akira Ukawa (WPI Program Director, JSPS)

Session I: Synthetic Biology

Chair: Jun Suzuki, Ganesh Pandian Namasivayam

- 13:00–13:30 **Miki Ebisuya** (RIKEN QBiC)
Synthetic Developmental Biology
- 13:30–14:00 **Kole T Roybal** (Univ of California, San Francisco)
Hacking Immune Cells to Expand Their Therapeutic Potential
- 14:00–14:30 **Koki Kamiya** (Kanagawa Institute of Industrial Science and Technology)
Artificial Cell Assembly Using Bottom-Up Approach
- 14:30–15:00 Coffee Break

Session II: Chemical Materials (1)

Chair: Easan Sivaniah, Satoshi Horike

- 15:00–15:30 **Ken-ichiro Kamei** (iCeMS)
Nanostructured Artificial Extracellular Matrices for Regenerative Medicine
- 15:30–16:00 **Yu Hoshino** (Kyushu Univ)
Development of Protein-Mimic Nanoparticles for Effective CO₂ Separation
- 16:00–16:30 **Shinya Hagihara** (Nagoya Univ)
Controlling Plant Growth and Development with Synthetic Molecules
- 16:30–17:00 Coffee Break

Session III: Microscopy (1)

Chair: Mineko Kengaku, Takahiro Fujiwara

- 17:00–17:30 **Yasushi Okada** (RIKEN QBiC / Univ of Tokyo)
Development and Application of High-Speed, High-Resolution Quantitative Live Cell Imaging
- 17:30–18:00 **Hideki Hirori** (iCeMS)
Strong THz Pulse Generation Technologies to Ultrafast Atomic-Scale Microscopy
- 18:00– Group photo

Day 2 (May 31)

Session IV: Chemical Materials (2)

Chair: Shuhei Furukawa, Daniel Packwood

- 9:30–10:00 **Daishi Fujita** (Univ of Tokyo)
Extended Goldberg Polyhedra Embodied by Self-Assembly
- 10:00–10:30 **Masaaki Kitano** (Tokyo Institute of Technology)
Application of Inorganic Electrides for Ammonia Synthesis
- 10:30–11:00 Coffee Break

Session V: Mechanobiology / Biophysics

Chair: Ryoichiro Kageyama, Kouichi Hasegawa

- 11:00–11:30 **Yusuke Toyama** (National Univ of Singapore)
Mechanical Forces Behind Tissue Morphogenesis
- 11:30–12:00 **Kaoru Sugimura** (iCeMS)
Quantifying and Modelling Epithelial Morphogenesis
- 12:00–12:30 **Rikiya Watanabe** (Univ of Tokyo)
Artificial Cell-Membrane Microsystems Accelerates Membrane Protein Studies
- 12:30–13:30 Lunch

Session VI: Microscopy (2)

Chair: Motonari Uesugi, Dan Ohtan Wang

- 13:30–14:00 **Yuko Mimori-Kiyosue** (RIKEN CLST)
*Exploring Cellular Secrets with Lattice Light-Sheet Microscopy
—Hidden Mechanisms Actuating Mitotic Apparatus*
- 14:00–14:30 **Yasufumi Takahashi** (Kanazawa Univ)
*Live Cell Nanoscale Topography and Chemical Imaging
by Using Scanning Ion Conductance Microscopy
and Scanning Electrochemical Microscopy*
- 14:30–15:00 **Mitsuharu Midorikawa** (Doshisha Univ)
*Imaging Exocytosis and Pre-exocytotic Activities of Single Synaptic Vesicles
at Mammalian Presynaptic Terminals*
- 15:00–15:15 Closing Remarks
Jun Suzuki (Symposium Organizing Chair / iCeMS)