New Frontiers in Chemistry

10th Hokkaido University–Nanjing University Joint Symposium

2014 HU–NU–NIMS/MANA Joint Symposium

August 22 – 23, 2014

Frontier Research in Applied Science Building, Hokkaido University, Sapporo and Rusutsu, Hokkaido, Japan

New Frontiers in Chemistry

The 10th Hokkaido Univ.–Nanjing Univ. Joint Symposium
2014 HU–NU–NIMS/MANA Joint Symposium

Date : August 22 – 23, 2014

Venue: August 22: Frontier Research in Applied Sciences Building, Hokkaido University, Sapporo

August 23: Rusutsu Resort, Rusutsu

Organizing Committee

Chair: Masako Kato (Hokkaido University)

Co-Chairs: Huang-Xian Ju (Nanjing University)

Jian-Xin Li (Nanjing University)

Kazuki Sada (Hokkaido University)

Sponsors

Department of Chemistry, Faculty of Science, 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

Graduate School of Chemical Sciences and Engineering, Hokkaido University

Hokkaido University Support Program for Research Exchange with Inter-university Foreign Partners

Conference Registration

Academic General:	20,000 yen
Academic General: Participation only on 22nd	5,000 yen
Academic Student:	3,000 yen

(Food and stay cost are not included.)

Program

Friday, August 22, 2014 @ Frontier Research in Applied Sciences Building

8:40 **Opening Remarks**

Masako Kato (Hokkaido Univ.)

Huang-Xian Ju (Nanjing Univ.)

Oral Session 1 Chair: **Huang-Xian Ju**

9:00-9:20	O-1	**Koichiro Ishimori** Key Interactions for Electron Transfer from Cytochrome c to Cytochrome c Oxidase in Respiratory Chain
9:20-9:40	O-2	**Shou-Jun Xiao** DNA/RNA Nanostructures Based on Small Circular DNA Molecules
9:40-10:00	O-3	**Kazuyasu Sakaguchi** Amino Acid Substitution in Tetramerization Domain of Tumor Suppressor Protein p53 in Tumorigenesis and Evolution
10:00-10:20	O-4	**Jian-Xin Li** Ursolic Acid Analogs Targeted to Tryptophan Hydroxylase 1 (Tph-1) as Bone Anabolic Agents

Coffee Brake (15 min)

Oral Session 2 Chair: **Kei Murakoshi**

10:35-10:55	O-5	**Kazuki Sada** Metal-Organic Framework with Fractal Surface
10:55-11:15	O-6	**Huang-Xian Ju** Design of Nanoprobes for In Situ Analysis of Cellular Functional Biomolecules and Cancer Therapy
11:15-11:35	O-7	**Tetsuya Taketsugu** Theoretical Elucidation of Excited-State Elementary Processes: Reaction, Vibration, and Tunneling
11:35-11:55	O-8	**Jian-Wei Zhao** Computer model simulation study of nanocrystalline silver

Group Photo and Lunch

Oral Session 3 Chair: **Sadamu Takeda**

13:30-13:50 O-9 **Zhen Shen**
Core-Modified Rubyrins Containing Dithienylethene Moieties

13:50-14:10 O-10 **Atsushi Miura**
Dual laser-induced extended phase separation of thermoresponsive poly(N-isopropylacrylamide) in solution under laser trapping

14:10-14:30 O-11 **Wei-Wei Zhao**
Recent advances in photoelectrochemical bioanalysis

14:30-14:50 O-12 **Atsushi Kobayashi**
Syntheses of Flexible Porous Coordination Polymers Composed of Multifunctional Metalloligands

Coffee Brake (15 min)

Oral Session 4 Chair: **Masako Kato**

15:05-15:25 O-13 **Goro Maruta**
Solid-State High-Resolution NMR of Paramagnetic Crystals

15:25-15:45 O-14 **Dan-Ke Xu**
Nanoparticle Probe Fabrication and Application for Aptasensor Arrays

15:45-16:05 O-15 **Tamotsu Inabe**
Soluble Organic-Inorganic Hybrid Semiconductors

