	October 8	October 9	October 10
9:00-9:15			
9:15-9:30			
9:30-9:45		I-3 J. Nagatomi	Young Researcher Symposium Venue Tokyo Medical and Dental University
9:45-10:00			
10:00-10:15	Opening remark (K. Ishihara)		
10:15-10:30	PL1 K. Kataoka	O-13 (K. Tsumoto)	
10:30-10:45		O-14 (D. Miyoshi)	
10:45-11:00		O-15 (N. Yui)	
11:00-11:15	O-1 (A. Harada)	O-16 (E. Nakata)	
11:15-11:30	O-2 (T. Ohtsuki)	I-4 H.S. Choi	
11:30-11:45	O-3 (K. Gonda)		
11:45-12:00	O-4 (N. Tanaka)		
12:00-12:15	Lunch / poster viewing	Lunch / poster viewing	
12:15-12:30			
12:30-12:45			
12:45-13:00			
13:00-13:15			
13:15-13:30			
13:30-13:45	I-1 K. Akiyoshi	PL2 J. Hilborn	
13:45-14:00			
14:00-14:15			
14:15-14:30	O-5 (K. Kogure)	O-17 (J. Miyake)	
14:30-14:45	O-6 (Y. Iwasaki)	O-18 (H. Iwata)	
14:45-15:00	O-7 (T. Nakabayashi)	O-19 (T. Nakaji)	
15:00-15:15	O-8 (N. Fukuda)	O-20 (H. Ueno)	
15:15-15:30	Coffee break	Coffee break	
15:30-15:45	I-2 Y. Katayama	I-5 H. Noji	
15:45-16:00			
16:00-16:15			
16:15-16:30	O-9 (A. Maruyama)	O-21 (N. Kaji)	
16:30-16:45	O-10 (H. Kashida)	O-22 (Y. Ogura)	
16:45-17:00	O-11 (K. Okabe)	O-23 (H. Higuchi)	
17:00-17:15	O-12 (M. Suzuki)	O-24 (T. Goda)	
17:15-17:30			
17:30-17:45			
17:45-18:00			
18:00-18:15	Reception (Sanjyo-Kaikan)		
18:15-18:30			
18:30-18:45		Banquet Hotel Chinzanso Tokyo (Ito International Research Center)	
18:45-19:00			
19:00-19:15			
19:15-19:30			
19:30-19:45			
19:45-20:00			
20:00-20:15			
20:15-20:30			
20:30-20:45		Closing (N. Yui and H. Higuchi)	

Plenary Lecture

PL-1 **Targeted Chemo- and Molecular-Therapy by Self-Assembled Supramolecular Nanodevices from Functionalized Block Copolymers**

Kazunori KATAOKA

Department of Materials Engineering, Graduate School of Engineering,

Department of Bioengineering, Graduate School of Engineering,

Center for Disease Biology & Integrating Medicine, Graduate School of Medicine,

The University of Tokyo

PL-2 **Bone Regeneration from Molecule to Clinic**

Jöns HILBORN

Department of Chemistry - Ångström, Uppsala University

Invited Speakers

I-1 **Development of Bio-Nanotransporters by Proteoliposome Engineering**

Kazunari AKIYOSHI

Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University

ERATO JST

I-2 **Cell Signal-responsive Gene Delivery for Tumor-specific Theranostics**

Yoshiki KATAYAMA

Department of Applied Chemistry, Faculty of Engineering, Kyushu University

Innovation Center for Medical Redox Navigation, Kyushu University

Center for Advanced Medical Innovation, Kyushu University

I-3 **Cell-Biomaterial Interactions for Regenerative Medicine: Use of Hydrogels in Controlling Cell Differentiation**

