2013 SNU-HU Chemistry Symposium on "The Present Chemistry at SNU and HU"

December 13, 2013

Bldg.500, Mogam Hall

Department of Chemistry

BK21플러스
Division of Chemistry and Molecular Engineering

Symposium Program

December 13, Friday **Bldg.500, Mogam Hall**

Opening Ceremony

09:00 ~ 09:10 **Seokmin Shin** (Seoul National University)
Koichiro Ishimori (Hokkaido University)
Seonghoon Lee (Seoul National University)

Oral Session 1 — Chair: Seonghoon Lee

09:10 ~ 09:40 **Prof. Kazuyasu Sakaguchi** Keynote **K-01**
"Control of Biomineralization and Nanoparticle Arrangement via Peptide Self-assembly by 3D Structure Element"

09:40 ~ 10:00 **Prof. Jwa-Min Nam** **O-01**
"Design and Synthesis of Plasmonic Nanogap Structures with ~1-nm Gap and Their SERS Applications"

10:00 ~ 10:20 **Prof. Kuniharu Ijiro** **O-02**
"Preparation of Nanoparticle Vesicles and Those Optical and Bio-Applications"

10:20 ~ 10:40 **Coffee Break**

Oral Session 2 — Chair: Jwa-Min Nam

10:40 ~ 11:00 **Prof. Kei Murakoshi** **O-03**
"Plasmon-Induced Photoexcitation Requires Novel Selection-Rules?"

11:00 ~ 11:20 **Prof. Zee Hwan Kim** **O-04**
"Nano-Plasmonics for Single-Molecule Photochemistry and Chemical Microscopy"

11:20 ~ 11:40 **Prof. Hajime Ito** **O-05**
"Luminescent Mechanochromism and Single-Crystal to Single Crystal Phase Transformation of Gold(I) Complexes"

11:40 ~ 11:50 **Symposium Photo Session**

12:00 ~ 13:30 **Lunch**

Symposium Program

Oral Session 3 — **Chair: Koichiro Ishimori**

13:30 ~ 14:00	**Prof. Seonghoon Lee** Keynote "The Excitonics on Artificial Atoms"	**K-02**
14:00 ~ 14:20	**Prof. Kazuki Sada** "Supramolecular Design of Thermosensitive Phase Transition of Polymer Solution"	**O-06**
14:20 ~ 14:40	**Prof. Toshihiro Shimada** "Electronic Structures, Intefaces & Spintronics in Organic Semiconductors"	**O-07**
14:40 ~ 15:00	**Coffee Break**	

Oral Session 4 — **Chair: Kazuki Sada**

15:00 ~ 15:20	**Prof. Koichiro Ishimori** "Electron Transfer Mechanism for Respiratory Chain in Mitochondoria: Electron Transfer from Cytochrome *c* to Cytochrome *c* Oxidase"	**O-08**
15:20 ~ 15:40	**Prof. Dongwhan Lee** "Making, Twisting, and Breaking Chemical Bonds for Fluorescence Sensing and Switching"	**O-09**
15:40 ~ 16:00	**Prof. Toshifumi Satoh** "Synthesis and Morphological Characterization of Miktoarm Star Polymers Consisting of Maltoheptaose and Polycaprolactone"	**O-10**

Poster Preview Presentation Session — **Chair: Dongwhan Lee**

16:00 ~ 17:30	**P1-P31 Poster Presenters** (3min's presentation / each presenter)

Poster Session — **Chair: Zee Hwan Kim**

17:30 ~ 18:30	**P1-P31 Poster Presenters** (Bldg. 500, the 1st floor Lobby)

Poster Session

December 13, Friday (17:30~18:30) **Bldg.500 Lobby**

RNase-Encapsulated Virus-Like Particles for Artificial RNA Interference System **P-01**

Naotoshi Sugimura, Kenichi Niikura, Kyoji Hagiwara, Hideyuki Mitomo, Hirofumi Sawa and Kuniharu Ijiro

Maximizing the Single-Molecule Surface-Enhanced Raman Scattering and Correlation Studies with Localized Surface Plasmons of Dimeric Nanostructures **P-02**

Jung-Hoon Lee and Jwa-Min Nam

Capsule-Like Self-Assembly of Gold Nanoparticles for SERS-Active DDS Carrier **P-03**

Jinjian Wei, Kenichi Niikura, Naoki Iyo, Hideyuki Mitomo, Kuniharu Ijiro

In-situ Surface-Enhanced Raman Scattering Observation of Intermediate Species at Plasmon-Induced Water Oxidation Process using TiO_2 Electrode with Au Nanostructure **P-04**

Kentaro Suzuki, Fumika Nagasawa, Satoshi Yasuda, Kei Murakoshi

Local Stacking Orders of Multilayer Graphenes Revealed by Infrared Nanoscopy **P-05**

Deok-Soo Kim, Hyeoksang Kwon, A. Y. Nikitin, Sung-Jin Ahn, L. Martin-Moreno, F. J. Garcia-Vidal, Sun-Min Ryu, Hongki Min, and Zee Hwan Kim

Copper(I)-Catalyzed Enantioselective Monoborylation of Alkenylsilanes **P-06**

Koji Kubota, Eiji Yamamoto, and Hajime Ito

Environmentally Benign Blue-Emitting Colloidal InP Nanocrystal: The Mechanistic Investigation on the Nucleation and Growth **P-07**

