

Okinawa Colloids 2019 Program

Version 2019.11.01

DCSC Meeting 70th Anniversary Special Lectures

November 5 (Tue)

Room A

Chair: Takeshi Kawai (Tokyo University of Science)

SL01 13:30-14:20

Science, Technology and Humanity for Sustainable Future (1. President, Chemical Society of Japan (Japan), 2. Director General, Institute for Molecular Science (Japan)) ***Maki Kawai**^{1,2}

November 7 (Thu)

Room A

Chair: Kazue Kurihara (Tohoku University)

SL02 16:10-17:00

Biomimetic Organization, Nanomembrane, Global Warming (1. Kyushu University (Japan)) ***Toyoki Kunitake**¹

Plenary Lectures

November 4 (Mon)

Room A

Chair: Hideki Sakai (Tokyo University of Science)

PL01 9:00-9:50

Capillary and magnetic interactions as tools for assembly and manipulation of active colloidal structures (1. North Carolina State University (USA)) ***Orlin D Velev**¹

November 5 (Tue)

Room A

Chair: Cathy McNamee (Shinshu University)

PL02 9:00-9:50

Polydopamine Coating and Pyrogallol Interfacial Chemistry (1. Korea Advanced Institute of Science and Technology (KAIST) (Korea)) ***Haeshin Lee**¹

November 6 (Wed)

Room B–D

Chair: Syuji Fujii (Osaka Institute of Technology)

PL03 9:00-9:50

Controlled Polycationic Gold Nanoclusters (1. Hokkaido University (Japan)) ***Tetsu Yonezawa**¹

November 7 (Thu)

Room A

Chair: Shigeru Deguchi (JAMSTEC)

PL04 9:00-9:50

Nanoparticles and organized lipid assemblies: from interaction to design of hybrid soft devices (1. University of Florence (Italy)) ***Debora Berti**¹

November 8 (Fri)

Room A

Chair: Naoyuki Ishida (Okayama University)

PL05 9:00-9:50

Whatever happened to the long-range hydrophobic attraction? (1. Australian National University (Australia)) ***Vincent S. J. Craig**¹

DCSC Award Lectures

November 7 (Thu)

Room D

4D07 13:30-14:00 (Young Scientist Award)

New photonic, electronic, and mechanic devices fabricated by soft lithography (1. Kumamoto University (Japan)) ***Satoshi Watanabe**¹

November 8 (Fri)

Room D

5D01 10:10-10:40 (Young Scientist Award)

Systematic understanding of the effects of peripheral molecules on the physical properties of phospholipid bilayers: Effects of hydrophobic molecules and hydration water (1. Department of Chemistry, University of Tsukuba (Japan)) ***Mafumi Hishida**¹

November 8 (Fri)

Room B

5B13 16:10-16:40 (Young Engineer Award)

α -Gel (α -type hydrated crystal) structure evaluation formed by monohexadecyl phosphate with L-arginine and its application into cosmetics (I. NIKKOL GROUP Cosmos Technical Center Co., Ltd (Japan)) ***Keisuke Tanaka**¹

Awards Ceremony

November 7 (Thu)

Room A

15:50-16:10

Welcome Reception

November 3 (Sun)

Room A

18:00-

Conference Banquet

November 7 (Thu)

Room A

18:30-

Opening Remarks

November 4 (Mon)

Room A

8:45-9:00

Closing Remarks

November 8 (Fri)

Room A

18:30-18:40

Oral Presentation

November 3 (Sun)

Room B

Young Researchers Session 1

Chair: Ryo Murakami (Konan University), Olivier Cayre (University of Leeds)

YB02 15:20-15:40

Structure and shape of capsules containing fixing agent for space inflatable structure (1. National Institute of Technology Asahikawa College (Japan), 2. Muroran Institute of Technology (Japan)) ***Takahito Hoshi**¹, Haruno Yanagimoto¹, Yuki Yamada², Koichiro Matsuo², Atsushi Hyono¹, Nobuhisa Katsumata², Masahiro Sakai², Ken Higuchi², Makoto Chiba¹, Hideaki Takahashi¹

YB03 15:40-16:00

Strategical Design of Polymer Nanoparticles that Exhibit Selective Uptake for Cancer Cell (1. Department of Chemistry and Materials Engineering, Kansai University (Japan), 2. ORDIST, Kansai University (Japan)) ***Aoi Uozumi**¹, Akifumi Kawamura^{1,2}, Takashi Miyata^{1,2}

YB04 16:00-16:20

Monofunctional Dual Stimuli-Responsive Organogels: Thermo- and Photo-Responsive Behavior of Coumarin Polymer-Based Organogel (1. Osaka City University (Japan)) ***Seidai Okada**¹, Eriko Sato¹, Yuta Koda¹, Hideo Horibe¹

Break (16:20-16:40)

Chair: Carlos Rodriguez-Abreu (IQAC-CSIC), Yuji Yamashita (Chiba Institute of Science)

YB05 16:40-17:00

Crosslinking agent/initiator-free polymer-gel synthesis by using in-liquid plasma method (1. Sophia University (Japan)) ***Seiya Sawada**¹, Satoshi Horikoshi¹

YB06 17:00-17:20

Photoinduced MRI Image Guided Synergistic Effect of CO Gas-Photothermal Therapy by CORM-401 Conjugated Prussian Blue Analogous (1. Department of Chemistry, National Cheng Kung University (Taiwan)) ***LiuChun Wang**¹, ChenSheng Yeh¹

YB07 17:20-17:40

A Method for Identifying Hair Dyes in or on Hairs Using a Combination of Surface-Enhanced Raman Spectroscopy and X-ray Fluorescence Analysis (1. Tokyo University of Science (Japan)) ***Momona Horiguchi**¹, Shinsuke Kunimura¹

Room C

Young Researchers Session 2

Chair: Takuya Sugimoto (University of Tokyo), Kenichi Sakai

(Tokyo University of Science)

YC02 15:20-15:40

Numerical and experimental study of shear induced aggregation using polymer nanoparticles with a thermo-responsive shell (1. University of Chemistry and Technology Prague (Czech Republic)) ***Jose Francisco Wilson**¹, Miroslav Soos¹

YC03 15:40-16:00

Modelling of drop size distribution in a cellulose nanocrystal-based ultrasound emulsification process via population balance method (1. Monash University Malaysia (Malaysia)) ***Sangeetapriya P. Siva**¹, Yong Kuen Ho¹

YC04 16:00-16:20

Structure and viscosity studies of Nafion dispersions (1. The Institute for Solid State Physics, The University of Tokyo (Japan), 2. Toyota Motor Corporation (Japan), 3. Toyota Central R&D Laboratories (Japan)) ***Caidric Indaya Gupit**¹, Xiang Li¹, Ryosuke Maekawa², Naoki Hasegawa^{2,3}, Mitsuhiro Shibayama¹

Break (16:20-16:40)

Chair: Yuki Uematsu (Kyushu University), Motoyoshi Kobayashi (University of Tsukuba)

YC05 16:40-17:00

AC Electrophoretic Mobility of an Optically Trapped Colloidal Particle in Complex Fluids (1. Kyushu University (Japan)) ***Kohei Iki**¹, Yukiteru Murakami¹, Yasuyuki Kimura¹

YC06 17:00-17:20

Reflective Properties of Spherical Photonic Crystals Composed of Silica Colloidal Particles (1. Tokyo University of Science (Japan), 2. Nagoya University (Japan)) ***Ryosuke Ohnuki**¹, Miki Sakai², Yukikazu Takeoka², Shinya Yoshioka¹

YC07 17:20-17:40

2D Non-close-packed Colloidal Crystals by the Electrostatic Adsorption of 3D Charged Colloidal Crystals (1. Nagoya City University (Japan)) ***Yurina Aoyama**¹, Akiko Toyotama¹, Tohru Okuzono¹, Junpei Yamanaka¹

Room D

Young Researchers Session 3

Chair: Taku Iiyama (Shinshu University), Takahiro Ohkubo (Okayama University)

YD01 15:00-15:20

Kinetics and Dynamics of Metal Ions Sorption on Monolith Polyethyleneimine-Based Porous Sorbents (1. Institute of Chemistry, Far Eastern Branch of RAS (Russia)) ***Irina Malakhova**¹, Alexey Golikov¹, Yulia Azarova¹, Svetlana Bratskaya¹

YD02 15:20-15:40

Synthesis of ZnGa₂O₄ with a high affinity for CO₂ via epoxide-mediated alkalization towards photocatalytic conversion of CO₂ with H₂O (1. Osaka Prefecture University (Japan), 2. Kyoto University (Japan)) ***Masanori Takemoto**¹, Yasuaki Tokudome¹, Kentaro Teramura², Souichi Kikkawa², Tsunehiro Tanaka², Hidenobu Murata¹, Atsushi Nakahira¹, Kenji Okada¹, Masahide Takahashi¹

YD03 15:40-16:00

Double Promoter Enhanced Mixed Methane-THF Hydrate Formation at Higher Temperature and Low Pressure (1. The Petroleum and Petrochemical College, Chulalongkorn University (Thailand), 2. National University of Singapore (Singapore), 3. Center of Excellence in Petrochemical Materials Technology (PETROMAT) (Thailand), 4. UOP, A Honeywell Company (USA)) ***Katipot Inkong**¹, Hari Prakash Veluswamy², Pramoch Rangsunvigit^{1,3}, Santi Kulprathipanja⁴

YD04 16:00-16:20

Development of novel Hg-free microwave discharged electrodeless lamp and evaluation by sterilization of *E. coli* (1. Sophia University (Japan)) ***Upile Chitete**¹, Satoshi Horikoshi¹

Break (16:20-16:40)

Chair: Shinji Yamada (Kao Co.), Takahiro Ohkubo (Okayama University)

YD05 16:40-17:00

Cobalt-Ferrite Nanoparticles Embedded in PNIPAM Based Microgel (1. Technical University Darmstadt (Germany), 2. University of Hamburg (Germany)) ***Marcus Witt**¹, Stephan Hinrichs², Birgit Fischer², Regine von Klitzing¹

YD06 17:00-17:20

Active control of cluster patterns formed by magnetic particles in a fluctuating magnetic field (1. Graduate School of Interdisciplinary New Science, Toyo University (Japan), 2. Bio-Nano Electronics Research Centre, Toyo University (Japan)) ***Asma Ben Salah**¹, Tomofumi Ukai^{1,2}, Shunji Kurosu^{1,2}, Hisao Morimoto^{1,2}, Toru Maekawa^{1,2}

YD07 17:20-17:40

Liquid phase transformation of an ionic liquid TMPA TFSI induced by magnetic fields (1. Shinshu University (Japan)) ***Hayato Otsuka**¹, Atom Hamasaki¹, Taku Iiyama¹, Sumio Ozeki¹

Room E

Young Researchers Session 4

Chair: Hiroki Matsubara (Kyushu University), Yuuki Takashima (Tokyo University of Pharmacy and Life Sciences)

YE01 15:00-15:20

Highly Pure Gold Nanoparticles Produced in a Low Temperature Heating and a Low Vacuum Conditions (1. Tokyo University of Science (Japan)) ***Hiroki Umeda**¹, Shinsuke Kunimura¹

YE02 15:20-15:40

Fabrication of Ag nanoparticle arrays embedded in polystyrene particles and their anisotropic optical properties (1. Tokyo University of Science (Japan)) ***Kazuhiko Kinoshita**¹, Yoshiro Imura¹, Ke-Hsuan Wang¹, Takeshi Kawai¹

Chair: Taku Ogura (Cosmos Technical Center Co., Ltd.), Hiroki Matsubara (Kyushu University)

YE03 15:40-16:00

Surface Modifier-Free Synthesis of TiO₂ Nanorod Heteroepitaxially-Grown on SnO₂ Seed Nanoparticle (1. Kindai University (Japan)) ***Atsunobu Akita**¹, Musashi Fujishima¹, Hiroaki Tada¹

YE04 16:00-16:20

Development of practical high-quality carbon quantum dots synthesis method using a novel microwave synthesis protocol (1. Sophia University (Japan)) ***Kenta Hagiwara**¹, Satoshi Horikoshi¹

Break (16:20-16:40)

Chair: Yuuki Takashima (Tokyo University of Pharmacy and Life Sciences), Taku Ogura (Cosmos Technical Center Co., Ltd.)

YE05 16:40-17:00

Graphene Oxide Film Isolated Raman Spectroscopy for Subnano Particles Analysis and Application (1. Laboratory for Chemistry and Life science, Institute of Innovative Research, Tokyo Institute of Technology (Japan), 2. JST-ERATO Yamamoto Atom Hybrid project, Institute of Innovative Research, Tokyo Institute of Technology (Japan)) ***Yuansen Tang**¹, Akiyoshi Kuzume², Kimihisa Yamamoto^{1,2}

YE06 17:00-17:20

Stability of Single Wall Carbon Nanotubes cryogels in organic solvents (1. Research Initiative for Supra-Materials, Shinshu University (Japan), 2. 1 Department of Materials Chemistry, Faculty of Engineering, Shinshu University (Japan)) ***Izadora Rhaynna Santos de Menezes**^{1,2}, Yuito Kamijyou^{1,2}, Radovan Kukobat¹, Toshio Sakai², Katsumi Kaneko¹

November 4 (Mon)

Room A

Lunch (12:20-13:40)

Plenary Lecture

Chair: Hideki Sakai (Tokyo University of Science)

PL01 9:00-9:50

Capillary and magnetic interactions as tools for assembly and manipulation of active colloidal structures (1. North Carolina State University (USA)) ***Orlin D Velev**¹

Break (9:50-10:10)

[T6] Nanoparticles and Nanomaterials

Chair: Yuichi Negishi (Tokyo University of Science),
Redouane Borsali (University Grenoble Alpes)

1A01 10:10-10:40 [Keynote Lecture]

Magneto-Responsive Metafluids: Polymer-Nanoparticle Composite Microspheres for SERS Sensing (1. Tohoku University (Japan)) Yutaro Hirai¹, ***Hiroshi Yabu**¹

1A02 10:40-11:00 [Invited Lecture]

Block-copolymer-based polyion complex nanostructures as a platform for incorporation of colloidal nanomaterials (1. Department of Applied Chemistry, Faculty of Engineering, Kyushu University (Japan), 2. Center for Molecular Systems, Kyushu University (Japan), 3. Center for Future Chemistry, Kyushu University (Japan)) ***Akihiro Kishimura**^{1,2,3}

1A03 11:00-11:20

Co-assembly of Superchaotropic Anions with Block Copolymers Leading to Nanostructures of Diverse Morphology (1. Department of Physical and Macromolecular Chemistry, Faculty of Science, Charles University (Czech Republic), 2. Institute of Macromolecular Chemistry AS CR, v.v.i (Czech Republic)) Jianwei Li¹, Sami Keraiche¹, Alexander Zhigunov², Zdenek Tosner¹, Mariusz Uchman¹, ***Pavel Matejcek**¹

1A04 11:20-11:40

Manipulation of Plasmon Active Silver Nanostructure with Gap on a Polystyrene Particle (1. National Institute of Technology, Asahikawa College (Japan), 2. Muroran Institute of Technology (Japan), 3. Nagasaki University (Japan)) Atsushi Hyono¹, Riu Yoshitani¹, Mai Takase², Shigeaki Abe³, ***Makoto Chiba**¹

1A05 11:40-12:00

Non-invasive SERS of reactive organic molecules using black silicon (1. Institute of Chemistry, Far Eastern Branch of RAS (Russia), 2. Institute of Automation and Control Processes, Far Eastern Branch, Russian Academy of Sciences (Russia), 3. Swinburne University of Technology (Australia), 4. Melbourne Centre for Nanofabrication (Australia)) ***Svetlana Bratskaya**¹, Evgeniy Mitsai², Alexander Kuchmizhak², Alexander Sergeev², Alexander Mironenko¹, Saulius Juodkazis^{3,4}

1A06 12:00-12:20

Silver and Gold Nanoparticles for Investigation of Protein Tyrosine Oxidation (1. IOCB AS CR (Czech Republic), 2. FFBT, UCT Prague (Czech Republic)) ***Jaroslav Sebestik**¹, Petr Niederhafner^{1,2}, Martin Safarik¹

[T6] Nanoparticles and Nanomaterials

Chair: Hideya Kawasaki (Kansai University), Svetlana Bratskaya (Far Eastern Branch of RAS)

1A07 13:40-14:10 [Keynote Lecture]

Novel Plasmonic Nanomaterials for Near Infrared Light Energy Conversion (1. Kyoto University (Japan)) ***Toshiharu Teranishi**¹

1A08 14:10-14:30 [Invited Lecture]

Atomic-Level Understanding of Effect of Heteroatom Doping of the Cocatalyst on Water-Splitting Activity in AuPd or AuPt Alloy Cluster-Loaded BaLa₄Ti₄O₁₅ (1. Tokyo University of Science (Japan), 2. Tokyo Metropolitan University (Japan)) ***Yuichi Negishi**¹, Kosuke Wakamatsu¹, Yuki Kataoka¹, Akihide Iwase¹, Wataru Kurashige¹, Akihiko Kudo¹, Seiji Yamazoe²

1A09 14:30-14:50

MXene Hydrogels with Ternary Structural Design for Supercapacitors (1. Southeast University (China)) Jing Ma¹, Wei Zhang¹, ***ZhengMing Sun**¹

1A10 14:50-15:10

Preparation and properties of colloidal transition-metal nanoclusters stabilized by fullerene (1. Osaka University (Japan)) ***Mark Kristan Espejo Cabello**¹, Nozomi Sato¹, Yuta Uetake¹, Ken Kokubo¹, Hidehiro Sakurai¹

1A11 15:10-15:30

Alchemy for Plasmonics: Coinage Metal-Free Visible-Plasmonic Nanoalloys (1. Institute for Chemical Research, Kyoto University (Japan), 2. Department of Theoretical and Computational Molecular Science, Institute for Molecular Science (Japan), 3. Department of Applied Chemistry, Faculty of Science Division I, Tokyo University of Science (Japan), 4. Department of Chemistry, Graduate School of Science, Kyoto University (Japan)) ***Ryota Sato**¹, Kenji Iida², Tokuhisa Kawawaki³, Haruka Takekuma⁴, Shigehisa Egawa⁴, Katsuyuki Nobusada², Toshiharu Teranishi¹

1A12 15:30-15:50

Development of New Solid-Solution Alloy Nanoparticles for Catalytic Applications Based on Density-of-States Engineering (1. Kyoto University (Japan), 2. Kyushu University (Japan), 3. NIMS (Japan), 4. Nagoya University (Japan)) ***Kohei Kusada**¹, Dongshuang Wu¹, Tomokazu Yamamoto², Syo Matsumura², Wei Xie², Michihisa Koyama³, Katsutoshi Sato¹, Katsutoshi Nagaoka⁴, Hiroshi Kitagawa¹

Break (15:50-16:10)

[T6] Nanoparticles and Nanomaterials

Chair: Akihiro Kishimura (Kyushu University), Zheng Ming Sun (Southeast University)

1A13 16:10-16:40 [Keynote Lecture]

Supracrystals of hydrophobic nanocrystals dispersed aqueous solution: Specific behaviors (1. Sorbonne Universite (France)) ***Marie Paule Pileni**¹

1A14 16:40-17:00 [Invited Lecture]

Carbohydrate-based block copolymer nanoparticles (1. University Grenoble Alpes - CNRS - CERMAV(France))
***Redouane Borsali**¹

1A15 17:00-17:20

Tuning of Thermo-responsive Assembly of Gold Nanoparticles Coated with Oligo (Ethylene Glycol) Derivatives (1. Hokkaido University (Japan)) ***Hideyuki Mitomo**¹, Yier Shi¹, Ryo Iida¹, Yusuke Yonamine¹, Kuniharu Ijiri¹

1A16 17:20-17:40

Controlled pattern formation consisting of fullerene on a substrate via the coffee-ring effect (1. Graduate school of Interdisciplinary New Science, Toyo University (Japan), 2. Bio-Nano Electronics Research Centre, Toyo University (Japan)) ***Shunji Kurosu**^{1,2}, Hisao Morimoto^{1,2}, Kyosuke Takahashi¹, Toru Maekawa^{1,2}

1A17 17:40-18:00

Liquid Crystalline Titanium Dioxide Nanorods: From 2D Superlattices to Self-assembled Architectures in Bulk (1. Soft Condensed Matter, Debye Institute for Nanomaterials Science, Utrecht University (Netherlands)) ***Syednaveed Hosseininohoji**¹, Arnout Imhof¹, Patrick Baesjou¹, Alfons van Blaaderen¹

1A18 18:00-18:20

Designs of plasmonic nanoparticle-assemblies in hollow silica spheres by employing surfactant self-assemblies (1. Yamaguchi University (Japan), 2. Tohoku University (Japan)) ***Haruyuki Ishii**¹, Yohei Ishikawa², Mikio Konno², Daisuke Nagao²

Room B

[T3] Soft Matter, Active Matter and Dynamical Self-organization of Biomolecular Systems

Chair: Nobuhiko J. Suematsu (Meiji University), Ayako Yamada (Ecole Normale Supérieure)

1B01 10:10-10:40 [Keynote Lecture]

Reconfigurable self-assembly: from evolutive DNA nanomachines to living 2D and 3D crystals (1. Ecole Normale Supérieure (France)) ***Damien Baigl**¹

1B02 10:40-11:00 [Invited Lecture]

Overcoming the challenges for designing swarm molecular robots (1. Faculty of Science, Hokkaido University (Japan), 2. Graduate School of Chemical Sciences and Engineering, Hokkaido University (Japan)) ***Akira Kakugo**^{1,2}, Jakia Jannat Keya¹, Mousumi Akter²

1B03 11:00-11:20

Driving force of vesicle with autonomous motion under a quasi-steady state pH gradient (1. Doshisha University (Japan)) ***Erika Nawa**¹, Yuki Nakao¹, Daigo Yamamoto¹, Akihisa Shioi¹

1B04 11:20-11:40

Polyelectrolyte complex phase separation for solvent-free membranes (1. University of Twente (Netherlands)) M. Irshad Baig¹, Elif Nur Durmaz¹, ***Joshua D Willott**¹, Wiebe M de Vos¹

1B05 11:40-12:00

Analysis of dynamic polymer brush by adhesion force measurement (1. University of Tokyo (Japan), 2. High Energy Accelerator Research Organization (Japan)) Taihei Aoki¹,

Norifumi L Yamada², Kohzo Ito¹, ***Hideaki Yokoyama**¹

1B06 12:00-12:20

The formation mechanism of porous colloidal gels based on metal-organic polyhedra (1. Institute for Integrated Cell-Material Sciences, Kyoto University (Japan), 2. Department of Macromolecular Science and Engineering, Kyoto Institute of Technology (Japan)) ***Alexandre Legrand**¹, Gavin A. Craig¹, Mickaele Bonneau¹, Saori Minami², Kenji Urayama², Shuhei Furukawa¹

Lunch (12:20-13:40)

[T3] Soft Matter, Active Matter and Dynamical Self-organization of Biomolecular Systems

Chair: Damien Baigl (Ecole Normale Supérieure), Akira Kakugo (Hokkaido University)

1B07 13:40-14:10 [Keynote Lecture]

Specific ion modulated thermoresponsive polymer brushes (1. University of Newcastle (Australia), 2. UNSW Sydney (Australia), 3. ANSTO (Australia)) ***Erica Joy Wanless**¹, Ben Humphreys¹, Edwin Johnson¹, Isaac Gresham², Stuart Prescott², Andrew Nelson³, Grant Webber¹

1B08 14:10-14:30 [Invited Lecture]

Dynamical behavior of non-freezing/intermediate/free water in a biocompatible polymer matrix (1. High Energy Accelerator Research Organization (Japan), 2. Mie University (Japan), 3. Kyushu University (Japan), 4. CROSS (Japan)) ***Hideki Seto**¹, Yoshihisa Fujii², Daiki Murakami³, Taiki Tominaga⁴, Masaru Tanaka³

1B09 14:30-14:50

Experimental approach for the mechanism of the self-propelled motion of the objects at liquid interface using a quasi-elastic laser scattering method (1. Chiba University (Japan), 2. The University of Tokyo (Japan)) ***Masanori Fujinami**¹, Yasuhito Watanuki¹, Ree Wakasa¹, Luca Chiari¹, Tomonori Nomoto¹, Taro Toyota²

1B10 14:50-15:10

Interaction between Self-propelled Ion Gel Pieces in Rotation on H₂O Surface (1. Meisei University (Japan)) ***Kazuaki Furukawa**¹

1B11 15:10-15:30

Enhancing Stability and Uptake of Double-stranded RNA for Use in Pest Control via Complexation with Well-defined Diblock Copolymers (1. University of Leeds (UK), 2. Max Planck Institute for Polymer Research (Germany), 3. L2C, University of Montpellier, CNRS (France)) ***Olivier Cayre**¹, Calum Ferguson^{2,1}, Juliette Behra^{3,1}, Nicholas Warren¹, Elwyn Isaac¹

1B12 15:30-15:50

Markedly different effect between cisplatin and transplatin on higher-order structure of DNA and gene expression (1. Doshisha University (Japan), 2. Suzuka University of Medical Science (Japan)) ***Toshifumi Kishimoto**¹, Yuko Yoshikawa¹, Seiji Komeda², Kenichi Yoshikawa¹

Break (15:50-16:10)

[T3] Soft Matter, Active Matter and Dynamical Self-organization of Biomolecular Systems

Chair: Erica Wanless (University of Newcastle), Hideki Seto (High Energy Accelerator Research Organization)

1B13 16:10-16:40 [Keynote Lecture]

Spontaneous Droplet Motion Driven by an Interfacial Chemical Reaction of Surfactants (1. Meiji University (Japan)) ***Nobuhiko J. Suematsu**¹

1B14 16:40-17:00 [Invited Lecture]

Reconstituted biomimetic systems: from molecular motor proteins to organs-on-chips (1. Ecole Normale Supérieure (France)) ***Ayako Yamada**¹

1B15 17:00-17:20

Switching of Self-propelling Modes for Liquid Crystal Droplets in Surfactant Solution (1. Kyushu University (Japan), 2. Kyoto University (Japan)) Mariko Suga¹, Saori Suda², Masatoshi Ichikawa², ***Yasuyuki Kimura**¹

1B16 17:20-17:40

Lipid nanodisc formation from cyclic peptide surfactant "surfactin" (1. Research Institute for Chemical Process Technology, Advanced Industrial Science and Technology (AIST) (Japan), 2. New Business Development Division, Kaneka Corporation (Japan)) ***Tomohiro Imura**¹, Ryoudai Moriyama¹, Tadao Tsuji², Satoshi Yanagisawa², Toshiaki Taira¹

1B17 17:40-18:00

Phase coexistence induced by Marangoni flows in a monolayer of active particles (1. University of Seville (Spain), 2. Max Planck Institute for Intelligent Systems (Germany)) Alvaro Dominguez¹, ***Mihail N. Popescu**²

1B18 18:00-18:20

Synthesis and Self-Assembly of Cyclic Amphiphiles (1. Hokkaido University (Japan)) ***Takuya Yamamoto**¹, Satoru Chimura¹

Room C

[T9] Biocolloids, Biomaterials, Biointerfaces and Biomimetics

Chair: Hiroyuki Mayama (Asahikawa Medical University), Anna Schenk (University of Bayreuth)

1C01 10:10-10:40 [Keynote Lecture]

In the curl: Interface-mediated formation of polymer/mineral composite micro scrolls (1. Department of Chemistry, University of Bayreuth (Germany)) ***Anna S Schenk**¹, Viktoria Gruen¹

1C02 10:40-11:00 [Invited Lecture]

Construction of Artificial Envelope-type Viral Capsids (1. Tottori University (Japan)) ***Kazunori Matsuura**¹, Hiroto Furukawa¹, Moeka Nagamachi¹, Hiroshi Inaba¹

1C03 11:00-11:20 [Invited Lecture]

Lipid liquid crystalline nanoparticles as enzyme carriers – structure and intermolecular interaction controlling the enzyme encapsulation (1. Physical Chemistry, Department of Chemistry, Lund University (Sweden), 2. ISIS, STFC, Rutherford Appleton Laboratory (UK), 3. University of Delaware (USA), 4. NIST Center for Neutron Research (USA), 5. Vilnius University (Lithuania), 6. Camurus AB (Sweden), 7. Malmö University (Sweden)) Maria Valldeperas¹, Najet Mahmoudi², Susana C. M. Teixeira^{3,4}, Martynas Talaikis⁵, Ieva Matulaitiene⁵, Gediminas Niaura⁵, Justas Barauskas^{6,7}, ***Tommy Nylander**¹

1C04 11:20-11:40

Preparation, characterization, and antimicrobial activity of cubosome encapsulated metal nanocrystals (1. RMIT University (Australia), 2. CSIRO (Australia)) ***Thomas Geoffrey Meikle**¹, Jacinta White², Charlotte Conn¹, Calum Drummond¹

1C05 11:40-12:00

Biomimetic Hydroxyapatite Mineralization on Polymer Substrates Utilizing Surface Pretreatments (1. Faculty of Engineering, Tokyo University of Science (Japan), 2. Graduate School of Chemical Sciences and Technology, Tokyo University of Science (Japan)) ***Mineo Hashizume**¹, Kohei Takada², Kohei Doji¹, Mitsumasa Ikemura¹, Kazutoshi Iijima¹, Yusuke Yataka¹

1C06

12:00-12:20 Exploring the biological identity of nanoplastics through the lens of physical chemistry (1. School of Chemical Sciences, The University of Auckland (New Zealand), 2. The MacDiarmid Institute for Advanced Materials and Nanotechnology (New Zealand), 3. ACNS, Australian Nuclear Science and Technology Organisation (ANSTO) (Australia), 4. Flinders Centre for Nanoscale Science and Technology and School of Chemical and Physical Sciences, Flinders University (Australia)) ***Shinji Kihara**^{1,2}, Chris Kingsley Seal^{1,2}, Jitendra Mata³, Ingo Köper⁴, Duncan James McGillivray^{1,2}

Lunch (12:20-13:40)

[T9] Biocolloids, Biomaterials, Biointerfaces and Biomimetics

Chair: Mineo Hashizume (Tokyo University of Science), Takayuki Murosaki (Asahikawa Medical University)

1C07 13:40-14:10 [Keynote Lecture]

Nano-scale nipple array as a multifunctional structure on the animal body surface (1. Faculty of Science, University of the Ryukyus (Japan)) ***Euichi Hirose**¹

1C08 14:10-14:30 [Invited Lecture]

Settlement behavior of sessile organisms on micro-structured surfaces (1. Asahikawa Medical University (Japan), 1 Central Research Institute of Electric Power Industry (Japan), 3. Chitose Institute of Science and Technology (Japan)) ***Takayuki Murosaki**¹, Yasuyuki Nogata², Yuji Hirai³

1C09 14:30-14:50

Antibacterial Liquid Metals: Biofilm Treatment via Magnetic Activation (1. RMIT University (Australia), 2. Monash Institute of Pharmaceutical Sciences (Australia), 3. Graduate School of Biomedical Engineering, University of New South Wales (Australia), 4. Department of Chemical and Biomolecular Engineering, North Carolina State University (USA)) ***Aaron Elbourne**¹, Samuel Cheeseman¹, Paul Atkin¹, Nitu Zayed¹, Ali Zavabeti¹, Nghia P Truong², Md Mohiuddin¹, Dorna Esrafilzadeh³, Daniel Cozzolino¹, Christopher F McConville¹, Michael Dickey⁴, Russell J Crawford¹, Torben Daeneke¹, James Chapman¹, Vi Khanh Truong¹

1C10 14:50-15:10

Direct Measurement of Water Strider's Leg Rowing Force for Considering Water-Repellent Mechanism (1. Osaka University (Japan), 2. Asahikawa Medical University (Japan)) ***Kaoru Uesugi**¹, Hiroyuki Mayama², Keisuke Morishima¹

1C11 15:10-15:30

Using nutrients and nanomaterials for therapeutic purpose (1.

Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University (Japan), 2. Kanagawa Institute of Industrial Science and Technology (KISTEC-KAST) (Japan)) ***Taiki Miyazawa**¹, Akira Matsumoto^{1,2}, Yuji Miyahara¹

1C12 15:30-15:50

Nanoscale vitrification of water at room temperature (1. National Institutes for Quantum and Radiological Science and Technology (Japan)) ***Hiroshi Murakami**¹

Break (15:50-16:10)

[T9] Biocolloids, Biomaterials, Biointerfaces and Biomimetics

Chair: Aaron Elbourne (RMIT University), Hong Yee Low (Singapore University of Technology and Design)

1C13 16:10-16:40 [Keynote Lecture]

Bioinspired Surfaces in 2-Dimensional and 3-Dimensional Product Formats and Their Applications in Biomedical Devices and Robotics (1. Singapore University of Technology and Design (Singapore)) ***Hong Yee Low**¹

1C14 16:40-17:00 [Invited Lecture]

Photo-controllable superhydrophobic surface mimicking the surface structures of lotus leaf (1. Ryukoku University (Japan), 2. Asahikawa Medical University (Japan), 3. Yamagata University (Japan), 4. Tokyo University of Pharmacy and Life Sciences (Japan), 5. RIKEN (Japan)) ***Ryo Nishimura**¹, Hiroyuki Mayama², Yoshimune Nonomura³, Satoshi Yokojima^{4,5}, Shinichiro Nakamura⁵, Kingo Uchida¹

1C15 17:00-17:20 [Invited Lecture]

Biomimetic structural coloration based on artificial melanin particles (1. Chiba University (Japan)) ***Michinari Kohri**¹

1C16 17:20-17:40

Fabrication of high brightness morpho structure using lithography technology (1. College of Science and Engineering, Ritsumeikan University (Japan), 2. The Research Organization of Science and Technology, Ritsumeikan University (Japan), 3. Litho Tech Japan Corporation (Japan)) ***Tomoki Nishino**¹, Atsushi Sekiguchi^{2,3}, Hiroshi Tanigawa²

1C17 17:40-18:00

Evaluation of Liquid Transport Ability of Bioinspired Textured Surfaces by Template Method (1. Graduate School of Engineering, Nagoya Institute of Technology (Japan)) ***Taro Yaeo**¹, Rikima Kuwada¹, Koji Muto¹, Tsubasa Kashima¹, Daisuke Ishii¹

[S3] Membranous and Membraneless Interfaces: Towards Artificial Cellular Complexity

Chair: Kanta Tsumoto (Mie University)

1C18 18:00-18:30 [Keynote Lecture]

Biomimetic interfacial engineering of all-aqueous systems (1. The University of Hong Kong (Hong Kong)) ***Anderson H. C. Shum**¹

Room D

[S5] Science & Technologies for the Sustainable Space Colony Life

Chair: Kazutami Sakamoto (Tokyo University of Science), James Ferri (Virginia Commonwealth University)

1D01 10:10-10:40 [Keynote Lecture]

Results and perspectives on the investigation of the behavior of liquid interfaces, foams and emulsions under weightlessness conditions (1. CNR-Institute of Condensed Matter Chemistry and Energy Technologies (Italy), 2. Aix-Marseille University (France), 3. University of Parma (Italy), 4. Aristotle University of Thessaloniki (Greece), 5. Max-Planck Institute for Colloids and Interfaces (Germany), 6. Virginia Commonwealth University (USA), 7. UAS Institute of Biocolloids (Ukraine), 8. St. Petersburg State University (Russia), 9. Tokyo University of Science (Japan), 10. Chiba Institute of Science (Japan)) ***Liberio Liggieri**¹, Francesca Ravera¹, Eva Santini¹, Giuseppe Loglio¹, Mickael Antoni², Luigi Cristofolini^{3,1}, Davide Orsi³, Fabrizia Salerni³, Thodoris Karapantsios⁴, Margaritis Kostoglou⁴, Angeliki Chondrou⁴, Reinhard Miller⁵, James Ferri⁶, Volodja Kovalchuk⁷, Boris Noskov⁸, Kazutami Sakamoto⁹, Yuji Yamashita¹⁰

1D02 10:40-11:00 [Invited Lecture]

Dynamics and ageing of emulsions (1. Department of Mathematical, Physical and Computer Sciences, University of Parma (Italy), 2. CNR-ICMATE, Genoa (Italy)) ***Luigi Cristofolini**¹, Fabrizia Salerni¹, Davide Orsi¹, Eva Santini², Francesca Ravera², Liberio Liggieri²

1D03 11:00-11:20 [Invited Lecture]

CFD simulation of a model bubbly emulsion (1. Aix-Marseille Université CNRS MADIREL (France), 2. CNR ICMATE Genova (Italy)) Sergey Semenov¹, Liberio Liggieri², ***Mickael Antoni**¹

1D04 11:20-11:40 [Invited Lecture]

Preparation of JAXA Multicomponent Colloidal Clusters Experiments under Microgravity (1. JEM Utilization Center, Human Spaceflight Technology Directorate, Japan Aerospace Exploration Agency (JAXA) (Japan), 2. Graduate School of Pharmaceutical Sciences, Nagoya City University (Japan), 3. Tsukuba Office, Japan Manned Space Systems Corporation (JAMSS) (Japan), 4. Advanced Engineering Services Co., Ltd (AES) (Japan), 5. Japan Space Forum (JSF) (Japan)) ***Chihiro Kurosawa**¹, Satoshi Adachi¹, Tetsuya Sakashita¹, Yasuhiro Nakamura¹, Junpei Yamanaka², Yuuki Toyoshima³, Yuki Watanabe⁴, Masae Nagai⁵

1D05 11:40-12:00

Aqueous/Aqueous Microdroplets: Their Stability and Reactivity with Biomacromolecules (1. Mie University (Japan), 2. Doshisha University (Japan), 3. Nagoya University (Japan)) ***Kanta Tsumoto**¹, Yusuke Fujise¹, Hiroki Sakuta², Kingo Takiguchi³, Kenichi Yoshikawa², Masahiro Tomita¹