Jiro NAGATOMI

Department of Bioengineering, Clemson University

I-4 **Targeted Contrast Agents for Bioimaging and Nanomedicine**

Hak Soo CHOI

Division of Hematology-Oncology, Department of Medicine, Harvard Medical School

Robotic Chemistry Group, Center for Molecular Imaging, Beth Israel Deaconess

Medical Center

I-5 **Single-molecule Digital Counting with Femtoliter Chamber Array**

Hiroyuki NOJI

Department of Applied Chemistry, School of Engineering, The University of Tokyo

CREST, Japan Science and Technology Agency

NMMS Speakers

O-1 **Intracellular Environment-Responsive Nanocapsules Prepared from Head-Tail Type Polycations**

Atsushi HARADA

Department of Applied Chemistry, Graduate School of Engineering,

Osaka Prefecture University

O-2 **Light-directed RNAi Using a Photosensitive Carrier Molecule**

Takashi OHTSUKI

Department of Biotechnology, Okayama University

O-3 **High Accuracy Imaging with Nanoparticles for Advanced Cancer Diagnosis**

Kohsuke GONDA

Department of Medical Physics, Graduate School of Medicine, Tohoku University

Department of Nano-Medical Science, Graduate School of Medicine, Tohoku University

O-4 **Self-assembled β-sheet Peptide Nanofibers for Efficient Antigen Delivery**

Naoki TANAKA

Department of Bio-molecular engineering, Kyoto Institute of Technology

O-5 **Enhanced Cellular Delivery of Nucleic Acids by Electric Stimulus**

Kentaro KOGURE

Department of Biophysical Chemistry, Kyoto Pharmaceutical University

O-6 **Surface Immobilization of Mammalian Cells with Synthetic Polymers**

Yasuhiko IWASAKI

Department of Chemistry and Materials Engineering, Kansai University

O-7 **Measurements of Intracellular Environments by Autofluorescence Lifetime Imaging Microscopy**

Takakazu NAKABAYASHI

Research Institute for Electronic Science, Hokkaido University

O-8 **Real-time Imaging of Single Sarcomeres in the Mouse Heart *in vivo***

Norio FUKUDA

Department of Cell Physiology, The Jikei University School of Medicine

O-9 **Cationic Comb-Type Copolymer Enhances DNAzyme Activity**

Atsushi MARUYAMA

Department of Biomolecular Engineering, Graduate School of Bioscience and Technology, Tokyo Institute of Technology

O-10 **Development of a Highly-sensitive Nucleic Acid Probe for *in vivo* Imaging**

Hiromu KASHIDA

Graduate School of Engineering, Nagoya University

O-11 **Real-Time Monitoring of mRNA Decay in Living Cells**

Kohki OKABE

School of Pharmaceutical Sciences, The University of Tokyo

JST-PRESTO

O-12 **Spot-by-spot Thermometry in Aqueous Solution by Fluorescent Temperature Reporters Under Optical Microscope**

Madoka SUZUKI

Waseda Bioscience Research Institute in Singapore, Waseda University

Organization for University Research Initiatives, Waseda University

O-13 **Baculovirus-Liposome Membrane Fusion for Construction of Artificial Cell Models Based on Giant Lipid Vesicles**

Kanta TSUMOTO

Division of Chemistry for Materials, Graduate School of Engineering, Mie University

O-14 **Fluorescence Light-up Probe for Human Telomere DNA G-quadruplex and Its Applications**

Daisuke MIYOSHI

Faculty of Frontiers of Innovative Research in Science and Technology (FIRST), Frontier Institute for Biomolecular Engineering Research (FIBER)

Konan University

O-15 **Supramolecular Logistics using Cytocleavable Polyrotaxanes for Modulating Cellular Functions**

Nobuhiko YUI

Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University

O-16 **A Rational Design Strategy to Control Fluorescent Property of SNARF Toward Latent Ratiometric Fluorescent pH Probe**

Eiji NAKATA

Institute of Advanced Energy, Kyoto University

O-17 **Development of a Nanoprobe for Measuring Molecular Dynamics in a Cell**

Jun MIYAKE

Department of Engineering Science, Osaka University

O-18 **Cell LEGO**

Hiroo IWATA

Institute for Frontier Medical Sciences, Kyoto University

O-19 **The Mechanism of Cell Regulation by Functional Biomaterials Based on Protein Immobilization**