Byungkwon Jang, Seounghoon Lee

Preparation of MOF-Polymer Composite with Fractal Structure **P-08**

Shunjiro Nagata, Hiroki Sato, Kouta Sugikawa, Kenta Kokado, and Kazuki Sada

Diamond-Like Carbon Doped with Highly π-Conjugated Molecules **P-09**

Wei Xie, Naoki Muraya, Takashi Yanase, Taro Nagahama, Toshihiro Shimada

Transient Inhibitor Peptide of p53 Transcriptional Activity via Hetero-Oligomerization **P-10**

Junya Wada, Rui Kamada, Yoshiro Chuman, Toshiaki Imagawa, and Kazayasu Sakaguchi

Protein-Ligand Docking by using Conformational Space Annealing, Beta-Complex, and Free Ligand Correction **P-11**

Woong-Hee Shin, Jae-Kwan Kim, Deok-Soo Kim, and Chaok Seok

Synthesis of End-Functionalized Poly(*n*-butyl acrylate) by Organocatalytic Group Transfer Polymerization **P-12**

Kenji Takada, Toshifumi Satoh, and Toyoji Kakuchi

Protein-Protein Docking by Cluster-Guided Conformational Space Annealing **P-13**

Hasup Lee, Hahnbeom Park, Junsu Ko, Woong-Hee Shin, and Chaok Seok

Sensitive Determination of Arsenic Compounds in Tap Water Below the WHO Guideline by Electromembrane Extraction Combined with Home-made Capillary Electrophoresis **P-14**

Sunkyung Jeong, Hongfei Zhang, and Doo Soo Chung

Styryl Dye Based Fluorescent Probes from Focused Libraries **P-15**

Sang Wook Lee, Hyun-Woo Rhee, Young-Tae Chang, and Jong-In Hong

Deflection of CS2 Molecules Using a Low Power IR Laser Pulse **P-16**

Sung Nam Sohn, Bum Suk Zhao, So Eun Shin, Doo Soo Chung

Sensitive Determination of Arsenic Compounds with Transient Isotachophoresis **P-17**

Ho Gyun Lee, Young Woo Lee, Doo Soo Chung

Fluorophores Confined in Nanostructures of Functionalized Diblock Copolymers **P-18**

Seungyong Chae, Jin-Kyung Lee, Byeong-Hyeok Sohn

Modulation of Quinone PCET Reaction by Ca^{2+} Ion Captured by Calix[4]quinone in Water **P-19**

R. Soyoung Kim and Taek Dong Chung

Hydrogen-Atom-Mediated Electrochemistry on Dielectric Thin Layer **P-20**

Jin-Young Lee, Jae Gyeong Lee, and Taek Dong Chung

Bio-inspired Virus-gold Microshells for Enhanced Immunoassay **P-21**

Chang Su Jeon, Inseong Hwang, and Taek Dong Chung

Electrokinetic Concentration on a Microfluidic Chip Using Polyelectrolytic Gel Plugs for Small Molecule Detection **P-22**

Donghoon Han, Joohoon Kim, and Taek Dong Chung

Highly Sensitive and Selective DNA Sensing by Surface-Passivated Graphene **P-23**

Bora Lee, Mijin Lee, Yang-Gyun Kim and Byung Hee Hong

Evolution of Nanobubbles in Graphene Liquid Cells: An in-situ TEM Study **P-24**

Dongha Shin, Jong Bo Park, Sang Jin Kim, Jin Hyun Kang, Bora Lee, Sung-Pyo Cho, and Byung Hee Hong

Non-destructive Electron Microscopic Imaging and Analysis of Biological Specimen with Graphene Coating **P-25**

Jong Bo Park, Yongjin Kim, Je Min Yoo, Sang Jin Kim, Youngsoo Kim, Kyungjun Choi, Sung-Pyo Cho, Konstantin S. Novoselov and Byung Hee Hong

One-Step Syntehsis of N-doped Graphene Quantum Dots from Monolayer Graphene by Nitrogen Plasma **P-26**

Joonhee Moon, Junghyun An, Uk Sim, Sung-Pyo Cho, Jin Hyoun Kang, Chul Chung, Jouhahn Lee, Ki Tae Nam, and Byung Hee Hong

Simultaneous Etching and Doping by Cu-Stabilizing Agent for High-Performance Graphene-Based Transparent Electrodes **P-27**

Sang Jin Kim, Jaechul Ryu, Suyeon Son, Donkwan Won, Eun-Kyu Lee, Sung Pyo Cho, Sukang Bae, Seungmin Cho, and Byung Hee Hong

Selective Patterning of Graphene on Flexible Transparent Substrates by Near Infrared LASER **P-28**

Taejun Choi, Yuna Kim, Jongho Ahn, and Byung Hee Hong

Vapor-Phase Molecular Doping of Graphene for High-Performance Transparent Electrodes **P-29**

Youngsoo Kim, Jaechul Ryu, Myungjin Park, Eun Sun Kim, Je Min Yoo, Jaesung Park, and Byung Hee Hong

Control of Osmosis and Desalination Driven by Lower Critical Solution Temperature Phase Transition **P-30**

Yeongbong Mok, Minwoo Noh, and Yan Lee

Carbon Nanotube Incorporated Three-Dimensional Cellulose Scaffolds **P-31**

Subeom Park, Juyeon Park, Byung Hee Hong, and Byung Soo Kim