1D06 12:00-12:20

Dynamics of Colloidal Dispersion under Quasi-microgravity (1. Chiba Institute of Science (Japan), 2. Tokyo University of Science (Japan), 3. Nikkol Group Cosmos Technical Center (Japan), 4. Kyowa Interface Science (Japan), 5. Japan Aerospace Exploration Agency (Japan), 6. CNR-ICMATE (Italy)) ***Yuji Yamashita**¹, Mami Ozaki¹, Masaaki Akamatsu², Kenichi Sakai², Hideki Sakai², Takeshi Misono³, Satoru Hashimoto³, Hirotake Kobayashi⁴, Masaaki Chiba⁴, Makoto Natsuisaka⁵, Liberio Liggieri⁶, Kazutami Sakamoto²

Lunch (12:20-13:40)

[S5] Science & Technologies for the Sustainable Space Colony Life

Chair: Libero Liggieri (CNR-Institute of Condensed Matter Chemistry and Energy Technologies), Yuji Yamashita (Chiba Institute of Science)

1D07 13:40-14:10 [Keynote Lecture]

The Space Colony Research Center at the Tokyo University of Science Dual space-Earth development of future living technologies (1. Tokyo University of Science (Japan)) ***Shinichi Kimura**¹

1D08 14:10-14:30 [Invited Lecture]

Surviving Partial Gravity (1. TSUKUBA KOKEN (Japan)) ***Kazuhito Shimada**¹

1D09 14:30-14:50 [Invited Lecture]

Soft X-ray microspectroscopy of water surrounding micro/nanobubbles (1. Institute for Solid State Physics, The University of Tokyo (Japan), 2. Institute for Molecular Science (Japan)) ***Yoshihisa Harada**¹, Takeshi Ohdaira¹, Jun Miyawaki¹, Takuji Ohigashi²

1D10 14:50-15:10 [Invited Lecture]

Development of Wearable Sensors and Biofuel Cells for Space Application (1. Tokyo University of Science (Japan)) ***Isao Shitanda**¹, Yoshinao Hoshi¹, Masayuki Itagaki¹

1D11 15:10-15:30

Development of Catalytic Hydrogenation Processes of Cosmetic Compounds Using Continuous Flow Reactors (1. NIKKOL GROUP COSMOS TECHNICAL CENTER Co.,LTD (Japan), 2. NIKKOL GROUP NIPPON SURFACTANT INDUSTRIES Co.,LTD (Japan)) ***Yuhya Watanabe**¹, Yuichi Akatsuka², Shodai Ushijima¹, Satoru Hashimoto¹, Shoichi Yahagi¹

1D12 15:30-15:50

Microscope for Venus Cloud Particle Observation (1. Tokyo University of Technology (Japan), 2. Tamagawa University (Japan), 3. JAXA (Japan), 4. Tokyo University of Pharmacy and Life Sciences (Japan), 5. Chiba Institute of Technology (Japan), 6. University of Wisconsin (USA)) ***Satoshi Sasaki**¹, Yoshitaka Yoshimura², Keigo Enya³, Atsuo Miyakawa⁴, Kazuhisa Fujita³, Tomohiro Usui³, Sohsuke Ohno⁵, Akihiko Yamagishi⁴, Sanjay Shridhar Limaye⁶

Break (15:50-16:10)

[T2] Foams/Bubbles/Emulsions and Microemulsions

Chair: Ryo Murakami (Konan University), Catherine Whitby (Massey University)

1D13 16:10-16:40 [Keynote Lecture]

Self-shaping droplets: from spheres to platelets with flagella (1. Faculty of Chemistry and Pharmacy, Sofia University (Bulgaria), 2. School of Engineering and Materials Science, Queen Mary University (UK)) ***Nikolai Denkov**¹, Diana Cholakova¹, Slavka Tcholakova¹, Stoyan K. Smoukov²

1D14 16:40-17:00 [Invited Lecture]

"PIT-slope" as robust method to predict properties and rationalize surfactant/oil/water systems (1. University of Lille (France)) ***Christel Pierlot**¹, Marianne Catté¹, Jesús F. Ontiveros¹

1D15 17:00-17:20

Design of Nanoscale Water-dispersible Capsules using W/O Emulsions Stabilized by Water-soluble Block Copolymers (1. Department of Chemistry and Materials Engineering, Kansai University (Japan), 2. ORDIST, Kansai University (Japan)) ***Akifumi Kawamura**^{1,2}, Hiroshi Nakaura¹, Takashi Miyata^{1,2}

1D16 17:20-17:40

Emulsion stabilization and encapsulation by synthetic and biosystems (1. Kazakh-British Technical University (Kazakhstan), 2. China University of Petroleum (China), 3. Satpayev University (Kazakhstan), 4. Max-Planck Institute of Colloids and Interfaces (Germany)) ***Saule Aidarova**^{1,2}, Altynay Sharipova³, Assem Issayeva³, Reinhard Miller⁴

1D17 17:40-18:00

Microfluidic preparation of Janus hydrogel microparticles using aqueous two-phase system droplets as a template (1. Okayama University (Japan)) ***Takaichi Watanabe**¹, Kae Ikegami¹, Ibuki Motohiro¹, Tsutomu Ono¹

1D18 18:00-18:20

Polymerization of Ionic Liquid (IL) in High Internal Phase Emulsions for the Preparation of Macroporous PILs Monoliths (1. Shaanxi Normal University, Key Lab of Applied Surface and Colloid Chemistry, MOE, School of Chemistry & Chemical Engineering (China)) Qing Tian¹, ***Junxia Peng**¹, Yu Fang¹

Room E

[T1] Surfactants and Self-Assembly

Chair: Frederick Heberle (The University of Tennessee), Shin-ichi Yusa (University of Hyogo)

1E01 10:10-10:40 [Keynote Lecture]

Solvophobic Self-Assembly in Nanostructured Solvents (1. The University of Sydney (Australia), 2. University of Western Australia (Australia)) ***Gregory G Warr**¹, Haihui Joy Jiang¹, Shurui Miao¹, Rob Atkin²

1E02 10:40-11:00 [Invited Lecture]

Structure and Property of α -Gel (α -Form Hydrated Crystal) Formed by Acylglutamic Acid-Alkylamine Complexes (1. Tokyo University of Science (Japan)) ***Kenichi Sakai**¹, Katsuya Tanaka¹, Tadashi Sugahara¹, Masaaki Akamatsu¹, Hideki Sakai¹

1E03 11:00-11:20

CO₂ responsive emulsion and foam stabilized by pseudogemini surfactants (1. Shandong University (China), 2. Southern University of Science and Technology (China)) ***Zengzi Wang**¹, Zhenghe Xu², Dejun Sun¹

1E04 11:20-11:40

Synthesis of *N*-heterocyclic carbene-based metal coordinate surfactants (MCSs) as aqueous catalysts (1. National Institute of Advanced Industrial Science and Technology (AIST) (Japan)) ***Toshiaki Taira**¹, Tomohiro Imura¹

1E05 11:40-12:00

Surfactant Aggregates Encapsulation and Modulation as New Method for Construction of Cross-Reactive Sensing Systems (1. Shaanxi Normal University (China)) Junmei Fan¹, Lijun Zhang¹, ***Liping Ding**¹

1E06 12:00-12:20

Calculation of diffusion coefficients for ionic micellar solutions using Einstein and Green-Kubo relations (1. Saint Petersburg State University (Russia)) ***Nikolai Volkov**¹, Alexander Shchekin¹, Maxim Posysoev¹

Lunch (12:20-13:40)

Luncheon Session sponsored by Science and
Technology of Advanced Materials (STAM)

12:40-13:20

[T1] Surfactants and Self-Assembly

Chair: Gregory Warr (The University of Sydney), Kenichi Sakai (Tokyo University of Science)

1E07 13:40-14:10 [Keynote Lecture]

Thickening Properties and Self-assembly Structures of Amide Amine Oxide Surfactants in Aqueous Solution (1. Osaka Research Institute of Industrial Science and Technology (Japan), 2. TA Instruments Japan Inc. (Japan), 3. National Institute of Advanced Industrial Science and Technology (Japan)) ***Rie Kakehashi**¹, Naoji Tokai¹, Yuki Kawata², Kazunori Kawasaki³, Shin Horiuchi³

1E08 14:10-14:30

pH effect on the micellar size distribution and its zeta potential of some surfactants (1. Department of Chemistry, Faculty of Science, Rangsit University (Thailand)) ***Kanda Wongwailikhit**¹

1E09 14:30-14:50

Chain length influence of hydrotrope on pH responsiveness of surfactant aggregates (1. China University of Petroleum (East China) (China), 2. University of Alberta (Canada), 3. Kazakh-British Technical University (Kazakhstan)) Wanli Kang¹, ***Tongyu Zhu**¹, Pengxiang Wang^{1,2}, Xiaoyu Hou¹, Saule Aidarova^{3,1}, Hongbin Yang¹

1E10 14:50-15:10

Intentionally Added Ionic Surfactants Induce Jones-Ray Effect at Air-Water Interface (1. Ecole Normale Supérieure (France), 2. Kyushu University (Japan)) ***Yuki Uematsu**¹, Kengo Chida², Hiroki Matsubara²

1E11 15:10-15:30

Molecular Packing and Miscibility of Tetradecyltrimethylammonium Bromide and Tetradecylphosphocholine in the Adsorbed Film and Micelle (1. Kyushu University (Japan), 2. Japan Atomic Energy Agency (Japan), 3. Japan Synchrotron Radiation Research Institute (Japan)) ***Yosuke Imai**¹, Haruna Hayase¹, Takeharu Sugiyama¹, Hajime Tanida², Toshiaki Ina³, Kiyofumi Nitta³, Tomoya Uruga³, Takanori Takiue¹

1E12 15:30-15:50

Stabilization of Indocyanine Green Dye in Micellar Systems for Various Bio-applications (1. Imaging Frontier Center (IFC), Research Institute for Science and Technology (RIST)(Japan), 2. Department of Material Science and Technology, Tokyo University of Science (Japan), 3. Exploratory Oncology Research & Clinical Trial Center, National Cancer Center Hospital East (Japan)) ***Gil Yeroslavsky**¹, Masakazu Umezawa^{2,1}, Karina Nigoghossian², Kyohei Okubo^{1,2}, Doan Thi Kim Dung³, Masao Kamimura^{1,2}, Kohei Soga^{1,2}

Break (15:50-16:10)

[T1] Surfactants and Self-Assembly

Chair: Otto Glatter (Graz University of Technology), Rie Kakehashi (Osaka Research Institute of Industrial Science and Technology)

1E13 16:10-16:40 [Keynote Lecture]

Self-Association Behavior of Block Copolymers Bearing Hydrophobic Siloxane and Hydrophilic Phosphorylcholine in Aqueous Solution (1. University of Hyogo (Japan)) ***Shin-ichi Yusa**¹

1E14 16:40-17:00 [Invited Lecture]

Supramolecular Polymeric Nanoparticles: Physico-Chemical Properties (1. Institute of Macromolecular Chemistry, Czech Academy of Sciences (Czech Republic), 2. Centro de Ciências Naturais e Humanas, Universidade Federal do ABC(Brazil)) ***Petr Stepanek**¹, Alessandro Jager¹, Eliezer Jager¹, Martin Hruby¹, Fernando Carlos Giacomelli²

1E15 17:00-17:20

Polar-Nopolar Interfaces of Inverse Bicontinuous Cubic Phases in Lyotropic Liquid Crystal (1. Shizuoka University (Japan), 2. SPring-8/JASRI(Japan), 3. Australian National University (Australia)) ***Toshihiko Oka**¹, Noboru Ohta², Stephen Hyde³

1E16 17:20-17:40

Electrostatic coassembly of thermoresponsive double hydrophilic block polyelectrolytes (1. Department of Physical and Macromolecular Chemistry, Faculty of Science, Charles University (Czech Republic), 2. Theoretical & Physical Chemistry Institute, National Hellenic Research Foundation (Greece)) ***Anastasiia Fanova**¹, Miroslav Štěpánek¹, Stergios Pispas²

1E17 17:40-18:00

Three-layered onion-like micelles with soft poly (lauryl acrylate) core: assembly and morphological transition (1. Department of Physical and Macromolecular Chemistry, Faculty of Science, Charles University (Czech Republic), 2. Institute of Macromolecular Chemistry, Czech Academy of Sciences (Czech Republic), 3. Stranski Laboratory of Physics and Theoretical Chemistry, Institute of Chemistry, Technical University of Berlin (Germany), 4. Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation (Greece)) ***Anastasiia Murmiliuk**¹, Sergey K. Filippov², Zdeněk Tošner¹, Michael Gradzielski³, Stergios Pispas⁴, Athanasios Skandalis⁴, Miroslav Štěpánek¹

1E18 18:00-18:20

Supramolecular Polymerization in Liquid Crystalline Media for Multifunctional Columnar Liquid Crystals (1. Department of Chemistry and Biotechnology, The University of Tokyo (Japan), 2. RIKEN Center for Emergent Matter Science (Japan)) ***Yoshimitsu Itoh**¹, Keiichi Yano¹, Takuzo Aida^{1,2}

Room F

[S4] Colloidal Dispersion and Aggregation in Materials
for Sustainability

Chair: George Franks (University of Melbourne), Motoyuki Iijima (Yokohama National University)

1F01 10:10-10:40 [Keynote Lecture]

Encapsulation strategy for spray-dried powders in food and dairy applications (1. Monash University (Australia)) ***Cordelia Selomulya**¹

1F02 10:40-11:00

Eugenol- and cardanol-derived latex: from aromatic biobased monomers to radical emulsion polymerization (1. Institut Charles Gerhardt (France)) ***Sylvain Caillol**¹, Vincent

Ladmiral¹, Patrick Lacroix-Desmazes¹, Samantha Molina-Gutierrez¹, Wing-Sze Jen Li¹

1F03 11:00-11:20

Formation of colloidal particles and gels based on porous metal-organic polyhedra by pathway selection in self-assembly (1. Institute for Integrated Cell-Material Sciences, Kyoto University (Japan)) ***Shuhei Furukawa**¹, Alexandre Legrand¹, Gavin Craig¹, Frederik Haase¹, Zaoming Wang¹

1F04 11:20-11:40

Colloidal processing and interfacial engineering of bio-based nanoparticles for sustainable materials (1. Stockholm University (Sweden)) ***Lennart Bergstroem**¹

1F05 11:40-12:00

Effect of Functional Group of Polymer Particles on Dispersion Stability and Antimicrobial Activity (1. Nagoya University (Japan), 2. Hiroshima University (Japan)) ***Tetsuya Yamamoto**¹, Ryo Furuta¹, Kenji Arakawa²

1F06 12:00-12:20 [Invited Lecture]

Direct translocation of nanoparticle across model cell membrane by nanoparticle-induced local enhancement of membrane potential (1. Osaka Prefecture University (Japan)) ***Hideya Nakamura**¹, Kyohei Sezawa¹, Masataka Hata¹, Shuji Ohsaki¹, Satoru Watano¹

Lunch (12:20-13:40)

[S4] Colloidal Dispersion and Aggregation in Materials for Sustainability

Chair: Cordelia Selomulya (Monash University), Hideya Nakamura (Osaka Prefecture University)

1F07 13:40-14:10 [Keynote Lecture]

Application of surface chemistry in cement and concrete technology (1. Hokkaido University (Japan)) ***Kiyofumi Kurumisawa**¹

1F08 14:10-14:30 [Invited Lecture]

A Physical Approach for Forming Dispersions of Metal and Metal Alloy Nanoparticles (1. Hokkaido University (Japan)) ***Mai Thanh Nguyen**¹, Tetsu Yonezawa¹, Lianlian Deng¹

1F09 14:30-14:50 [Invited Lecture]

Polyethyleneimine based multifunctional dispersants: toward versatile approach to control the stability of non-aqueous dispersions (1. Yokohama National University (Japan)) ***Motoyuki Iijima**¹, Seitaro Morita¹, Ryoya Arita¹, Junichi Tatami¹

1F10 14:50-15:10 [Invited Lecture]

Hansen parameter to predict optimum surface modification for particles (1. Gifu University (Japan), 2. Nagoya Institute of Technology (Japan)) ***Chika Takai-Yamashita**¹, Hidenori Nagamine², Masayoshi Fuji²

1F11 15:10-15:30

Particle surface energy quantification by Hansen dispersibility parameters to predict particle-particle and particle-liquid interaction (1. Takeda Colloid Techno-Consulting Co., Ltd. (Japan), 2. LUM GmbH (Germany), 3. Dr. Lerche KG (Germany), 4. Universität Duisburg-Essen (UDE) (Germany)) ***Shin-ichi Takeda**¹, Dietmar Lerche^{2,3}, Luis Rodriguez³, Tietus Sobisch², Dolis Segets⁴

1F12 15:30-15:50

Twilight Fluorescence Microscopy: A Novel Technique to Observe Individual Nanoparticles Dispersed in Solution (1. Yamagata University (Japan)) ***Masahito Sano**¹

Break (15:50-16:10)

[S4] Colloidal Dispersion and Aggregation in Materials for Sustainability

Chair: Chika Takai-Yamashita (Gifu University), Testuya Yamamoto (Nagoya University)

1F13 16:10-16:40 [Keynote Lecture]

Rheological analysis of the dispersion state of particles in the electrode slurry (1. Kobe University (Japan), 2. National Institute of Advanced Industrial Science and Technology (Japan)) ***Yoshiyuki Komoda**¹, Kentaro Kuratani²

1F14 16:40-17:00 [Invited Lecture]

Mixing Process and Dispersion Technology for Lithium Ion Battery Electrode Slurries (1. PRIMIX Corporation (Japan)) ***Maiko Kawakubo**¹, Tsumoru Ohata¹, Nobuhiko Moriyasu¹, Takayuki Wani¹, Maruo Kamino¹

1F15 17:00-17:20 [Invited Lecture]

Production of anionic graphite for ultra-high exfoliation in liquid (1. Tokyo Institute of Technology (Japan), 2. National Institute for Materials Science (Japan)) ***Yoshihiko Arai**¹, Jonathon Tanks², Kojiro Aida¹, Masatoshi Kubouchi¹

1F16 17:20-17:40 [Invited Lecture]

Particle Stabilized Foams and Emulsions as Pastes for 3D Printing Multiscale Porous Ceramics (1. University of Melbourne (Australia), 2. LaTrobe University (Australia)) ***George V. Franks**¹, Shareen S. L. Chan¹, Mitchell L. Sesso^{1,2}

1F17 17:40-18:00 [Invited Lecture]

Fabrication of Transparent Thin Film Based on Octahedral Molybdenum Cluster by Electrophoretic Deposition (1. National Institute for Materials Science (Japan), 2. Hokkaido University (Japan)) ***Tetsuo Uchikoshi**^{1,2}

1F18 18:00-18:20

Mapping of mechanical properties of metal paste materials by atomic force microscopy (1. Sumitomo Metal Mining Co., Ltd (Japan)) ***Tatsuo Aikawa**¹, Kyoko Miyauchi¹

Room G

[S1] How Can Colloid and Interface Chemistry Contribute to Global Sustainability? –Surfactants, Water and Energy–

Chair: Norio Tobori (Lion Specialty Chemicals), Keisuke Tanaka (Cosmos Technical Center)

1G01 10:10-10:40 [Keynote Lecture]

Transformation and innovation for sustainability through research integration and collaboration with the society (1. Future Earth (Japan), 2. National Institute for Environmental Studies (Japan), 3. The University of Tokyo (Japan)) ***Fumiko Kasuga**^{1,2,3}

1G02 10:40-11:00 [Invited Lecture]

From colloidal solution chemistry to greener product formulations (1. University of Regensburg (Germany)) ***Werner Kunz**¹

1G03 11:00-11:20 [Invited Lecture]

A Perspective of Hydrate Technology for Natural Gas Storage (1. Chulalongkorn University (Thailand), 2. UOP, A

Honeywell Company (USA)) ***Pramoch Rangsunvigit**¹, Katipot Inkong¹, Santi Kulprathipanja²

1G04 11:20-11:40 [Invited Lecture]

Expansion of Palm-Oil-Based Surfactants for Global Sustainability (1. Research and Development Headquarters, Lion Specialty Chemicals (Japan)) ***Takayasu Kubozono**¹

1G05 11:40-12:00 [Invited Lecture]

Sustainable Anionic Surfactant Supporting Our Future Life; Molecular Shape in Water Providing Global Usability and Higher Performance with Smaller Amount (1. Material Science Research Laboratory, Kao Corporation (Japan)) ***Yukiko Tabuchi**¹, Takaya Sakai¹

1G06 12:00-12:20

Physical Stability of Oil-in-Water (O/W) nanoemulsion loaded with terpineol using saponin from quillaja bark as natural emulsifier (1. School of Life & Environmental Sciences, University of Tsukuba (Japan), 2. Department of Food Science, School of Food Engineering, University of Campinas (Brazil), 3. Food Engineering Division, National Food Research Institute, NARO (Japan)) ***Lorena de Oliveira Felipe**¹, Juliano Lemos Bicas², Isao Kobayashi³, Mitsutoshi Nakajima¹, Marcos A. Neves¹

Lunch (12:20-13:40)

[S6] Nanopores and/or Nanowindows Associated Interface Science (Nano-IS)

Chair: Teresa Badosz (The City College of New York), Hideki Tanaka (Shinshu University)

1G07 13:40-14:10 [Keynote Lecture]

Surface-modified activated carbons for adsorption of VOCs and radioactive methyl iodide in dry and wet conditions (1. Yonsei University (Korea)) ***Chang Ha Lee**¹

1G08 14:10-14:30 [Invited Lecture]

Structure and Gas Transport at the Polymer-Zeolite Interface: Insights from Molecular Dynamics Simulations (1. The University of Queensland (Australia)) Ravi Dutta¹, ***Suresh Bhatia**¹

1G09 14:30-14:50 [Invited Lecture]

Carbon Dioxide Separation Using Ionic Liquids Supported on a Silica Microhoneycomb Obtained through Ice Templating (1. Division of Applied Chemistry, Faculty of Engineering, Hokkaido University (Japan), 2. Industrial Research Institute, Hokkaido Research Organization (Japan)) Seichiro Yoshida^{1,2}, Kazuya Takahashi¹, Shuichiro Kudo¹, Shinichiro Iwamura¹, Isao Ogino¹, ***Shin Mukai**¹

1G10 14:50-15:10 [Invited Lecture]

Zeolite Design for Adsorption and Separation Processes (1. Instituto de Tecnologia Química (Universitat Politècnica de València - Consejo Superior de Investigaciones Científicas)

(Spain)) ***Fernando Rey**¹, Eduardo Pérez-Botella¹, Miguel Palomino¹, Susana Valencia¹

1G11 15:10-15:30 [Invited Lecture]

Freezing/melting of water in a confined environment evaluated using DSC: Effect of an external stimuli (1. University of Alicante (Spain), 2. Colorado School of Mines (USA)) Carlos Cuadrado-Collados¹, Ahmad A. A. Majid², Carolyn Koh², ***Joaquin Silvestre Albero**¹

1G12 15:30-15:50 [Invited Lecture]

Confinement-Induced Compression and High Pressure Phases in Nanopores (1. North Carolina State University (USA)) Kaihang Shi¹, James Matthew Mansell¹, Erik E. Santiso¹, ***Keith E. Gubbins**¹

Break (15:50-16:10)

[S6] Nanopores and/or Nanowindows Associated Interface Science (Nano-IS)

Chair: Philip Llewellyn (TOTAL EP R&D, CNRS-AMU), Mauricio Terrones (The Pennsylvania State University)

1G13 16:10-16:40 [Keynote Lecture]

Advanced Carbon Materials for Energy Storage Applications (1. Fraunhofer IWS and TU Dresden (Germany)) ***Stefan Kaskel**¹

1G14 16:40-17:00 [Invited Lecture]

On the Importance of Carbon Nanopores in Oxygen Reduction Reaction (1. The City College of New York/CUNY (USA), 2. National University of San Luis (Argentina)) ***Teresa J Badosz**¹, Marc Florent¹, Deicy Barrera^{1,2}

1G15 17:00-17:20 [Invited Lecture]

Nanoporous materials with single-layer graphene walls (1. Tohoku University (Japan)) ***Hiroto Nishihara**¹

1G16 17:20-17:40 [Invited Lecture]

Modelling nanoporous carbons: the mesopore challenge (1. Department of Physics and Astronomy, Curtin University (Australia)) ***Carla de Tomas**¹

1G17 17:40-18:00 [Invited Lecture]

Surface modification of graphene oxides (1. Budapest University of Technology and Economics (Hungary), 2. Research Centre for Natural Sciences, Hungarian Academy of Sciences (Hungary)) ***Krisztina Laszlo**¹, Imre Bertóti², Miklós Mohai², Shereen Farad¹

1G18 18:00-18:20

Re-organization and two dimensional transformation of an all-silica MEL-type zeolite (1. National Institute of Advanced Industrial Science and Technology (AIST) (Japan)) Jie Liu¹, Danny Yang¹, ***Zheng-Ming Wang**¹

November 5 (Tue)

Room A

Plenary Lecture

PL02 9:00-9:50

Polydopamine Coating and Pyrogallol Interfacial Chemistry (1. Korea Advanced Institute of Science and Technology (KAIST) (Korea)) ***Haeshin Lee**¹

Break (9:50-10:10)

[T6] Nanoparticles and Nanomaterials

Chair: Hitoshi Kasai (Tohoku University), Alla Synytska (Technische Universität Dresden)

2A01 10:10-10:40 [Keynote Lecture]

Nano-formulation designed for gas therapy in nanomedicine (1. Department of Chemistry, National Cheng Kung University (Taiwan)) ***Chen-Sheng Yeh**¹

2A02 10:40-11:00 [Invited Lecture]

Plasmonics Endoscopy for study of drug delivery system in individual single cells (1. Hakkaido University (Japan), 2. KU Leuven (Belgium)) Ricci Monica², Beatrice Fortuni², Tomoko Inose¹, ***Hiroshi Ujii**^{1,2}

2A03 11:00-11:20

Engineered cationic ultra-small lipid nanoparticles for glioblastoma treatment (1. Faculty of Pharmacy, University of Coimbra (Portugal), 2. Centre for Neurosciences and Cell Biology (CNC), University of Coimbra (Portugal), 3. Coimbra Chemistry Center, Department of Chemistry, University of Coimbra (Portugal)) Maria Mendes^{1,2}, Jéssica Silva^{1,2}, João Basso^{1,2}, Tânia Cova³, João Sousa^{1,3}, Alberto Pais^{1,3}, ***Carla Vitorino**^{1,2,3}

2A04 11:20-11:40

Hybridosomes®: Innovative Multifunctional Nanocapsules from the Ouzo Effect (1. Univ Rennes, CNRS, ISCR-UMR6226, SCANMat-UMS2001 (France), 2. World Premier International (WPI) Research Center for Materials Nanoarchitectonics (MANA), National Institute for Materials Science (NIMS) (Japan), 3. UMR 1078 Génétique, Génomique fonctionnelle et Biotechnologies, Inserm, Université de Bretagne Occidentale (France), 4. INRA, La Giraudière (France), 5. Laboratoire de Chimie de Coordination, UPR8241, CNRS (France), 6. Graduate School of Frontier Sciences, The University of Tokyo (Japan)) ***Flavien Sciortino**^{1,2}, Clement Goubault¹, Helene Jacobczyk¹, Pierre-Antoine Eliat¹, Marie-Berengere Troadec^{1,3}, Cedric Gaillard⁴, Myrtil L Kahn⁵, Soizic Chevaance¹, Fabienne Gauffre¹, Katsuhiko Ariga^{2,6}

2A05 11:40-12:00

DNA Aptamer-Gold Nanoparticles for Colorimetric Protein Assay (1. The University of Tokyo (Japan), 2. RIKEN (Japan)) ***Surachada Chuaychob**^{1,2}, Masahiro Fujita², Mizuo Maeda^{1,2}

2A06 12:00-12:20

Elastic Superhydrophobic and Photocatalytically Active Films being Super-Blood Repellent (1. Max Planck Institute for

Polymer Research (Germany)) ***Werner Steffen**¹, Jie Liu¹, Michael Kappl¹, Hans-Jürgen Butt¹

Lunch (12:20-13:30)

DCSC Meeting 70th Anniversary Special Lecture

SL01 13:30-14:20

Science, Technology and Humanity for Sustainable Future (1. President, Chemical Society of Japan (Japan), 2. Director General, Institute for Molecular Science (Japan)) ***Maki Kawai**^{1,2}

Break (14:20-14:30)

[T6] Nanoparticles and Nanomaterials

Chair: Shinya Maenosono (JAIST), Werner Steffen (Max Planck Institute for Polymer Research)

2A07 14:30-15:00 [Keynote Lecture]

Light-emitting colloidal nanostructures (1. City University of Hong Kong (Hong Kong)) ***Andrey Rogach**¹

2A08 15:00-15:20 [Invited Lecture]

Present Status and Prospects of Metallic Nanostructure Synthesis by Polyol/Alcohol Reduction Technique (1. The University of Shiga Prefecture (Japan)) ***Jeyadevan Balachandran**¹, Jhon Lehman Cuya Huaman¹

2A09 15:20-15:40

Plasmon-enhanced triplet-triplet annihilation-based upconverted emission (1. Nihon University (Japan)) ***Kosuke Sugawa**¹, Naoto Takeshima¹, Shota Jin¹

2A10 15:40-16:00

Sequential Adsorption of Polyelectrolyte Layers and Guest Molecules on Layered Double Hydroxide Nanoparticles (1. MTA-SZTE Lendulet Biocolloids Research Group, Department of Physical Chemistry and Materials Science, University of Szeged (Hungary), 2. Interdisciplinary Excellence Centre, Department of Physical Chemistry and Materials Science, University of Szeged (Hungary), 3. Department of Organic Chemistry, University of Szeged (Hungary)) ***Zoltan Somosi**^{1,2}, Istvan Szilagyi^{1,2}, Istvan Palinko³

2A11 16:00-16:20

Anisotropic gold nanoparticles synthesized in AOT-based template phases (1. Institute for Chemistry, University of Potsdam (Germany)) ***Joachim Koetz**¹, Ferenc Liebigh¹

2A12 16:20-16:40

Templated Production of Gold Nanoparticles on Surface-Aminated 2D Cellulose Assemblies (1. Tokyo Institute of Technology (Japan)) ***Takatoshi Nohara**¹, Toshiki Sawada¹, Hiroshi Tanaka¹, Takeshi Serizawa¹

Break (16:40-17:00)

[T6] Nanoparticles and Nanomaterials

Chair: Jeyadevan Balachandran (The University of Shiga Prefecture), Kosuke Sugawa (Nihon University)

2A13 17:00-17:30 [Keynote Lecture]

Nanostructured materials and coatings based on novel peptide amphiphiles (1. Department of Interfaces and Colloids, IPC-BAS (Bulgaria), 2. Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, RAS (Russia)) ***Elena Mileva**¹, Dimitrinka Arabadzchieva¹, Anna Gyurova¹, Lidia Alexandrova¹, Alexander Chinarev², Svetlana Tsygankova², Alexander Tuzikov²

2A14 17:30-17:50 [Invited Lecture]

Hierarchy of hydrophobic graphitic core/solvophobic fluorocarbon domain/hydrophilic polymer shell (1. National Taiwan University of Science and Technology (Taiwan), 2. Charles Sadron Institute (France)) ***Toyoko Imae**¹, Cheng-Yu Kuo¹, Mary-Pierre Krafft²

2A15 17:50-18:10

Soft Colloids with Chemical and Geometrical Anisotropy as Wet Adhesives (1. IPF Dresden (Germany), 2. Technische Universität Dresden (Germany)) ***Alla Synytska**^{1,2}

2A16 18:10-18:30

Reversible liquid-gas phase transition by the force-driven deformation of elastic nanostructured carbon materials (1. Tohoku University (Japan), 2. Nissan Motor Corp. (Japan)) ***Masanori Yamamoto**¹, Hiroto Nishihara¹, Keita Nomura¹, Atsushi Gabe¹, Masashi Ito², Masanobu Uchimura², Takashi Kyotani¹

2A17 18:30-18:50

Nanoparticle Mixtures at Liquid Interfaces: Properties of the Interfacial Layer, Foams and Emulsions (1. CNR - Institute of Condensed Matter Chemistry and Energy Technologies, Unit of Genoa (Italy)) ***Francesca Ravera**¹, Eva Santini¹, Karzyna Dziza¹, Libero Liggieri¹

2A18 18:50-19:10

Surface lattice resonances in periodic, self-assembled plasmonic monolayers (1. Heinrich-Heine-University Duesseldorf, Institute of Physical Chemistry I: Colloids and Nanooptics (Germany)) Kirsten Volk¹, Ekaterina Ponomareva¹, ***Matthias Karg**¹

Room B

[T3] Soft Matter, Active Matter and Dynamical Self-organization of Biomolecular Systems

Chair: Satoru Kidoaki (Kyushu University), Mahesh Bandi (Okinawa Institute of Science and Technology Graduate University)

2B01 10:10-10:40 [Keynote Lecture]

Unidirectional Molecular Rotations of Chiral and Achiral Liquid Crystals Driven by Linear Flows (1. Waseda University (Japan)) ***Yuka Tabe**¹, Shinji Bono¹, Shin-ya Sugisawa¹, Chuhei Oshima¹

2B02 10:40-11:00 [Invited Lecture]

Compaction of DNA and Chromatin under Influence of Neutral and Anionic Crowding (1. Nagoya University, Graduate School of Environmental Studies (Japan)) ***Anatoly Zinchenko**¹

2B03 11:00-11:20

Hydrodynamically synchronized motion of externally driven colloids (1. Kyoto University (Japan), 2. AIST-Tohoku

University (Japan)) Norihiro Oyama², Kosuke Teshigawara¹, John Jairo Molina¹, Ryoichi Yamamoto¹, ***Takashi Taniguchi**

2B04 11:20-11:40

Computational modeling of drug recognition and free-energy patterns in cyclodextrin-based nanostructures (1. Coimbra Chemistry Center, Department of Chemistry, Faculty of Sciences and Technology, University of Coimbra (Portugal), 2. Faculty of Pharmacy, University of Coimbra (Portugal)) ***Tania Firmino Cova**¹, Carla S. Vitorino², Sandra C. Nunes¹, Alberto Canelas Pais¹

2B05 11:40-12:00

Colloidal particles that make polymers smart (1. Semmelweis University (Hungary)) ***Miklos Zrinyi**¹

2B06 12:00-12:20

pH driven Modular Micro Swimmers - State and Prospects (1. Inst. of Physics, Johannes Gutenberg Universität (Germany)) Ran Niu¹, Denis Botin¹, Nadir Möller¹, Thomas Speck¹, ***Thomas P Palberg**¹

Lunch (12:20-13:30)

[T3] Soft Matter, Active Matter and Dynamical Self-organization of Biomolecular Systems

Chair: Yuka Tabe (Waseda University), Anatoly Zinchenko (Nagoya University)

2B07 14:30-15:00 [Keynote Lecture]

Engineering with biomolecular motors and enzyme cascades (1. Columbia University (USA)) ***Henry Hess**¹

2B08 15:00-15:20 [Invited Lecture]

High-Aspect-Ratio Gold Nanorods Grow in the Transient Lamellar Structure of Surfactant (1. National Institute of Advanced Industrial Science and Technology (AIST) (Japan)) ***Yoshiko Takenaka**¹

2B09 15:20-15:40

Direct Numerical Simulations for Charged Colloidal Dispersions: A challenge beyond DLVO (1. Kyoto University (Japan)) ***Ryoichi Yamamoto**¹, Chunyu Shih¹, John J. Molina¹

2B10 15:40-16:00

Generation of density traveling wave in aqueous solution of graphite under stationary photo-irradiation (1. Faculty of Life and Medical Sciences, Doshisha Univ. (Japan)) ***Yoshino Hasegawa**¹, Tomoko Tanaka¹, Satoshi Takatori¹, Koichiro Sadakane¹, Takahiro Kenmotsu¹, Kenichi Yoshikawa¹

2B11 16:00-16:20

Synthesis and directed self-assembly of monodisperse hematite silica rods at a liquid-air interface using hematite ellipsoids as a seed particle (1. Utrecht University (Netherlands)) ***Rama Kotni**¹, Fabian Hagemans¹, Alfons van Blaaderen¹

2B12 16:20-16:40

Two-dimensional lipid molecular diffusion and membrane viscosity measured at the molecular scales (1. Indiana University (USA), 2. National Institute of Standards and Technology (USA), 3. Comprehensive Research Organization for Science and Society (Japan), 4. Japan Atomic Energy Agency (Japan), 5. University of Delaware (USA), 6. University of Tennessee (USA)) ***Michihiro Nagao**^{1,2}, Elizabeth G. Kelley², Takeshi Yamada³, Antonio Faraone², Kaoru Shibata⁴, Paul D. Butler^{2,5,6}

Break (16:40-17:00)

[T3] Soft Matter, Active Matter and Dynamical Self-organization of Biomolecular Systems

Chair: Henry Hess (Columbia University), Yoshiko Takenaka (AIST)

2B13 17:00-17:30 [Keynote Lecture]

Heterogeneous field of matrix elasticity to exercise mesenchymal stem cells through their nomadic migrations (1. IMCE, Kyushu University (Japan)) ***Satoru Kidoaki**¹

2B14 17:30-17:50 [Invited Lecture]

Thermoresponsive Polymer-Clay Nanocomposite Gels (1. Tokushima University (Japan)) ***Keiji Minagawa**¹, Yukihiko Arakawa¹, Yasushi Imada¹

2B15 17:50-18:10

Spatiotemporal *trans*-on switched cargo transportation by molecular swarm robot (1. Graduate School of Chemical Science & Engineering, Hokkaido University (Japan), 2. Faculty of Science, Hokkaido University (Japan), 3. Department of Biomolecular Engineering, Nagoya University (Japan), 4. Department of Chemistry and Materials Engineering, Kansai University (Japan)) ***Mousumi Akter**¹, Jakia Jannat Keya², Arif Md. Rashedul Kabir², Hiroyuki Asanuma³, Akinori Kuzuya⁴, Kazuki Sada², Akira Kakugo^{1,2}

2B16 18:10-18:30

Phantasmagoric liquid crystals (1. Department of Physics, Graduate School of Science, Kyoto University (Japan), 2. JST-CREST, Japan Science and Technology Agency (Japan), 3. Seoul National University (Korea), 4. University of Luxembourg (Luxembourg)) ***Jun Yamamoto**^{1,2}, Chisato Ida¹, HyeRan Jo³, Giusy Scalia⁴

2B17 18:30-18:50

Motion of Colloidal Particles in Optical Vortices (1. Kyushu University (Japan)) ***Kenta Iwamoto**¹, Yasuyuki Kimura¹

2B18 18:50-19:10

Tuning the interactions of oligopeptides with star-like polyelectrolytes by means of charge regulation (1. Charles University (Czech Republic)) Raju Lunkad¹, Pascal Hebbeker¹, ***Peter Kosovan**¹

Room C

[T9] Biocolloids, Biomaterials, Biointerfaces and Biomimetics

Chair: Jitendra Mata (ANSTO), Yuji Hirai (Chitose Institute of Science and Technology)

2C01 10:20-10:40 [Invited Lecture]

Confinement of reduced graphene oxides within cellulose oligomer networks for constructing functional materials (1. Tokyo Institute of Technology (Japan)) ***Yuuki Hata**¹, Toshiki Sawada¹, Takeshi Serizawa¹

2C02 10:40-11:00 [Invited Lecture]

Nano and Microstructure Investigation of Silk Fibroin-Based Hydrogels for Biomedical Applications: A Small Angle Scattering Study (1. Australian Centre for Neutron Scattering (ACNS), Australian Nuclear Science and Technology Organization (ANSTO) (Australia), 2. Future Industries Institute, University of South Australia (Australia), 3. School of Engineering, RMIT University (Australia), 4. Guangdong Technion Israel Institute of Technology (GTIIT) (China), 5.

