

The 12th Hokkaido University– Nanjing University–NIMS/MANA Joint Symposium

Chemists, Be Ambitious!



Date July 29, 2016

Venue Akira Suzuki Memorial Hall, Frontier Chemistry Center,
Hokkaido University

Organizing Committee

Chair: Kei Murakoshi (Hokkaido University)

Co-Chairs: Dan-Ke Xu (Nanjing University)

Kazuki Sada (Hokkaido University)

Huang-Xian Ju (Nanjing University)

Sponsors

Department of Chemistry, Faculty of Science, Hokkaido University,
Graduate School of Chemical Sciences and Engineering, Hokkaido University,
Frontier Chemistry Center, Faculty of Engineering, Hokkaido University,
Ambitious Leader's Program; "Fostering Future Leaders to Open New Frontiers in Materials
Science", Hokkaido University

Frontier Chemistry Center
フロンティア化学教育研究センター



HOKKAIDO UNIVERSITY
AMBITIOUS
LEADER'S PROGRAM
Fostering Future Leaders to
Open New Frontiers in Materials Science

Program

8:40 Welcome Address
Kei Murakoshi (Hokkaido Univ.)

8:45 Opening Remarks
Kazuki Sada (Hokkaido Univ.)
Huang-Xian Ju (Nanjing Univ.)

Keynote Lecture 1 Chair: **Kei Murakoshi**

9:00-9:30 KL-1 **Xing-Hua Xia**
Plasmonics enhanced spectroscopic and electrochemical detection of biomolecules

Oral Session 1 Chair: **Jian-Xin Li**

9:30-9:45 IL-1 **Koichiro Ishimori**
Structural Characterization of Electron Transfer Complex between Cytochrome *c* - Cytochrome *c* Oxidase in Respiratory Chain

9:45-10:00 IL-2 **Huang-Xian Ju**
In Situ Analysis and Mass Spectroscopic Imaging of Cellular Functional Biomolecules

10:00-10:15 IL-3 **Kazunari Yamaura**
 $\text{Ba}_2\text{NiOsO}_6$: a Ferromagnetic Mott Insulator

10:15-10:30 IL-4 **Jing-Juan Xu**
Electrochemiluminescence Ratiometry for Bioanalysis

———— Short Break (15 min) ————

Oral Session 2 Chair: **Koichiro Ishimori**

10:45-11:00 IL-5 **Dan-Ke Xu**
Multiple protein assay for biochips based on nanoprobe

11:00-11:15 IL-6 **Kazuki Sada**
Anisotropic Deforming Materials based on Crystal Cross-linking of Metal Organic Frameworks

11:15-11:30 IL-7 **Hong Yan**
B-H $\cdots\pi$ Interaction: A New Type of Nonclassical Hydrogen-Bonding

11:30-11:45 IL-8 **Takanori Suzuki**
Bis(10-methylacridinium)s as a Versatile Platform for Redox Active
Functionalized Dyes and Novel Structure

————— Group Photo and Lunch —————

Keynote Lecture 2

Chair: **Dan-Ke Xu**

13:30-14:00 KL-2 **Masako Kato**
Platinum Complexes Exhibiting Intense Luminescence and Chromic
Phenomena

Oral Session 3

Chair: **Kazunari Yamaura**

14:00-14:15 IL-9 **Wei Wang**
Determining the Absolute Concentration of Nanoparticles without
Calibration Factor by Visualizing the Dynamic Processes of Interfacial
Adsorption

14:15-14:30 IL-10 **Jun Harada**
Unique Ferroelectricity found in Organic Ionic Plastic Crystals

————— Short Break (10 min) —————

Oral Session 4

Chair: **Hong Yan**

14:40-15:55 IL-11 **Jian-Xin Li**
Rearrangement Products of PPAP and Inhibitory Activity on PANC-1

15:55-15:10 IL-12 **Rui Kamada**
Methylation of Arginine Residues of Tetramerization Domain Destabilizes
the Tetrameric Structure of Tumor Suppressor Protein p53

15:10-15:25 IL-13 **Jian-Wei Zhao**
Theoretical investigation on the metallic plating layer by molecular
dynamics simulation

15:25-15:40 IL-14 **Yoshiyuki Kageyama**
Macroscopically Working Light-Powered Molecular Motor: Dissipative
Self-Organization Resultant Oscillation

————— Short Break (10 min) —————

Oral Session 5

Chair: **Kazuki Sada**

- 15:50-16:05 IL-15 **Satoshi Maeda**
Global Reaction Route Mapping (GRRM) Strategy for Automated
Exploration of Reaction Pathways
- 16:05-16:20 IL-16 **De-Ju Ye**
Redox-Activatable Trimodal Molecular Imaging Probe for the Detection
of Reducing Environments
- 16:20-16:35 IL-17 **Satoshi Yasuda**
Development of Iron-Nitrogen-Doped Vertically Aligned Carbon
Nanotube Electrocatalyst for the Oxygen Reduction Reaction

———— Short Break (10 min) ————

Poster Short Presentation

Chair: **Rui Kamada, De-Ju Ye**

16:45-17:25 (2 minutes presentations by 20 persons)

17:25 Closing Remarks
Dan-Ke Xu (Nanjing Univ.)

