

**The 3rd International Conference on the MEXT Project of  
Integrated Research on Chemical Synthesis  
“Synergy of Theory and Molecular Transformation”**

January 10 and 11, 2014

Nishijin Plaza, Kyushu University

Fukuoka, Japan

<http://www.kyushu-u.ac.jp/university/institution-use/nishijin/english.htm>

***Program***

**January 10 (Friday)**

13:30-13:40 Opening Remarks: **Atsushi Takahara** (Kyushu University)

*(Chair: Atsushi Takahara, Kyushu University)*

13:40-14:20 **Krzysztof Matyjaszewski** (Carnegie Mellon University, USA)  
“Macromolecular Engineering by Atom Transfer Radical Polymerization”

14:20-14:50 **Tamaki Nakano** (Hokkaido University, Japan)  
“Chirality of Polymers in Excited States”

14:50-15:10 **Takeshi Tayagaki** (Kyoto University, Japan)  
“Photoenergy Conversion in Semiconductor Nanomaterials”

15:10-15:40 *Coffee Break*

*(Chair: Wataru Ueda, Hokkaido University)*

15:40-16:20 **Sunney I. Chan** (Academia Sinica, Taiwan)  
“Catalysts for Efficient Methane Hydroxylation: From Enzymes to Biomimics”

16:20-16:50 **Kazunari Yoshizawa** (Kyushu University, Japan)  
“Methane Hydroxylation by Enzymatic Systems: Mechanistic Proposals from  
Quantum Chemical Calculations”

*(Chair: Fumiyuki Ozawa, Kyoto University)*

16:50-17:10 **Osami Shoji** (Nagoya University, Japan)  
“Gaseous Alkanes and Benzene Hydroxylation by Wild-type Cytochrome P450BM3  
Induced by Perfluorinated Carboxylic Acids”

17:10-17:40 **Shigehiro Yamaguchi** (Nagoya University, Japan)  
“Organoboron Materials with Intriguing Reactivity and Properties”

17:40-19:00 *Poster session*

19:30-21:30 *Reception* (Hilton Fukuoka Sea Hawk)

## January 11 (Saturday)

*(Chair: Kazuyuki Tatsumi, Nagoya University)*

09:00-9:40 **Miklos Kertesz** (Georgetown University, USA)  
“Pancake Bonding vs.  $\pi$ - $\pi$  Stacking: Interpretations with Molecular and Solid State Examples”

9:40-10:00 **Hiroki Ago** (Kyushu University, Japan)  
“Graphene and Its Nanostructures: Epitaxial Growth, Characterization, and Challenges”

10:00-10:20 **Hirokazu Kobayashi** (Hokkaido University, Japan)  
“Synthesis of Sugar Compounds from Cellulose over Heterogeneous Catalysts”

10:20-10:50 *Coffee Break*

*(Chair: Katsuhiko Tomooka, Kyushu University)*

10:50-11:30 **Keith A. Woerpel** (New York University, USA)  
“Silylene Transfer Reactions as New Methods for Stereoselective Synthesis”

11:30-12:00 **Shiroh Futaki** (Kyoto University, Japan)  
“Peptide-based approaches for delivering exogenous molecules into cells”

12:00-12:20 **Satoshi Ueno** (Kyushu University, Japan)  
“Selective Carbon–Nitrogen Bond Formation at the Remote Position through Catalytic Sequential Dehydrogenation of Saturated Carbonyl Compounds”

12:20-14:00 *Lunch Break*

*(Chair: Makoto Tokunaga, Kyushu University)*

14:00-14:20 **Shen Ye** (Hokkaido University, Japan)  
“Enzyme Catalyzed Hydrolysis of the Supported Lipid Bilayers”

14:20-14:40 **Satoshi Muratsugu** (Nagoya University, Japan)

“Surface Functionalization of Oxide-Supported Clusters toward Durable Heterogeneous Catalysts for Selective Epoxidation”

14:40-15:00 **Richard Murdey** (Kyoto University, Japan)

“Photoconductivity of organic semiconductor thin films: Methods and mechanisms”

15:00-15:10 Closing Remarks: **Kazunari Yoshizawa** (Kyushu University)