CSIRO Manufacturing (Australia)) ***Jitendra Mata**¹, Jasmin L Whittaker², Rajkamal Balu^{3,2}, Robert Knott¹, Liliana de Campo¹, Christine Rehm^{4,1}, Anita J Hill⁵, Naba K Dutta^{3,2}, Namita Roy Choudhury^{3,2}

2C03 11:00-11:20

Structure of Chemically Modified Cellulose Ethers in Aqueous Solution (1. Tokyo University of Agriculture and Technology (Japan), 2. Comprehensive Research Organization for Science and Society (Japan)) ***Toshiyuki Shikata**¹, Kengo Arai¹, Hiroki Iwase²

2C04 11:20-11:40

Effects of Cholesterol on the Permeability and Fluidity of Biomimetic Ion Pair Amphiphile Bilayers: A Molecular Dynamics Study (1. Department of Chemical Engineering, National Cheng Kung University (Taiwan)) Wu-Jhao Tien¹, Yu-Fang Lai¹, ***Chi-cheng Chiu**¹

2C05 11:40-12:00

Fluorescence Detection of Water-soluble Polymers Based on a Specific Affinity of Peptides (1. Tokyo Institute of Technology (Japan)) ***Seigo Suzuki**¹, Toshiki Sawada¹, Takeshi Serizawa¹

Lunch (12:20-13:30)

[T9] Biocolloids, Biomaterials, Biointerfaces and Biomimetics

Chair: Chie Kojima (Osaka Prefecture University), Hiroyuki Mayama (Asahikawa Medical University)

2C07 14:30-15:00 [Keynote Lecture]

Human Corneal Endothelium as 2D Colloidal Assembly (1. Heidelberg University (Germany), 2. Kyoto University (Japan)) ***Motomu Tanaka**^{1,2}, Akihisa Yamamoto²

2C08 15:00-15:20 [Invited Lecture]

Functional Peptides-Conjugated Dendrimers for Cancer Therapy and Diagnosis (1. Osaka Prefecture University (Japan)) ***Chie Kojima**¹

2C09 15:40-16:00

Poly (ethylene glycol) Modified Near-Infrared Nanophosphors for Deep Tissue *in vivo* Bioimaging (1. Department of Materials Science and Technology, Tokyo University of Science (Japan), 2. Imaging Frontier Center, Tokyo University of Science (Japan)) ***Masao Kamimura**^{1,2}, Kohei Soga^{1,2}

2C10 15:40-16:00

Inhibition of Amyloid β -Protein Fibrillogenesis on Surface: A Story about HyBER Theory (1. Tianjin University (China)) ***Yan Sun**¹

2C11 16:00-16:20

Cracking Pattern on Pathological Tissue Slice Caused by External Extension Provides Useful Information for Medical Diagnosis (1. Doshisha University (Japan)) ***Natsumi Okoso**¹, Takahiro Kenmotsu¹, Kenichi Yoshikawa¹

2C12 16:20-16:40

Biodegradable Injectable Polymer Systems Exhibiting Temperature-Responsive Irreversible Sol-Gel Transition for Medical Application (1. Department of Chemistry and Materials Engineering, Kansai University (Japan), 2. CEMP, Kansai University (Japan), 3. ORDIST, Kansai University (Japan)) ***Yuichi Ohya**^{1,2}, Yuta Yoshizaki³, Soichiro Fujiwara¹, Takuya Nagata¹, Hiroki Takai¹, Yasuyuki Yoshida¹, Kazuyuki Takata¹, Akinori Kuzuya^{1,2}

Break (16:40-17:00)

[T11] Nanomedicine and Pharmaceutical Science

Chair: Kohsaku Kawakami (NIMS), Yuuki Takashima
(Tokyo University of Pharmacy and Life Sciences)

2C13 17:00-17:30 [Keynote Lecture]

Self-assembly of Glyco-based Polymers (Nanogels and Vesicles) for Biomedical Applications (1. Kyoto University (Japan)) ***Kazunari Akiyoshi**¹

2C14 17:30-17:50 [Invited Lecture]

Multifunctional Smart Amino Lipid Nucleic Acids Nanoparticles for Gene Therapy (1. Case Western Reserve University (USA)) ***Zheng-Rong Lu**¹

2C15 17:50-18:10 [Invited Lecture]

Colloidal tetraglycine-L-octaarginine-linked hyaluronic acid as an adjuvant for mucosal vaccination (1. Faculty of Pharmaceutical Sciences, Setsunan University (Japan), 2. Life Science Materials Laboratory, ADEKA Co (Japan), 3. Faculty of Medicine, University of Miyazaki (Japan), 4. Joint Research Center for Human Retrovirus Infection, Kagoshima University (Japan)) ***Masami Ukawa**¹, Sohei Tanishita¹, Takumi Tomono¹, Koichi Shigeno², Etsuo Tobita², Tomofumi Uto³, Masanori Baba⁴, Shinji Sakuma¹

2C16 18:10-18:30 [Invited Lecture]

Self-Assembling of Amphiphilic Liquid Crystalline Polymers and Their Applications as Thermoresponsive Drug Carriers (1. Kansai University (Japan)) ***Takashi Miyata**¹, Yasuaki Inoue¹, Akifumi Kawamura¹

2C17 18:30-18:50

Yeast glucan particles as carriers for low-water soluble drugs: Encapsulation by spray drying and improvement of dispersibility and dissolution properties (1. Department of Chemical Engineering, University of Chemistry and Technology Prague (Czech Republic)) ***Gabriela Rупhuy**¹, Filip Zavřel¹, Jan Tomas¹, Petra Salamunová¹, Jaroslav Hanus¹, František Štěpánek¹

2C18 18:50-19:10

Process Development and Characterization of Liposomes for Pharmaceutical Applications (1. Karlsruhe Institute of Technology (KIT), Institute for Mechanical Process Engineering and Mechanics (Germany), 2. Carl Gustav Carus-Institute (Germany), 3. Abnoba GmbH (Germany)) ***Kirsten Ullmann**¹, Manuel Meier¹, Gero Leneweit^{2,3}, Hermann Nirschl¹

Room D

[T2] Foams/Bubbles/Emulsions and Microemulsions

Chair: Yoshimune Nonomura (Yamagata University), Saule Aidarova (Kazakh National Technical University)

2D01 10:10-10:40 [Keynote Lecture]

Overviews and prospects on the explorations to control interfaces (1. Tokyo University of Science (Japan)) ***Kazutami Sakamoto**¹

2D02 10:40-11:00

Responsive Emulsions based on Dynamic Covalent Bond/Non-Covalent Interaction (1. Shandong university (China)) ***Gaihuang Ren**¹, Dejun Sun¹

2D03 11:00-11:20

Entropy of Oil Droplets on Colloidal Stability of Oil-in-Water Emulsions: Excluded Volume Effect of Hydrocarbon (1. Shinshu University (Japan), 2. RIKEN (Japan)) ***Toshio Sakai**¹, Natsumi Koike¹, Shunsuke Urabe¹, Ayumi Yamamoto¹, Naoki Kanayama^{1,2}

2D04 11:20-11:40

Structure of PNIPAM microgels in aqueous foams (1. Technical University Darmstadt (Germany)) ***Matthias Kuehnhammer**¹, Christian Appel¹, Regine von Klitzing¹

2D05 11:40-12:00

Freezing emulsions: Interactions between solidification fronts and droplets (1. Laboratoire de Synthèse et Fonctionnalisation des Céramiques, UMR 3080 CNRS/Saint-Gobain CREE (France), 2. Sciences et Ingénierie de la Matière Molle, ESPCI Paris, PSL Research University, CNRS, Sorbonne Universités, UPMC Univ Paris 06 (France)) ***Sidhanth Tyagi**^{1,2}, Cécile Monteux², Sylvain Deville¹

2D06 12:00-12:20

Coalescence destabilization of particle-stabilized emulsions associated with mixing particles (1. Department of Chemistry, Konan University (Japan)) ***Ryo Murakami**¹, Junpei Ogawa¹, Masahiro Yamamoto¹

Lunch (12:20-13:30)

[T2] Foams/Bubbles/Emulsions and Microemulsions

Chair: Toshio Sakai (Shinshu University), Ivan Vakarelski (King Abdullah University of Science and Technology)

2D07 14:30-15:00 [Keynote Lecture]

Influence of particle concentration on multiple droplet formation in Pickering emulsions (1. Massey University (New Zealand)) ***Catherine Whitby**¹

2D08 15:00-15:20 [Invited Lecture]

Harnessing electrostatic interactions for liquid marble formation and particle separation (1. The University of Newcastle (Australia), 2. Osaka Institute of Technology (Japan)) ***Grant Bruce Webber**¹, Benjamin T Lobel¹, Casey A Thomas¹, Syuji Fujii², Peter M Ireland¹, Erica J Wanless¹

2D09 15:20-15:40

Gas permeation through Pickering membranes (1. Chemnitz University of Technology (Germany)) Matthias M Krejca¹, Cornelia Wüstner¹, ***Werner A. Goedel**¹

2D10 15:40-16:00

Modified starch adsorption at liquid-solid and liquid-liquid interface on Pickering emulsion (1. Lund University (Sweden), 2. Kao Corporation (Japan)) ***Ippei Furikado**^{1,2}, Jan Forsman¹, Marilyn Rayner¹, Tommy Nylander¹

2D11 16:00-16:20

Oil-in-water Pickering emulsions stabilized with cellulose nanocrystals bearing polyphosphoesters (1. Graduate School of Science and Engineering, Kansai University (Japan), 2. Graduate School of Engineering, Osaka Institute of Technology (Japan), 3. Faculty of Engineering, Osaka Institute of Technology (Japan), 4. Nanomaterials Microdevices Research Center, Osaka Institute of Technology (Japan), 5. Faculty of Chemistry, Materials and Bioengineering, Kansai University (Japan), 6. ORDIST, Kansai University (Japan)) ***Suphatra Hiranphinyophat**¹, Yuta Asami², Syuji Fujii^{3,4}, Yasuhiko Iwasaki^{5,6}

2D12 16:20-16:40

Geometric Effect of Amphiphilic Regular Polygonal Particles

on Emulsion Droplet Structure (1. Kyoto Sangyo University (Japan), 2. Kyushu University (Japan)) Ryotaro Koike², ***Yasutaka Iwashita**¹, Yasuyuki Kimura²

Break (16:40-17:00)

[T2] Foams/Bubbles/Emulsions and Microemulsions

Chair: Yasutaka Iwashita (Kyoto Sangyo University), Grant Webber (The University of Newcastle)

2D13 17:00-17:30 [Keynote Lecture]

Fabrication of Organic-Inorganic Hybrid Colloidal Particles from Emulsions (1. Instituto de Química Avanzada de Cataluña, Consejo Superior de Investigaciones Científicas (IQAC-CSIC) and CIBER de Bioingeniería, Biomateriales y Nanomedicina (CIBER-BBN) (Spain)) ***Carlos Rodríguez-Abreu**¹, Gabriela Calderó¹

2D14 17:30-17:50

Effect of storage temperature on the colloidal stability of ultrafine bubbles in pure water (1. Keio University (Japan)) ***Shunya Tanaka**¹, Koichi Terasaka¹, Satoko Fujioka¹

2D15 17:50-18:10

Oil Flow inside Aqueous Surfactant Foam (1. Kao Corporation (Japan)) ***Azusa Kusaka**¹, Takaya Sakai¹

2D16 18:10-18:30

Mobile and immobile fluid interfaces: droplets, bubbles and cavities (1. King Abdullah University of Science and Technology (Saudi Arabia), 2. University of Melbourne (Australia)) ***Ivan Vakarelski**¹, Derek Chan², Sigurdur Thoroddsen¹

2D17 18:30-18:50

Micro-Disk formation of molecular assembly and application to foam stabilization (1. Kao Corporation (Japan)) ***Shunsuke Watanabe**¹

2D18 18:50-19:10

Use of novel co-block polymers for flotation of colloidal fines in nuclear decommissioning operations (1. School of Chemical and Process Engineering, University of Leeds (UK), 2. Sellafield Ltd (UK), 3. School of Earth and Environment, University of Leeds (UK)) ***Alexander Peter Geoffrey Lockwood**¹, Timothy Hunter¹, Nicholas Warren¹, Jeffrey Peakall³, David Harbottle¹, Geoff Randall², Martyn Barnes²

Room E

[T1] Surfactants and Self-Assembly

Chair: Dganit Danino (Israel Institute of Technology), Kenji Aramaki (Yokohama National University)

2E01 10:10-10:40 [Keynote Lecture]

Novel Soft Matter/Materials: Functional Molecular Liquids towards Luminescent and Electret Applications (1. National Institute for Materials Science (Japan)) ***Takashi Nakanishi**¹

2E02 10:40-11:00 [Invited Lecture]

Bile Acid Derivatives allow for a controlled Supramolecular-Supracolloidal Assembly (1. Dep. of Chemistry, Sapienza University of Rome (Italy), 2. Institute of Physical Chemistry, Aachen University (Germany), 3. Division of Physical Chemistry, Department of Chemistry, Lund University

(Sweden)) ***Luciano Galantini**¹, Jacopo Cautela¹, Jérôme J. Crassous², Björn Stenqvist³

2E03 11:00-11:20

Pseudo-Polyotaxane Nanosheet constructed by Supramolecular Self-assembly (1. The University of Tokyo (Japan)) ***Shuntaro Uenuma**¹, Rina Maeda¹, Hideaki Yokoyama¹, Kohzo Ito¹

2E04 11:20-11:40

Supramolecular Assembly of Calix[4]resorcinarenes for Design of Drug Nanocontainers (1. Arbusov Institute of Organic and Physical Chemistry, FRC Kazan Scientific Center, Russian Academy of Sciences (Russia)) ***Ruslan Ravilevich Kashapov**¹, Albina Ziganshina¹, Yuliya Razuvayeva¹, Anastasiya Sapunova¹, Alexandra Voloshina¹, Lucia Zakharova¹

2E05 11:40-12:00

Colloidal Systems at High Concentration Studied by Small-Angle Scattering (1. University of Technology Graz (Austria), 2. University of Leoben (Austria)) ***Otto Glatter**¹, Gerhard Popovski²

2E06 12:00-12:20

Shape-anisotropic reverse micelles of low F-content surfactants as a CO₂ thickener for enhanced oil recovery (1. Hiroaki University (Japan), 2. Universidade Estadual da Paraíba (Brazil), 3. Universiti Pendidikan Sultan Idris (Malaysia), 4. University of Pittsburgh (USA), 5. University of Bristol (UK)) ***Masanobu Sagisaka**¹, Yuuki Sato¹, Atsushi Yoshizawa¹, Rodrigo José de Oliveira², Azmi Mohamed³, Robert Enick⁴, Julian Eastoe⁵

Lunch (12:20-13:30)

Luncheon Session sponsored by Anton Paar
12:40-13:20

[T1] Surfactants and Self-Assembly

Chair: Luciano Galantini (La Sapienza University of Rome), Takanori Takiue (Kyushu University)

2E07 14:30-15:00 [Keynote Lecture]

Lipid organization in complex biomimetic membranes: Lessons from physical chemistry (1. University of Tennessee (USA)) ***Frederick A. Heberle**¹

2E08 15:00-15:20 [Invited Lecture]

Membrane Fusion of Phospholipid Bilayers Induced by High Pressure (1. Tokushima University (Japan)) ***Hitoshi Matsuki**¹, Masaki Goto¹, Nobutake Tamai¹

2E09 15:20-15:40

Scaling the Elastic and Viscous Properties of Lipid Membranes (1. National Institute of Standards and Technology (USA), 2. University of Delaware (USA), 3. University of Tennessee (USA), 4. Indiana University (USA)) ***Elizabeth G Kelley**¹, Paul D Butler^{1,2,3}, Michihiro Nagao^{1,4}

2E10 15:40-16:00

Formation of lipid bilayer nanodisc by membrane-active amphiphilic polymethacrylate random copolymer (1. Nara Institute of Science and Technology (Japan)) ***Kazuma Yasuhara**¹, Yuma Mitsuyoshi¹, Jinyu Hao¹, Jin Arakida¹, Gwénaél Rapenne¹, Jun-ichi Kikuchi¹

2E11 16:00-16:20

Diglycoside Nanodiscs as New Tools for Membrane-Protein Research (1. Molecular Biophysics Technische Universitaet

Kaiserslautern (Germany), 2. HALOmem and Institute of Biochemistry Marthin-Luther-Universitaet Halle-Wittenberg (Germany), 3. Institut des Biomolécules Max Mousseron Avignon University (France), 4. Chem2staB joint laboratory (France)) ***Florian Mahler**¹, Annette Meister², Pierre Guillet^{3,4}, Grégory Durand^{3,4}, Sandro Keller¹

2E12 16:20-16:40

Amphiphilic Fluorephores Assembled on the Surface of Liquid Microdroplet: Self-assembly Behavior, Aggregated Structures, and Sensing Performance (1. Shaanxi Normal University (China)) ***Jing Liu**¹, Hairui Lei¹, Yuan Ma¹, Qi Zhao¹, Yu Fang¹

Break (16:40-17:00)

[S8] Transport Phenomena at the Bio-inspired-Nano Interface & Environment

Chair: Yasuhisa Adachi (University of Tsukuba), Junyuo Wang (East China University of Science and Technology)

2E13 17:00-17:30 [Keynote Lecture]

New observations of transport phenomena around junctions in microfluidic flows (1. Okinawa Institute of Science and Technology Graduate University (Japan)) ***Amy Shen**¹

2E14 17:30-17:50 [Invited Lecture]

Protein complexation with soil humic acids and their transport (1. Huazhong Agricultural University (China)) ***Wenfeng Tan**¹

2E15 17:50-18:10

Effect of soil fulvic and humic acid on Pb binding to the goethite/water interface: LCD modeling and speciation distribution of Pb (1. Huazhong Agricultural University (China), 2. Wageningen University (Netherlands)) ***Juan Xiong**¹, Liping Weng², Luuk Koppal^{1,2}, Mingxia Wang¹, Wenfeng Tan¹

2E16 18:10-18:30

Rheological Scaling of Ionic Liquid-Based Polyelectrolytes in Ionic Liquid Solutions (1. Okinawa Institute of Science and Technology Graduate University (Japan), 2. Swansea University (UK)) ***Atsushi Matsumoto**¹, Francesco Del Giudice^{1,2}, Rachapun Rotrattanadumrong¹, Amy Q Shen¹

2E17 18:30-18:50

The Effects of Temperature and pH on Conformation Change of Poly (N-isopropylacrylamide) by Complex Formation with Poly (Acrylic Acid) (1. University of Tsukuba (Japan)) ***Kazuyoshi Ogawa**¹, Ryohei Kobayashi¹

2E18 18:50-19:10 [Invited Lecture]

Bio-inspired microfluidic devices using interfacial motion with non-equilibrium design basis (1. Shinshu university (Japan)) ***Hideyuki Sugioka**¹

Room F

[T5] Colloidal Dispersion/Aggregation, Surface Forces and Rheology

Chair: Shin-ichi Takeda (Takeda Colloid Techno-Consulting Co., Ltd.), Georg Papastavrou (University of Bayreuth)

2F01 10:10-10:40 [Keynote Lecture]

Oscillatory forces between interfaces induced by solvents (1-

component systems) and colloidal dispersions (2-component systems) (1. Technische Universität Darmstadt (Germany)) ***Regine von Klitzing**¹

2F02 10:40-11:00 [Invited Lecture]

Presence of Multivalent Ions and Like-Charged Polyelectrolytes: Particle Aggregation and Surface Forces (1. University of Geneva (Switzerland)) ***Gregor Trefalt**¹

2F03 11:00-11:20

Molecular Alignment of Nematic Liquid Crystal on the Swollen Polymer Brush Studied by Surface Forces Measurement (1. Tohoku University (Japan), 2. University of Chicago (USA)) ***Takuya Yanagimachi**¹, Xiao Li², Paul Nealey², Kazue Kurihara¹

2F04 11:20-11:40

Friction Mechanism of Nano-confined Ionic Liquids Revealed by Resonance Shear Measurement and X-Ray Diffraction (1. Tohoku University (Japan), 2. JASRI/SPring-8(Japan)) Kazuhito Tomita¹, ***Masashi Mizukami**¹, Shinya Nakano¹, Noboru Ohta², Naoto Yagi², Kazue Kurihara¹

2F05 11:40-12:00

Towards measuring nanoscale hydrodynamics and interaction potentials of rattle-type particles using liquid phase STEM (1. Utrecht University (Netherlands), 2. Tohoku University (Japan)) ***Tom Welling**¹, Sina Sadighikia¹, Kanako Watanabe², Albert Grau-Carbonell¹, Daisuke Nagao², Marijn van Huis¹, Alfons van Blaaderen¹

2F06 12:00-12:20

Bubble Coalescence and Interaction with Particles (1. University of Alberta (Canada)) ***Qingxia Liu**¹, Bo Liu¹, Yuran Chen¹, Rogerio Manica¹

Lunch (12:20-13:30)

[T5] Colloidal Dispersion/Aggregation, Surface Forces and Rheology

Chair: Motoyoshi Kobayashi (University of Tsukuba), Gregor Trefalt (University of Geneva)

2F07 14:30-15:00 [Keynote Lecture]

Recent Advances in Theories of Colloid and Interfacial Electric Phenomena (1. Tokyo University of Science (Japan)) ***Hiroyuki Ohshima**¹

2F08 15:00-15:20

The unusual hydrodynamics of particle electrophoresis (1. University of Melbourne (Australia), 2. A-Star Institute of High Performance Computing (Singapore), 3. National University of Singapore (Singapore)) ***Derek Chan**¹, Evert Klaseboer², Amitech Jayaraman³

2F09 15:20-15:40

Decomposing Specific-Ion Interactions in Aqueous and Non-Aqueous Solvents (1. University of Newcastle (Australia)) ***Kasimir Phennah Gregory**¹, Erica J Wanless¹, Grant B Webber¹, Alister J Page¹

2F10 15:40-16:00

Stability of FCC Structure in the Charged Colloidal Dispersion with Sogami-Ise Potential by Molecular Dynamics Simulations (1. Hosei University (Japan)) ***Yosuke Kataoka**¹

2F11 16:00-16:20

Polymer-like self-assembled structures from particles with isotropic interactions (1. Theoretical Chemistry, Lund University (Sweden), 2. School of Chemistry,

UNSW(Australia) Sara Haddadi¹, Hongduo Lu¹, Marcus Backstrom¹, Clifford Woodward², ***Jan Forsman**¹

2F12 16:20-16:40

Water Adsorption and Surface Forces in Microporous Materials (1. TU Bergakademie Freiberg, Inst. Phys. Chem. (Germany), 2. TU Bergakademie Freiberg, Inst. Ceram., Glass and Constr. Mat (Germany)) ***Hans-Jörg Mögel**¹, Mirco Wahab¹, Thomas A. Bier², Peter Schiller¹

Break (16:40-17:00)

[T5] Colloidal Dispersion/Aggregation, Surface Forces and Rheology

Chair: Masashi Mizukami (Tohoku University), Derek Chan (University of Melbourne)

2F13 17:00-17:30 [Keynote Lecture]

Direct force measurements with sub-micron colloidal particles by AFM (1. University of Bayreuth (Germany), 2. University of Düsseldorf (Germany)) ***Georg Papastavrou**¹, Andreas Mark¹, Astrid Rauh², Matthias Karg², Nicolas Helfricht¹

2F14 17:30-17:50

Structured Layer on Silica Surface in Electrolyte Solutions and Kinetic Stability of Silica Nanoparticles (1. Kyoto University (Japan), 2. Doshisha University (Japan)) ***Ko Higashitani**¹, Kazushi Hiramura², Yasushige Mori²

2F15 17:50-18:10

Controlled Adsorption of Metallo-dielectric Patchy Particles to Metal Surfaces (1. Dept. Physics, Kyushu University (Japan), 2. Dept. Physics, Kyoto Sangyo University (Japan)) ***Tomohiro Goroh Noguchi**¹, Yasutaka Iwashita², Yasuyuki Kimura¹

2F16 18:10-18:30

Dynamics of Single and Multicomponent Bubble Nucleation at Degassing: Colloidal Dispersions Relevant to Volcanic Eruption (1. St Petersburg State University (Russia)) ***Alexander K Shchekin**¹, Anatoly E Kuchma¹, Darya S Martuyukova¹

2F17 18:30-18:50

Collision case model for population balance equations in agglomerating heterogeneous colloidal systems: Theory and experiment (1. Karlsruhe Institute of Technology, Institute for Mechanical Process Engineering and Mechanics (Germany)) ***Frank Rhein**¹, Hermann Nirschl¹

2F18 18:50-19:10

Application of Holographic Microscopy to Characterization of a Single Colloidal Particle (1. Kyushu University (Japan)) Toyokazu Ikeda¹, ***Yasuyuki Kimura**¹

Room G

[S6] Nanopores and/or Nanowindows Associated Interface Science (Nano-IS)

Chair: Lucia Carlucci (Universita degli Studi di Milano), Joaquin Silvestre Albero (University of Alicante)

2G01 10:10-10:40 [Keynote Lecture]

Chemical Design of Carbon Nanomaterials for Energy and Optoelectronic Applications (1. University of California at Riverside (USA)) ***Elena Bekyarova Haddon**¹

2G02 10:40-11:00 [Invited Lecture]

Pore-size-selective-control of surface hydrophilicity of porous carbons by molecular masking (1. Institute for Materials Chemistry and Engineering, Kyushu University (Japan), 2. Interdisciplinary Graduate School of Engineering Science, Kyushu University (Japan), 3. International Institute for Carbon-Neutral Energy Research, Kyushu University (Japan)) ***Jin Miyawaki**^{1,2,3}, Yao Yu², Koji Nakabayashi^{1,2}, Seong-Ho Yoon^{1,2}

2G03 11:00-11:20 [Invited Lecture]

Identify interface, structure and active sites in multi-functional hybrids (1. University of Science and Technology of China (China)) ***Li Song**¹

2G04 11:20-11:40

Molecular Recognition of Water Isotopes on Porous Coordination Polymer (1. Shinshu University (Japan), 2. Kyoto University (Japan), 3. University of Pittsburgh (USA)) ***Hideki Tanaka**¹, Shotaro Hiraide², Kazuhiro Nagai², Abhishek Bagusetty³, J. Karl Johnson³, Minoru T. Miyahara², Katsumi Kaneko¹, Katsuya Teshima¹

2G05 11:40-12:00 [Invited Lecture]

Submolecular resolution scanning probe microscopy to bridge the "materials gap" (1. Keio University (Japan)) ***Tomoko K Shimizu**¹

2G06 12:00-12:20

A large variety of hydrophobic fcc supracrystals deposited on a substrate: Intrinsic Properties (1. Sorbonne Universite (France)) ***Marie Paule Pileni**¹

Lunch (12:20-13:30)

[S6] Nanopores and/or Nanowindows Associated Interface Science (Nano-IS)

Chair: Keith Gubbins (North Carolina State University), Krisztina Laszlo (Budapest University of Technology and Economics)

2G07 14:30-15:00 [Keynote Lecture]

Elastic Layered Metal-Organic Framework Adsorbents for Applications in Carbon Dioxide Separation (1. University of Michigan (USA)) ***Christian Lastoskie**¹

2G08 15:00-15:20 [Invited Lecture]

Flexibility, defects and disorder in soft porous crystals (1. Chimie ParisTech, PSL University, CNRS, Institut de Recherche de Chimie Paris (France)) ***Francois Xavier Couderc**¹

2G09 15:20-15:40

Dynamic Nature of Porous Coordination Polymer Surfaces Unveiled by Real-Time Imaging Techniques (1. The University of Tokyo (Japan), 2. Kyoto University (Japan), 3. Nagoya University (Japan)) ***Nobuhiko Hosono**^{1,2}, Aya Terashima², Shinpei Kusaka³, Ryotaro Mastuda³, Susumu Kitagawa²

2G10 15:40-16:00 [Invited Lecture]

First-Principles Study of Low-Dimensional Covalent Organic Frameworks for Visible-light Driven Overall Water Splitting (1. University of Science and Technology of China (China)) ***Xiaojun Wu**¹

2G11 16:00-16:20 [Invited Lecture]

Molecular-Scale Porous Materials Based on Pillar[n]arenes (1. Graduate School of Engineering, Kyoto University (Japan))

***Tomoki Ogoshi¹**

2G12 16:20-16:40 [Invited Lecture]

Exfoliation of 2D Coordination Networks in solution: A systematic approach (1. Università degli Studi di Milano (Italy), 2. Samara Center for Theoretical Materials Science (Russia), 3. Tokyo University of Agriculture and Technology (Japan)) ***Lucia Carlucci¹**, Davide Maria Proserpio¹, Pierluigi Mercandelli¹, Eugeny Alexandrov², Atsushi Kondo³

Break (16:40-17:00)

[S6] Nanopores and/or Nanowindows Associated Interface Science (Nano-IS)

Chair: Marie Paule Pileni (Sorbonne Université), Fernando Rey (Instituto de Tecnología Química)

2G13 17:00-17:30 [Keynote Lecture]

Recent advances in the textural characterization of nanoporous

materials (1. University Erlangen-Nuremberg, Institute of Separation Science and Technology, Department of Chemical and Bioengineering (Germany)) ***Matthias Thommes¹**

2G14 17:30-17:50 [Invited Lecture]

Porous materials for carbon capture: challenges and opportunities for research on adsorption-based CO₂ recovery (1. TOTAL EP R&D (France), 2. CNRS-AMU (France), 3. TOTAL RC R&D (Belgium)) ***Philip Llewellyn^{1,2}**, Eirik Silva¹, Parveen Kumar³, Samuel Leithier¹

2G15 17:50-18:10 [Invited Lecture]

Low-Dimensional Nano-Carbons: Form Doped Graphene to 3-D Hybrids and Biological Applications (1. The Pennsylvania State University (USA)) ***Mauricio Terrones¹**

2G16 18:10-18:30

Zero- to 2D-Atomic Scale In-solid Space Induced Novel Functions (1. Research Initiative for Supra-Materials, Shizuoka University (Japan)) ***Katsumi Kaneko¹**, Fernando Vallejos-Burgos¹, Hideki Tanaka¹

November 6 (Wed)

Room B–D

Plenary Lecture

Chair: Cathy McNamee (Shinshu University)

PL03 9:00-9:50

Controlled Polycationic Gold Nanoclusters (1. Hokkaido University (Japan)) ***Tetsu Yonezawa¹**

November 7 (Thu)

Room A

Plenary Lecture

Chair: Shigeru Deguchi (JAMSTEC)

PL04 9:00-9:50

Nanoparticles and organized lipid assemblies: from interaction to design of hybrid soft devices (1. University of Florence (Italy)) ***Debora Berti**¹

Break (9:50-10:10)

[S9] Langmuir Symposium

Chair: Atsushi Takahara (Kyushu University), Ye Zhang (Okinawa Institute of Science and Technology)

4A01 10:10-10:50 [Keynote Lecture]

Adaptive Microgels: Colloids or Macromolecules? Bulk vs. Interfaces (1. RWTH Aachen University (Germany)) ***Walter Richtering**¹

4A02 10:50-11:20 [Invited Lecture]

The Development and Surface Properties of Antifouling Conducting Polymers (1. Department of Materials Science and Engineering, National Taiwan University (Taiwan), 2. Advanced Research Center for Green Materials Science and Technology, National Taiwan University (Taiwan)) Jih-Guang Wu¹, Kuan-Ting Liu¹, ***Shyh-Chyang Luo**^{1,2}

4A03 11:20-11:50 [Invited Lecture]

Polymerization-Induced Self-Assembly of Functionalizable and Zwitterionic Diblock Copolymer via RAFT Aqueous Dispersion Polymerization (1. Department of Chemistry, Faculty of Science, Chulalongkorn University (Thailand), 2. Center of Excellence in Materials and Bio-interfaces, Chulalongkorn University (Thailand)) ***Voravee Hoven**^{1,2}, Panittha Damsongsang¹

4A04 11:50-12:20 [Invited Lecture]

Magic number colloidal clusters (1. Friedrich-Alexander University Erlangen-Nuremberg (Germany)) Junwei Wang¹, Chrameh Fruh Mbah¹, Benjamin Apeleo¹, Erdmann Spiecker¹, Michael Engel¹, ***Nicolas Vogel**¹

Lunch (12:20-13:30)

Luncheon Session sponsored by Langmuir
12:40-13:20

[S9] Langmuir Symposium

Chair: Syuji Fujii (Osaka Institute of Technology), Voravee Hoven (Chulalongkorn University)

4A05 13:30-14:00 [Invited Lecture]

The assembly of amphiphilic polymers in water: Can weak

forces oppose amphiphilic segregation (1. University of Helsinki (Finland), 2. MANA, NIMS (Japan), 3. Shaanxi Normal University (China)) Fabian Pooch¹, Hao Ren³, ***Francoise M Winnik**^{1,2}

4A06 14:00-14:30 [Invited Lecture]

Photochemical Control of Interfacial Chemical Properties using Novel Photoresponsive Amphiphiles (1. Faculty of Science and Technology, Tokyo University of Science (Japan)) ***Hideki Sakai**¹, Masaaki Akamatsu¹, Kenichi Sakai¹

4A07 14:30-15:00 [Invited Lecture]

Spatial Regulation of membrane proteins via peptide-assembly for the control of signalling pathway (1. Okinawa Institute of Science and Technology Graduate University (Japan)) ***Ye Zhang**¹

4A08 15:00-15:40 [Keynote Lecture]

Colloidal Engineering Hydrogels from the Simple Chemicals (1. Key Laboratory of Colloid and Interface Chemistry, Shandong University (China)) ***Jingcheng Hao**¹

DCSC Meeting 70th Anniversary Special Lecture

Chair: Kazue Kurihara (Tohoku University)

SL02 16:10-17:00

Biomimetic Organization, Nanomembrane, Global Warming (1. Kyushu University (Japan)) ***Toyoki Kunitake**¹

Room B

[T3] Soft Matter, Active Matter and Dynamical Self-organization of Biomolecular Systems

Chair: Takuya Yamamoto (Hokkaido University), Yanlei Yu (Fudan University)

4B01 10:10-10:40 [Keynote Lecture]

Optically Addressed Structural Colors of Self-Organized Helical Superstructures (1. Fudan University (China)) ***Yanlei Yu**¹, Lang Qin¹, Jia Wei¹

4B02 10:40-11:00 [Invited Lecture]

Aggregate morphologies in collective behavior of self-propelled Camphor boats (1. Okinawa Institute of Science and Technology Graduate University (Japan), 2. Institute for Basic Sciences (Korea)) ***Mahesh Bandi**¹, Tamoghna Das²

4B03 11:00-11:20

Direct Numerical Simulations of Induced-Charge Electrophoretic Janus Particles (1. Kyoto University (Japan), 2. The University of Tokyo (Japan)) ***John Jairo Molina**¹, Takuma Oguri¹, Ryoichi Yamamoto^{1,2}

4B04 11:20-11:40

Self-assembly and Deposition Control of LC Polysaccharide at Evaporative Interface (1. Japan Advanced Institute of Science and Technology (Japan), 2. Niigata University (Japan)) ***Gargi Joshi**¹, Kosuke Okeyoshi¹, Tetsu Mitsumata², Tatsuo Kaneko¹

4B05 11:40-12:00

Kinetics of solitary waves in liquid crystals (1. South China University of Technology (China), 2. RIKEN Center for Emergent Matter Science (CEMS) (Japan)) ***Satoshi Aya**¹, Fumito Araoka²

4B06 12:00-12:20

Marked Difference in Morphology of DNA Compaction and Transcription Caused by Amino Acid Sequence of Oligopeptide (1. Department of Chemistry, Asahikawa Medical University (Japan), 2. Graduate School of Environmental Study, Nagoya University (Japan), 3. Faculty of Pharmacy, Meijo University (Japan), 4. Graduate School of Medical Science, Nagoya University (Japan), 5. Graduate School of Pharmaceutical Science, Nagoya City University (Japan), 6. Faculty of Biological and Medical Sciences, Doshisha University (Japan)) ***Tatsuo Akitaya**¹, Anatoly Zinchenko², Hiroyuki Hiramatsu³, Toshio Kanbe⁴, Shizuaki Murata², Norio Hazemoto⁵, Kenichi Yoshikawa⁶

Lunch (12:20-13:30)

[T12] Application of Colloids – Cosmetics, Detergents, Household Products, Foods and Paints

Chair: Takehiko Kasai (L'Oréal), Anniina Salonen (Université Paris Sud)

4B07 13:30-14:00 [Keynote Lecture]

Interfacial soft matter design features for skin products (1. Edinburgh University (UK)) ***Alexander Lips**¹

4B08 14:00-14:20 [Invited Lecture]