Poster Short Presentation

- P-1 **Yuan-Cheng Zhu, Wei-Wei Zhao, Jing-Juan Xu, Hong-Yuan Chen**
Alkaline Phosphatase Tagged Antibodies on Gold Nanoparticles/TiO₂ Nanotubes
Electrode: A Plasmonic Strategy for Label-Free and Amplified
Photoelectrochemical Immunoassay
- P-2 **Shizuka Anan, Yumi Mochizuki, Kenta Kokado, Kazuki Sada**
Synthesis, deconstruction, and reconstruction of polymer MOFs
- P-3 **Jun Hu, Xiao-Xiao Jiang, Jiang Wang, Qi-Yuan Guan, Pan-Ke Zhang,
Jing-Juan Xu, Hong-Yuan Chen**
Alternating Current Induced Bipolar Spray and Its Application in Comprehensively
Profiling Biomolecules in Single Cells by Combining both Positive-Ion and
Negative-Ion Mass Spectra
- P-4 **Takanori Suzuki, Wataru Nojo, Yusuke Ishigaki, Ryo Katoono**
Redox-induced Conformational Changes in Twin-BIC Donors that Form
Sandwich-like Dimeric Cations Exhibiting NIR Absorption
- P-5 **Tao Liu, Meng Li, Yimin Fang, Wei Wang**
Imaging the interfacial potential distribution on bipolar electrodes without optical
Probes
- P-6 **Hiroshi Kagaya, Wataru Sato, Takeshi Uchida, Kyoko Ito-Shinzawa,
Shinya Yoshikawa, Koichiro Ishimori**
Interaction analysis of Cytochrome *c* – Cytochrome *c* Oxidase complex formation
using fluorescence anisotropy
- P-7 **Chao Liang, Jun-Qin Qiao, Hong-Zhen Lian**
Lipophilicity prediction of strong acids with ion-pair high-performance liquid
Chromatography
- P-8 **Emiri Nakayama, Toshiaki Imagawa, Rui Kamada, Kazuyasu Sakaguchi**
A Novel Assay System to Quantify The Transcriptional Activity of Tumor
Suppressor protein p53 in Single Living Cells

- P-9 **Shu Xu, Bing-Jie Zou, Qing-Shun Zhao, Guo-Hua Zhou**
An alternative novel tool for DNA editing without target sequence limitation: the structure-guided nuclease (SGN)
- P-10 **Ayako Watanabe, Erika Saitoh, Masaki Yoshida, Atsushi Kobayashi, Masako Kato**
Synthesis of a Luminescent and Ion-conductive Porous Coordination Polymer
- P-11 **Wei Cui, Jian-Xin Li**
The influence and regulation of NJx-1 on Muscle function
- P-12 **Yuki Ohta, Yoshiyuki Kageyama, Goro Maruta, Sadamu Takeda**
Possibility of active proton transport by asymmetric proton channel of a coordination polymer
- P-13 **Kewei Ren, Ying Liu, Jie Wu, Yue Zhang, Jing Zhu, Min Yang, Huangxian Ju**
A Structure Switchable “Double Locks-Smart Key” for Cell-Subtype Specific siRNA Delivery
- P-14 **Masanori Ebina, Takeshi Iwasa, Tetsuya Taketsugu**
Theoretical approach to photophysical properties of thiolate-protected icosahedral gold cluster
- P-15 **Pan-Pan Gai, Yu-Sheng Ji, Wen-Jing Wang, Rong-Bin Song, Cheng Zhu, Yun Chen, Jian-Rong Zhang, Jun-Jie Zhu**
Ultrasensitive self-powered cytosensor
- P-16 **Jinjiang Zhang, Takahiro Toda, Hiro Minamimoto, Kei Murakoshi**
Determination of Localized Surface Plasmon Modes Excited on Au Nanorods via in-situ Surface-Enhanced Raman Scattering Measurement
- P-17 **Yi Shi, Yue Zhou, Chen Wang, Xing-Hua Xia**
Study on the catalytic degradation of dye on palladium nanocrystals modified MoS₂ Nanosheets
- P-18 **Yu Su, Yoshihiro Tsujimoto, Kazunari Yamaura**
High-Pressure Synthesis, Crystal Structure and Magnetic Properties of the New Layered Oxyfluoride Perovskite Sr₂MnO₃F

- P-19 **Xiao-Hui Liu, Ya-Ju Zhao, Hui Li, Dan-Ke Xu**
Online-mixing and multiplex protein detection using AgNPs microarray
microfluidic chip
- P-20 **Hui-Wen Lin, Hidenori Noguchi, Toshihiro Kondo, Kohei Uosaki**
Electrochemical and Structural Studies of Si-Li anode in Organic Solvents
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- P-21* **Yu-Hua Zhu**
Introduction of the State Key Lab of Analytical Chemistry for Life Science
- P-22* **Guang Jin**
Introduction of Graduate School of Nanjing University

(* No short-presentation and abstract)