Tadashi NAKAJI-HIRABAYASHI

Frontier Research Core for Life Sciences, University of Toyama

O-20 **Nano-imaging of Ciliary Motion and the Axonemal Structure**

Hironori UENO

Molecular Function & Life Sciences, Aichi University of Education

O-21 **Micro and Nanochamber Array Chip for a Single Nucleus and Protein Analysis**

Noritada KAJI

Graduate School of Engineering, and FIRST Research Center for Innovative Nanobiodevices, Nagoya University

O-22 **Optical Control of Fluorescence Resonance Energy Transfer Paths in Photonic DNA Nano-processor**

Yusuke OGURA

Graduate School of Information Science and Technology, Osaka University

O-23 **Noninvasive *in vivo* Imaging of Neutrophil and Tumor in Mouse Auricles**

Hideo HIGUCHI

Department of Physics, Graduate School of Science, The University of Tokyo

O-24 **Electrical Sensing for Molecular Dynamics in Nanomedicine**

Tatsuro GODA

Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University

Swedish Medical Nanoscience Center, Department of Neuroscience, Karolinska Institute

Poster Presentation

October 8th 12:00 – 13:30 and October 9th 12:00 – 13:30

P-1 **Raft/caveolae-mediated Endocytosis Achieved by a Novel Cell-penetrating Peptide as a Vector for Protein**

Toshinori SATO

Department of Biosciences and Informatics, Keio University

P-2 **Neutralized and Biodegradable Lipid-Envelope-Type Nanoparticle Using Vitamin A-Scaffold Lipid-like Material for pDNA Delivery**

Hiroki TANAKA

Faculty of Pharmaceutical Sciences, Hokkaido University

P-3 **Tumor Cell Functions on Staged Tumorigenesis-mimicking Matrices**

Takashi HOSHIBA

Graduate School of Science and Engineering, Yamagata University

International Center for Materials Nanoarchitectonics, National Institute for Materials Science

P-4 **Biodegradable Oligo(lactide)s-grafted Dextran Nanogels Collapsing under Reductive Condition for Intracellular Traffics Controlled Drug Delivery**

Akihiro TAKAHASHI

ORDIST, Kansai University

P-5 **Preparation of Biodegradable Double Network Gel for Application in Tissue Engineering**

Takuroh KITAMURA

Faculty of Chemistry, Material and Bioengineering, Kansai University

P-6 **Micro-sized Hydrogel as Platform for Investigating Effect of Physical Property on Cellular Function**

Tatsuo AIKAWA

Department of Pure and Applied Chemistry, Faculty of Science and Technology,

Tokyo University of Science

P-7 **Effect of Nano-sized Polyols on Cell Death and Cellular Activation**

Tooru OOYA

Graduate School of Engineering, Kobe University

P-8 **Surface Design of Thermoresponsive Nanosphere Having High**

Dispersion Stability

Takuya MATSUYAMA

Department of Materials Science and Technology, Tokyo University of Science

P-9 **Quantitative and Direct Evaluation of Interactions Generated Proteins Adsorbed on the Well-defined Surfaces**

Weixin CHEN

Department of Materials Engineering, School of Engineering, The University of Tokyo

P-10 **Amphiphilic Graft Copolymers Based on Poly(trimethylene carbonate): Colloid Gel Formation and Solution Property**

Kyohei NITTA

Department of Chemistry of Functional Molecules, Faculty of Science and Engineering, Konan University

P-11 **Cell-containing Multilayered Phospholipid Polymer Hydrogels Can Evaluate Cell/Cell Communications**

Botao GAO

Department of Materials Engineering, School of Engineering, The University of Tokyo

P-12 **Synthesis of Intracellular Environment-Responsive Nanoparticles by Surfactant-Free Emulsion Polymerization**

Akifumi KAWAMURA

Department of Chemistry and Materials Engineering and ORDIST, Kansai University

P-13 **Extracellular Electron Transfer Regulates Biological Clocks**

Shujij NAKANISHI

Department of Applied Chemistry, School of Engineering, The University of Tokyo

P-14 **Phospholipid Polymer-covered Magnetic Nanoparticles for Continuous Analysis of Intracellular Molecular Reactions**