Physical origin of a complicated tactile sensation: “*Shittori* feel” (1. Yamagata University (Japan), 2. The University of Electro-Communications (Japan), 3. Daito Kasei Kogyo, Co., Ltd (Japan)) Kana Kikagawa¹, Rieko Kuhara¹, Jinhwan Kwon², Maki Sakamoto², Reiichiro Tsuchiya³, Noboru Nagatani³, ***Yoshimune Nonomura**¹

4B09 14:20-14:40

Measuring tactile friction of Pickering formulations on excised skin (1. Department of Biomedical Sciences, Faculty of Health and Society, Malmö University (Sweden), 2. Biofilms - Research Center for Biointerfaces, Malmö University (Sweden), 3. Speximo AB(Sweden), 4. Rise Research Institute of Sweden (Sweden), 5. Department of Food Technology, Engineering and Nutrition, Lund University (Sweden)) ***Abdullah Ali**^{1,2,3}, Lovisa Ringstad⁴, Lisa Skedung⁴, Marie Wahlgren⁵, Johan Engblom^{1,2}

4B10 14:40-15:00

α -Form Hydrated Crystal (α -Gel) Prepared by Ecofriendly Cationic Surfactant (1. Kao Corporation (Japan), 2. Tokyo University of Science (Japan)) ***Takanori Saito**^{1,2}, Rina Ishii², Masaaki Akamatsu², Takaya Sakai¹, Kenichi Sakai², Hideki Sakai²

4B11 15:00-15:20 [Invited Lecture]

Spontaneous Skin-Sebum Cleansing by Interaction between Weak Acid Salt Surfactant Aqueous Solution and Polar Lipid (1. Skin Care Products Research, Kao corporation (Japan)) ***Mariko Kagaya**¹

4B12 15:20-15:40 [Invited Lecture]

The potential of polymer-coated liposomes for dental care (1. Department of Pharmacy, University of Oslo (Norway)) Joseph Azumah¹, Gro Smistad¹, ***Marianne Hiorth**¹

Room C

[T1] Surfactants and Self-Assembly

Chair: Petr Stepanek (Czech Academy of Sciences), Hiroki Matsubara (Kyushu University)

4C01 10:10-10:40 [Keynote Lecture]

The Spatial Organization of Soft Molecular Assemblies and Colloids: New Insights from Cryo-Electron Tomography (1. CryoEM Laboratory of Soft Matter, Faculty of Biotechnology and Food Engineering, Technion (Israel)) ***Dganit Danino**¹

4C02 10:40-11:00 [Invited Lecture]

Fabrication of catanionic vesicles from pseudotriple-chained ion pair amphiphile for gene delivery application (1. National Cheng Kung University (Taiwan)) Yu-Fon Chen¹, ***Chien-Hsiang Chang**¹

4C03 11:00-11:20

Synthesis and characterization of asymmetric amino bolaform surfactants as structure directing agents in super-microporous silicate templating (1. University of Otago (New Zealand), 2. WSP Opus (New Zealand), 3. The MacDiarmid Institute for Advanced Materials and Nanotechnology (New Zealand)) ***Kenneth Ortega**¹, Alan R Hayman¹, Nigel T Lucas^{1,3}, Stephen A Bagshaw²

4C04 11:20-11:40

Hydrogels Formed by Surfactant Mediated Gelation (SMG) - Effect of Surfactant Type (1. Yokohama National University (Japan)) ***Kenji Aramaki**¹, Eriko Takimoto¹, Miho Maeda¹

4C05 11:40-12:00

Photo-driven Transformation from Superhelix to Nanokebab and Chiroptical Switch (1. Institute of Chemistry, Chinese Academy of Sciences (China)) ***Li Zhang**¹, Hejin Jiang¹, Minghua Liu¹

4C06 12:00-12:20

Synthesis and bundle structures of ultrathin Au nanowires in water (1. Faculty of Engineering, Tokyo University of Science (Japan)) ***Naoya Miyajima**¹, Yoshiro Imura¹, KeHsuan Wang¹, Takeshi Kawai¹

Lunch (12:20-13:30)

[S8] Transport Phenomena at the Bio-inspired-Nano Interface & Environment

Chair: Hideyuki Sugioka (Shinshyu University), Hideki Sakai (Tokyo University of Science)

4C07 13:30-14:00 [Keynote Lecture]

The Science and Engineering of Complex Coacervates (1. University of Massachusetts Amherst (USA), 2. University of Illinois at Urbana-Champaign (USA)) ***Sarah L Perry**¹, Yalin Liu¹, Xiangxi Meng¹, Li-Wei Chang¹, Tyler K. Lytle², Jason Madinya², Jessica D. Schiffrin¹, Charles E. Sing²

4C08 14:00-14:20 [Invited Lecture]

Polyelectrolyte Micelles from Assembly of Functional Charged Building Blocks (1. East China University of Science and Technology (China)) ***Junyou Wang**¹, Jiahua Wang¹, Wenjuan Zhou¹, Jianan Huang¹, Mingke Ma¹

4C09 14:20-14:40

Molecular simulations of polyelectrolyte brush under external field (1. University of Hyogo (Japan), 2. Kyoto University (Japan)) ***Hitoshi Washizu**^{1,2}

4C10 14:40-15:00

Influence of Humic Acid on Transport, Deposition and Activity of Lysozyme in Goethite-Coated Quartz Sand (1. Key Laboratory of Horticultural Plant Biology, The Ministry of Education, College of Resources and Environment, Huazhong Agricultural University (China), 2. Laboratory of Physical Chemistry and Soft Matter, Wageningen University and Research (Netherlands)) ***Yan Li**¹, Luuk K. Koopala², Yijia Zhang¹, Wenfeng Tan¹

4C11 15:00-15:20 [Invited Lecture]

Polyelectrolyte Flocculation of Model Colloid in the Initial Stage Studied by means of Normalized Mixing Flow (1. University of Tsukuba (Japan)) ***Yasuhisa Adachi**¹, Yiran Zhuang¹

4C12 15:20-15:50 [Keynote Lecture]

Nature-Inspired Multi-Compartment and Multi-Layered Capsules (1. University of Maryland (USA)) ***Srinivasa R Raghavan**¹

Room D

[T8] Solid Surface –Adsorption, Catalysis, Tribology and Electrochemistry

Chair: Hirofumi Kanoh (Chiba University), Takahiro Ueda (Osaka University), Shinji Yamada (Kao Corporation)

4D01 10:10-10:40 [Keynote Lecture]

A new paradigm for biotribology (1. Weizmann Institute (Israel)) ***Jacob Klein**¹

4D02 10:40-11:00

Chemical Reactivity and Gas Sensing Performances of Two-dimensional Graphene Sheet (1. Chiba University (Japan)) Mukam Ekayev¹, Hiroki Kitayama¹, Sharifa Faraezi¹, Tomoko Nakano¹, Yuki Baba¹, Masaya Ishida¹, Takumi Watanabe¹, ***Tomonori Ohba**¹

4D03 11:00-11:20

Understanding the cation dependent surfactant adsorption on clay minerals surfaces (1. Delft University of Technology (Netherlands)) ***Zilong Liu**¹, Ernst J. R. Sudholter¹, Binder Singh¹, Duco Bosma¹, Murali Ghatkesar¹, Naveen Kumar¹

4D04 11:20-11:40

Ambient pressure synthesis of cyclohexanediol high pressure organic reaction through in-pore superhigh pressure effect of SWCNTs (1. Research Initiative for Supra-Materials, Shinshu University (Japan), 2. Faculty of Science, Department of Chemistry, Shinshu University (Japan)) ***Ayumi Furuse**¹, Ryusuke Futamura², Katsumi Kaneko¹

4D05 11:40-12:00

Monolith supermacroporous metal-chelate and composite sorbents based on carboxyalkylchitosans (1. Institute of Chemistry Far Eastern Branch of the Russian Academy of Sciences (Russia), 2. I. Ya. Postovsky Institute of Organic Synthesis, Ural Branch of the Russian Academy of Sciences (Russia)) ***Yuliya Olegovna Privar**¹, Dariya Alexseevna Shashura¹, Alexandr Viktorovich Pestov², Svetlana Yurievna Bratskaya¹

4D06 12:00-12:20

Adsorption of Anion Species into π -Electron-Rich Micropores of Carbon Promoted by Proton Coadsorption (1. Okayama University (Japan)) ***Takahiro Ohkubo**¹, Yuri Hirono¹, Hiroki Nakayasu¹, Masaru Yamasaki¹, Yasushige Kuroda¹

Lunch (12:20-13:30)

[T8] Solid Surface –Adsorption, Catalysis, Tribology and Electrochemistry

Chair: Takahiro Ohkubo (Okayama University), Taku Iiyama (Shinshu University)

4D07 13:30-14:00 [DCSC Award Lecture (Young Scientist Award)]

New photonic, electronic, and mechanic devices fabricated by soft lithography (1. Kumamoto University (Japan)) ***Satoshi Watanabe**¹

4D08 14:00-14:20

Effect of Carbon Nanopores on Amyloid Formation of Denatured Concanavalin A (1. Chiba University (Japan)) Daisuke Hane¹, ***Hirofumi Kanoh**¹

4D09 14:20-14:40

Transient dynamic pore expansion in ZIF-8 -The unique mechanism of adsorption for bulky molecules (1. Osaka University (Japan)) ***Takahiro Ueda**¹, Masako Nakai¹, Tatsuya Yamatani¹

4D10 14:40-15:00

Kinetic Monte-Carlo Simulation of Fischer-Tropsch Synthesis on Cobalt Surface Catalyst (1. The Petroleum and Petrochemical College, Chulalongkorn University (Thailand), 2. Center of Excellence on Petrochemical and Materials Technology, Chulalongkorn University (Thailand), 3. Department of Chemical Engineering, University of Michigan (USA)) Nuttawut Puingna^{1,2}, ***Palawat Unruean**^{1,2}, Boonyarach Kitiyanan^{1,2}, Robert M. Ziff³

4D11 15:00-15:20

Potential-induced Interfacial Restructuring of Ionic Liquids Triggering Electrochemical Reactions (1. Nagoya Institute of Technology (Japan)) ***Kenta Motobayashi**¹, Yuhei Shibamura¹, Katsuyoshi Ikeda¹

4D12 15:20-15:40

Electrochemical Oxygen Reduction Reactivity of Pt–Ni Nanostructured Electrocatalysts on Various Carbon Supports (1. Hokkaido University (Japan)) ***Ichizo Yagi**¹, Kazuya Ogura¹, Tianchi Li¹, Ryota Nakahoshi¹, Zhuang Yu¹, Yoshimi Iguchi¹, Shoichi Tokuda¹, Masaru Kato¹

Room E

[S7] New trends of Biological Science Research Created by Interfacial Structural Analysis - Innovation for Life Science

Chair: Piero Baglioni (University of Florence), Taku Ogura (Nikkol Group Cosmos Technical Center)

4E01 10:10-10:40 [Keynote Lecture]

Drug Delivery System of Biomaterial Technology Necessary for Life Sciences (1. Kyoto University (Japan)) ***Yasuhiko Tabata**¹

4E02 10:40-11:00 [Invited Lecture]

Engineering FcγR for the development of next generation biomedicine: colloidal and conformational stability of IgG (1. The University of Tokyo (Japan)) ***Kouhei Tsumoto**¹

4E03 11:00-11:20 [Invited Lecture]

Equilibrium liquid structure of protein solutions: from intermolecular interactions of globular proteins to hierarchical

structure of artificial oxygen carriers (1. Shinshu University (Japan), 2. Chuo University (Japan), 3. Nara medical University (Japan)) ***Takaaki Sato**¹, Teruyuki Komatsu², Hiromi Sakai³

4E04 11:20-11:40 [Invited Lecture]

Microemulsion based organogels as lipase carriers: A structure and efficacy study (1. Institute of Chemical Biology, National Hellenic Research Foundation (Greece)) Evdokia Vassiliadi¹, Maria Zoumpantioti¹, Christos Chochos¹, Spyridon Avramiotis¹, ***Aristotelis Xenakis**¹

4E05 11:40-12:00 [Invited Lecture]

Membrane-membrane Interactions and Ion Fluctuation in Aqueous Dispersions of Double-chain Cationic Surfactant (1. Nagoya University (Japan), 2. Shinshu University (Japan), 3. NIKKOLGROUP Cosmos Technical Center Co. Ltd (Japan)) ***Keiichi Yanase**^{1,2}, Taku Ogura³, Takaaki Sato²

4E06 12:00-12:20 [Invited Lecture]

Real-Time NMR Spectroscopy of Biologically Relevant Reaction: Preaggregation of Amyloid- β Fragments Prior to Fibril Formation (1. Faculty of Pharmaceutical Sciences, Himeji Dokkyo University (Japan)) Kenzo Aki¹, Yui Uchihara¹, Kotoha Kose¹, Tetsuro Nishida¹, ***Emiko Okamura**¹

Lunch (12:20-13:30)

[S7] New trends of Biological Science Research
Created by Interfacial Structural Analysis - Innovation
for Life Science

Chair: Takaaki Sato (Shinshu University), Taku Ogura
(Nikkol Group Cosmos Technical Center)

4E07 13:30-14:00 [Keynote Lecture]

Biologically relevant calcium-magnesium phosphates (1. University of Florence & CSGI (Italy)) ***Piero Baglioni**¹, Francesca Ridi¹, Rita Gelli¹

4E08 14:00-14:20 [Invited Lecture]

Nanoscale observation of biological specimens in aqueous condition by scanning-electron assisted dielectric microscopy (1. National Institute of Advanced Industrial Science and Technology (AIST) (Japan)) ***Toshihiko Ogura**¹, Tomoko Okada¹

4E09 14:20-14:40 [Invited Lecture]

Analyzing matrix vesicles in mineral-forming cells (1. Department of Periodontology, Osaka University Graduate School of Dentistry (Japan)) ***Tomoaki Iwayama**¹, Shinya Murakami¹

4E10 14:40-15:00 [Invited Lecture]

Study on accumulation mechanism of gold in unicellular alga by X-ray analyses (1. Tokyo Denki University (Japan)) ***Akiko Hokura**¹

4E11 15:00-15:20

Adsorption, Desorption Control of Fibronectin at the Liquid/Polymer Interface with Thermoresponsivity using in-situ Quartz Crystal Microbalance Monitoring (1. Center for Material Design Science, School of Integrated Design Engineering, Keio University (Japan), 2. The Department of Materials Engineering, School of Engineering, The University of Tokyo (Japan), 3. Faculty of Pharmacy, Keio University (Japan)) ***Seimei Shiratori**¹, Jiayu Li¹, Taisei Kaku¹, Yuki Tokura¹, Taihei Nishimoto², Yuki Hiruta¹, Aya Mizutani Akimoto², Kenichi Nagase³, Hideko Kanazawa³

4E12 15:20-15:40

Study of Force Measurement for Forceps-Tip Movement (1. Dept. Mechanical Engineering, Ritsumeikan Univ. (Japan), 2. The Research Organization of Science and Technology, Ritsumeikan University (Japan), 3. Graduate School of Medicine Department of Pediatric Surgery, The University of Tokyo (Japan), 4. Saitama Children's Medical Center (Japan)) ***Tsuyoshi Yagi**¹, Hiroshi Tanigawa², Ryoichi Deie³, Tetsuya Ishimaru⁴, Tadashi Iwanaka⁴, Tomoki Nishino¹

Room F

[T5] Colloidal Dispersion/Aggregation, Surface Forces
and Rheology

Chair: Shin-ichi Takeda (Takeda Colloid Techno-Consulting Co., Ltd.), Regine von Klitzing (Technische Universität Darmstadt)

4F01 10:10-10:40 [Keynote Lecture]

Charging and aggregation-dispersion of cellulose nanofibers in aqueous solution: effect of pH and electrolyte concentration (1. Faculty of Life & Environmental Sciences, University of Tsukuba (Japan), 2. Graduate School of Life & Environmental Sciences, University of Tsukuba (Japan)) ***Motoyoshi Kobayashi**¹, Yusuke Sato²

4F02 10:40-11:00 [Invited Lecture]

Characterization of highly concentrated dispersions by Ultrasound - New developments (1. Dispersion Technology Inc. (USA), 2. Columbia University (USA)) ***Andrei Dukhin**¹, Sean Parlia², Ponisseril Somasundaran²

4F03 11:00-11:20 [Invited Lecture]

In-situ visualization of separation and segregation phenomena in highly concentrated dispersions by light and X-ray transmission (1. LUM GmbH (Germany), 2. Dr. Lerche KG (Germany)) ***Dietmar Lerche**^{1,2}, Anne-Katrin Zierau¹, Titus Sobisch¹

4F04 11:20-11:40

Aggregation and dispersion of Au-nanoparticles and decorated polystyrene beads with SERS-activity in optofluidic chip (1. University of Hyogo (Japan)) ***Akinobu Yamaguchi**¹, Yuichi Utsumi¹, Takao Fukuoka¹

4F05 11:40-12:00

Time-resolved small-angle X-ray scattering of self-assembling iron oxide nanocubes (1. Stockholm University (Sweden), 2. Center for Free-Electron Laser Science (Germany)) ***Martin Kapuscinski**¹, Michael Agthe², Zhong-Peng Lv¹, Mo Segad¹, Yingxin Liu¹, Lennart Bergström¹

4F06 12:00-12:20

Colloidal stability of apolar nanoparticles in different evaporating solvents: *in situ* measurements and interpretation (1. INM-Leibniz Institute for New Materials (Germany), 2. Colloid and Interface Chemistry, Saarland University (Germany)) ***Lola Gonzalez-Garcia**¹, David Doblas¹, Thomas Kister¹, Marina Cano-Bonilla¹, Tobias Kraus^{1,2}

Lunch (12:20-13:40)

[T6] Nanoparticles and Nanomaterials

Chair: Nobuyoshi Miyamoto (Fukuoka Institute of

Technology), Anh T. N. Dao (Tohoku University)

4F07 13:40-14:00 [Invited Lecture]

Liquid-Crystalline Self-Organizing Organic-Inorganic Hybrid Dendrimer with a Fe₃O₄ Magnetic Nano-Core (1. Tohoku University (Japan), 2. National Institute of Technology, Sendai College (Japan)) ***Kiyoshi Kanie**¹, Takehiro Yachi¹, Masaki Matsubara², Atsushi Muramatsu¹

4F08 14:00-14:20

Hybrid nanoparticles for energy and photocatalytic applications (1. National Tsing Hua University (Taiwan)) ***De-Hao Tsai**¹

4F09 14:20-14:40

Enzymatic activity and thermostability of α -amylase used as a cross-linker for the creation of ferromagnetic nanoparticle clusters (1. Bio-Nano Electronics Research Center, Toyo University (Japan)) ***Masashi Suzuki**¹, Toru Mizuki¹, Toru Maekawa¹, Hisao Morimoto¹

4F10 14:40-15:00

Synthesis of Cu₃Al_{1-x}M_xSn₅ (M = metal) Nanocrystals as Building Blocks for Sustainable Thermoelectric Materials (1. Japan Advanced Institute of Science and Technology (Japan), 2. National Institute of Advanced Industrial Science and Technology (Japan), 3. Nippon Shokubai Co., Ltd (Japan)) ***Pratibha Dwivedi**¹, Wei Zhou¹, Michihiro Ohta², Masanobu Miyata¹, Hiroshi Takida³, Korefumi Kubota³, Takeo Akatsuka³, Shinya Maenosono¹

4F11 15:00-15:20

Ultrafine Colloidal Nanoprecursors for An Easy Access to ThMn₁₂-Type-Structured Hard Ferromagnetic Materials (1. Institute for Chemical Research, Kyoto University (Japan)) ***Thang Thuy Trinh**¹, Jungyang Kim¹, Ryota Sato¹, Mitsutaka Haruta¹, Hiroki Kurata¹, Toshiharu Teranishi¹

4F12 15:20-15:40

Room temperature synthesis of Sn/Ag-Sn nanoparticles via galvanic reaction (1. Hokkaido University (Japan)) ***Min Jia Saw**¹, Mai Thanh Nguyen¹, Tetsu Yonezawa¹

Room G

[T10] Colloids and Energy

Chair: Tsuyohiko Fujigaya (Kyushu University), Yasuyuki Kusaka (AIST)

4G01 10:10-10:40 [Keynote Lecture]

Photon Upconversion based on Molecular Self-Assembly (1. Kyushu University (Japan)) ***Nobuo Kimizuka**¹

4G02 10:40-11:00

Chiral Lipid Assemblies Work as Host Matrix for Fabricating Circularly Polarized Luminescent Materials (1. National Center for Nanoscience and Technology, China (China)) ***Pengfei Duan**¹

4G03 11:00-11:20

Specific photocatalytic reaction of p-methyl thiophenol and related molecules induced by a gap mode plasmon (1.

Graduate School of Science and Engineering, Saitama University (Japan)) Kanae Tabei¹, Keitaro Akai¹, ***Masayuki Futamata**¹

4G04 11:20-11:40 [Invited Lecture]

R&D for Hydrogen Supply Chain by the Organic Hydrides Technology (1. JXTG Nippon Oil & Energy Corporation (Japan)) ***Hideshi Iki**¹

4G05 11:40-12:00

Colloidal Design via Template-Sacrificial Conversion of MnCO₃ Microspheres to TiO₂ Visible Light Photocatalysts (1. University of Kitakyushu (Japan)) ***Seung-Woo Lee**¹, Hack-Keun Lee¹

4G06 12:00-12:20

Artificial Photosynthesis for Carbon Recycling (1. ARPChem (Japan)) ***Taisei Nishimi**¹

Lunch (12:20-13:30)

[T10] Colloids and Energy

Chair: Seung-Woo Lee (University of Kitakyushu), Taisei Nishimi (ARPChem)

4G07 13:30-14:00 [Keynote Lecture]

Carbon Nanotubes Coated by Emulsion Polymerization and their Applications (1. Kyushu University (Japan), 2. WPI-I2CNER(Japan), 3. CMS, Kyushu University (Japan)) ***Tsuyohiko Fujigaya**^{1,2,3}

4G08 14:00-14:20

Adhesion-based patterning of semidried nano-colloid thin films (1. AIST (Japan), 2. Hiroshima University (Japan)) ***Yasuyuki Kusaka**¹, Atsushi Takei¹, Tomonori Fukasawa², Toru Ishigami², Nobuko Fukuda¹

4G09 14:20-14:40 [Invited Lecture]

Study of Energy Materials for Development of Redox-Flow Battery (1. National Institute of Advanced Industrial Science and Technology (Japan)) ***Akihiro Ohira**¹, Akira Negishi¹, Erika Ishida¹, Eiji Hozomi¹, Yukari Sato¹

4G10 14:40-15:00

Enhanced Electrochromic Properties of a Nickel Oxide-Alanine Film (1. Tokyo University of Science (Japan), 2. Yamaguchi University (Japan)) ***KeHsuan Wang**¹, Hayato Ikeuchi¹, Masaaki Yoshida², Takeshi Kawai¹

4G11 15:00-15:20

Organic Hybrid Thermoelectric Materials Based on Inexpensive Carbon Nanotubes (1. Sanyo-Onoda City University (Japan)) ***Naoki Toshima**¹, Keisuke Oshima¹, Yukihide Shiraishi¹

4G12 15:20-15:40 [Invited Lecture]

Colloids and interface controlling phenomenon in lithium ion battery for large scaled application (1. Mitsubishi Chemical Corporation (Japan)) ***Iwao Soga**¹

November 8 (Fri)

Room A

Plenary Lecture

Chair: Naoyuki Ishida (Okayama University)

PL05 9:00-9:50

Whatever happened to the long-range hydrophobic attraction? (1. Australian National University (Australia))

***Vincent S. J. Craig**¹

Break (9:50-10:10)

[T5] Colloidal Dispersion/Aggregation, Surface Forces and Rheology

Chair: Junpei Yamanaka (Nagoya City University), Michael Kappl (Max Planck Institute for Polymer Research)

5A01 10:10-10:40 [Keynote Lecture]

Dynamic properties of capillary suspensions: connecting structure and rheology (1. Department of Chemical Engineering, KU Leuven (Belgium)) Jens Allard¹, Sebastian Bindgen¹, ***Erin Koos**¹

5A02 10:40-11:00

On the rheology of pulmonary surfactant: effects of concentration and consequences for the surfactant replacement therapy (1. Universite de Paris (France)) ***Jean-Francois Berret**¹

5A03 11:00-11:20

Arrested colloidal gels: low-invasive rheology investigations of their ageing and gravitational collapse (1. Bayer AG (Germany), 2. University of Bristol (UK)) ***Malcolm Faers**¹, Christopher Patrick Royall², Paul Bartlett²

5A04 11:20-11:40

Quantitative understanding of sheared colloidal rods and the effect of length and stiffness (1. Forschungszentrum Juelich (Germany), 2. KU Leuven (Belgium)) ***Pavlik Lettinga**¹, Christian Lang¹, Christian Clasen², Jan Dr. Hendricks², Jan Dhont¹

5A05 11:40-12:00

Capillary Rheo-SANS: Measuring the nanostructure and rheology of complex fluids at high shear rates (1. NIST Center for Neutron Research (USA), 2. University of Illinois Urbana-Champaign (USA), 3. University of Tulsa (USA), 4. NIST Material Measurement Laboratory (USA), 5. University of Delaware (USA), 6. NIST Engineering Laboratory (USA)) ***Ryan P Murphy**¹, Zachary Riedel², Javen S Weston³, Paul Salipante⁴, Yun Liu^{1,5}, Nicos Martys⁶, Steven D Hudson⁴, Katie M Weigandt¹

5A06 12:00-12:20

Exploring the characteristics of "short-range" hydrophobic attraction: non-aqueous solvents, dissimilar surfaces, and

effect of surfactants (1. Okayama University (Japan)) ***Naoyuki Ishida**¹, Yuhei Soga¹, Kohei Matsuo¹, Shota Kage¹, Koreyoshi Imamura¹

Lunch (12:20-13:40)

[T5] Colloidal Dispersion/Aggregation, Surface Forces and Rheology

Chair: Kohji Ohno (Kyoto University), Erin Koos (KU Leuven)

5A07 13:40-14:10 [Keynote Lecture]

Clustering of Oppositely Charged Colloidal Particles (1. Nagoya City University (Japan)) ***Junpei Yamanaka**¹, Honoka Komazawa¹, Minoru Fujita¹, Hiroyuki Miki¹, Madoka Minami¹, Teruyoshi Ishigami¹, Miyu Ioka¹, Hajime Hattori¹, Yoko Kondo¹, Akiko Toyotama¹, Tohru Okuzono¹

5A08 14:10-14:30

Structured Film of Monodispersed Spherical Silica Particles Prepared by Electrophoretic Deposition (1. Doshisha University (Japan)) ***Yasushige Mori**¹, Tomoaki Seki¹, Yoshiro Sadakami¹, Kastumi Tsuchiya¹

5A09 14:30-14:50

Suspensions of anisotropic core-shell silica/PNIPAM particles: tuning the particles organisation and phase behaviour (1. Laboratoire de Synthèse et Fonctionnalisation des Céramiques - UMR 3080 CNRS / Saint-Gobain CREE (France), 2. Physical Chemistry, Lund University (Sweden)) ***Julien Schmitt**¹, Caroline Hartwig², Adriana M. Mihut², Jérôme J. Crassous², Peter Schurtenberger², Viveka Alfredsson²

5A10 14:50-15:10

2D crystallization of submicron-sized gold particles (1. Nagoya City University (Japan), 2. Institute for Materials Research, Tohoku University (Japan)) ***Akiko Toyotama**¹, Ayanori Fukushima¹, Miyu Ioka¹, Tohru Okuzono¹, Satoshi Uda², Jun Nozawa², Junpei Yamanaka¹

5A11 15:10-15:30

Hierarchical Self-Assembly and Deposition of Nanoparticles Controlled by Surface Forces (1. The Department of chemical Engineering, Technion (Israel)) ***Ekhlas Homede**¹, Ofer Manor¹

5A12 15:30-15:50

Clusters Formed by Superparamagnetic Colloidal Particles in a Thin Magnetorheological Fluid Layer Induced by a DC Magnetic Field (1. Bio-Nano Electronics Research Centre, Toyo University (Japan), 2. Graduate School of Interdisciplinary New Science, Toyo University (Japan)) ***Tomofumi Ukai**^{1,2}, Yuto Hamada², Toru Maekawa^{1,2}, Hisao Morimoto^{1,2}

Break (15:50-16:10)

[T5] Colloidal Dispersion/Aggregation, Surface Forces and Rheology

Chair: Motoyoshi Kobayashi (University of Tsukuba),
Dietmar Leriche (LUM GmbH)

5A13 16:10-16:40 [Keynote Lecture]

Segregation in Drying Binary Colloidal Droplets (1. Department of Physics at Interfaces, Max Planck Institute for Polymer Research (Germany), 2. Institute of Physics, Johannes Gutenberg University Mainz (Germany)) Wendong Liu¹, Jiarul Midya², ***Michael Kappel**¹, Hans-Jürgen Butt¹, Arash Nikoubashman²

5A14 16:40-17:00

Impact of particle size on the electrostatic method of liquid marble formation (1. Faculty of Engineering, University of Newcastle (Australia), 2. Graduate School of Engineering, Osaka Institute of Technology (Japan), 3. Faculty of Engineering, Osaka Institute of Technology (Japan), 4. Faculty of Science, University of Newcastle (Australia)) ***Casey A. Thomas**¹, Moe Kasahara², Yuta Asami², Syuji Fujii³, Grant B. Webber¹, Peter M. Ireland¹, Erica J. Wanless⁴

5A15 17:00-17:20

Preparation of metal-shell microcapsules using Pickering emulsion and interfacial electroless plating (1. Okayama University (Japan)) Toshihiko Tsuneyoshi¹, Takaichi Watanabe¹, ***Tsutomu Ono**¹

5A16 17:20-17:40

Reentrant condensation of phospholipid vesicles: interactions driven by bulk nanobubbles (1. Guangdong Provincial Key Laboratory of Nanophotonic Functional Materials and Devices, School of Information and Optoelectronic Science and Engineering, South China Normal University (China), 2. National Center for International Research on Green Optoelectronics, South China Normal University (China), 3. MESA+ Institute for Nanotechnology, University of Twente (Netherlands)) ***Minmin Zhang**^{1,2,3}, Serge G Lemay³

5A17 17:40-18:00

Ordered Structure Formation in Colloidal Dispersion of Polymer-Brush-Decorated Particles (1. Kyoto University (Japan)) ***Kohji Ohno**¹, Haruhisa Ohno¹

5A18 18:00-18:20

Controlled crystallization of colloidal particles through tuning the repulsive and attractive forces (1. Department of Chemical Engineering, Kyoto University (Japan)) ***Nozomi Arai**¹, Satoshi Watanabe¹, Minoru T. Miyahara¹

Room B

[T12] Application of Colloids – Cosmetics, Detergents, Household Products, Foods and Paints

Chair: Alexander Lips (Edinburgh University), Kei Watanabe (Shiseido Global Innovation Center)

5B01 10:10-10:40 [Keynote Lecture]

Using Fundamental Structural and Thermodynamic Insights for Rationalizing the Aggregation Behavior of Commercially Relevant Surfactant Systems (1. Technische Universität Berlin (Germany)) ***Michael Gradzielski**¹, Vivian J. Spiering¹, Rapael Michel¹

5B02 10:40-11:00 [Invited Lecture]

Liposome for Cosmetics? The Long-Term Stability of Liposomes and Topical Effects of the Water Soluble Ingredients on the Skin by Liposome Encapsulation (1. KOSE

Corporation, Research Laboratories (Japan)) Yoshikazu Konno¹, ***Noboru Naito**¹

5B03 11:00-11:20

Micellar Effects on the Hydrolysis Reaction of an Anionic Surfactant in Aqueous Solution and Measurements of Adsorbed Proton on the Micellar Surface (1. Process Engineering Research Laboratories, Lion Corporation (Japan), 2. Fabric Care Research Laboratories, Lion Corporation (Japan), 3. R&D Headquarter, Lion Corporation (Japan)) ***Yutaka Abe**¹, Hideaki Watanabe², Masami Fujiwara³

5B04 11:20-11:40 [Invited Lecture]

Advanced Solid-in-Oil Nanodispersions for Promoting Skin Permeation of Amphiphilic Bioactive Ingredients (1. Kyushu University (Japan), 2. KK Chanel Research and Technology Development Laboratory (Japan)) ***Masahiro Goto**¹, Yoshihito Oda², Masayoshi Minamoto²

5B05 11:40-12:00 [Invited Lecture]

Interfacial Control of Processed Foods with Emulsifiers (1. MITSUBISHI-CHEMICAL FOODS CORPORATION (Japan)) ***Akihiro Ogawa**¹

5B06 12:00-12:20 [Invited Lecture]

Effect of food additives on phase transition of thermoresponsive polymer colloids in aqueous media (1. Kanagawa Institute of Technology (Japan)) ***Hideonobu Shimizu**¹

Lunch (12:20-13:40)

[T12] Application of Colloids – Cosmetics, Detergents, Household Products, Foods and Paints

Chair: Kei Watanabe (Shiseido Global Innovation Center),
Michael Gradzielski (Technische Universität Berlin)

5B07 13:40-14:10 [Keynote Lecture]

Mixing bubbles and drops to make foamy materials (1. University Paris Sud (France)) ***Anniina Salonen**¹

5B08 14:10-14:30

Novel Fascinating Feature of foam- Foam type hybrid bicontinuous microemulsion makeup remover - (1. Shiseido Global Innovation Center (Japan), 2. Tokyo University of Science (Japan)) ***Kei Watanabe**¹, Takashi Meno¹, Shigeo Takahashi¹, Namiko Sakurai¹, Hideki Sakai², Koji Tsuchiya²

5B09 14:30-14:50

Poloxamer Addition Interferes with Lipid Bilayer Disruption by Sucrose Monolaurate, a Penetration Enhancer (1. ICES, A*STAR(Singapore), 2. IHPC, A*STAR(Singapore), 3. Singapore Polytechnic (Singapore), 4. IMRE, A*STAR(Singapore)) ***Jin Wang Kwek**¹, Kai Cong Kuan¹, Wen Cong Yeo¹, Liangfeng Guo¹, Jernej Zidar², Freda Lim², Chunxiang Li³, Hui Yin³, Connie K Liu^{4,1}

5B10 14:50-15:10

Sustainable Technologies Based on “SHARING BEAUTY WITH ALL” by L’Oréal (1. L’Oreal(Japan)) ***Christophe Dumousseaux**¹

5B11 15:10-15:30

100% Natural Hair Color: Application of Traditional Renewable Dyes – Henna, Indigo and Cassia (1. Nihon Loreal KK (Japan)) ***Sherluck John Kunnilakatt**¹

5B12 15:30-15:50

Functional polyion complex gel particles (PGP) and films for cosmetic application (1. Nihon Loreal (Japan)) ***Takehiko Kasai**¹, Tatsushi Isojima¹, Hidehiko Asanuma¹, Nozomi

Takahashi¹, Tomomi Hamazaki¹, Toru Koike¹, Christophe Dumousseaux¹, Toshifumi Shiroya¹

Break (15:50-16:10)

[T12] Application of Colloids – Cosmetics, Detergents, Household Products, Foods and Paints

Chair: Makoto Uyama (Shiseido Global Innovation Center), Christophe Dumousseaux (L'Oréal)

5B13 16:10-16:40 [DCSC Award Lecture (Young Engineer Award)]

α -Gel (α -type hydrated crystal) structure evaluation formed by monohexadecyl phosphate with L-arginine and its application into cosmetics (1. NIKKOL GROUP Cosmos Technical Center Co., Ltd (Japan)) ***Keisuke Tanaka**¹

5B14 16:40-17:00 [Invited Lecture]

Multiple Levers of Lamellar Gel Network in Hair Conditioners for Broad Spectrum of Sensorial Performance (1. Singapore Innovation Center, Procter & Gamble (Singapore), 2. Brussels Innovation Center, Procter & Gamble (Belgium)) ***Toshiyuki Iwata**¹, Chetan Yagnik¹, Nobuaki Matsuoka¹, Pierre Verstraete²

5B15 17:00-17:20

Adsorption of Polyglycerin-Modified Silicone to Titanium Dioxide and its Effect on Interfacial Force (1. Shiseido Global Innovation Center (Japan), 2. Okayama University (Japan)) ***Ryushi Fukuhara**¹, Akio Nasu¹, Ayano Nakamura¹, Naoyuki Ishida²

5B16 17:20-17:40

Effect of lecithin on α -gel formation consisting of cationic surfactants (1. Research & Development Division, KOSE Corporation (Japan), 2. Graduate School of Environment and Information Sciences, Yokohama National University (Japan)) ***Daisuke Matsumoto**¹, Yoshikazu Konno¹, Kenji Aramaki²

5B17 17:40-18:00

Development of Lamellar/Polymer Composite with Exhibiting Characteristic Interaction to Skin Surface (1. Kao corporation (Japan)) ***Etsuko Watarai**¹, Hiroki Yoshitake¹, Takuji Kume¹, Satoru Naitou¹, Kei Takahashi¹, Takanori Igarashi¹, Yasushi Katayama¹, Hotaka Yamamuro¹

5B18 18:00-18:20

Development of Oil-based Cosmetics Containing High-concentrated Ceramide by Applying Lamellar Organogel Composed of Ceramide, Meadowfoam Estlide and Non-polar Oil (1. Nippon Menard Cosmetic Co., Ltd (Japan)) ***Hitoshi Kumagai**¹, Hinayo Asai¹, Kenji Kono¹, Hiroyuki Asano¹, Osamu Hirose¹, Seiji Hasegawa¹, Hitoshi Sawada¹, Michirou Kitahara¹, Satoru Nakata¹

Room C

[T7] Wetting and Adhesion

Chair: Atsushi Hozumi (AIST), Sanghyuk Wooh (Chung-Ang University)

5C01 10:10-10:40 [Keynote Lecture]

Wetting, Antifouling and Adhesion Behaviors of Polyelectrolyte Brushes (1. Kyushu University (Japan)) ***Atsushi Takahara**¹

5C02 10:40-11:00 [Invited Lecture]

Wetting Phenomena on Mimicking Lotus Leaf: Importance of Double-Roughness Surface Structure (1. Asahikawa Medical University (Japan)) ***Hiroyuki Mayama**¹