16:05-16:25 O-16 **Zheng Hu**
Carbon-based Nanostructures for Energy Conversion and Storage: Synthesis, Performance and Mechanism

Coffee Brake (15 min)

Oral Session 5 Chair: **Jian-Xin Li**

16:40-17:00 O-17 **Wei Wang**
Study of Electrochemical Oxidation of Single Nanoparticles with Plasmonic-based Electrochemical Imaging

17:00-17:20 O-18 **Kei Murakoshi**
Novel Route for Effective Photoexcitation of Nanomaterials

17:20-17:40 O-19 **Xing-Hua Xia**
Bio-inspired Synthesis of Electrocatalysts for Oxygen Reduction

17:40-18:00 O-20 **Kohei Uosaki**
Boron Nitride as Highly Active Electrocatalyst for Oxygen Reduction Reaction - Theoretical Prediction and Experimental Proof

Saturday, August 23, 2014 @ Rusutsu

Poster session (18:00-22:00)

P-1 **Shuo Yang**
Interfacial Electronic Structure of CO Absorbed on Pt Surface in Electrochemical Environment Probed by Double-resonant Sum Frequency Generation Spectroscopy

P-2 **Yasuhiro Shigeta**
Ligand Substitution Effects on Vapochromic Diimine Platinum(II) Complexes

P-3 **Tomonari Ikegami**
Aliphatic Carboxylic Acid Mediated Growing of Helical Assemblies Composed of Oleate: Mechanistic Study Using pH-Titration

P-4 **Md. Sirajul ISLAM**
Motility System for In Vitro Observation of Treadmilling and Elongation of Microtubules by TIRF Microscopy

P-5 **Gao-Chao Fan**
A new signal amplification strategy of photoelectrochemical immunoassay for highly sensitive interleukin-6 detection based on TiO2/CdS/CdSe dual co-sensitized structure

P-6 **Tanjina Afrin**
Cargo Transportation by Biomolecular Motor along Deformed Microtubule Track In Vitro

P-7 **Pan-Pan Gai**
NADH Dehydrogenase-like Behavior of Nitrogen-Doped Graphene

P-8 **Kana Sawaguchi**
Surface Ligands Dependence of Photocatalytic Hydrogen Evolution Ability of a Combined System of 3d Metal Complex Catalysts and Photosensitizing Quantum Dots

P-9 **Wen-Jing Bao**
Surface enhanced infrared absorption spectroscopy as a powerful tool for interfacial bioanalysis

P-10 **Yukari Sekine**
Iron Metabolism by Heme Degradation Enzyme, HutZ, in Vibrio cholera

P-11 **Yunlong Chen**
Protein-Specific Raman Imaging of Cell-Surface Glycans Based on An Ortho SERS Effect

P-12 **Yuta Kurokome**

Change of the Intermolecular Interactions and Transformation of the Macroscopic Structures of Oleate Self-Assemblies Triggered by Photoisomerization of Azobenzene Derivatives

P-13 **Qiu-Mei Feng**

Disposable paper-based bipolar electrode for sensitive electrochemiluminescence detection of cancer biomarker

P-14 **Riku Nohara**

Simultaneous laser-induced microparticle formation and extraction in thermoresponsive polymer/alcohol/water ternary system

P-15 **Yosuke Sumiya**

Kinetics Calculation of Global Reaction Route Map:Unimolecular Decomposition of 1,3-Butadiene

P-16 **Jing Wu**

Oleanolic Acid Derivatives as Inhibitors of Osteoclast Formation for Osteoporosis

P-17 **Junya Wada**

Destabilization of p53 Tetramer Formation by Arginine Methylation

P-18 **Zhonghui Li**

Simultaneous Detection of Multiple Harmful Substances in Milk Using a Visual Microarray Screening Assay

P-19 **XiaoWei Li**

Enhanced Photo-electrochemical Response of PbS Quantized Nanoparticles excited by Localized Surface Plasmon Resonance

P-20 **Junqiong Wu**

Graduate Education and International Exchange at Nanjing University