Naoki MACHIDA

Department of Materials Engineering, School of Engineering, The University of Tokyo

P-15 **Facile Method for Preparation of Temperature-responsive Cell Culture Surfaces by Using Thioxanthone Immobilized Polystyrene Surfaces**

Yoshikatsu AKIYAMA

Institute of Advanced Biomedical Engineering and Science, Tokyo Women's Medical University

P-16 **Nano-force Analysis for Understanding Protein-Materials Interactions**

Sho SAKATA

Department of Materials Engineering, School of Engineering, The University of Tokyo

P-17 **Well-functional Phospholipid Polymers for Controlling Blood Cells Response at the Surface**

Yihua LIU

Department of Bioengineering, School of Engineering, The University of Tokyo

P-18 **Cell Membrane Permeable and Cytocompatible Phospholipid Polymer Nanoprobes Conjugated with Molecular Beacons**

Xiaojie LIN

Department of Materials Engineering, School of Engineering, The University of Tokyo

P-19 **Cells Encapsulated in Cytocompatible Phospholipid Polymer Hydrogel Matrix Make Differentiation with Highly Efficiency**

Haruka ODA

Department of Materials Engineering, School of Engineering, The University of Tokyo

P-20 **Quantitative Analysis of Cell Invasion in Metastasis by Using Nanofibers**

Satoshi FUJITA

Department of Frontier Fiber Technology and Science, Graduate School of Engineering, University of Fukui, Department of Applied Chemistry and Biotechnology, Faculty of Engineering, University of Fukui

P-21 **Polyampholyte Based Protein Delivery Enhanced by Freeze Concentration**

Kazuaki MATSUMURA

School of Materials Science, Japan Advanced Institute of Science and Technology

P-22 **Hydrophobized Thermoresponsive Copolymer Brushes for Cell Separation**

Kenichi NAGASE

Institute of Advanced Biomedical Engineering and Science,

Tokyo Women's Medical University

P-23 **Initial Cell Response on The Analogous Protein Adsorption Layer by Polymer Brush Structure**

Yuya ONODERA

Department of Bioengineering, School of Engineering, The University of Tokyo

P-24 **Anisotropic Magnetic and Cytocompatible Polymer Nanoparticles for Intracellular Stirrering**

Kensuke YOSHIE

Department of Materials Engineering, School of Engineering, The University of Tokyo

P-25 **Effect of Surface Functional Group on Adsorption of Cell Adhesive**

Proteins and Subsequent Cell Adhesion Using Self-assembled Monolayers

Yusuke ARIMA

Institute for Frontier Medical Sciences, Kyoto University

P-26 **Preparation of Thermoresponsive Polymer Grafted Polystyrene Monolithic Capillary for Detection of Hydrophobic Bioactive Compounds**

Takuya KORIYAMA

Department of Materials Science and Technology, Tokyo University of Science

P-27 **Control Fusion of Polymersome by Dipalmitoyl Glycerol Terminated Telechelic Poly(N-isopropylacrylamide)**

Nobuyuki MORIMOTO

Department of Materials Processing, Graduate School of Engineering,

Tohoku University

P-28 **High Resolution Imaging of Angiogenesis with Nanoparticles**

Yoh HAMADA

Department of Nano-Medical Science, Graduate School of Medicine, Tohoku University

P-29 **Heparin-functionalized Thermoresponsive Surfaces for the Dynamic Regulation of Affinity Interaction with Heparin-binding Proteins and Cells**

Jun KOBAYASHI

Institute of Advanced Biomedical Engineering and Science,

Tokyo Women's Medical University

P-30 **Development of Homogeneous Neural Network and Multichannel Incubation-type Planar Patch Clamp -Aiming High Performance Disease Model Chip-**

Tsuneo URISU

FIRST Research Center for Innovative Nanobiodevices, Nagoya University