5C03 11:00-11:20

Dynamic wetting and dewetting during the deposition of polymer from a volatile solution (1. Chemical Engineering, Technion Israel Institute of Technology (Israel)) ***Mohammad Abo Jabal**¹, Anna Zigelman¹, Ofer Manor¹

5C04 11:20-11:40

Gas polarisabilities and dispersion forces stabilise ice coatings on certain gas hydrate interfaces, preventing water wetting (1. Murdoch University (Australia)) ***Drew F. Parsons**¹

5C05 11:40-12:00 [Invited Lecture]

Antifouling properties of organogels showing syneresis (1. National Institute of Advanced Industrial Science and Technology (AIST) Structural Materials Research Institute (Japan)) ***Chihiro Urata**¹, Atsushi Hozumi¹

5C06 12:00-12:20

Shape-designable polyhedral liquid marble (1. Osaka Institute of Technology (Japan), 2. Max Planck Institute for Polymer Research (Germany)) ***Syuji Fujii**¹, Junya Fujiwara¹, Florian Geyer², Doris Vollmer², Hans-Jürgen Butt², Tomoyasu Hirai¹, Yoshinobu Nakamura¹

Lunch (12:20-13:40)

[T7] Wetting and Adhesion

Chair: Satoshi Watanabe (Kyoto University), Alfred Crosby (University of Massachusetts Amherst)

5C07 13:40-14:10 [Keynote Lecture]

Slide electrification (1. Max-Planck-Institute for Polymer Research (Germany)) ***Hans-Jürgen Karl Butt**¹

5C08 14:10-14:30

A free-energy calculation package for polymer-grafted solid-liquid interface: methodology and application (1. Nagoya Institute of Technology (Japan)) ***Masayuki Uranagase**¹, Shuji Ogata¹

5C09 14:30-14:50

Spectroscopic study on the relation between chemical states of surface modifier on nanoparticles and coating film morphology (1. Kao corporation (Japan), 2. W-FST Center, Tokyo University of Science (Japan), 3. Faculty of Science, Tokyo University of Science (Japan), 4. Kao research division, Tokyo University of Science (Japan)) ***Rui Takahashi**¹, Shuhei Urashima², Yuu Oshima³, Toshinori Morisaku², Keiko Matsuo⁴, Hiroharu Yui^{2,3}

5C10 14:50-15:10

Synthesis of Semi-fluorinated polysilazanes Capable as Omniphobic Coating Materials (1. Intelligent & Sustainable Materials Group, Korea Institute of Industrial Technology (Korea), 2. Department of Green Process and System Engineering, University of Science and Technology (Korea), 3. OOMPH CHEM Inc. (Korea)) ***Tien N. H Lo**^{1,2}, Ha Soo Hwang^{1,3}, In Park^{1,2}

5C11 15:10-15:30

Superhydrophobic Core-Shell Nanoparticles Synthesized by Thiol-Lactam Initiated Radical Polymerization (1. Intelligent Sustainable Materials R&D Group, Research Institute of Sustainable Manufacturing System, Korea Institute of Industrial Technology, South Korea (Korea), 2. Department of Chemical and Biomolecular Engineering, Yonsei University,

South Korea (Korea), 3. R&D center, OomphChem Inc., South Korea (Korea)) ***Ji Young Lee**^{1,2}, Ha Soo Hwang^{3,1}, Won-Gun Koh², In Park¹

5C12 15:30-15:50 [Invited Lecture]

Evaporation Driven Surface Templated Supraparticle Synthesis (1. Chung-Ang University (Korea), 2. Max Planck Institute for Polymer Research (Germany)) ***Sanghyuk Wooh**¹, Hans- Jürgen Butt²

Break (15:50-16:10)

[T7] Wetting and Adhesion

Chair: Syuji Fujii (Osaka Institute of Technology), Drew Parsons (Murdoch University)

5C13 16:10-16:40 [Keynote Lecture]

Bioinspired Structure Assembly: Surface Forces and Adhesion (1. Polymer Science & Engineering Dept., University of Massachusetts Amherst (USA)) ***Alfred J Crosby**¹

5C14 16:40-17:00

Influence of Catechol Groups on Molecular Aggregation State and Surface Properties of Poly[2-(perfluorooctyl)ethyl acrylate] (1. Kyushu University (Japan)) ***Wei Ma**¹, Atsushi Takahara¹

5C15 17:00-17:20 [Invited Lecture]

Controlled Degradation of Polyperoxides for Application to High Performance Dismantlable Adhesives (1. Osaka City University (Japan)) ***Eriko Sato**¹

5C16 17:20-17:40

An Unified Understanding of Long-Range Attractive Capillary Bridge Forces between Solid Surfaces in Gas and Liquid Media (1. Fukuoka University (Japan)) ***Hiroyuki Shinto**¹

5C17 17:40-18:00

Attachment Behavior of a Single Colloid Particle on a Bubble Surface (1. Kyoto University (Japan)) ***Satoshi Watanabe**¹, Nozomi Arai¹, Gregory Lecrivain¹, Minoru T. Miyahara¹

5C18 18:00-18:20 [Invited Lecture]

Biomimetics for Sustainable Packaging Materials in "Anthropocene" (1. Chitose Institute of Science and Technology (Japan), 2. IMRAM, Tohoku University (Japan), 3. Synthemec Co. (Japan), 4. CCBC-Hokkaido (Japan)) Yuji Hirai¹, Norihisa Tanio¹, Toshihiko Arita², Eiichi Matsumoto³, Otohiko Azuma⁴, ***Masatsugu Shimomura**¹

Room D

[T4] Membranes and LB films

Chair: Ken-ichi Iimura (Utsunomiya University), Ian Gentle (The University of Queensland)

5D01 10:10-10:40 [DCSC Award Lecture (Young Scientist Award)]

Systematic understanding of the effects of peripheral molecules on the physical properties of phospholipid bilayers: Effects of hydrophobic molecules and hydration water (1. Department of Chemistry, University of Tsukuba (Japan)) ***Mafumi Hishida**¹

5D02 10:40-11:00

Characteristics of liposomes containing DPPC and β -sitosterol

sulfate (1. Tokyo University of Science (Japan), 2. L. V. M. C. Inc. (Japan)) ***Ananda Kaffle**¹, Masaaki Akamatsu¹, Kenichi Sakai¹, Chihiro Kaise², Teruhisa Kaneko², Hideki Sakai¹

5D03 11:00-11:20

Undulation force-characterized long-range repulsive forces between the cationic lipid bilayers in water (1. Kao Corporation (Japan), 2. Water Frontier Science & Technology Research Center, Tokyo University of Science (Japan), 3. Faculty of Science, Tokyo University of Science (Japan), 4. Kao research division, Tokyo University of Science (Japan)) ***Atsushi Miyazaki**¹, Toshinori Morisaku², Kimio Dairiki³, Takaya Sakai¹, Keiko Matsuo^{1,4}, Hiroharu Yui^{2,3}

5D04 11:20-11:40 [Invited Lecture]

Quantitative Pursue of Chemical Reaction in a Thin Film Using IR MAIRS Spectra (1. ICR, Kyoto University (Japan)) Ryoji Fujiwara¹, Kazutaka Tomita¹, Nobutaka Shioya¹, Takafumi Shimoaka¹, ***Takeshi Hasegawa**¹

5D05 11:40-12:00

Effects of Anion Addition on Molecular Assembly Structures of Amphiphilic Naphthalenediimides (1. Faculty of Science and Technology, Tokyo University of Science (Japan), 2. Research Institute for Science and Technology, Tokyo University of Science (Japan)) ***Masaaki Akamatsu**¹, Koji Yamanaga¹, Yurina Kanehara¹, Kenichi Sakai^{1,2}, Hideki Sakai^{1,2}

5D06 12:00-12:20 [Invited Lecture]

Solid Film Formation of Cationic Surfactant at Oil/Water Interface Studied by Interfacial Tensiometry and X-ray Reflectometry (1. Kyushu University (Japan), 2. Japan Synchrotron Radiation Research Institute (Japan)) ***Takanori Takiue**¹, Haruna Hayase¹, Yosuke Imai¹, Toshiaki Ina², Kiyofumi Nitta², Hajime Tanida², Tomoya Uruga²

Lunch (12:20-13:40)

[T4] Membranes and LB films

Chair: Atsuhiko Fujimori (Saitama University), Qiming Liu (Chinese Academy of Sciences)

5D07 13:40-14:10 [Keynote Lecture]

Self-Assembly at Interface and in Gel of Glutamic Acid Based Derivatives for Soft Functional Materials (1. Institute of Chemistry, Chinese Academy of Sciences (China)) ***Minghua Liu**¹

5D08 14:10-14:30

Surface pressure-induced secondary structure transition of amphiphilic peptides in the lipid monolayer (1. Meiji University (Japan)) ***Noritaka Kato**¹

5D09 14:30-14:50

Anisotropic self-assembly of isotropic colloidal building blocks (1. FAU Erlangen Nuernberg (Germany), 2. University of Hull (UK)) ***Marcel Rey**¹, Martin Buzza², Adam Law², Nicolas Vogel¹

5D10 14:50-15:10 [Invited Lecture]

Liquid-phase interfacial nanoassembly of molecular building units into porous nanosheet crystals (1. Osaka Prefecture University (Japan)) ***Rie Makiura**¹

5D11 15:10-15:30

Effect of Charge in Hydrogel Microspheres on Self-Assembly at the Air/Water Interface (1. Graduate School of Textile Science & Technology, Shinshu University (Japan), 2. Research Initiative for Supra-Materials, Interdisciplinary

Cluster for Cutting Edge Research, Shinshu University (Japan)) ***Haruka Minato**¹, Daisuke Suzuki^{1,2}

5D12 15:30-15:50 [Invited Lecture]

Ways to change the physical properties of films of particles formed at air-aqueous interfaces (1. Shinshu University (Japan)) ***Cathy McNamee**¹

Break (15:50-16:10)

[T4] Membranes and LB films

Chair: Cathy McNamee (Shinshu University), Minghua Liu (Lanzhou University)

5D13 16:10-16:40 [Keynote Lecture]

Understanding order and diffusion in thin organic films (1. The University of Queensland (Australia)) ***Ian Gentle**¹

5D14 16:40-17:00

CO₂ capture by amine-containing polymeric membranes (1. Kyushu University (Japan)) ***Ikuo Taniguchi**¹, Kae Kinugasa¹, Mariko Toyoda¹, Koki Minezaki¹

5D15 17:00-17:20 [Invited Lecture]

2D Materials Modified Polymer Membranes for Efficient Energy Conversion/Storage Devices (1. Lanzhou University (China)) ***Qiming Liu**¹, Pengqian Guo¹, Yonggang Zhao¹, Dequan Liu¹, Deyan He¹

5D16 17:20-17:40 Creation of electrically conductive metal-organic framework nanosheets utilizing liquid-phase interfacial coordination (1. Osaka Prefecture University (Japan), 2. The University of Tokyo (Japan)) ***Takashi Ohata**¹, Tatsuyuki Makita², Jun Takeya², Rie Makiura¹

5D17 17:40-18:00 [Invited Lecture]

Finite-size line tension effects for nanoparticles at the air-liquid and liquid-liquid interfaces (1. Kyushu University (Japan)) ***Hiroki Matsubara**¹

5D18 18:00-18:20

Three-dimensional Structuring through Self-assembly on Two-dimensional Templates Prepared by Langmuir Monolayers (1. Utsunomiya University (Japan)) ***Ken-ichi Iimura**¹, Misa Katagiri¹, Tatsuki Agatsuma¹, Misa Noki¹, Nguyen Thi My An¹

Room E

[T8] Solid Surface –Adsorption, Catalysis, Tribology and Electrochemistry

Chair: Minoru Mizuhata (Kobe University), Tetsuo Yamaguchi (Kyusyu University)

5E01 10:10-10:40 [Keynote Lecture]

Advancement of colloidal quantum dots from phosphors: A step towards environmentally benign light-emitting diodes and backlight applications (1. National Taiwan University (Taiwan)) ***Chung Hsin Lu**¹, Sudipta Som¹

5E02 10:40-11:00 [Invited Lecture]

Optimization of Si-anode/electrolyte interface for development of advanced Li-ion battery (1. Department of Chemistry and Biotechnology, Graduate School of Engineering, Tottori University (Japan)) ***Hiroki Sakaguchi**¹

5E03 11:00-11:20

Preparation and Evaluation of Cu Porous Electrode Structured

by Cu Fine Particles (1. National Institute of Technology, Asahikawa College (Japan), 2. Muroran Institute of Technology (Japan), 3. National Institute of Technology, Sendai College (Japan), 4. National Institute of Technology, Ube College (Japan), 5. Asahikawa Medical University (Japan)) ***Yuya Yato**¹, Mai Takase², Masaki Matsubara³, Youichi Takata⁴, Tatsuo Akitaya⁵, Hiroyuki Mayama⁵, Takayuki Murosaki⁵, Makoto Chiba¹, Atsushi Hyono¹

5E06 11:20-11:40 [Invited Lecture]

Low-temperature Surface Forces Apparatus (1. Tohoku University (Japan), 2. Nihon Michelin Tire Co., Ltd (Japan)) ***Kazue Kurihara**¹, Florian Lecadre¹, Sylvain Hemmette¹, Motohiro Kasuya¹, Yuji Kanno²

5E05 11:40-12:00

Fatty acid/*n*-alkane adlayer on metal induced by high-frequency shear oscillation (1. University of Fukui (Japan)) ***Kenji Hisada**¹, Tsubasa Yamamoto¹, Narunori Ikejiri¹, Hina Takamura¹, Shinya Oozawa¹, Minako Ito¹, Toyoaki Hirata¹

5E04 12:00-12:20

Controlling the adsorption properties by the physisorption (1. Shinshu University (Japan)) Seiichiro Ishii¹, Yuki Ishihara¹, Minoru Deguchi¹, Taro Uchida¹, Ryusuke Futamura¹, ***Taku Iiyama**¹

Lunch (12:20-13:40)

[T8] Solid Surface –Adsorption, Catalysis, Tribology and Electrochemistry

Chair: Shinji Yamada (Kao Corporation), Kenji Hisada (University of Fukui), Taku Iiyama (Shinshu University)

5E07 13:40-14:10 [Keynote Lecture]

Effect of confined nanopores on charge/discharge performance of carbon electrodes (1. Nagasaki University (Japan)) ***Koki Urita**¹, Chiharu Urita¹, Hiroo Notohara¹, Takuya Araki¹, Maya Inoue¹, Isamu Moriguchi¹

5E08 14:10-14:30 [Invited Lecture]

Sliding friction of polymer gels at various sliding speeds (1. Kyushu University (Japan)) ***Tetsuo Yamaguchi**¹

5E09 14:30-14:50

Self-assembly of ZIF-8 nanoparticles into hierarchically porous suprastructures using microfluidic device (1. Department of Chemical Engineering, Kyoto University (Japan), 2. Institute of Particle Technology, Friedrich-Alexander University Erlangen-Nürnberg (Germany)) ***Atsushi Fujiwara**¹, Junwei Wang², Minoru T. Miyahara¹, Nicolas Vogel², Satoshi Watanabe¹

5E10 14:50-15:10

Preparation of Mo-Substituted Zeolite Catalysts by Sequential Mechanochemical Treatment and Hydrothermal Synthesis (1. Institute of Multidisciplinary Research for Advanced Materials, Tohoku University (Japan), 2. Institute of Innovative Research, Tokyo Institute of Technology (Japan), 3. JST CREST (Japan)) ***Mizuho Yabushita**¹, Mami Horie¹, Motohiro Yoshida¹, Fumiya Muto¹, Sachiko Maki¹, Kiyoshi Kanie¹, Toshiyuki Yokoi², Atsushi Muramatsu^{1,3}

5E11 15:10-15:30

SFG analysis of triblock copolymer lubricant additive adsorbing to solid surfaces (1. Tohoku University (Japan), 2. University of Hyogo (Japan)) ***Takako Imamura**¹, Shinichi Yusa², Masashi Mizukami¹, Kazue Kurihara¹

5E12 15:30-15:50

Aqueous Lubrication with the Molecularly Confined Films of Silicone-Based Amphiphilic Copolymer Aggregates (1. Kao Corporation (Japan)) Takumi Miyamoto¹, Naoyuki Yamazaki¹, Shunichi Watanabe¹, *Shinji Yamada¹

Break (15:50-16:10)

[T8] Solid Surface –Adsorption, Catalysis, Tribology and Electrochemistry

Chair: Minoru Mizuhata (Kobe University), Akihito Imanishi (Osaka University)

5E13 16:10-16:40 [Keynote Lecture]

Electrochemical Impedance Spectroscopy to Analyze Adsorptions at Liquid/Solid Interfaces (1. Tokyo University of Science (Japan)) *Masayuki Itagaki¹

5E14 16:40-17:00

Development of novel wastewater treatment using controlled colloidal microwave discharge (1. Sophia University (Japan)) *Jing Liu¹, Satoshi Horikoshi¹

5E15 17:00-17:20

Interaction among the Dissolving Species in Li Electrolyte/Metal Oxide Using Binary Solvent for Ionic Conduction (1. Kobe University (Japan), 2. Tohoku University (Japan)) *Minoru Mizuhata¹, Nobuaki Kunikata¹, Yoshimasa Suzuki¹, Hideshi Maki¹, Masaki Matsui¹, Kazue Kurihara², Motohiro Kasuya²

5E16 17:20-17:40

Depletion Layer Formation Induced by Unusual Diffusion Behavior of Metal Ions at Ionic Liquid/Electrode Interface and Its Effect on Electrodeposits (1. Department of Chemistry, Graduate School of Engineering Science, Osaka University (Japan)) *Akihito Imanishi¹, Shodai Koyama¹, Ken-ichi Fukui¹

5E17 17:40-18:00

Electrical charging of colloids and interfaces in surfactant-doped nonpolar liquids (1. Ghent University (Belgium)) *Filip Strubbe¹, Caspar Schreuer¹, Masoumeh Karvar¹, Manoj Prasad¹, Bavo Robben¹, Kristiaan Neyts¹

5E18 18:00-18:20

Thermal Stabilization of Enzymes by Adsorption on Biochar (1. Department of Applied Chemistry for Environment, Tokyo Metropolitan University (Japan), 2. EEN Co., Ltd (Japan)) *Hidetaka Noritomi¹, Ryotaro Kai¹, Nobuyuki Endo², Satoru Kato¹, Katsumi Uchiyama¹

Room F

[T6] Nanoparticles and Nanomaterials

Chair: Kiyoshi Kanie (Tohoku University), Masashi Suzuki (Toyo University)

5F01 10:20-10:40 [Invited Lecture]

Fabrication of Au/Silk Nanocarriers and the *in vitro* Evaluation for Cancer Therapy (1. Institute of Multidisciplinary Research for Advanced Materials, Tohoku University (Japan)) *Anh T. N. Dao¹, Motohumi Nakamura¹, Farsai Taemaitree¹, Hitoshi Kasai¹

5F02 10:40-11:00

Colloidal stability of gold nanoparticle clusters encapsulated into hollow silica spheres (1. Tohoku University (Japan), 2.

Utrecht University (Netherlands), 3. Yamaguchi University (Japan)) *Kanako Watanabe¹, Tom A. J. Welling², Sina Sadighikia², Haruyuki Ishii³, Arnout Imhof², Marijn A. Huis², Alfons van Blaaderen², Daisuke Nagao¹

5F03 11:00-11:20

Application of Single-Walled Carbon Nanotubes Coated with Designed Gel via Emulsion Polymerization (1. Department of Applied Chemistry, Graduate School of Engineering, Kyushu University (Japan), 2. WPI I2CNER, Kyushu University (Japan), 3. Center for Molecular Systems, Kyushu University (Japan)) *Yukiko Nagai¹, Tsuyohiko Fujigaya^{1,2,3}

5F04 11:20-11:40

Dispersion of the Long Single Walled Carbon Nanotube and Its Metal Composite Toward Future Energy Devices and Wiring (1. National Institute of Advanced Industrial Science and Technology (AIST) (Japan)) *Atsuko Sekiguchi¹, Rajyashree Sundaram¹, Yuichi Kato¹, Takeo Yamada¹, Guohai Chen¹, Don Futaba¹, Kenji Hata¹

5F05 11:40-12:00

Niobate nanosheet/acrylamide composite gel microparticles for photocatalytic applications (1. Department of Life, Environment and Materials Chemistry, Fukuoka Institute of Technology (Japan), 2. Graduate School of Engineering, Fukuoka Institute of Technology (Japan)) *Nobuyoshi Miyamoto^{1,2}, Daichi Matsuda¹, Wenqi Yang², Ye Yumeng², Masanari Nishi²

5F06 12:00-12:20

Mild synthesis of single-nanosized plasmonic copper nanoparticles and their catalytic activities (1. Kansai University (Japan), 2. Justus-Liebig-University (Germany)) *Hideya Kawasaki¹, Kousuke Kuroda¹, Philip Keller²

Lunch (12:20-13:40)

[S3] Membranous and Membraneless Interfaces: Towards Artificial Cellular Complexity

Chair: Yutaka Sumino (Tokyo University of Science), Kanta Tsumoto (Mie University)

5F07 13:50-14:10

Cooperation between DNA and Actin in Cell-Sized Aqueous/Aqueous Micro Droplet (1. Graduate School of Life and Medical Sciences, Doshisha University (Japan), 2. Department of Frontier Bioscience, Hosei University (Japan), 3. Graduate School of Science, Nagoya University (Japan), 4. Graduate School of Engineering, Mie University (Japan)) *Hiorki Sakuta¹, Masahito Hayashi², Kingo Takiguchi³, Kanta Tsumoto⁴, Kenichi Yoshikawa¹

5F08 14:10-14:30

Polypeptide based complex coacervate as biomimetic material to sequester biomolecules via rational design of polymeric sidechain (1. Graduate School of Systems Life Sciences, Kyushu University (Japan), 2. Faculty of Engineering, Department of Applied Chemistry, Kyushu University (Japan), 3. Center for Future Chemistry, Kyushu University (Japan), 4. Center for Molecular Systems, Kyushu University (Japan), 5. Center for Advanced Medical Innovation, Kyushu University (Japan)) *Biplab K C¹, Takeshi Mori^{2,3}, Yoshiki Katayama^{2,3,4,5}, Akihiro Kishimura^{2,4}

5F09 14:30-14:50 [Invited Lecture]

Formation of DNA microdroplets with sequence-specificity by liquid-liquid phase separation of DNA nanostructures (1. Tokyo Institute of Technology (Japan)) Yusuke Sato¹,

***Masahiro Takinoue**¹

5F10 14:50-15:10 [Invited Lecture]

Effect of the Interfacial Water Properties on Electrophoresis (1. Ecole Normale Supérieure (France)) ***Yuki Uematsu**¹

5F11 15:10-15:30

Liquid robots (1. University of Chemistry and Technology Prague (Czech Republic)) ***Jitka Cejkova**¹

5F12 15:30-15:50

Spontaneous deformation of an oil droplet induced by the formation of α -gel (1. Department of Applied Physics, Faculty of Science, Tokyo University of Science (Japan)) ***Yutaka Sumino**¹, Shuhei Kuroiwa¹

Break (15:50-16:10)

[S3] Membranous and Membraneless Interfaces:
Towards Artificial Cellular Complexity

Chair: Masatoshi Ichikawa (Kyoto University), Kingo Takiguchi (Nagoya University)

5F13 16:10-16:40 [Keynote Lecture]

Is Research on “Synthetic Cells” Moving to the Next Level? (1. University of Salento (Italy)) ***Pasquale Stano**¹

5F14 16:40-17:00 [Invited Lecture]

Synergistic effect of molecular crowding and cell size confinement as a potential cause of unique phase behaviors (1. Komaba Institute for Science, The University of Tokyo (Japan)) ***Chiho Watanabe**¹, Miho Yanagisawa¹

5F15 17:00-17:20

Self-driven droplet model constructed with active actomyosin (1. Hokkaido University (Japan), 2. Chiba University (Japan), 3. University of Hyogo (Japan), 4. Kyoto University (Japan)) Yukinori Nishigami¹, Hiroaki Ito², Masahiro Makuta⁴, Seiji Sonobe³, ***Masatoshi Ichikawa**⁴

5F16 17:20-17:40

Light-induced morphological change and displacement of filamentous-actin encapsulating giant liposome (1. Dept. Frontier Bioscience, Hosei Univ. (Japan), 2. Dept. Biological Science, Nagoya Univ. (Japan)) ***Masahito Hayashi**¹, Shunsuke Tanaka², Tomoyuki Kaneko¹, Kingo Takiguchi²

5F17 17:40-18:00 [Invited Lecture]

Giant Liposome-based Dynamic Bioreactor (1. Chuo University (Japan)) ***Hiroaki Suzuki**¹

5F18 18:00-18:20 [Invited Lecture]

Molecular robotics is yet another approach to build bottom-up artificial-cell (1. Department of Robotics, Tohoku University (Japan)) ***Shin-ichiro M. Nomura**¹

Room G

[S2] Creation and Application of Two Dimensional
Atomic and Molecular Materials and Devices

Chair: Ayumi Hirano-Iwata (Tohoku University), Bernhard Wolfrum (Technical University of Munich)

5G01 10:10-10:40 [Keynote Lecture]

Graphene Sensor Application for Virus Detection (1. Osaka University (Japan)) ***Kazuhiko Matsumoto**¹

5G02 10:40-11:00 [Invited Lecture]

Graphene-based Micro Biosensor (1. NTT Basic Research Laboratories (Japan)) ***Yuko Ueno**¹

5G03 11:00-11:20 [Invited Lecture]

Carbon-based devices for bioelectronics and biosensing applications (1. Technical University of Munich (Germany), 2. Forschungszentrum Jülich (Germany)) Sabine Zips¹, Dmitry Kireev², Nouran Adly¹, Jan Schnitker², Philipp Rinklin¹, Andreas Offenhäusser², Dirk Mayer², ***Bernhard Wolfrum**^{1,2}

5G04 11:20-11:40

Controlling structure and function of neuronal networks in 2D using microcontact-printed protein scaffolds (1. Tohoku University (Japan), 2. Waseda University (Japan)) ***Hideaki Yamamoto**¹, Kei Wakimura¹, Zhixiong Chen¹, Takuma Sumi¹, Taiki Takemuro¹, Takashi Tani², Ayumi Hirano-Iwata¹

5G05 11:40-12:00

Thermally Stable Transparent Single Wall Carbon Nanotube Films on Flexible Glass Substrates (1. Research Initiative for Supra-Materials, Shinshu University (Japan)) ***Radovan Kukobat**¹, Katsumi Kaneko¹

5G06 12:00-12:20

Lipid bilayers on graphene oxide: condensation of lipid domains by nano-amphiphilic surface (1. Toyohashi University of Technology (Japan)) ***Ryugo Tero**¹, Yoshi Hagiwara¹, Shun Saito¹

Lunch (12:20-13:40)

[S2] Creation and Application of Two Dimensional
Atomic and Molecular Materials and Devices

Chair: Yuko Ueno (NTT), Ryugo Tero (Toyohashi University of Technology)

5G07 13:40-14:10 [Keynote Lecture]

Functional Coordination Nanosheets (1. The University of Tokyo (Japan)) ***Hiroshi Nishihara**¹

5G08 14:10-14:30 [Invited Lecture]

Patterned model biological membrane on the solid substrate: Potentials for biophysical studies and biomedical applications (1. Kobe University (Japan)) ***Kenichi Morigaki**¹

5G09 14:30-14:50 [Invited Lecture]

Protein nanodevice production based on in vitro translation system (1. Saitama University (Japan)) ***Yuzuru Tozawa**¹

5G10 14:50-15:10 [Invited Lecture]

Microfabricated Lipid Bilayer Systems for the Analysis of Ion Channel Functions (1. Tohoku University (Japan)) ***Ayumi Hirano-Iwata**¹

5G11 15:10-15:30

Molecular streaming and its voltage control in ångström scale channels (1. Laboratoire de Physique de l'ENS, ENS, PSL, CNRS (France), 2. School of Physics and Astronomy, University of Manchester (UK), 3. National Graphene Institute, University of Manchester (UK), 4. Department of Physics, University of Engineering & Technology (Pakistan)) ***Timothée Mouterde**¹, Ashok Keerthi^{2,3}, Anthony Robert Poggioli¹, Sidra Abbas Dar^{2,3,4}, Alessandro Siria¹, Andre Konstantin Geim^{2,3}, Lyderic Bocquet¹, Radha Boya^{2,3}

5G12 15:30-15:50

Molecular diffusion under cell mimetic membrane confinement: the characteristic environment (1. Department of Applied Physics, Tokyo University of Agriculture and Technology (Japan), 2. Komaba Institute for Science, The University of Tokyo (Japan), 3. Biomedical Research Institute,

National Institute of Advanced Industrial Science and Technology (Japan), 4. Faculty of Advanced Life Science, Hokkaido University (Japan), 5. Department of Basic Science, The University of Tokyo (Japan)) ***Yuta Kobori**¹, Chiho Watanabe², Johtaro Yamamoto³, Masataka Kinjo⁴, Miho Yanagisawa^{1,5}

Break (15:50-16:10)

[T11] Nanomedicine and Pharmaceutical Science

Chair: Shinji Sakuma (Setsunan University), Yuriko Higuchi (Kyoto University)

5G13 16:10-16:40 [Keynote Lecture]

Crosslinking of Receptors as a Design Principle for Smart Nanomedicines (1. University of Utah (USA)) ***Jindrich Henry Kopecek**¹, Jiyuan Yang¹, Lian Li¹, Jiawei Wang¹

5G14 16:40-17:00 [Invited Lecture]

Cell surface modification with ligand molecule for targeted delivery of cell-based medicine (1. Graduate School of Pharmaceutical Sciences, Kyoto University (Japan)) ***Yuriko Higuchi**¹

5G15 17:00-17:20 [Invited Lecture]

Colloids in Gastrointestinal Tract to Improve Oral Absorption of Poorly Absorbable Drugs (1. National Institute for Materials Science (Japan)) ***Kohsaku Kawakami**¹

5G16 17:20-17:40

Control of cellular uptake behavior based on tuning of structure and physical properties of PEGylated polyion complex and its application (1. Department of Applied Chemistry, Faculty of Engineering, Kyushu University (Japan), 2. Center for Future Chemistry, Kyushu University (Japan), 3. Center for Molecular Systems, Kyushu University (Japan), 4. Center for Advanced Medical Innovation, Kyushu University (Japan), 5. Nanosquare Research Institute, Osaka Prefecture University (Japan)) Hiroaki Matsuba¹, ***Fadlina Aulia**¹, Ikuhiko Nakase⁵, Takeshi Mori^{1,2}, Yoshiki Katayama^{1,2,3,4}, Akihiro Kishimura^{1,3}

5G17 17:40-18:00

Intracellular delivery to 3D cancer cell aggregates using sulfobetaine polymers (1. Tohoku University (Japan)) ***Nobuyuki Morimoto**¹, Masaya Yamamoto¹

Poster Presentation

November 6 (Wed)

Room A: PT02–PT05, PT08–PT10, PT12, PS01–08

Room E: PT01, PT11

Room F–G: PT06, PT07

10:10-12:10

[T1] Surfactants and Self-Assembly

PT01-01 Supramolecular Amphiphiles Based on Cyclodextrins and Surfactants for Design of Drug Nanocontainers (1. Arbutov Institute of Organic and Physical Chemistry, FRC Kazan Scientific Center, Russian Academy of Sciences (Russia)) ***Ruslan Ravilevich Kashapov**¹, Anastasiya Lykova¹, Albina Ziganshina¹, Anastasiya Sapunova¹, Alexandra Voloshina¹, Lucia Zakharova¹

PT01-02 Formation and Characterization of Polymer Vesicles from a Novel CP Polymer (1. Department of Biomedical Sciences & Engineering, National Central University (Taiwan), 2. Department of Organic and Macromolecular Chemistry, Ghent University (Belgium)) ***Nam Hoang Nguyen**¹, Metwally Ezzat^{1,2}, Chun-Jen Huang¹

PT01-03 Pattern formation of decanol droplets (1. University of Chemistry and Technology Prague (Czech Republic)) Lenka Honetschlagerova¹, Jan Heyda¹, Jan Tomas¹, ***Jitka Cejkova**¹

PT01-04 Monolayer-Based Nanotubes with Controllable Diameters (1. National Institute of Advanced Industrial Science and Technology (Japan)) ***Naohiro Kameta**¹, Wuxiao Ding¹

PT01-05 Synergistic mechanism of amphiphilic polymer supramolecular systems based on polyacids (1. China University of Petroleum (East China) (China), 2. University of Alberta (Canada), 3. Kazakh-British Technical University (Kazakhstan)) Wanli Kang¹, ***Xiangfeng Zhang**¹, Pengxiang Wang^{1,2}, Tongyu Wang¹, Tongyu Zhu¹, Saule Aidarova^{1,3}, Hongbin Yang¹

PT01-06 Conformational Analysis of Disaccharide Glycolipid Using Density Functional Theory Calculation (1. Bioinformatics Program, Institute of Biological Sciences, University of Malaya (Malaysia), 2. Department of Chemistry, Firoozabad Branch, Islamic Azad University (Iran), 3. Centre for Theoretical and Computational Physics, Department of Physics, University of Malaya (Malaysia), 4. Centre for Fundamental and Frontier Sciences in Nanostructure Self-

Assembly, Department of Chemistry, Faculty of Science, University of Malaya (Malaysia)) ***Rinaa Ramesh**¹, Sara Ahmadi², Vijayan Manickam Achari^{1,3,4}

PT01-07 Surface Adsorption and Layer Structure of Mixed System of Quaternary-Ammonium-Salt-Type Amphiphilic Gemini Ionic Liquid and Homogeneous Polyoxyethylene-Type Nonionic Surfactant (1. Nara Women's University (Japan), 2. Nissan Chemical Corporation (Japan)) ***Risa Kawai**¹, Maiko Niki¹, Shiho Yada¹, Tomokazu Yoshimura¹, Masashi Ohno², Toshinari Koda²

PT01-08 Weak C-H...O=C Hydrogen Bond-Directed Self-Assembly of Supramolecular Fibers from a 1, 5-Anhydro-D-Glucitol Derivative Having Palmitoyl Moieties (1. SUNUS CO. LTD. (Japan), 2. National Agriculture and Food Research Organization (Japan)) Takahito Kajiki¹, Shiro Komba², ***Rika Iwaura**²

PT01-09 Bluish-White Light Emission of a DNA-Based Supramolecular Nanosheet (1. National Agriculture and Food Research Organization (Japan)) ***Rika Iwaura**¹

PT01-10 Synthesis of Self-assembling Fe₃O₄ Nanoparticles by Modification with Liquid-Crystalline Dendrons (1. Tohoku University (Japan), 2. National Institute of Technology, Sendai College (Japan)) ***Takehiro Yachi**¹, Masaki Matsubara², Atsushi Muramatsu¹, Kiyoshi Kanie¹

PT01-11 Cholesterol Effects on the Rigidity of Vesicular Bilayers: A Comparison between Catanionic Vesicles and Liposomes Utilizing Fluorescence Anisotropy (1. Department of Chemical Engineering, National Cheng Kung University (Taiwan)) ***Yu-Min Yang**¹, Chia-Yu Cheng¹, Yu-Ling Hsieh¹

PT01-12 Solubilization Properties of More Sustainable Non-ionic Surfactants with CO₂/EO Headgroups (1. Stranski-Laboratorium, Technische Universität Berlin (Germany), 2. Technische Chemie, Technische Universität Berlin (Germany), 3. Kyushu University, Department of Chemistry (Japan)) ***Vivian Jeannette Spiering**¹, Rahel Marshall¹, Björn Hanf¹, Michelle Tupinamba Tupinamba Lima², Hiroki Matsubara³, Reinhard Schomäcker², Michael Gradzielski¹

PT01-13 Production of Photonic Ball with Non-iridescent Structural Color consisting of Amorphous Arrays of Silica Particles (1. Department of Molecular and Macromolecular Chemistry, Nagoya University (Japan)) ***Yuwen Ai**¹, Yukikazu Takeoka¹, Takahiro Seki¹

PT01-14 Solution Properties of Homogeneous Polyoxyethylene Type Nonionic Surfactant With Single Chain Length Distribution and Mixed System with Lecithin (1. Nara Women's University (Japan), 2. NIKKOL GROUP Cosmos Technical Center Co., Ltd. (Japan)) ***Shan Wang**¹, Shihyo Yada¹, Satoru Hashimoto², Toshiyuki Suzuki², Tomokazu Yoshimura¹

PT01-15 Core-Shell Micelle Formation of Amphiphilic Block Copolymer with Poly (4-Vinyl Benzoic Acid) Core (1. Kanagawa University (Japan), 2. Teikyo University of Science (Japan)) Tomonori Sugiyama¹, Taichi Koito¹, Mao Yamanobe¹, Akira Takahashi¹, Yoshihito Ishida², ***Atsushi Kameyama**¹

PT01-16 Core-Shell Micelle with Outer POSS Shell Based on POSS-Containing Random Methacrylate Copolymer (1. Kanagawa University (Japan), 2. RIKEN (Japan)) ***Akira Takahashi**¹, Taito Hoshino¹, Kosuke Tsuchiya², Atsushi Kameyama¹

PT01-17 Capsaicin alters the physiological properties of artificial lipid vesicles (1. Japan Agency for Marine-Earth Science and Technology (Japan), 2. Kagoshima University (Japan), 3. Japan Advanced Institute of Science and Technology (Japan)) ***Neha Sharma**^{1,3}, Mun'delanj Catherine Vestergaard², Shigeru Deguchi¹, Masahiro Takagi³

PT01-18 Structural Analysis on Iridescent Aqueous Surfactant Solution with a Higher Alcohol by Small- and Wide-Angle X-Ray Scattering (1. Mikimoto Pharmaceutical Co., Ltd. (Japan), 2. Graduate School of Engineering, Mie University (Japan)) ***Akinori Nakano**^{1,2}, Naoya Torikai²

PT01-19 Partition Characteristics of Reverse Micelles (1. Tokyo Tech, School of Science (Japan)) ***Hinako Sakai**¹, Tetsuo Okada¹, Makoto Harada¹

PT01-20 Physical Properties of Adsorption Films of α -Gel Dispersion Prepared by Ecofriendly Cationic Surfactant (1. Faculty of Science and Technology, Tokyo University of Science (Japan), 2. Material Science Research Laboratories, KAO Co. (Japan), 3. Research Institute for Science and Technology, Tokyo University of Science (Japan)) ***Rina Ishii**¹, Takanori Saitoh^{1,2}, Masaaki Akamatsu¹, Kenichi Sakai^{1,3}, Hideki Sakai^{1,3}

PT01-21 Structural Changes of α -Gel Induced by Temperature and Shear Flow in Oleic Acid-Based Gemini Surfactant System (1. Department of Pure and Applied Chemistry, Faculty of Science and Technology, Tokyo University of Science (Japan), 2. Research Fellow of Japan Society for the Promotion of Science (Japan), 3. Comprehensive Research Organization for Science and Society (CROSS) (Japan), 4. Miyoshi Oil & Fat Co. Ltd. (Japan), 5. Research Institute for Science and Technology, Tokyo University of Science (Japan)) ***Tadashi Sugahara**^{1,2}, Masaaki Akamatsu¹, Hiroki Iwase³, Yuichiro Takamatsu⁴, Kenichi Sakai^{1,5}, Hideki Sakai^{1,5}

PT01-22 Solution Properties of Amphiphilic Alternative Multiblock Copolymers (1. Fukuoka University (Japan), 2. Hiroshima University (Japan)) ***Yukiteru Katsumoto**¹, Tasuku Horiuchi², Kazuaki Rikiyama², Yusuke Sanada¹

PT01-23 Fast and facile surface modification of ZnO with silane coupling agent using rotary evaporation method (1.

Utsunomiya University (Japan)) ***Noboru Suzuki**¹, Nagisa Maeno¹, Misaki Abe¹, Masahide Sato¹

PT01-24 Collapse behavior of PIC micelles by salt addition and reforming behavior by dialysis and its temperature responsivity (1. Kyoto University (Japan), 2. Osaka Organic Chemical Industry LTD. (Japan)) ***Dongwook Kim**¹, Hideki Matsuoka¹, Yoshiyuki Saruwatari²

PT01-25 A CMC's prediction on a mixture of divalent and monovalent surfactants. - A comment to Rubingh's equation (1. Kyushu Kyoritsu University (Japan), 2. Fukuoka Institute of Technology (Japan)) ***Hideo Akisdada**¹, Junko Kuwahara², Hiroki Sakumoto¹, Tatuo Nakata¹, Jun Koganemaru¹, Keishi Takehara¹

PT01-26 Improvement of clearness of thermal-responsive coloring emulsions and addition of photo-response to the emulsions (1. Tokyo University of Science (Japan)) ***Ryoichi Kondo**¹, Yoshiro Imura¹, Ke-Hsuan Wang¹, Takeshi Kawai¹

PT01-27 Formation of lipid nanodiscs by an amphiphilic polymer with phosphocholine side chains (1. Nara Institute of Science and Technology (Japan)) ***Yuma Mitsuyoshi**¹, Gwénaél Rapenne¹, Kazuma Yasuhara¹

PT01-28 Oil Gelation using an Amphoteric Surfactant (1. Nagoya Institute of Technology (Japan)) ***Tomonori Matsumoto**¹, Akihiro Yoshino¹, Kejiro Taga¹, Yasushi Yamamoto¹, Akiko Obata¹, Shuichi Iwata¹

PT01-29 The Effect of Additives to Gemini Surfactants in Organic Solvent (1. Nagoya Institute of Technology (Japan)) ***Kosuke Ota**¹, Akihiro Yoshino¹, Kejiro Taga¹, Yasushi Yamamoto¹, Akiko Obata¹, Shuichi Iwata¹

PT01-30 Study of Block Ratio Influence of Betaine Block Copolymer PGLBT-*b*-PSPE on Temperature-Responsive Features (1. Dept. of Polymer chemistry, Kyoto University (Japan), 2. Osaka Organic Chemical Industries (Japan)) ***Jongmin Lim**¹, Hideki Matsuoka¹, Yoshiyuki Saruwatari²

PT01-31 Diversity of Bicontinuous Morphology - Novel Aspect of Sponge Phase Structure in Surfactant Solution (1. Chiba Institute of Science (Japan), 2. Taiyo Kagaku Co., LTD. (Japan), 3. Tokyo University of Science (Japan)) ***Yuji Yamashita**¹, Satoko Ito², Yoshiyuki Matsumoto², Tomonori Higuchi², Kazutami Sakamoto³

PT01-32 Diversity of Bicontinuous Morphology - Novel Aspect of Microemulsion Structure in Mixed Polyglycerol Fatty Acid Esters system - (1. Taiyo Kagaku Co., Ltd. Interface Solution Division (Japan), 2. Chiba Institute of Science, Faculty of Pharmacy (Japan), 3. Tokyo University of Science, Institute for Colloid and Interface Science (Japan)) ***Satoko Ito**¹, Yoshiyuki Matsumoto¹, Tomonori Higuchi¹, Yuji Yamashita², Kazutami Sakamoto³

PT01-33 Solution behaviour of different components in the commonly used pharmaceutical excipient polysorbate 80 (1. Department of Biomedical Science, Malmö University (Sweden), 2. Biofilms – Research Center for Biointerfaces, Malmö University (Sweden), 3. LONZA, Basel (Switzerland)) ***Emelie Josefina Nilsson**^{1,2}, Tania Kjellerup Lind^{1,2}, Dieter Scherer³, Vitaly Kocherbitov^{1,2}, Johan Engblom^{1,2}

PT01-34 Formation of yolk-shell structure based on self-assembly of polyions and proteins (1. Department of Applied Chemistry, Faculty of Engineering, Kyushu University (Japan)) ***Yiwei Liu**¹, Takeshi Mori¹, Yoshiki Katayama¹, Akihiro Kishimura¹

PT01-35 Effects of Cholesterol on the Structural and Dynamic Properties of Biomimetic Ion Pair Amphiphile Membrane in

Difference Phases (1. National Cheng Kung University (Taiwan)) ***Yu-Fang Lai**¹

PT01-36 Photoresponsive Organogels Based on Fluorocarbon/Hydrocarbon Hybrid Surfactants (1. Tokyo University of Science (Japan)) ***Sekito Itoyama**¹, Norio Saito¹, Yukishige Kondo¹

PT01-37 Fluorescence Quenching of Pyrene Sulfonate by Bromide Ions on Surfaces of Didodecyldimethylammonium Bromide Aggregates (1. Okayama University of Science (Japan)) ***Makoto Takezaki**¹, Takumi Zaima¹, Tatsuki Katayama¹

PT01-38 Phase diagram of threadlike micelle formation of sodium salicylate and cationic surfactant system (1. Fukuoka Women's University (Japan), 2. Kyushu University (Japan)) ***Norihiro Ikeda**¹, Kokoro Ikeda¹, Xiaolei Xu¹, Aira Kamito²

PT01-39 Dynamic formation / deformation behavior of liquid crystals in aqueous solutions of hybrid amphiphiles and application (1. Graduate School of Science and Technology, Hirosaki University (Japan)) ***Shota Suhara**¹, Tsuyoshi Narumi¹, Hitomi Oshiyama¹, Atsushi Yoshizawa¹, Masanobu Sagisaka¹

PT01-40 Generation of shape-anisotropic aggregates of fluorine-free CO₂-philic/oleo-philic amphiphile/polymer mixtures in supercritical CO₂ (1. Hirosaki University (Japan), 2. University of Bristol (UK)) ***Toma Yagihashi**¹, Tsubasa Kondo¹, Atsushi Yoshizawa¹, Julian Eastoe², Masanobu Sagisaka¹

PT01-41 Physicochemical Properties of Maltitol Oleate in Water (1. National Institute of Advanced Industrial Science and Technology (Japan)) ***Hiroyuki Minamikawa**¹, Masaki Kogiso¹, Yusuke Hara¹

PT01-42 Development of peptide-drug co-assemblies induced by complementary interaction and their intracellular localization (1. Graduate School of Engineering, Kyushu University (Japan), 2. Center for Future Chemistry, Kyushu University (Japan)) ***Hiroki Obayashi**¹, Rie Wakabayashi¹, Noriho Kamiya^{1,2}, Masahiro Goto^{1,2}

PT01-43 Effects of Alkanol Amine and Aromatic Sulfonic Acid on Krafft Point of MES-Na (1. LION Corporation (Japan), 2. Tokyo Metropolitan University (Japan)) ***Atsunori Morigaki**¹, Yasushi Kakizawa¹, Youhei Kawabata²

PT01-44 The Effect of Bile Salt Micelles on the Morphology of Giant Unilamellar Liposomes (GUV) (1. Faculty of Science and Technology, Tokyo University of Science (Japan), 2. LION Corporation (Japan), 3. Research Institute for Science and Technology, Tokyo University of Science (Japan)) ***Risa Tanaka**¹, Miyuki Miyake², Atsunori Morigaki², Masaaki Akamatsu¹, Kenichi Sakai^{1,3}, Hideki Sakai^{1,3}

PT01-45 Aggregation behavior in cesium hydroxide-decanoic acid mixed solution (1. Hiroshima University (Japan)) ***Taichi Koga**¹, Masumi Villeneuve¹

PT01-46 Effect of the dispersion state of perfluorosulfonic acid ionomers on ultrathin film formation by self-assembly method (1. FC-Cubic, Technical Research Association (Japan)) ***Yutaro Kamei**¹, Takeshi Terao¹, Kayo Ohira¹, Seiichi Kuroda¹, Makoto Yamaguchi¹

PT01-47 Adsorption and Aggregation Properties of Star-type Quaternary-Ammonium-Salt Trimeric Surfactants (1. Nara Women's University (Japan)) ***Morita Tsukasa**¹, Yada Shiho¹, Tomokazu Yoshimura¹

PT01-48 Characterization of Amphiphilic Gemini Ionic Liquids Having Various Spacers and Their Properties with Nonionic Surfactants (1. Nara Women's University (Japan)) Risa Kawai¹, Maiko Niki¹, Shiho Yada¹, ***Tomokazu Yoshimura**¹

[T2] Foams/Bubbles/Emulsions and Microemulsions

PT02-01 Contribution of Light Backscattering during phase inversion process of different surfactant/oil/water system (1. University of Lille (France), 2. Chiba Institute of Science (Japan)) ***Christel Pierlot**¹, Mako Uehara², Marianne Catté¹, Jesús Fermin Ontiveros¹, Tetsuji Hirao², Yuji Yamashita²

PT02-02 Influence of Hydrophobic Groups in Sodium Alkylsulfates and Sodium Bis (2-ethylhexyl)sulfosuccinate on Air-Water Interfacial Dilational Viscoelasticity and Their Foam Properties (1. Faculty of System Engineering, Wakayama University (Japan), 2. Kao Corporation (Japan)) ***Keita Aono**^{1,2}, Furitsu Suzuki², Yoshihiro Yomogida², Tetsuya Okano², Shinpei Kado¹, Yoshio Nakahara¹, Setsuko Yajima¹

PT02-03 Structure and shape of capsules containing fixing agent for space inflatable structure (1. National Institute of technology asahikawa college (Japan), 2. Muroran Institute of technology (Japan)) ***Takahito Hoshi**¹, Haruno Yanagimoto¹, Yuki Yamada², Koichiro Matsuo², Atsushi Hyono¹, Nobuhisa Katsumata², Masahiro Sakai², Ken Higuchi², Makoto Chiba¹, Hideaki Takahashi¹

PT02-04 Strategical Design of Polymer Nanoparticles that Exhibit Selective Uptake for Cancer Cell (1. Department of Chemistry and Materials Engineering, Kansai University (Japan), 2. ORDIST, Kansai University (Japan)) ***Aoi Uozumi**¹, Akifumi Kawamura^{1,2}, Takashi Miyata^{1,2}

PT02-05 Temperature, surfactants and spontaneous emulsification (1. Aix-Marseille Université CNRS MADIREL (France)) Ritu Toor¹, Murielle Schmitt¹, Renaud Denoyel¹, ***Mickael Antoni**¹

PT02-06 Effect of mixing cellulose fibrillated by high pressure and water-soluble homologue on emulsion properties (1. Graduate School of Engineering, Mie University (Japan)) ***Kazuma Yamane**¹, Yoshihisa Fujii¹, Naoya Torikai¹

PT02-07 Rheological models as applied to water in water emulsions: water-caseinate-alginate system (1. Universitat de Barcelona (Spain)) Esther Santamaria¹, Alicia Maestro¹, ***Jose Maria Gutierrez**¹, Carme Gonzalez¹

PT02-08 Formation and Stabilization of Multiple Water-in-Water (W/W/W) emulsions (1. Institute of Advanced Chemistry of Catalonia (IQAC), CSIC (Spain), 2. Faculty of Pharmacy, University of Barcelona (UB) (Spain), 3. Advanced Optical Microscopy Unit, Faculty of Medicine, University of Barcelona (UB) (Spain)) ***Jordi Esquena**¹, Yoran Beldengrün¹, Clara Jaén¹, Robin Protat¹, Jonathan Miras¹, Maria Calvo³, Maria José García-Celma²

PT02-09 Study of pickering emulsions stabilized by silica nanoparticles modified by oleic acid and chitosan (1. M. Auezov South-Kazakhstan State University (Kazakhstan), 2. University of Chemistry and Technology Prague (Czech Republic), 3. Kazakh-British Technical university (Kazakhstan), 4. South-Kazakhstan State Pedagogical University (Kazakhstan)) ***Botagoz Mutaliyeva**¹, Aiyim Tleuova², Saule Aidarova³, Galiya Madybekova⁴, Dariga Kudasova¹

PT02-10 Pickering Emulsions for 3D Printing of Hierarchical Porous Ceramic Architectures (1. University of Melbourne

(Australia), 2. La Trobe University (Australia) ***Shareen Sheue Lian Chan**¹, George V. Franks¹, Mitchell L. Sesso^{1,2}

PT02-11 Preparation of Small and Uniform-Sized Emulsion with Reduced Amount of Surfactants Using a Thin Film-Spinning Emulsification Technique (1. PRIMIX Corporation (Japan)) ***Tadahito Takahashi**¹, Chihiro Asano, Akihito Shundo

PT02-12 Preparation of Gel Capsules That Encapsulate Water-soluble Substances Using W/O Emulsion as Template (1. Department of Chemistry and Materials Engineering, Kansai University, Kansai (Japan), 2. ORDIST, Kansai University (Japan)) ***Rika Hirabayashi**¹, Akifumi Kawamura^{1,2}, Takashi Miyata^{1,2}

PT02-13 Preparation of Reductively Responsible Gel Capsules via Inverse Miniemulsion Periphery RAFT Polymerization (1. Department of Chemistry and Materials Engineering, Kansai University (Japan), 2. ORDIST, Kansai University (Japan)) ***Kaito Fukui**¹, Akifumi Kawamura^{1,2}, Takashi Miyata^{1,2}

PT02-14 Friction Dynamics of Emulsion on Hydrogel Surfaces (1. Graduate School of Science and Engineering, Yamagata University (Japan), 2. Department of Chemistry, Asahikawa Medical University (Japan)) ***Kei Kikuchi**¹, Hiroyuki Mayama², Yoshimune Nonomura¹

PT02-15 Effect of line tension on physical properties of Pickering emulsion (1. Kyushu University (Japan), 2. Technische Universität Berlin (Germany), 3. Kansas State University (USA)) ***Keisuke Chiguchi**¹, Michael Gradzielski², Law Bruce³, Hiroki Matsubara¹

PT02-16 Synthesis and Swelling Property of Thermo-sensitive Microgel with Controlled Network Structure (1. Nagoya university (Japan)) ***Yuka Hiei**¹, Kota Takei¹, Ikuya Ohshima¹, Yusuke Baba¹, Yukikazu Takeoka¹, Takahiro Seki¹

PT02-17 Investigation of foam reduction with mixed anionic-nonionic surfactants in the SNG technology (1. The Petroleum and Petrochemical College, Chulalongkorn University (Thailand), 2. UOP, A Honeywell Company (USA), 3. Center of Excellence in Petrochemical and Materials Technology (PETROMAT) (Thailand)) ***Chakorn Viriyakul**¹, Katipot Inkong¹, Santi Kulprathipanja², Pramoch Rangsunvigit³

PT02-18 Synthesis of spheroidal capsules for advanced coating –Self-healing coating for corrosion protection of metal– (1. National Institute of Technology Asahikawa College (Japan)) ***Mitsuki Kawamura**¹, Yuki Tsuji¹, Haruno Yanagimoto¹, Haruka Okuyama¹, Atsushi Hyouno¹, Makoto Chiba¹, Hideaki Takahashi¹

PT02-19 Surfactant-free Pickering emulsification using Chinese quince fruit fibers (1. Tokyo University of Technology (Japan)) ***Riho Yamada**¹, Masashi Shibata¹

PT02-20 Study on the Removal Effect of Fixed Salt by Fine Bubbles (1. Advanced Course of Material Engineering, National Institute of Technology (KOSEN), Kochi College (Japan), 2. Department of Social Design Engineering, National Institute of Technology (KOSEN), Kochi College (Japan)) ***Yuji Mikasa**¹, Naoya Yamawaki¹, Hayato Okumura², Shigenori Akamatsu², Yusuke Nishiuchi², Takashi Hata²

PT02-21 Study on an Evaluation Method of Ultrafine Bubbles under the Mixture of Impurities - Influences of Oil and Ionic Substance (1. Advanced Course of Material Engineering, National Institute of Technology (KOSEN), Kochi College (Japan), 2. Department of Materials Science and Engineering, National Institute of Technology (KOSEN), Kochi College (Japan), 3. Department of Social Design Engineering, National

Institute of Technology (KOSEN), Kochi College (Japan)) ***Naoya Yamawaki**¹, Hayato Saeki², Hayato Okumura³, Shigenori Akamatsu³, Yusuke Nishiuchi³, Takashi Hata³

PT02-22 Study on an Evaluation Method of Ultrafine Bubbles under the Mixture of Impurities - Influence of Solid Nanoparticles (1. Department of Materials Science and Engineering, National Institute of Technology, Kochi College (Japan), 2. Advanced Course of Material Engineering, National Institute of Technology, Kochi College (Japan), 3. Department of Social Design Engineering, National Institute of Technology, Kochi College (Japan)) ***Hayato Saeki**¹, Naoya Yamawaki², Hayato Okumura³, Shigenori Akamatsu³, Yusuke Nishiuchi³, Takashi Hata³

PT02-23 Study on Dispersion Stability of Oil in Water Emulsion Using Ultrafine Bubble (1. Advanced Course of Material Engineering, National Institute of Technology (KOSEN), Kochi College (Japan), 2. Department of Materials Science and Engineering, National Institute of Technology (KOSEN), Kochi College (Japan), 3. Department of Social Design Engineering, National Institute of Technology (KOSEN), Kochi College (Japan)) ***Kaiki Amagu**¹, Shogo Takahashi², Takashi Hata³, Yusuke Nishiuschi³, Kaori Tada³

PT02-24 Study on preparation method of O/W emulsion using liquid-liquid two-phase mixed flow (1. Department of Material Engineering, National Institute of Technology, Kochi College (Japan), 2. Advanced Course of Material Engineering, National Institute of Technology, Kochi College (Japan), 3. Department of Social Design Engineering, National Institute of Technology, Kochi College (Japan), 4. Sakamoto Giken Co. (Japan)) ***Syogo Takahashi**¹, Kaiki Amagu², Yusuke Nishiuchi³, Takashi Hata³, Masaoki Sakamoto⁴, Kaori Tada³

PT02-25 Effect of alcohols and cosmetic oils on O/W Emulsion stabilized by surface freezing transition (1. Kyushu University (Japan), 2. TU Berlin (Germany)) ***Hiromu Sakamoto**¹, Albert Praues², Michael Gradzielski², Hiroki Matsubara¹

PT02-26 Interfacial Crystallisation of Lipids (1. University of South Australia (Australia), 2. Monash University (Australia), 3. Fonterra Research and Development Centre (New Zealand), 4. Massey University (New Zealand), 5. Virginia Commonwealth University (USA)) ***Stephanie Victoria MacWilliams**¹, Damien A. Sebben¹, Andrew J. Clulow², Vamsee Ulagathan¹, Graham Gillies³, Matt Golding⁴, Benjamin J. Boyd², James K. Ferri⁵, David A. Beattie^{1,2}, Marta Krasowska¹

PT02-27 Testing mobility at high purity water-air interface by rising bubbles (1. Future Industries Institute, University of South Australia (Australia), 2. School of Information Technology & Mathematical Sciences, University of South Australia (Australia), 3. Department of Chemical and Materials Engineering, University of Alberta (Canada)) Piotr P. Pawliszak^{1,2}, Vamsee Ulaganathan¹, Bronwyn H. Bradshaw-Hajek², Rogerio Manica³, David A. Beattie^{1,2}, ***Marta Krasowska**^{1,2}

PT02-28 Water-in-CO₂ nanodispersions stabilized by headgroup-free amphiphiles (1. Hirosaki University (Japan), 2. University of Bristol (UK)) ***Yudai Nitta**¹, Kensuke Sakuraba¹, Atsushi Yoshizawa¹, Julian Eastoe², Masanobu Sagisaka¹

PT02-29 Effect of phase separation behavior on nano-emulsification formation using MAGIQ method (1. Hiroshima University (Japan), 2. Japan Agency for Marine-Earth Science and Technology (Japan)) ***Yu Kanasaki**¹, Shigeru Deguchi²

PT02-30 Photo-Induced Phase Inversion of Emulsifications Prepared with Azobenzene-based Surfactants (1. Tokyo University of science (Japan)) ***Hiroko Hayashi**¹, Norio Saito¹, Yukishige Kondo¹

PT02-31 Structure and Properties of Foam Stabilized by Hydroxy Group-Containing Amino Acid-Type Surfactant (1. Nara Women's University (Japan), 2. NOF Corporation (Japan), 3. Kracie Home Products, Ltd. (Japan), 4. Ibaraki University (Japan)) ***Shiho Yada**¹, Hiroshi Shimosegawa², Hiroya Fujita², Yukako Matsue³, Satoshi Koizumi⁴, Tomokazu Yoshimura¹

[T3] Soft Matter, Active Matter and Dynamical Self-organization of Biomolecular Systems

PT03-01 Small and Ultra Small Angle Scattering for Nano- and Micro-Structural Characterisation at ACNS, ANSTO (1. Australian Centre for Neutron Scattering (ACNS), Australian Nuclear Science and Technology Organization (ANSTO)(Australia)) ***Jitendra Mata**¹, Kathleen Wood¹, Liliana de Campo¹, Anna V Sokolova¹, Andrew E Whitten¹, Chun-Ming Wu¹, Robert Knott¹, Christopher J Garvey¹, Elliot P Gilbert¹

PT03-02 Collective behavior of intermittent motion of camphor boats (1. Kindai University (Japan)) ***Takatoshi Ichino**¹, Yuya Yamamoto¹

PT03-03 Dual Stimuli-Responsive Sol-Gel Transition Polymers with Photo-dimerizable Moieties for Regulating Cells (1. Kansai University (Japan)) ***Takashi Miyata**¹, Yosuke Natsume¹, Akana Matsuda¹, Akifumi Kawamura¹

PT03-04 Promotion and inhibition of gene expression caused by divalent polyamines: Important role of distance between amino-groups (1. Doshisha University (Japan), 2. City University of New York (USA)) ***Hiroko Tanaka**¹, Chwen Yang Shew², Yuko Yoshikawa¹, Takahiro Kenmotsu¹, Kenichi Yoshikawa¹

PT03-05 Hydration Behavior and Rheology of Hydroxyethyl Cellulose in Aqueous Solution (1. Tokyo University of Agriculture and Technology (Japan)) ***Kengo Arai**¹, Toshiyuki Shikata¹

PT03-06 Molecular motions of poly (vinylidene fluoride) in polar solvents (1. Graduate School of Agriculture, Tokyo University of Agriculture and Technology, Japan (Japan)) ***Yuki Nohara**¹, Toshiyuki Shikata¹

PT03-07 Development of a Paper Actuator with PEDOT/PSS Electrode Films for Microfluidic Device (1. Department of Nano-Science and Nano-Technology, Graduate School of Pure and Applied Sciences, University of Tsukuba (Japan), 2. Research Institute for Sustainable Chemistry, National Institute of Advanced Industrial Science and Technology (AIST)(Japan)) ***Yujiao Wu**^{1,2}, Hiroyuki Minamikawa², Tomoka Nakazumi², Yusuke Hara^{1,2}

PT03-08 Synthesis and structural evaluation of polymer gel with homogeneous network structure prepared by telechelic Poly (*N*-isopropylacrylamide) (1. Nagoya University (Japan), 2. RIKEN, RSC(Japan), 3. Tokyo Institute of Technology (Japan)) ***Ikuya Ohshima**¹, Taiki Hoshino², Takahiro Seki¹, Kotaro Satoh³, Masami Kamigaito¹, Yukikazu Takeoka¹

PT03-09 Switching of fluorescence wavelength caused by phase separation of pyrene in poly (*N*-isopropylacrylamide) gel (1. Shinshu university (Japan)) ***Kei Kubo**¹, Atom Hamasaki¹, Naoya Sato¹, Akio Katsuki¹, Sumio Ozeki¹

PT03-10 Reconfigurable Assembly of Charged Hybrid Janus and Non-Janus Particles: From Half-Raspberries to Colloidal Clusters and Chains (1. Leibniz Institute of Polymer Research Dresden, Functional Particles and Interfaces Group (Germany), 2. Institute of Physical Chemistry of Polymeric Materials, Dresden University of Technology (Germany)) ***Claudia Marschelke**^{1,2}, Olga Diring^{1,2}, Alla Synytska^{1,2}

PT03-11 Optically transparent, high-toughness elastomer by introducing polyrotaxane as molecular pulley (1. University of Nagoya (Japan)) ***Liu Sizhe**¹

PT03-12 Hydration Behavior and Molecular Motions of Sulfobetaine-type Surfactant Molecules in Aqueous Micellar Solution (1. Tokyo University of Agriculture and Technology (Japan)) ***Hiroki Yoshida**¹, Toshiyuki Shikata¹

PT03-13 Observation of dehydration process related to temperature phase transition of thermosensitive polymer (1. The Institute for Solid State Physics, The University of Tokyo. (Japan), 2. Graduate School of Frontier Sciences, The University of Tokyo. (Japan), 3. Graduate School of Science, Hiroshima University (Japan)) ***Kosuke Yamazoe**¹, Ralph Ugalino², Jun Miyawaki^{1,2}, Osamu Takahashi³, Yoshihisa Harada^{1,2}

PT03-14 Simple PCP / MOF molding method using pulp microfiber suitable for lab-scale flow-type gas separation evaluation (1. Nippon Steel Co. (Japan)) ***Hiroshi Kajiro**¹

PT03-15 Design of Glucose-responsive Microcapsules with Biomolecular Complex Crosslinks at W/O Interface (1. Department of Chemistry and Materials Engineering, Kansai University (Japan), 2. ORDIST, Kansai University (Japan)) ***Shiori Matsubara**¹, Akifumi Kawamura^{1,2}, Takashi Miyata^{1,2}

PT03-16 Ligand Binding Causes Porphyrin Receptors to Chemotax (1. Nanjing University of Science and Technology (China)) ***Shengyuan Deng**¹, Jiajin Hong¹, Yaqi Huang¹, Meng Yang¹, Kai Kang¹, Ying Wan¹

PT03-17 Change in mechanical properties due to the network structure of elastomer (1. Nagoya University (Japan), 2. Tokyo Institute of Technology (Japan)) ***Yusuke Baba**¹, Yukikazu Takeoka², Takahiro Seki¹, Kotaro Sato², Masami Kamigaito¹

PT03-18 Janus nanorods with tailored size and tip shape (1. Helmholtz-Zentrum Dresden-Rossendorf (Germany), 2. Institute for Materials Science and Max Bergmann Center of Biomaterials, Dresden University of Technology (Germany), 3. Institut für Chemie neuer Materialien, Universität Osnabrück (Germany)) ***Anna Eichler-Volf**¹, Tao Huang², Fernando Vazquez Luna³, Yara Alsaadawi¹, Larysa Baraban², Martin Steinhart³, Artur Erbe¹

PT03-19 Target induced formation of DNA tetrahedron chain for Detection of miRNA in living cells (1. Nanjing University of Science and Technology (China)) ***Ying Wan**¹, Huan Wang¹, Jinyu Ji¹, Shengyuan Deng¹

PT03-20 Control of Drying-induced Self-assembly of Polysaccharide LC solution in Confined Geometry (1. Japan Advanced Institute of Science and Technology (Japan)) ***Gargi Joshi**¹, Kosuke Okeyoshi¹, Maiko K. Okajima¹, Tatsuo Kaneko¹

PT03-21 Structural investigation of thermo-responsive block-polymers with microemulsions in water (1. Technische Universität Berlin (Germany), 2. Universität Potsdam (Germany), 3. Fraunhofer Institute for Applied Polymer Research IAP(Germany)) ***Albert Prause**¹, Michelle Hechenbichler², Benjamin von Lospichl¹, André Laschewsky^{2,3}, Michael Gradzielski¹

PT03-22 Zwitterionic Polymer-Brush-Grafted Films with Tunable Mechanical and Antifouling Properties (1. National Taiwan University Department of Materials Science and Engineering (Taiwan)) ***Chia-Hsuan Lin**¹, Shyh-Chyang Luo¹

PT03-23 Preparation of double network ion gels with silica particles and poly (ionic liquid)s (1. Department of Applied Chemistry, Graduate School of Natural Science and Technology, Okayama University (Japan)) ***Ruri Takahashi**¹, Takaichi Watanabe¹, Tsutomu Ono¹

PT03-24 Control of Physical Properties of Polysaccharide Polyion Complex Gels Using Hofmeister Effect (1. Tokyo University of Science (Japan)) ***Masahiro Sakaguchi**¹, Yusuke Yataka¹, Kazutoshi Iijima¹, Mineo Hashizume¹

PT03-25 Synchronization and entrainment of oil/water/oil droplet's oscillators in glass tubes (1. Doshisha University (Japan)) ***Masahiro Kasai**¹, Erika Nawa¹, Daigo Yamamoto¹, Akihisa Shioi¹

PT03-26 Motions of Dimer Particles Supporting Photocatalytic Nanoparticles under Light Irradiation (1. Tohoku University (Japan)) ***Akira Nagasawa**¹, Nozomi Shigeta¹, Kanako Watanabe¹, Daisuke Nagao¹

PT03-27 One-Shot Synthesis of Thermosensitive Gel (1. Graduate School of Engineering Nagoya University (Japan), 2. School of Materials and Chemical Technology Tokyo Institute of Technology (Japan)) ***Tomoki Sakai**¹, Yukikazu Takeoka¹, Takahiro Seki¹, Kotaro Satoh², Masami Kamigaito¹

PT03-28 Photoinduced pressure-sensitive adhesion properties of polymer composites containing an azobenzene-doped liquid crystal (1. Tokyo Institute of Technology (Japan), 2. National Institute of Advanced Industrial Science and Technology (Japan)) ***Mioka Koike**^{1,2}, Takahiro Yamamoto², Norihisa Akamatsu¹, Atsushi Shishido¹

PT03-29 Preparation of Structural Color Hydrogel Complexed with Perovskite Nanosheets/Poly (*N*-isopropylacrylamide) (1. Fukuoka Institute of Technology (Japan)) ***Wenqi Yang**¹, Shinya Yamamoto¹, Keiichi Sueyoshi¹, Nobuyoshi Miyamoto¹

PT03-30 Formation of Self-Organized Periodic Precipitation Patterns in Gradient Hydrogel (1. Yamagata University, Graduate School of Science and Engineering (Japan), 2. Yamagata University, Faculty of Science (Japan)) ***Masaki Itatani**¹, Qing Fang², Kei Unoura², Hideki Nabika²

PT03-31 Mechanism of reduction of wax gel hardness with storage (1. Tokyo University of Technology (Japan)) ***Hikari Matsuo**¹, Masashi Shibata¹

PT03-32 Growth of giant vesicles linking to hydrophobic chain extension of phospholipids by Suzuki-Miyaura cross-coupling reaction (1. Graduate School of Arts and Sciences, University of Tokyo. (Japan)) ***Atsufumi Ohtani**¹, Hironori Sugiyama¹, Taro Toyota¹

PT03-33 Observation of Self-propelled Giant Multilamellar Vesicles Driven by Surfactant Addition in a Microfluidic Device (1. Tokyo University of Science (Japan), 2. Grad. Sch. Arts and Sci., The Univ. of Tokyo (Japan), 3. IIS, The Univ. of Tokyo (Japan), 4. KISTEC (Japan)) ***Hatsuhi Kato**¹, Hironori Sugiyama², Toshihisa Osaki^{3,4}, Shoji Takeuchi³, Taro Toyota²

PT03-34 Motion analysis on self-propelled giant multilamellar vesicles in an aqueous surfactant solution (1. Grad. Sch. Arts and Sci., The Univ. of Tokyo. (Japan), 2. IIS, The Univ. of Tokyo. (Japan), 3. KISTEC(Japan)) ***Soichiro**

Hiroi¹, Hironori Sugiyama¹, Toshihisa Osaki^{2,3}, Shoji Takeuchi², Taro Toyota¹

PT03-35 Monte Carlo Simulations on biological inspired systems: the role of electrostatics (1. Coimbra Chemistry Center, Department of Chemistry, Faculty of Sciences and Technology, University of Coimbra (Portugal)) ***Tania Firmino Cova**¹, Sandra C. C. Nunes¹, Alberto A. C. C. Pais¹

PT03-36 Obtaining an effective intermolecular potential for water via molecular dynamics and Monte Carlo methods (1. Saint Petersburg State University (Russia)) ***Nikolai Volkov**¹, Alexander Shchekin¹, Elena Gonorovskaya¹

PT03-37 Immobilization of α -amylase on ferromagnetic colloidal particles and its enzymatic activity under an ac/dc combined magnetic field (1. Graduate School of Interdisciplinary New Science, Toyo University (Japan), 2. Bio-Nano Electronics Research Center, Toyo University (Japan)) ***Masayuki Karube**¹, Masashi Suzuki², Toru Mizuki^{1,2}, Toru Maekawa^{1,2}, Hisao Morimoto^{1,2}

PT03-38 Fabrication of Dynamic Cytoskeletal Networks by Focused Laser Beam (1. Saitama University (Japan), 2. National Chiao Tung University (Taiwan), 3. Nara Institute of Science and Technology (Japan)) ***Hiroshi Y. Yoshikawa**¹, Takuya Takeshige¹, Fumika Kiryu¹, Kei Takano¹, Chi-Shiun Wu^{1,2}, Yang-Hsin Shih², Seiichiro Nakabayashi¹, Teruki Sugiyama^{2,3}, Ryuzo Kawamura¹

PT03-39 Quantitative evaluation of synchronization of oil droplet oscillation on water surface (1. Doshisha University (Japan)) ***Tomoaki Nakano**¹, Erika Nawa¹, Daigo Yamamoto¹, Akihisa Shioi¹

PT03-40 (Withdrawn) Spectroelectro-chemistry of nitric oxide reductase immobilized on electrodes *via* self-assembled monolayer (1. Graduate School of Environmental Science, Hokkaido University (Japan), 2. Faculty of Environmental Earth Science, Hokkaido University (Japan), 3. RIKEN SPring-8 Center (Japan)) ***Asahi Narumi**¹, Yuya Masuda¹, Shogo Nakagawa¹, Takehiko Tosha³, Masaru Kato^{1,2}, Ichizo Yagi^{1,2}

PT03-41 Mechanical properties of hydrogels based on "physically" cross-linked double polymer networks of HM-PAA and a polysaccharide (1. Lomonosov Moscow State University (Russia)) ***Andrey Shibaev**¹, Maria Smirnova¹, Alexander Ospennikov¹, Mikhail Avdeev¹, Anna Aleshina¹, Dmitry Muravlev¹, Alexey Gavrillov¹, Olga Philippova¹

PT03-42 pH-Responsibilities of giant vesicles composed of cationic lipids with imine linkages and oleic acids (1. Keio University (Japan)) ***Daichi Sawada**¹, Koichi Asakura¹, Taisuke Banno¹

PT03-43 Structural stability of giant vesicles consisting of cationic amphiphiles having diamide skeletons (1. Keio University (Japan)) ***Hibiki Ueno**¹, Kouichi Asakura¹, Taisuke Banno¹

PT03-44 Microscopic Insights into Gelation of Aqueous Methylcellulose Solution and Underlying Critical Phenomena (1. Shinshu University (Japan), 2. Nagoya University (Japan)) ***Atsuki Nakamachi**¹, Keiichi Yanase², Takaaki Sato¹

PT03-45 Enhanced Dispersion Stability of Gold Nanoparticles by Cyclic Poly (Ethylene Glycol) (1. University of Hokkaido. (Japan)) ***Yubo Wang**¹, Takuya Yamamoto¹

PT03-46 Topological Impact of Poly (3-hexylthiophene) on the Structure of Nanoparticles (1. Hokkaido University (Japan)) ***Tomohisa Watanabe**¹, Takuya Yamamoto¹

PT03-47 Statistical mechanics study of effective interaction between anionic sites on biomolecules (1. Graduate of Science, Kyushu University (Japan), 2. Kyushu Sangyo University (Japan), 3. Kyushu University (Japan)) ***Michika Takeda**¹, Ayumi Suematsu², Ryo Akiyama³

[T4] Membranes and LB films

PT04-01 Non-invasive measurement of membrane tension of free-standing lipid bilayer membranes by laser-induced surface deformation spectroscopy (1. Chiba University (Japan), 2. The University of Tokyo. (Japan)) ***Masanori Fujinami**¹, Shinnosuke Yoshida¹, Yusuke Yokoyama¹, Masahior Takahashi¹, Luca Chiari¹, Tomonori Nomoto¹, Taro Toyota²

PT04-02 Floatcasting of Microsieves (1. Chemnitz University of Technology (Germany)) ***Werner A. Goedel**¹

PT04-03 Creation of interfacial films of organic / inorganic hybrid nanoparticles (1. Saitama University (Japan)) ***Hiroki Machida**¹, Takato Ohashi¹, Atsuhiko Fujimori¹

PT04-04 Fabrication of Organized films of organo-modified needle-like nanoparticles and preparation of its polymer-based nanocomposites (1. Saitama University (Japan)) ***Shuhei Hirayama**¹, Takuto Hayasaki¹, Yoshinori Abiko¹, Atsuhiko Fujimori¹

PT04-05 Denaturation control based on Gibbs monolayer behavior of biopolymers (1. Saitama University (Japan)) ***Yusuke Kimura**¹, Atsuhiko Fujimori¹

PT04-06 Structure and function of organized molecular films of polyguanamine derivatives with metal scavenging properties (1. Saitama University (Japan), 2. Iwate University (Japan)) ***Keito Fukushi**¹, Haruka Maruyama¹, Masaya Shirao¹, Yuji Shibasaki², Atsuhiko Fujimori¹

PT04-07 Formation and structure of organized molecular films of organo-modified single wall carbon nanotubes (1. Saitama University (Japan)) ***Yoshinori Abiko**¹, Shuhei Hirayama¹, Atsuhiko Fujimori¹

PT04-08 Determination of a way to prepare two dimensional films of Fe₃O₄ nanoparticles with the desired structure (1. Shinshu University (Japan), 2. Tohoku University (Japan), 3. Sankei Giken Kogyo Co., Ltd. (Japan)) ***Hiroaki Shigekura**¹, Tomoyuki Ogawa², Shinpei Yamamoto³, Cathy McNamee¹

PT04-09 Interactions of Tetrazine Derivatives with Biomembrane Lipids at the Air-Water Interface (1. Daiichi University of Pharmacy (Japan), 2. Nagasaki University (Japan), 3. Kobe Pharmaceutical University (Japan), 4. Nagasaki International University (Japan)) ***Hirokichi Nakahara**¹, Masayori Hagimori², Takahiro Mukai³, Osamu Shibata⁴

PT04-10 Wet etching of silicon wafer using vertically grown structures as mask (1. Utsunomiya University (Japan)) ***Misa Katagiri**¹, Ken-ichi Iimura¹

PT04-11 Interaction between Sulfosuccinic Acid Surfactants and Hydrophobic Monolayers (1. Utsunomiya University (Japan), 2. Kao Corporation (Japan)) ***Maasa Saito**¹, Ken-ichi Iimura¹, Satoru Okamura², Keita Aono², Furitsu Suzuki²

PT04-12 High-Pressure Fluorometric Study on Bilayer Packing of Phosphatidylcholines (1. Tokushima University (Japan)) ***Masaki Goto**¹, Nobutake Tamai¹, Hitoshi Matsuki¹

PT04-13 Metal ion adsorption by radiation grafted adsorbents (1. National Institutes for Quantum and Radiological Science and Technology (Japan)) ***Noriaki Seko**¹, Hiroyuki Hoshina¹, Haruyo Amada¹, Natsuki Hayashi¹, Yuji Ueki¹

PT04-14 Dynamics of fatty acids adsorption on lipid bilayer membrane (1. Graduate School of Science and Engineering, Yamagata University (Japan)) ***Maki Miura**¹, Hiroyuki Furusawa¹, Yoshimune Nonomura¹

PT04-15 Interaction of photoresponsive azobenzenes with Phosphatidylcholine: Investigation at Langmuir monolayers (1. Chung Shan Medical University (Taiwan)) ***Chih-Chien Chu**¹, Chi-Yu Huang¹, Huei-Fang Chiou¹

PT04-16 Surface Structures of Spin Coated Films of Acrylic Ester Copolymers (1. Utsunomiya University (Japan), 2. Lion Corporation (Japan)) ***Hyuga Nakamura**¹, Ken-ichi Iimura¹, Fumiya Mori²

PT04-17 Surface Property and Structure of Mixed Monolayer of Polydimethylsiloxane and Olive Oil (1. Utsunomiya University (Japan), 2. J-Oil Mills Inc. (Japan), 3. National Institute of Advanced Industrial Science and Technology (Japan)) ***Masashi Kobayashi**¹, Ken-ichi Iimura¹, Masami Inoue², Takayuki Miyamae³

PT04-18 Domain Formation and Miscibility in Adsorbed Film of Hybrid Alcohol Mixture at Alkane/Water Interface (1. Graduate School of Science, Kyushu University (Japan), 2. Japan Synchrotron Radiation Research Institute (Japan), 3. Faculty of Arts and Science, Kyushu University (Japan)) ***Runa Mitsuda**¹, Hajime Tanida², Toshiaki Ina², Kiyofumi Nitta², Tomoya Uruga², Yosuke Imai³, Takanori Takiue^{1,3}

PT04-19 Effects of hybrid phospholipid on line tension and morphology of liquid-like domain in 3-components mixed vesicle (1. Graduate School of Science, Kyushu University (Japan), 2. Faculty of Arts and Science, Kyushu University (Japan)) ***Ryoa Kanda**¹, Yosuke Imai², Takanori Takiue^{1,2}

PT04-20 Effect of Hydrophilic Structure on Adsorbed Film of Fluorinated Ester at Hexane/Water Interface (1. Graduate School of Science, Kyushu University (Japan), 2. Japan Synchrotron Radiation Research Institute (Japan), 3. Sector of Nuclear Science Research, Japan Atomic Energy Agency (Japan), 4. Faculty of Arts and Science, Kyushu University (Japan)) ***Tetsuya Hotta**¹, Toshiaki Ina², Kiyofumi Nitta², Tomoya Uruga², Hajime Tanida³, Yosuke Imai⁴, Takanori Takiue^{1,4}

PT04-21 Domain Morphology and Molecular Miscibility of Mixed Adsorption Films of Fluoroalkanol-Cationic Surfactant at Hexane/Water Interface (1. Graduate School of Science, Kyushu University (Japan), 2. Faculty of Arts and Science, Kyushu University (Japan), 3. Japan Synchrotron Radiation Research Institute, Hyogo. (Japan), 4. Sector of Nuclear Science Research, Japan Atomic Energy Agency (Japan)) ***Chikara Shirai**¹, Kosuke Saiki¹, Toshiaki Ina³, Kiyofumi Nitta³, Tomoya Uruga³, Hajime Tanida⁴, Yosuke Imai², Takanori Takiue^{1,2}

PT04-22 Specific Action Mechanism of Isoflurane to phospholipid Monolayers formed on the Water Surface (1. Nagoya Institute of technology (Japan)) ***Masaaki Ieda**¹, Takashi Yokoyama¹, Hiroya Mori¹, Daisuke Yoshida¹, Akihiro Hayashi¹, Daiki Ito¹, Akihiro Yoshino¹, Keiji Taga¹, Yasushi Yamamoto¹

PT04-23 Action Mechanism of Anesthetics to Spingomyelin Monolayer Formed on the Surface (1. Nagoya Institute of Technology (Japan)) ***Shuhei Kitagawa**¹, Daisuke Yoshida¹, Hiroya Mori¹, Akihiro Hayashi¹, Daiki Ito¹, Keiji Taga¹, Akihiro Yoshino¹, Yasushi Yamamoto¹

PT04-24 Relation between hydration states and stacking structures of phospholipid bilayers indicated by their dependences on thermal history (1. The University of Tsukuba

(Japan)) ***Takuma Nagayama**¹, Mafumi Hishida¹, Yasuhisa Yamamura¹, Kazuya Saito¹

PT04-25 Thermotropic Properties of Partially Fluorinated Dimyristoyl- phosphatidylcholine Bilayer (1. Gunma University (Japan), 2. AIST(Japan), 3. Kyoto University (Japan)) ***Masashi Sonoyama**¹, Kohei Morita¹, Toshiyuki Takagi², Hiroshi Takahashi¹, Hideki Amii¹, Takeshi Hasegawa³

PT04-26 Contribution of the thermal fluctuation of lipid bilayers to the control of membrane fusion: Development of an evanescent-wave illumination dynamic light scattering microscope (1. Graduate School of Science, Tokyo University of Science (Japan), 2. Water Frontier Science & Technology Research Center, Tokyo University of Science (Japan), 3. Kao Corporation (Japan), 4. Kao research division, Tokyo University of Science (Japan)) ***Miki Sunada**¹, Toshinori Morisaku², Atsushi Miyazaki³, Takaya Sakai³, Keiko Matsuo⁴, Hiroharu Yui^{1,2}

PT04-27 Identification of the origin of long-range repulsive forces between the cationic lipid bilayers in water with colloid-probe AFM (1. Tokyo University of Science (Japan), 2. Water Frontier Science & Technology Research Center, Tokyo University of Science (Japan), 3. Kao Corporation (Japan), 4. Kao research division, Tokyo University of Science (Japan)) ***Kimio Dairiki**¹, Toshinori Morisaku², Atsushi Miyazaki³, Takaya Sakai³, Keiko Matsuo^{3,4}, Hiroharu Yui^{1,2}

PT04-28 Characteristic responses of phospholipid monolayers to monovalent and divalent cations (1. Hiroshima University (Japan)) ***Yuta Yamaguchi**¹, Satoshi Nakata¹

PT04-29 Performance of Metal Adsorbent Synthesized by Radiation Graft Polymerization (1. National Institutes for Quantum and Radiological Science and Technology (Japan)) ***Hiroyuki Hoshina**¹, Noriaki Seko¹

PT04-30 Wetting Behavior and Interface Investigation of Dialkyl Sulfosuccinate Aqueous Solution (1. KAO corporation (Japan), 2. University of Utsunomiya (Japan)) ***Satoru Okamura**¹, Keita Aono¹, Furitsu Suzuki¹, Yoshihiro Yomogida¹, Tetsuya Okano¹, Maasa Saito², Ken-ichi Iimura²

[T5] Colloidal Dispersion/Aggregation, Surface Forces and Rheology

PT05-01 Practice-oriented colloidal aggregation: Magnetic seeded filtration for the separation of fine polymer particles from dilute suspensions (Microplastics) (1. Karlsruhe Institute of Technology, Institute for Mechanical Process Engineering and Mechanics (Germany)) ***Frank Rhein**¹, Hermann Nirschl¹

PT05-02 Measuring Colloidal Dynamics in Turbid Suspensions (1. Inst. of Physics, Johannes Gutenberg Universität (Germany)) ***Thomas P Palberg**¹, Denis Botin¹

PT05-03 Deformation of Microhydrogels at the Air/Water Interface (1. Graduate School of Textile Science & Technology, Shinshu University (Japan), 2. Research Initiative for Supra-Materials, Interdisciplinary Cluster for Cutting Edge Research, Shinshu University (Japan)) ***Haruka Minato**¹, Daisuke Suzuki^{1,2}

PT05-04 Reflective Properties of Spherical Photonic Crystals Composed of Silica Colloidal Particles (1. Tokyo University of Science (Japan), 2. Nagoya University (Japan)) ***Ryosuke Ohnuki**¹, Miki Sakai², Yukikazu Takeoka², Shinya Yoshioka¹

PT05-05 Stability of Single Wall Carbon Nanotubes cryogels in organic solvents (1. Research Initiative for Supra-Materials, Shinshu University (Japan), 2. 1 Department of Materials

Chemistry, Faculty of Engineering, Shinshu University (Japan)) ***Izadora Rhayna Santos de Menezes**^{1,2}, Yuito Kamijyou^{1,2}, Radovan Kukobat¹, Toshio Sakai², Katsumi Kaneko¹

PT05-06 Single wall carbon nanotube inks of high concentration (1. Research Initiative for Supra-Materials, Shinshu University (Japan)) ***Dragana Stevic**¹, Radovan Kukobat¹, Katsumi Kaneko¹

PT05-07 AC Electrophoretic Mobility of an Optically Trapped Colloidal Particle in Complex Fluids (1. Kyushu University (Japan)) ***Kohei Iki**¹, Yukiteru Murakami¹, Yasuyuki Kimura¹

PT05-08 Cobalt-Ferrite Nanoparticles Embedded in PNIPAM Based Mircogel (1. Technical University Darmstadt (Germany), 2. University of Hamburg (Germany)) ***Marcus Witt**¹, Stephan Hinrichs², Birgit Fischer², Regine von Klitzing¹

PT05-09 2D Non-close-packed Colloidal Crystals by the Electrostatic Adsorption of 3D Charged Colloidal Crystals (1. Nagoya City University (Japan)) ***Yurina Aoyama**¹, Akiko Toyotama¹, Tohru Okuzono¹, Junpei Yamanaka¹

PT05-10 Many-body depletion interactions between particles in a polymerizing system (1. Theoretical Chemistry, Lund University (Sweden), 2. School of Chemistry, UNSW ADFA (Australia)) Priyadarshini Thiyam¹, Huy Nguyen², Clifford Woodward², ***Jan Forsman**¹

PT05-11 Release of Metal Nanoparticles as Micelles from Complex Coacervates Nano-Architectures (1. Graduate School of System Life Science, Kyushu University (Japan), 2. Center for Future Chemistry, Kyushu University (Japan), 3. Center for Molecular Systems, Kyushu University (Japan), 4. Center for Advanced Medical Innovation, Kyushu University (Japan)) ***Takumi Egashira**¹, Takeshi Mori^{1,2}, Yoshiki Katayama^{1,2,3,4}, Akihiro Kishimura^{1,3}

PT05-12 Active control of cluster patterns formed by magnetic particles in a fluctuating magnetic field (1. Graduate School of Interdisciplinary New Science, Toyo University (Japan), 2. Bio-Nano Electronics Research Centre, Toyo University (Japan)) ***Asma Ben Salah**¹, Tomofumi Ukai^{1,2}, Shunji Kurosu^{1,2}, Hisao Morimoto^{1,2}, Toru Maekawa^{1,2}

PT05-13 Numerical and experimental study of shear induced aggregation using polymer nanoparticles with a thermo-responsive shell (1. University of Chemistry and Technology Prague (Czech Republic)) ***Jose Francisco Wilson**¹, Miroslav Soos¹

PT05-14 Mechanism of High Temperature Induced Destabilization of Nonpolar Organoclay Suspension (1. Shandong University (China)) ***Zhe Fan**¹, Dejun Sun¹

PT05-15 Capillary Rheo-SANS: Measuring the nanostructure and rheology of complex fluids at high shear rates (1. NIST Center for Neutron Research (USA), 2. University of Illinois Urbana-Champaign (USA), 3. George Washington University (USA), 4. University of Tulsa (USA), 5. NIST Material Measurement Laboratory (USA), 6. University of Delaware (USA), 7. NIST Engineering Laboratory (USA)) ***Ryan P Murphy**¹, Zachary Riedel², Marshall Nakatani³, Javen S Weston⁴, Paul Salipante⁵, Yun Liu^{1,6}, Nicos Martyts⁷, Steven D Hudson⁵, Katie M Weigandt¹

PT05-16 Preparation and characterization of surfaces modified with chemically attached chitosan (1. Shinshu University (Japan)) ***Yuusuke Tone**¹, Cathy McNamee¹

PT05-17 Effects of concentration and ratio of component on the morphology of taurocholic acid-based mixed micelles as

determined by small-angle X-ray scattering (1. Faculty of Pharmaceutical Sciences, Setsunan University (Japan)) ***Hideki Aizawa**¹

PT05-18 Formation of anisotropic colloidal assemblies in cholesteric liquid crystals (1. Kyushu University (Japan)) ***Kazuki Hayashi**¹, Yasuyuki Kimura¹

PT05-19 Reversible molecular accumulation of gum arabic at oil/water interface (1. Japan Agency for Marine-Earth Science and Technology (JAMSTEC)(Japan), 2. Laboratoire Rhéologie et Procédés, Université Grenoble Alpes (France)) ***Noriyuki Isobe**¹, Denis Roux², Naoya Sagawa¹, Shigeru Deguchi¹

PT05-20 Order-Disorder Boundary for Soft Colloidal Crystal in Mixed Solvent (1. Kyoto university (Japan)) ***Hayato Kunimitsu**¹, Nozomi Arai¹, Satoshi Watanabe¹, Minoru T. Miyahara¹

PT05-21 Structural study of smectite suspensions by simultaneous small-angle neutron scattering coupled with rheological measurements (1. Kunimine Industries Co. Ltd. (Japan), 2. Comprehensive Research Organization for Science and Society (Japan), 3. National Institute of Advanced Industrial Science and Technology (Japan), 4. Advanced Institute of Materials Science (Japan)) ***Munehiro Kubota**¹, Hiroki Iwase², Tetsuji Itoh³, Hiroyuki Ohtani¹, Yoshiaki Fukushima⁴

PT05-22 Rheo-SANS study on rheological behavior observed in cationic gemini-type surfactant solution (1. Comprehensive Research Organization for Science and Society (CROSS)(Japan), 2. Nara Women's University (Japan)) ***Hiroki Iwase**¹, Risa Kawai², Tokomazu Yoshimura²

PT05-23 Colloid concentration dependence of coagulation of spherical colloidal particles (1. Department of Chemistry, Faculty of Pure and Applied Sciences, University of Tsukuba (Japan)) ***Taichi Matsubara**¹, Mafumi Hishida¹, Yasuhisa Yamamura¹, Kazuya Saito¹

PT05-24 Rheological behavior of nanoemulsions (Ne), nanostructured lipid carriers (NLC) and solid lipid nanoparticles (SLN) adding with tamarind gum (1. Department of Chemical and Materials Engineering, National Yunlin University of Science and Technology, Taiwan (Taiwan)) Tzung-Han Chou¹, ***Hsin-Ping Chiu**¹

PT05-25 Influences of dispersibility and crystallinity on photocatalytic activity of titania particles (1. Tohoku University (Japan)) ***Hikaru Namigata**¹, Kanako Watanabe¹, Saya Okubo¹, Daisuke Nagao¹

PT05-26 Changes in the thermoresponsive behavior of poly (2-isopropyl-2-oxazoline) in water induced by the block copolymerization with poly (ethylene oxide) (1. Fukuoka University (Japan)) ***Takeshi Kimura**¹, Takaaki Bekki¹, Yusuke Sanada¹, Yukiteru Katsumoto¹

PT05-27 Comparison of the inhibitory effect of initial stage flocculation between humic substances and polyacrylic acid (1. University of Tsukuba (Japan)) ***Voon Huey Lim**¹, Yuji Yamashita¹, Yasuhisa Adachi¹

PT05-28 Study on demixing and remixing processes of the aqueous Poly (*N*-isopropylacrylamide) solution monitored by the fluorescence correlation spectroscopy (1. Fukuoka University (Japan)) ***Hironori Ishihara**¹, Reika Ikemoto¹, Yusuke Sanada¹, Yukiteru Katsumoto¹

PT05-29 Crystallization of Microgel Colloids Due to Depletion Attraction (1. Graduate School of Pharmaceutical

Sciences, Nagoya City University (Japan)) ***Yui Sato**¹, Akiko Toyotama¹, Tohru Okuzono¹, Junpei Yamanaka¹

PT05-30 Non-Classical Crystal Growths of Colloidal Systems Due to Depletion Attraction (1. Faculty of Pharmaceutical Sciences, Nagoya City University (Japan), 2. Graduate School of Pharmaceutical Sciences, Nagoya City University (Japan)) ***Nozomi Yamada**¹, Ruri Yamamoto¹, Akiko Toyotama², Tohru Okuzono², Junpei Yamanaka²

PT05-31 Fabrications of Gold Colloidal Crystals Due to Depletion Attraction and Their Applications for SERS (1. Faculty of Pharmaceutical Sciences, Nagoya City University (Japan), 2. Graduate School of Pharmaceutical Sciences, Nagoya City University (Japan)) ***Miyu Ioka**¹, Akiko Toyotama², Tohru Okuzono², Junpei Yamanaka²

PT05-32 Nanometer-resolved fluidity of diacrylate monomers between unmodified and modified silica surfaces for single-digit-nanometer UV nanoimprinting (1. Tohoku University (Japan)) Shunya Ito¹, Motohiro Kasuya¹, Kazue Kurihara¹, ***Masaru Nakagawa**¹

PT05-33 The effect of confinement at nucleation and micellization (1. St Petersburg State University (Russia), 2. Okayama University (Japan)) ***Alexander K Shchekin**¹, Kenichiro Koga², Nikolai A. Volkov¹

PT05-34 How does antagonistic salts behave like surfactants in water? (1. Doshisha University (Japan)) ***Kyohei Doai**¹, Koichiro Sadakane¹

PT05-35 Dark-field laser speckle microscope for micro-rheological measurements of slurries on a substrate during wetting and spreading accompanied by drying (1. Graduate School of Science, Tokyo University of Science (Japan), 2. Water Frontier Science & Technology Research Center, Tokyo University of Science (Japan), 3. Kao Corporation (Japan), 4. Kao research division, Tokyo University of Science (Japan)) ***Masaru Shiraishi**¹, Toshinori Morisaku², Rui Takahashi³, Yuu Oshima¹, Shu-hei Urashima², Keiko Matsuo^{3,4}, Hiroharu Yui^{1,2}

PT05-36 Determination for the dispersion conditions of particles in slurries toward the formation of uniform films on substrates (1. Graduate School of Science, Tokyo University of Science (Japan), 2. Kao Corporation (Japan), 3. Water Frontier Science & Technology Research Center, Tokyo University of Science (Japan), 4. Kao research division, Tokyo University of Science (Japan)) ***Yuu Oshima**¹, Rui Takahashi², Toshinori Morisaku³, Shu-hei Urashima³, Keiko Matsuo^{2,4}, Hiroharu Yui^{1,3}

PT05-37 Single-Sheet Diamond Colloidal Crystals Formed by Layer-by-Layer Electrostatic Self-Assembly (1. Nagoya City University (Japan)) ***Minori Fujita**¹, Yurina Aoyama¹, Akiko Toyotama¹, Tohru Okuzono¹, Junpei Yamanaka¹

PT05-38 Adsorption Behavior of Oppositely Charged Particle/Plate and Binary Particle Systems (1. Nagoya City University (Japan)) ***Teruyoshi Ishigami**¹, Akiko Toyotama¹, Tohru Okuzono¹, Junpei Yamanaka¹

PT05-39 Evaluation of the wettability of carbon black by solvent relaxation NMR (1. Sumika Chemical Analysis Service, Ltd. (Japan), 2. Takeda Colloid Techno-Consulting Co., Ltd. (Japan)) ***Takuto Shimamori**¹, Yuji Nakanishi¹, Eiji Takahashi¹, Katsuya Imanishi¹, Shin-ichi Takeda²

PT05-40 Characterization of Amphiphilic Block/Random Copolymer Films in Oils (1. Faculty of Science and Technology, Tokyo University of Science (Japan), 2. SHISEIDO Global Innovation Center (Japan), 3. Research Institute for Science and Technology, Tokyo University of

Science (Japan)) ***Yurina Yamada**¹, Yuji Ito², Kazuyuki Miyazawa², Nozomi Oguchi², Masaaki Akamatsu¹, Kenichi Sakai^{1,3}, Hideki Sakai^{1,3}

PT05-41 Temporal change of adsorbed layer thickness and electrophoresis of PSL particles after overshooting with oppositely charged polyelectrolytes of different charge density (1. Life and Environmental Science, University of Tsukuba (Japan)) ***Yen Thi Hai Doan**¹, Yasuhisa Adachi¹, Yuji Yamashita¹

PT05-42 Two-dimensional percolation in a thin magnetorheological fluid layer induced by an external dc magnetic field (1. Graduate School of Interdisciplinary New Science, Toyo University (Japan), 2. Bio-Nano Electronics Research Center, Toyo University (Japan)) ***Yuto Hamada**¹, Tomofumi Ukai^{1,2}, Hisao Morimoto^{1,2}

PT05-43 Critical Coagulation Ionic Strengths on Heteroaggregation in the presence of Multivalent Ions (1. Graduate School of Agricultural and Life Sciences, The University of Tokyo. (Japan), 2. Faculty of Life and Environmental Sciences, University of Tsukuba (Japan)) ***Takuya Sugimoto**¹, Motoyoshi Kobayashi²

PT05-44 Maximum adsorbed amount of charged macromolecules on gold-water interface: Effect of surface potential (1. Graduate School of Life and Environmental Sciences, University of Tsukuba (Japan), 2. Physical chemistry II, Bayreuth University (Germany), 3. Faculty of Life and Environmental Sciences, University of Tsukuba (Japan)) ***Atsushi Yamaguchi**¹, Nicolas Helfricht², Motoyoshi Kobayashi³, Georg Papastavrou²

PT05-45 Water Structure Analysis of Dairy Products by Dielectric Spectroscopy (1. Graduate School of Science and Technology, Tokai University (Japan), 2. School of Science, Tokai University (Japan)) ***Yuko Maruyama**¹, Rio Kita², Naoki Shinyashiki², Shin Yagihara²

PT05-46 Rapid stability testing of emulsions for design, production and quality control of emulsions by multi-sample analytical centrifugation (1. Takeda Colloid Techno-Consulting Co., Ltd. (Japan)) ***Shin-ichi Takeda**¹

PT05-47 Electrostatic surface characteristics: Thoughts regarding measurand electrophoretic mobility and calculation of Zeta-potential of functionalized nanoparticles (1. Takeda Colloid Techno-Consulting Co., Ltd. (Japan)) ***Shin-ichi Takeda**¹

PT05-48 Sizing and counting of particles from nano- to micro-scale by simultaneous single particle forward and sideward light scattering (1. Takeda Colloid Techno-Consulting Co., Ltd. (Japan)) ***Shin-ichi Takeda**¹

[T6] Nanoparticles and Nanomaterials

PT06-01 Laser ablation for the formation of colloidal clusters smaller than 5 nm (1. TOYOTA CENTRAL R&D LABS., INC.(Japan)) ***Tepei Nishi**¹, Yusuke Akimoto¹, Kosuke Kitazumi¹, Naoko Takahashi¹, Shuji Kajiya¹, Kazuhisa Yano¹, Yoshihide Watanabe¹

PT06-02 Ag NWs as Top Electrode for Organic/Inorganic Photodiode (1. Faculty of Engineering, Hokkaido University (Japan), 2. National Institute for Materials Science (NIMS)(Japan), 3. Triveni Devi Bhalotia College (India), 4. Chulalongkorn University (Thailand), 5. Chuo University (Japan), 6. Graduate School of Chemical Sciences and Engineering, Hokkaido University (Japan)) ***Min Jia Saw**¹, Batu Ghosh^{2,3}, Mai Thanh Nguyen¹, Kridsada Jirasattayaporn^{1,4}, Soorathep Kheawhom⁴, Naoto Shirahata^{2,5,6}, Tetsu Yonezawa¹

PT06-03 Fabrication of Ag nanoparticle arrays embedded in polystyrene particles and their anisotropic optical properties (1. Tokyo University of Science (Japan)) ***Kazuhiko Kinoshita**¹, Yoshiro Imura¹, Ke-Hsuan Wang¹, Takeshi Kawai¹

PT06-04 Coalescence of Tri-*n*-Octylphosphine-Oxide-Capped Silver Nanoparticles by the Addition of Chloride Salt in Organic Solvent at Room Temperature (1. Faculty of Systems Engineering, Wakayama University (Japan), 2. Osaka Research Institute of Industrial Science and Technology (Japan)) ***Soichiro Okada**¹, Yoshio Nakahara¹, Mitsuru Watanabe², Toshiyuki Tamai², Setsuko Yajima¹

PT06-05 A stable water dispersion of ITO nanoparticles with crystalline rough protrusions and the high-performance ITO thin films obtained by a mist-deposition method (1. Nikon corporation (Japan), 2. IMRAM, Tohoku University (Japan)) ***Ryoko Suzuki**¹, Yasutaka Nishi¹, Sachiko Maki², Atsushi Muramatsu², Kiyoshi Kanie²

PT06-06 Molecular tailor of metal nanoparticle's surfaces for printed electronics (1. INM-Leibniz Institute for New Materials (Germany), 2. Colloid and Interface Chemistry, Saarland University (Germany)) ***Lola Gonzalez-Garcia**¹, Indra Backes¹, Juraj Drzic¹, Lukas Engel¹, Alberto Escudero¹, Tobias Kraus^{1,2}

PT06-07 Development of practical high-quality carbon quantum dots synthesis method using a novel microwave synthesis protocol (1. Sophia University (Japan)) ***Kenta Hagiwara**¹, Satoshi Horikoshi¹

PT06-08 Trapping of Pyrene-labelled Hydrophilic Polymer Chains dissolved in Water by NASSCA Optical Tweezers (1. Osaka City University (Japan), 2. Osaka University (Japan)) ***Kenta Ushiro**¹, Tatsuya Shoji¹, Taka-Aki Asoh², Yasuyuki Tsuboi¹

PT06-09 Micro-assembly formation of colloidal polystyrene beads using liquid/liquid interface-assisted. (LiLiI) optical tweezers (1. Osaka City University (Japan)) ***Daiki Yamanishi**¹, Tatsuya Shoji¹, Yasuyuki Tsuboi¹

PT06-10 Study of the structure of interfacial layers of silica nanoparticles-CTAB complexes at water-dodecane by neutron reflectivity (1. CNR-Institute of Condensed Matter Chemistry and of Technologies for Energy (Italy), 2. Universidad Complutense de Madrid. (Spain), 3. STFC-Rutherford Appleton Laboratory (UK), 4. University of Parma (Italy)) ***Libero Liggieri**¹, Francesca Ravera¹, Eva Santini¹, Sara Llamas^{2,1}, Mario Campana³, Davide Orsi⁴, Luigi Cristofolini^{4,1}

PT06-11 Graphene Oxide Film Isolated Raman Spectroscopy for Subnano Particles Analysis and Application (1. Laboratory for Chemistry and Life science, Institute of Innovative Research, Tokyo Institute of Technology (Japan), 2. JST-ERATO Yamamoto Atom Hybrid project, Institute of Innovative Research, Tokyo Institute of Technology (Japan)) ***Yuansen Tang**¹, Akiyoshi Kuzume², Kimihisa Yamamoto^{1,2}

PT06-12 Fluorescent Silicon Nanoparticle-based Bioimaging (1. Institute of Functional Nano and Soft Materials (FUNSOM), Soochow University (China)) ***Yuanyuan Su**¹

PT06-13 (Withdrawn) Structural elucidation of thermoresponsive hydrogel microspheres by temperature-controlled high-speed AFM (1. Grad. Sch. of Textile Sci. & Tech., Shinshu Univ. (Japan), 2. RISM, Shinshu Univ. (Japan), 3. Grad. Sch. of Sci. & Tech., Kyoto Inst. of Tech. (Japan), 4. Dept. of Chem. Sci. and Eng., Tokyo Inst. of Tech. (Japan), 5. Grad. Sch. of Sci., Nagoya Univ. (Japan)) ***Yuichiro Nishizawa**¹, Shusuke Matsui¹, Kenji Urayama³,

Takuma Kureha⁴, Mitsuhiro Shibayama⁴, Takayuki Uchihashi⁵, Daisuke Suzuki^{1,2}

PT06-14 Structural control of hydrogel microspheres by free radical polymerization (1. Grad. Sch. of Textile Sci. & Tech., Shinshu Univ. (Japan), 2. RISM, Shinshu Univ. (Japan), 3. Grad. Sch. of Sci. & Tech., Kyoto Inst. of Tech. (Japan), 4. Dept. of Chem. Sci. and Eng., Tokyo Inst. of Tech. (Japan), 5. Grad. Sch. of Sci., Nagoya Univ. (Japan)) ***Yuichiro Nishizawa**¹, Shusuke Matsui¹, Kenji Urayama³, Takuma Kureha⁴, Mitsuhiro Shibayama⁴, Takayuki Uchihashi⁵, Daisuke Suzuki^{1,2}

PT06-15 Optical and Mechanical properties of structural colored elastomer embedded with colloidal crystal of fine silica particles (1. Graduate School of Engineering Nagoya University (Japan), 2. Graduate School of Macromolecular Science & Engineering Kyoto Institute of Technology (Japan)) ***Eiji Miwa**¹, Kenta Watanabe¹, Yukikazu Takeoka¹, Takahiro Seki¹, Kenji Urayama²

PT06-16 Effect of Molecular Structure of Adsorbed Polymer on Dispersion of Colloidal Silica and Composite Rheological Property (1. Graduate School of Engineering, Mie University (Japan)) ***Masayuki Miyamoto**¹, Fujii Yoshihisa¹, Naoya Torikai¹

PT06-17 Surface Modification of SN-38 Nano-Prodrugs for Enhancing the Efficiency of Anticancer Drug Delivery (1. Tohoku University (Japan)) ***Farsai Taemaitree**¹, Yoshitaka Koseki¹, Ryuju Suzuki¹, Anh T. N. Dao¹, Hitoshi Kasai¹

PT06-18 Determination of photogenerated W(V) quantity in tungsten oxide by using absorption of Ag nanoparticles (1. Graduate School of Sciences and Technology for Innovation, Yamaguchi University (Japan)) ***Koki Isoyama**¹, Suzuki Yamazaki¹

PT06-19 Synthesis of highly Nb-doped TiO₂ nanoparticles by gel-sol method. (1. Institute of Multidisciplinary Research for Advanced Materials, Tohoku University (Japan)) ***Hirokii Baba**¹, Mizuho Yabushita¹, Kiyoshi Kanie¹, Atsushi Muramatsu¹

PT06-20 Factors affecting the coloring rate in the photochromism of titanium dioxide colloidal solution containing molybdenum ion (1. Yamaguchi University (Japan)) ***Koshiro Okimura**¹, Suzuko Yamazaki¹

PT06-21 MoS₂/ZnO nanocomposites with enhanced visible-light-driven photocatalytic degradation and hydrogen production (1. Feng Chia University (Taiwan)) ***Yu-Cheng Chang**¹, Yu-Wen Lin¹

PT06-22 Application of the Prussian blue thin film fabricated by a solution method using dispersion solution of its nanoparticles (1. Yamagata University (Japan)) ***Manabu Ishizaki**¹, Hiroya Tanno¹, Eito Ohshida¹, Hiroki Fujii¹, Masato Kurihara¹

PT06-23 Synthesis of non-spherical magnetic nano-micro particles in supercritical acetone (1. Toyo University (Japan)) ***Marie Nagatomo**¹, Mio Yoshida¹, Seiya Watanabe¹, Toru Maekawa¹

PT06-24 The droplet-size effect of antimicrobial nanoemulsions on the eradication of planktonic and biofilm MRSA (1. Chang Gung University (Taiwan), 2. Providence University (Taiwan)) ***Jia-You Fang**¹, Yu-Ching Yang¹, Shih-Chun Yang²

PT06-25 Size-Controlled Preparation of Metal Nanoclusters Deposited on Citric Acid-Modified Cellulose Nanofiber (1. Osaka University (Japan), 2. Mahidol University (Thailand)) ***Yuta Uetake**¹, Chutimasakul Threeraphat², Jonggol

Tantirungrotechai², Taka-aki Asoh¹, Hiroshi Uyama¹, Hidehiro Sakurai¹

PT06-26 Preparation of Thermo-responsive Liquid Crystalline Polymer Films with Well-Dispersed AuNPs and Their Smart Properties (1. Faculty of Chemistry, Materials and Bioengineering, Kansai University (Japan), 2. ORDIST, Kansai University (Japan)) ***Hiroki Tanaka**¹, Akifumi Kawamura^{1,2}, Takashi Miyata^{1,2}

PT06-27 Site-specific bandgap modification in lead halide perovskites by chemical reactions under optical trapping (1. Hokkaido University (Japan)) ***Md Shahjahan**¹, Md. Jahidul Islam¹, Ken-ichi Yuyama¹, Vasudevanpillai Biju¹

PT06-28 Effect of silica encapsulation on plasmon characteristics of gold nanotriangle (1. Tohoku University (Japan)) ***Kosuke Nakamura**¹, Kanako Watanabe¹, Daisuke Nagao¹

PT06-29 Physical properties and structure of a cornea-inspired polyacrylate/nanosilica hybrid elastomer (1. Nagoya University (Japan), 2. UNITIKA LTD. (Japan), 3. Riken Spring-8 Center (Japan), 4. Tokyo Institute of Technology (Japan)) ***Fumio Asai**^{1,2}, Yukikazu Takeoka¹, Takahiro Seki¹, Tomotaka Nakatani³, Taiki Hoshino³, Xiaobin Liang⁴, Ken Nakajima⁴

PT06-30 Time-series Analysis of Raman Spectra for Deducing the Adsorption Geometry of Poly (vinylpyrrolidone) Capping on Silver Nanoparticle (1. Osaka Research Institute of Industrial Science and Technology (Japan)) ***Masashi Saitoh**¹, Toshiyuki Tamai¹

PT06-31 Synthesis of carbon nanotubes by plasma enhanced chemical vapour deposition using patterned iron oxide nanoparticles as a catalyst (1. Toyo university (Japan)) ***Kyosuke Takahashi**¹, Toru Maekawa¹, Shunji Kurosu¹

PT06-32 Understanding the physical nature of interactions in nano and bio materials using quantum-chemical methods (1. National Institute of Advanced Industrial Science and Technology (AIST) (Japan)) ***Dmitri G. Fedorov**¹

PT06-33 Synthesis of plate-like halide perovskite@Pt or Au nanocrystals (1. Graduate School of Engineering, Tokyo University of Science (Japan), 2. Department of Industrial Chemistry, Tokyo University of Science (Japan)) ***Muneharu Minakawa**¹, Kehsuan Wang², Yoshiro Imura², Takeshi Kawai²

PT06-34 Zeptomole biosensing based on levitation coordinate shift induced by gold nanoparticle binding (1. Tokyo Institute of Technology (Japan)) ***Akihisa Miyagawa**¹, Makoto Harada¹, Tetsuo Okada¹

PT06-35 Effect of Water in Room-Temperature Ionic Liquids on Emissive Metal Nanocluster Formation (1. National Institute of Technology, Wakayama College (Japan)) Junjiro Hayashi¹, ***Rithisak San**¹

PT06-36 Tracking gold nanoparticle aggregation for measurement of biomolecules with a picoliter sensing volume (1. Soka University (Japan)) ***Masahiko Shiraishi**¹, Kazuhiro Watanabe¹, Shoichi Kubodera¹

PT06-37 Gallium Liquid Metal Antibacterial Micro-/Nanodroplets as Next-Generation Antimicrobials (1. RMIT University (Australia)) ***Samuel Cheeseman**¹, Sheeana Gangadoo¹, Russell J Crawford¹, Torben Daeneke¹, Aaron Elbourne¹, Vi Khanh Truong¹, James Chapman¹

PT06-38 Fabrication of chiral nanostructure inside polystyrene particles by an UV irradiation method and their optical properties (1. Tokyo University of Science (Japan))

***Kota Murai**¹, Ke-Hsuan Wang, Yoshiro Imura, Takeshi Kawai

PT06-39 Fe₃O₄-supported Gold Nanoflower Catalysts with High Catalytic Activity (1. Tokyo University of Science (Japan)) ***Ryota Kan**¹, Yoshiro Imura, Ke-hsuan Wang, Takeshi Kawai

PT06-40 High-sensitivity Raman spectroscopy with Ag nanoparticle aggregation controlled by freezing (1. Department of Chemistry, Tokyo Institute of Technology (Japan)) ***Yu Fukunaga**¹, Makoto Harada¹, Tetsuo Okada¹

PT06-41 Synthesis of poly (methyl methacrylate)/polystyrene composite particles by soap-free seeded emulsion polymerization using a water-in-oil slug flow in a microchannel (1. Department of Applied Chemistry, Graduate School of Natural Science and Technology, Okayama University (Japan)) ***Kengo Karita**¹, Takaichi Watanabe¹, Tsutomu Ono¹

PT06-42 Titanium dioxide nanorod liquid crystals (1. Soft Condensed Matter, Debye Institute for Nanomaterials Science, Utrecht University (Netherlands)) ***Syednaveed Hosseininohoji**¹, Arnout Imhof¹, Patrick Baesjou¹, Alfons van Blaaderen¹

PT06-43 Application of a Method for Producing Gold Nanoparticles Using a Pyroelectric Crystal to Production of Sample Holders for Surface-Enhanced Raman Spectroscopy (1. Tokyo University of Science (Japan)) ***Saaya Ohashi**¹, Shinsuke Kunimura¹

PT06-44 Patterning of Ag Nanoparticles into Polystyrene Thin Films by Colloidal Lithography (1. Tokyo University of Science (Japan)) ***Yoshihiro Sone**¹, Yoshiro Imura¹, Ke-Hsuan Wang¹, Takeshi Kawai¹

PT06-45 Patterning of Polystyrene Thin Films by Colloidal Lithography and Their Chiral Optical Properties (1. Tokyo University of Science (Japan)) ***Rino Kaneko**¹, Yoshiro Imura¹, Ke-Hsuan Wang¹, Takeshi Kawai¹

PT06-46 Size Control and Catalytic Performance of Gold Nanoflowers Supported on Alumina (1. Tokyo University of Science (Japan)) ***Motoki Maniwa**¹, Yoshiro Imura¹, Ke-hsuan Wang¹, Takeshi Kawai¹

PT06-47 Characterization for Structural Transformation Behavior of Interpenetrated Metal-Organic Frameworks Formed on a Polymer Substrate (1. Faculty of Frontiers of Innovative Research in Science and Technology (FIRST), Konan University (Japan)) ***Shoya Hirao**¹, Yohei Takashima¹, Kensuke Akamatsu¹, Takaaki Tsuruoka¹

PT06-48 Correlation between Hypsochromic Behavior of Carotenoids Nanoparticles and a Strain of their Molecules (1. Research Center for Bioscience and Nanoscience, Japan Agency for Marine-Earth Science and Technology (JAMSTEC)(Japan), 2. Institute of Multidisciplinary Research for Advanced Materials (IMRAM), Tohoku University (Japan), 3. Division of Material Science, Nara Institute of Science and Technology (NAIST)(Japan)) ***Ryuju Suzuki**^{1,2}, Kazuma Yasuhara³, Shigeru Deguchi¹

PT06-49 Syntheses and Catalytic Properties of Pd Nanoparticles and Organic Polymers inside MOF (1. Konan University (Japan)) ***Seiko Tetsusashi**¹, Yohei Takashima¹, Takaaki Tsuruoka¹, Kensuke Akamatsu¹

PT06-50 Systematic Evaluation on the Structural Transformation Properties of Al-based Metal-Organic Frameworks (1. Frontiers of Innovative Research in Science and Technology (FIRST), Konan University (Japan)) ***Atsuto**

Horikoshi¹, Yohei Takashima¹, Takaaki Tsuruoka¹, Kensuke Akamatsu¹

PT06-51 One-pot synthesis of non-spherical iron oxide nanoparticles via thermal decomposition (1. Graduate School of Interdisciplinary New Science, Toyo University (Japan), 2. Bio-Nano Electronics Research Centre, Toyo University (Japan)) ***Arisu Noto**¹, Toru Maekawa^{1,2}, Tomofumi Ukai^{1,2}

PT06-52 Charging and aggregation behaviors of oxidized carbon nanohorn (CNHox) in aqueous solution (1. Graduate School of Life and Environmental Sciences, University of Tsukuba (Japan), 2. Faculty of Life and Environmental Sciences, University of Tsukuba (Japan)) ***Kiyono Omija**¹, Motoyoshi Kobayashi²

PT06-53 Synthesis and directed self-assembly of monodisperse hematite silica rods using hematite ellipsoids as seed particles (1. Utrecht University (Netherlands)) ***Rama Kotni**¹, Alfons van Blaaderen¹

PT06-54 Improving Catalytic Activity of Alumina-supported Gold Nanoflowers by UV-Ozone Treatment (1. Tokyo University of Science (Japan)) ***Haruna Saito**¹, Yoshiro Imura¹, Ke-hsuan Wang¹, Takeshi Kawai¹

PT06-55 Fabrication of polymer micro/nano-discs with various aspect ratio controlled by stretching method via polymer phase separation (1. Course of Science and Technology, Graduate School of Science and Technology, Tokai University (Japan), 2. Micro/Nano Technology Center, Tokai University (Japan)) ***Waranyou Tuntanatewin**¹, Hong Zhang^{1,2}, Yosuke Okamura^{1,2}

PT06-56 Precise size separation of cadmium chalcogenide clusters by electrophoresis (1. Kyoto University, Institute for Chemical Research (Japan)) ***Ryo Takahata**¹, Masaki Saruyama¹, Masanori Sakamoto¹, Toshiharu Teranishi¹

PT06-57 A Three-Component Plasmonic Photocatalyst Consisting of Gold Nanoparticle, SnO₂ Nanorod and Rutile TiO₂ (1. Graduated school of Engineering, Kindai University (Japan), 2. Environmental Research Laboratory, Kindai University (Japan), 3. Kyoto Institute of Technology (Japan)) ***Kenta Awa**¹, Ryo Akashi¹, Atsunobu Akita¹, Shin-ichi Naya², Hisayoshi Kobayashi³, Hiroaki Tada^{1,2}

PT06-58 Precise Synthesis of Ultrafine Biicosahedral Au₂₄Pd Cluster and Their Catalytic CO Oxidation Activity (1. Graduate School of Science, Tokyo University of Science (Japan), 2. Technische Universität Wien (Austria)) ***Yukari Imai**¹, Sakiat Hossain¹, Daiki Suzuki¹, Tokuhisa Kawawaki¹, Noelia Barrabés², Yuichi Negishi¹

PT06-59 Functionalization of diamond nanoparticles using of photocatalytic reaction (1. Dept. of Pure and Applied Chemistry, Tokyo Univ. of Sci. (Japan), 2. Photocatalysis International Research Center, Tokyo Univ. of Sci. (Japan)) ***Kazuki Kato**^{1,2}, Chiaki Terashima², Norihiro Suzuki², Takeshi Kondo^{1,2}, Makoto Yuasa^{1,2}, Akira Fujishima²

PT06-60 Versatile Conjugation of Proteins on Multifunctional Magnetic-Plasmonic Hybrid Nanoparticles for Organelle Targeting (1. Japan Advanced Institute of Science and Technology (Japan), 2. Tohoku University (Japan)) ***Mari Takahashi**¹, Youren Wang¹, Kazuaki Matsumura¹, Tomohiko Taguchi², Shinya Maenosono¹

PT06-61 Solvent composition effect on mesopores formed in the formation of spherical silica particles (1. Tohoku University (Japan), 2. Yamaguchi University (Japan)) ***kota Fujimoto**¹, Shunho Ishikawa¹, Kanako Watanabe¹, Haruyuki Ishii², Daisuke Nagao¹

PT06-62 Chemical Synthesis of Co-Sb-S Nanoparticles and Fabrication of Nanostructured N-type CoSbS Thermoelectric Materials (1. Japan Advanced Institute of Science and Technology (Japan), 2. National Institute of Advanced Industrial Science and Technology (Japan), 3. Nippon Shokubai Co. Ltd. (Japan)) ***Shujie Fei**¹, Pratibha Dwivedi¹, Masanobu Miyata¹, Michihiro Ohta², Takeo Akatsuka³, Shinya Maenosono¹

PT06-63 Tuning of the assembly temperature of thermo-responsive gold nanoparticles via change in mixing ratio of surface ligands (1. Hokkaido University (Japan), 2. Research Institute for Electronic Science, Hokkaido University (Japan), 3. Global Institution for Collaborative Research and Education, Hokkaido University (Japan)) ***Yier Shi**¹, Hideyuki Mitomo^{2,3}, Yusuke Yonamine^{2,3}, Kuniharu Ijiro^{2,3}

PT06-64 Effect of polyethylene glycol induced depletion attraction on DNA-functionalized nanoparticle crystallization (1. Nagoya University (Japan), 2. Japan Synchrotron Radiation Research Institute (JASRI)(Japan), 3. Institute of Materials and Systems for Sustainability (IMaSS), Nagoya University (Japan)) ***Shoko Kojima**¹, Hayato Sumi¹, Noboru Ohta², Hiroshi Sekiguchi², Shunta Harada³, Toru Ujihara³, Miho Tagawa³

PT06-65 Loading of hydrophobic and hydrophilic drugs on magnetite-functionalized carbon nanohorns for combination therapy (1. National Taiwan University of Science and Technology (Taiwan)) ***Huang Yi-Shou Huang**¹

PT06-66 Nanoparticulation of gum ghatti (1. JAMSTEC(Japan), 2. San-Ei Gen F.F.I., Inc. (Japan)) ***Naoya Sagawa**¹, Noriyuki Isobe¹, Satoshi Okada¹, Keigo Kinoshita², Takeshi Miuchi², Masayuki Nishino², Shigeru Deguchi¹

PT06-67 Synthesis of polymer nanoparticle using gel and FMM (1. Nagoya university (Japan)) ***Shinya Ouchi**¹, Tetsuya Yamamoto¹, Naoki Yamada¹

PT06-68 First Synthesis of Mille-Feuille FePd₃ Framework by the Introduction of a Third Element (1. Department of Chemistry, Graduate School of Science, Kyoto University (Japan), 2. Institute for Chemical Research, Kyoto University (Japan), 3. Center for Liberal Arts Education, Meio University (Japan)) ***Kenshi Matsumoto**¹, Ryota Sato², Yasutomi Tatetsu³, Toshiharu Teranishi²

PT06-69 Circularly Polarized Luminescence Film of AgInS₂ Nanocrystals Hybridized with Cholesteric Liquid Crystals (1. Department of Chemistry, Graduate School of Science, Tokyo University of Science (Japan)) ***Mami Furukawa**¹, Takuya Yamane¹, Masashi Fukawa¹, Kenta Koyama¹, Yusuke Shoji¹, Tatsuya Miyazaki¹, Ruri Aoki¹, Akane Kawaguchi¹, Kenichiro Hayata¹, Seiichi Furumi¹

PT06-70 Water-soluble InP/ZnS Nanocrystals for Application to Nanocomposite Luminescent Devices (1. Department of Chemistry, Graduate School of Science, Tokyo University of Science (Japan)) ***Tatsuya Miyazaki**¹, Kenta Koyama¹, Takuya Yamane¹, Mami Furukawa¹, Takeru Koike¹, Seiichi Furumi¹

PT06-71 Fabrication of biocompatible shape memory particles and their shape control (1. Graduate School of Engineering, Tokai University (Japan), 2. Micro/Nano Technology Center, Tokai University (Japan)) ***Akira Tokui**¹, Kazuki Nagashima¹, Yosuke Okamura^{1,2}

PT06-72 Nanoparticles Composed of Tannic Acid and Metal Ion Network (1. Meiji University (Japan), 2. University of New South Wales (Australia), 3. The University of Melbourne (Australia)) ***Noritaka Kato**¹, Md. Arifur Rahim², Frank Caruso³

PT06-73 pH-induced reversible orientation change of gold nanorods immobilized on a DNA-modified substrate (1. Hokkaido university (Japan), 2. Research Institute for Electronic Science, Hokkaido University (Japan), 3. Global Institution for Collaborative Research and Education, Hokkaido University (Japan), 4. National Institute of Advanced Industrial Science and Technology (AIST)(Japan)) ***Yu Sekizawa**¹, Hideyuki Mitomo^{2,3}, Satoshi Nakamura⁴, Yusuke Yonamine^{2,3}, Atsushi Hozumi⁴, Kuniharu Ijiro^{2,3}

PT06-74 The relation between SERS intensity and nanoparticle structure changing with time (1. Chiba University (Japan), 2. Utsunomiya University (Japan), 3. Okayama University (Japan)) ***Yuki Ogawa**¹, Nobuo Uehara², Tomonari Sumi³, Takeshi Morita¹

PT06-75 Synthesis of Carbon Hollow Particles by Template Free Method (1. Department of Materials Design Innovation Engineering, Nagoya University (Japan)) ***Yusuke Kawai**¹, Tetsuya Yamamoto¹

PT06-76 Chemical Synthesis of Cu-Fe-S nanoparticles towards Sustainable N-type Thermoelectric Materials (1. Japan Advanced Institute of Science and Technology (Japan), 2. Res. Inst. Energy Conservation, Nat. Inst. Adv. Ind. Sci. Tech. (Japan), 3. Nippon Shokubai, Co., Ltd. (Japan)) ***Kimihiko Numano**¹, Maninder Singh¹, Pratibha Dwivedi¹, Michihiro Ohta², Hiroshi Takida³, Takeo Akatsuka³, Shinya Maenosono¹

PT06-77 Preparation of silica hollow particles using bubble templating method (1. Faculty of Science and Technology, Tokyo University of Science (Japan), 2. Research Institute for Science and Technology, Tokyo University of Science, Japan (Japan)) ***Kazuta Hirata**¹, Koji Tsuchiya², Masaaki Akamatsu¹, Kenichi Sakai^{1,2}, Hideki Sakai^{1,2}

PT06-78 Fabrication and characterization of multilayered nanosheets loaded fluorescent dye-encapsulated liposomes (1. Graduate School of Engineering, Tokai University (Japan), 2. Micro/Nano Technology Center, Tokai University (Japan)) ***Anutida Pocharoen**¹, Waranyou Tuntanatewin¹, Yosuke Okamura^{1,2}

PT06-79 Development of NIR Light-Responsive Plasmonic Copper Nanomaterials and Usability as a Photothermal Therapy Agent (1. Graduate School of Science and Technology, Nihon University (Japan)) ***Arisa Suzuki**¹, Kosuke Sugawa¹, Joe Otsuki¹

PT06-80 pH Dependence of Snowflake Gold Nanoparticles Prepared by Gallic Acid Reduction (1. Graduate school of Engineering, Okayama University of Science (Japan), 2. Faculty of Engineering, Okayama University of Science (Japan)) ***Hiroki Muraai**¹, Tatsuya Obata², Makoto Takezaki^{1,2}

PT06-81 Synthesis of nanoclusters of Pd and Au-Pd alloys and their catalytic activity (1. Graduate School of Science and Technology, Nihon University (Japan)) ***Yuhei Yamakawa**¹, Kosuke Sugawa¹, Joe Otsuki¹

PT06-82 Synthesis and Crystallization of Cationic Building Blocks Based on Pyridine-Coordinated Octahedral Molybdenum Cluster (1. Tokyo University of Science (Japan)) ***Shumpei Kawamoto**¹, Norio Saito¹, Yukishige Kondo¹

PT06-83 Size-Selective Preparation of Au:Chitosan Nanoclusters (1. Osaka University (Japan)) ***Nazgul Zhaxembayeva**¹, Yuka Motohashi¹, Yuta Uetake¹, Yumi Yakiyama¹, Hidehiro Sakurai¹

PT06-84 Photoelectric conversion properties of Mie resonances-responsive FeS₂ nanocrystals (1. Graduate School of Science and Technology, Nihon University (Japan)) ***Jun Yokoyama**¹, Kosuke Sugawa¹, Joe Otsuki¹

PT06-85 Mie resonance-responsive Cu₂O nanocrystals for intracellular nanoparticle imaging (1. Graduate School of Science and Technology, Nihon University (Japan), 2. Tokyo Medical and Dental University (Japan)) ***Miu Danno**¹, Kotomi Kanakubo¹, Tsuyoshi Kimura², Kosuke Sugawa¹, Joe Otsuki¹

PT06-86 Delayed Dual-luminescent Nanothermometer Utilizing Triplet-Triplet Annihilation-Based Upconversion Mechanism (1. Graduate School of Science and Technology, Nihon University (Japan), 2. Collage of Science and Technology, Nihon University (Japan)) ***Satoshi Yoshinari**¹, Naoto Takeshima¹, Shota Jin¹, Kosuke Sugawa², Joe Otsuki²

PT06-87 Stabilizer-free synthesis of anisotropic magnetite nanoparticles templated by magnetic field for use in magnetic polymer nanocomposites (1. Lomonosov Moscow State University (Russia), 2. REC "Functional Nanomaterials", Immanuel Kant Baltic Federal University (Russia), 3. National Research Centre "Kurchatov Institute" (Russia), 4. Institute of Polymer Science, Ulm University (Germany)) ***Andrey Shibaev**¹, Darya Kessel¹, Petr Shvets², Roman Kamyshinsky³, Anton Orekhov³, Alexei Khokhlov⁴, Olga Philippova¹

PT06-88 Effects of Surface Modifying Molecules on Solution Structure of Functionalized Gold Nanoparticles (1. Shinshu University (Japan), 2. Utsunomiya University (Japan)) ***Minamo Matsuoka**¹, Yuma Mizuma², Yuto Hatakeyama², Eri Nasuno², Norihiro Kato², Ken-ichi Iimura², Takaaki Sato¹

[T7] Wetting and Adhesion

PT07-01 Monofunctional Dual Stimuli-Responsive Organogels: Thermo- and Photo-Responsive Behavior of Coumarin Polymer-Based Organogel (1. Osaka City University (Japan)) ***Seidai Okada**¹, Eriko Sato¹, Yuta Koda¹, Hideo Horibe¹

PT07-02 Liquid Marble Metabolizes Wetting Defects in Superhydrophobic Coatings (1. National Institute for Materials Science (Japan)) ***Mizuki Tenjimbayashi**¹, Sadaki Samitsu¹, Masanobu Naito¹

PT07-03 Behavior of Air Bubbles and Liquid Droplets on Surface Microstructures in Liquid Media (1. Graduate School of Engineering, Nagoya Institute of Technology (Japan)) ***Maria Inukai**¹, Daisuke Ishii¹

PT07-04 Anomalous Slow Hydration Kinetics of a Hydrophobic Self-Assembled Monolayer in Water (1. The University of Tokyo. (Japan), 2. Zhejiang University (China), 3. RIKEN Center for Emergent Matter Science (Japan)) ***Tengfei Fu**¹, Xing Hao^{2,1}, Eric Silver¹, Shuo Chen¹, Yoshimitsu Itoh¹, Takuzo Aida^{1,3}

PT07-05 Photopatterned chemical surfaces: Impact of regional wettability and patterning sizes on overall dynamic wettability (1. National Institute of Advanced Industrial Science and Technology (AIST)(Japan), 2. Queen's University (Canada)) ***Brandon Becher Nienhaus**^{1,2}, Guojun Liu², Atsushi Hozumi¹

PT07-06 Adhesions between Polyimide Films and Titanium Plates Modified with Silane Coupling Agents and Carboxylic Acid Chlorides (1. Tokyo University of Science (Japan)) ***Tatsuyuki Abe**¹, Yusuke Yataka¹, Kazutoshi Iijima¹, Mineo Hashizume¹

PT07-07 Tuning Surface Chemistry for Configurable Super Liquid Repellency of High-to-Low Surface Tension Liquids

(1. Max Planck Institute for Polymer Research (Germany), 2. The Australian National University (Australia)) ***William S. Y. Wong**^{1,2}

PT07-08 Improvement of adhesion durability of stainless steel in water by surface treatment with silane coupling agent (1. Dept., of Pure and Applied Chemistry, Tokyo Univ. of Sci. (Japan), 2. RIST., Tokyo Univ. of Sci. (Japan)) ***Satsuki Ozawa**¹, Yuya Oki¹, Yusuke Misawa¹, Hidetoshi Yamabe¹, Toshifumi Tojo¹, Takeshi Kondo^{1,2}, Makoto Yuasa^{1,2}

PT07-09 Preparation and wettability evaluation of thermoresponsive crosslinked polymer thin films (1. Graduate School of Engineering, Nagoya Institute of Technology (Japan)) ***Rin Kadowaki**¹, Daisuke Ishii¹

PT07-10 Improvement of adhesion durability of stainless steel in water by surface treatment with phosphoric acid monomer solution (1. Dept., of Pure and Applied Chemistry, Tokyo Univ. of Sci. (Japan), 2. RIST., Tokyo Univ. of Sci. (Japan)) ***Yuya Oki**¹, Yusuke Misawa¹, Satsuki Ozawa¹, Hidetoshi Yamabe¹, Toshifumi Tojo¹, Takeshi Kondo^{1,2}, Makoto Yuasa^{1,2}

PT07-11 Characteristic Liquid Movement Due to Hair Cuticle Structure (1. Nagoya Institute of Technology (Japan)) ***Nozomi Ito**¹, Shingo Ito¹, Daisuke Ishii¹

PT07-12 Improvement of wet adhesion of stainless steel by poly (acrylic acid) treatment (1. Dept., of Pure and Applied Chemistry, Tokyo Univ. of Sci. (Japan), 2. RIST., Tokyo Univ. of Sci. (Japan)) ***Yusuke Misawa**¹, Yuya Oki¹, Satsuki Ozawa¹, Hidetoshi Yamabe¹, Toshifumi Tojo¹, Takeshi Kondo^{1,2}, Makoto Yuasa^{1,2}

PT07-13 Antifouling coatings of cross-linked PVA against marine sessile organisms (1. Graduate school of Photonics Science, Chitose Institute of Science and Technology (Japan), 2. Asahikawa Medical University (Japan), 3. Central Research Institute of Electric Power Industry (Japan)) ***Ai Momose**¹, Takayuki Murosaki², Yuji Hirai¹, Yasuyuki Nogata³, Masatsugu Shimomura¹

PT07-14 Solid-Liquid Interface Structure; Wettability of Sodium Halide Solutions (1. Kogakuin University (Japan)) ***Ibuki Shibagaki**¹, Naoya Yoshida¹, Toshinori Okura¹

PT07-15 Is the wetting transition inevitable near the critical endpoint and tricritical point? (1. Okayama University (Japan), 2. KU Leuven (Belgium)) ***Kenichiro Koga**¹, Joseph O Indekeu²

PT07-16 Evaluation of Friction Coefficient of Starch Gel on Solid Surface (1. Kogakuin University (Japan)) ***Naoya Yoshida**¹, Kazunori Inudo¹, Toshinori Okura¹

PT07-17 Preparation of Pickering emulsion containing triglyceride (1. Mitsubishi Chemical Corporation (Japan)) ***Minako Hanasaki**¹

[T8] Solid Surfaces -Adsorption, Catalysis, Tribology and Electrochemistry

PT08-01 Anomalous Friction Dynamics between Agar Gels under Accelerated Motion (1. Yamagata University (Japan), 2. Asahikawa Medical University (Japan)) Koki Shinomiya¹, Hiroyuki Mayama², ***Yoshimune Nonomura**¹

PT08-02 Precise Characterization of Electric Double Layer of Electrode Using Electrochemical Surface Forces Apparatus (1. IMRAM, Tohoku University (Japan), 2. NICHe, Tohoku University (Japan)) ***Motihoro Kasuya**¹, Kazue Kurihara²

PT08-03 Synthesis of Nanoporous Inorganic Materials by Using MOFs (1. Tokyo University of Agriculture and

Technology (Japan)) ***Atsushi Kondo**¹, Daisuke Abe¹, Kazuyuki Maeda¹

PT08-04 Development of novel Hg-free microwave discharged electrodeless lamp and evaluation by sterilization of *E. coli* (1. Sophia University (Japan)) ***Upile Chitete**¹, Satoshi Horikoshi¹

PT08-05 Kinetics and Dynamics of Metal Ions Sorption on Monolith Polyethyleneimine-Based Porous Sorbents (1. Institute of Chemistry, Far Eastern Branch of RAS (Russia)) ***Irina Malakhova**¹, Alexey Golikov¹, Yulia Azarova¹, Svetlana Bratskaya¹

PT08-06 Synthesis of ZnGa₂O₄ with a high affinity for CO₂ via epoxide-mediated alkalization towards photocatalytic conversion of CO₂ with H₂O (1. Osaka Prefecture University (Japan), 2. Kyoto University (Japan)) ***Masanori Takemoto**¹, Yasuaki Tokudome¹, Kentaro Teramura², Souichi Kikkawa², Tsunehiro Tanaka², Hidenobu Murata¹, Atsushi Nakahira¹, Kenji Okada¹, Masahide Takahashi¹

PT08-07 Enhancement of Raman Scattering at Lossy Platinum Surfaces using Long-Range Surface Plasmon Excitation (1. Nagoya Institute of Technology (Japan)) ***Soma Ikegaya**¹, Kenta Motobayashi¹, Katsuyoshi Ikeda¹

PT08-08 Aqueous phase adsorption of trimethylamine on oxidized activated carbon and three different MOFs (1. University of Gothenburg (Sweden), 2. Essity Hygiene and Health AB (Sweden)) ***Isabelle Simonsson**¹, Philip Gärdhagen¹, Frida Ryttsén², Zareen Abbas¹

PT08-09 In-situ Observation of Li⁺ Desolvation Behavior at Solvate Ionic Liquid/Electrode Interfaces (1. Nagoya institute of technology (Japan)) ***Kosuke Matsumoto**¹, Katsuyoshi Ikeda¹, Kenta Motobayashi¹

PT08-10 Investigation of Methylamine at Aqueous Surfaces by Computer Simulation Methods (1. Budapest University of Technology and Economics (Hungary), 2. Université Bourgogne Franche-Comté (France), 3. University of Miskolc (Hungary), 4. Eszterházy Károly University (Hungary), 5. University of Vienna (Austria)) ***Reka Anna Horvath**¹, Balázs Fábián¹, Sylvain Picaud², György Hantal⁵, Milán Szöri³, Pál Jedlovský⁴

PT08-11 Suppression Effect on Electrodeposition, Induced by Adsorption of Cationic Surfactants (1. Faculty of Science and Technology, Tokyo University of Science (Japan), 2. Mitsubishi Materials Company, Limited. (Japan), 3. Research Institute for Science and Technology, Tokyo University of Science (Japan)) ***Takahiro Fukui**¹, Yoshie Tarutani², Kenji Kubota², Kiyotaka Nakaya², Masaaki Akamatsu¹, Kenichi Sakai^{1,3}, Hideki Sakai^{1,3}

PT08-12 Co₂C Nanoparticles Supported on Carbon as a Durable Electrode Catalyst for Oxygen Reduction Reaction (1. Institute of Multidisciplinary Research for Advanced Materials, Tohoku University (Japan)) ***Atsushi Neya**¹, Kanae Endo¹, Masafumi Nakaya¹, Mizuho Yabushita¹, Sachiko Maki¹, Kiyoshi Kanie¹, Atsushi Muramatsu¹

PT08-13 Synthesis of [Ga]-MFI via Mechanochemical Treatment and Its Activity for Methane Transformation (1. Institute of Multidisciplinary Research for Advanced Materials, Tohoku University (Japan), 2. Institute of Innovative Research, Tokyo Institute of Technology (Japan), 3. JST-CREST (Japan)) ***Motohiro Yoshida**¹, Fumiya Muto¹, Mami Horie¹, Yusuke Kunitake², Mizuho Yabushita¹, Sachiko Maki¹, Kiyoshi Kanie¹, Toshiyuki Yokoi², Atsushi Muramatsu^{1,3}

PT08-14 Highly efficient overall water splitting in acid with metal nanosheets (1. Kyoto university (Japan), 2. Kyushu University (Japan), 3. National Institute for Materials Science (Japan), 4. Japan Synchrotron Radiation Research Institute (JASRI), SPring-8(Japan), 5. Osaka Prefecture University (Japan)) ***Dongshuang Wu**¹, Kohei Kusada¹, Satoru Yoshioka², Tomokazu Yamamoto², Takaaki Toriyama², Syo Matsumura², Yanna Chen³, Osami Sakata³, Toshiaki Ina⁴, Shogo Kawaguchi⁴, Yoshiki Kubota⁵, Hiroshi Kitagawa¹

PT08-15 Verification of Pore Size Evaluation by Nitrogen Adsorption and Thermoporometry using Model Pores (1. Tokyo Metropolitan University (Japan)) ***Takashi Takei**¹, Masaya Otuka¹, Ryosuke Miyasaka¹, Takashi Yanagishita¹, Hideki Masuda¹

PT08-16 Adsorption hysteresis of nitrogen in fluorinated micropores (1. Faculty of Textile Science and Technology, Shinshu University (Japan), 2. Research Initiative for Supra-materials, Shinshu University (Japan)) ***Hironori Sugiyama**¹, Yoshiyuki Hattori^{1,2}

PT08-17 Investigation of pore structure of activated carbon prepared by different activation methods using temperature variable ¹²⁹Xe-NMR technique (1. Interdisciplinary Graduate School of Engineering Science, Kyushu University (Japan), 2. Institute of Materials Chemistry and Engineering, Kyushu University (Japan)) ***Kohei Kuroda**¹, Tatsuya Tomoda¹, Keiko Ideta², Koji Nakabayashi^{1,2}, Seng-Ho Yoon^{1,2}, Jin Miyawaki^{1,2}

PT08-18 Shear Velocity and Gap Dependencies of Lubrication by Nano-confined OMCTS (1. New Industry Creation Hatchery Center, Tohoku University (Japan), 2. Institute of Multidisciplinary Research for Advanced Materials, Tohoku University (Japan)) ***Yuuta Shibuya**¹, Masashi Mizukami², Kazue Kurihara¹

PT08-19 Control of structure and molecular selectivity of carbon nanospace by introducing hydrophobic molecules (1. Shinshu University (Japan)) ***Yuuki Ishihara**¹, Minoru Deguchi¹, Ryusuke Futamura¹, Taku Iiyama¹

PT08-20 The strategy for preparing molecular-modified Graphene on foreign metal substrate (1. Graduate School of Environmental Science, Hokkaido University (Japan), 2. Faculty of Environmental Earth Science, Hokkaido University (Japan), 3. Japan Atomic Energy Agency (Japan)) ***Keisuke H. Nishiyama**¹, Rina Tsurugai¹, Shun Tanno¹, Masaru Kato^{1,2}, Satoshi Yasuda³, Kazuhisa Tamura³, Ichizo Yagi^{1,2}

PT08-21 Elucidation of the polar molecules structure in nanospace (1. Shinshu University (Japan)) ***Shoichi Tonegawa**¹, Ryusuke Futamura¹, Taku Iiyama¹

PT08-22 Study on the Solid Conversion of Silane-modified Silica into Zeolite Coating on Aluminum Alloy and Its Anti-corrosion Property (1. Department of Applied Chemistry, National University of Kaohsiung (Taiwan), 2. Hawing GemS Technology Corporation (Taiwan)) Lin-Yi Huang¹, Shang-Tien Tsai¹, Wen-Chyuan Chang², Pei-Hsiun Chao², ***Tseng-Chang Tsai**¹

PT08-23 Adsorption Behavior and Nanotribological Property of Sodium Carboxylates Having Different Chain Structures in Water (1. Doshisha University (Japan), 2. Kyoto University (Japan), 3. JST Presto. (Japan), 4. Idemitsu Kosan Co., Ltd. (Japan)) ***Ryohei Okada**¹, Tomoko Hirayama^{2,3}, Takashi Matsuoka¹, Hidetoshi Sakamoto¹, Keiji Asada⁴, Hideto Kamimura⁴

PT08-24 Design of Polymer Gels with Photo-responsive Metal Organic Frameworks That Regulate Gas Release (1. Department of Chemistry and Materials Engineering, Kansai

University (Japan), 2. ORDIST, Kansai University (Japan)) ***Keita Tsubakimoto**¹, Akifumi Middle Kawamura^{1,2}, Takashi Middle Miyata^{1,2}

PT08-25 Magnetic Ionic Liquids in Carbon Nanospaces (1. Shinshu University (Japan)) ***Ryusuke Futamura**¹, Yuma Takasaki¹, Taku Iiyama¹

PT08-26 Nanotribological properties and molecular structure of oil-based agents in lubricating oils (1. Doshisha University (Japan), 2. Kobe Steel, Ltd. (Japan)) ***Yukiko Onishi**¹, Takashi Matsuoka¹, Hidetoshi Sakamoto¹, Hironobu Nakanishi²

PT08-27 Influence of probe hardness in microstructure friction measurements (1. Grad., Chitose Ins. of Sci. and Tech. (Japan)) ***Masanaru Nosaka**¹, Yuji Hirai¹, Masatsugu Shimomura¹

PT08-28 The low friction shape-memory micro spikes vulcanized rubber (1. Graduate school of Photonics Science, Chitose Institute of Science and Technology (Japan), 2. RIES, Hokkaido University (Japan), 3. R&D Center, The Yokohama Rubber Co., Ltd. (Japan), 4. IMRAM, Tohoku University (Japan)) ***Shun Uemura**¹, Yuji Hirai¹, Yasutaka Matsuo², Takahiro Okamoto³, Toshihiko Arita⁴, Masatsugu Shimomura¹

PT08-29 Grazing Incidence X-ray Fluorescence Analysis Using Weak White X-rays (1. Tokyo University of Science (Japan)) ***Masato Kimura**¹, Shinsuke Kunimura¹

PT08-30 Selective O₂ sorption based on a gate phenomenon of ELM-11 (1. Chiba University (Japan), 2. Nippon Steel Corporation (Japan)) ***Ryoichi Koyama**¹, Hiroshi Kajiro², Hirofumi Kanoh¹

PT08-31 Halide effects on the formation of gold micro- and nanostructures (1. Tokyo University of Science (Japan)) ***Siyang Cui**¹, Ke-Hsuan Wang¹, Yoshiro Imura¹, Takeshi Kawai¹

PT08-32 Gap mode induced photocatalytic reaction of p-methyl thiophenol and related molecules (1. Graduate School of Saitama University (Japan)) ***Kanae Tabei**¹, Keitaro Akai, Masayuki Futamata¹

PT08-33 Effect of External Electric Field on the Charging of the Graphite-PVdF Composite Powders in the Electrostatic Screen Printing System (1. Toyota central R&D Labs., Inc. (Japan)) ***Ayaka Yonaga**¹, Takuro Matsunaga¹, Masaaki Tani¹, Hiroshi Nakamura¹

PT08-34 O₂ adsorption by Nanostructured Magnetite-Carbon composite (1. Chiba University (Japan)) ***Yuto Hirano**¹, Hirofumi Kanoh¹

PT08-35 Pore size control of porous carbon particles coated with polymer by electron beam graft polymerization (1. Dept. of Pure and Applied Chemistry, Tokyo Univ. of Sci. (Japan), 2. Sumitomo Metal Mining Co., Ltd. (Japan), 3. RIST, Tokyo Univ. of Sci. (Japan)) ***Ryo Suzuki**¹, Toshifumi Tojo¹, Tatsuo Aikawa², Isao Shitanda^{1,3}, Takeshi Kondo^{1,3}, Makoto Yuasa^{1,3}

PT08-36 Surface Treatment Using Discharge Plasma Induced by a Pyroelectric Crystal (1. Tokyo University of Science (Japan)) ***Sosuke Hamada**¹, Shinsuke Kunimura¹

PT08-37 A hybrid photocatalyst consisting of monoclinic bismuth vanadate and bis (acetylacetonato)copper(II) complex for hydrogen peroxide synthesis (1. Graduate School of Science and Engineering, Kindai University (Japan), 2. Environmental Research Laboratory, Kindai University (Japan), 3. Faculty of Science and Engineering, Kindai University (Japan), 4. Kyoto Institute of Technology (Japan))

***Takeshi Kunimoto**¹, Miwako Teranishi², Shin-ichi Naya², Hisayoshi Kobayashi⁴, Musashi Fujishima³, Hiroaki Tada^{1,2,3}

PT08-38 Preparation of Size Controlled Platinum Clusters Catalysts Aiming for Automotive Exhaust Gas Purification (1. Tokyo University of Science (Japan), 2. Johnson Matthey Japan (Japan)) ***Nobuyuki Shimizu**¹, Kanako Funai¹, Ryo Kaneko¹, Wataru Kurashige², Tokuhisa Kawawaki¹, Shuhei Nagaoka², Yuichi Negishi¹

PT08-39 Toward High Sensitive Dopamine Detection by Integrating Surface-Enhanced Raman Scattering (SERS) Spectroscopy with Electrochemical Approach (1. Department of Materials Science and Engineering, National Taiwan University (Taiwan)) ***Shu Yun Hsiao**¹, Shyh Chyang Lou¹

PT08-40 Preparation and characterization of magnetic nanostructured silicon (1. Chiba University (Japan)) ***Mizuki Inoue**¹, Hirofumi Kanoh¹

PT08-41 Oxygen Evolution Catalyzed by Iron Oxyhydroxide Micro/Nanostructured film (1. Tokyo Univ. of Sci. (Japan)) ***Genta Watanabe**¹, KeHsuan Wang¹, Yoshiro Imura¹, Takeshi Kawai¹

PT08-42 Molecular Mechanisms of Functional Polymer Binders at the Electrolyte-Cathode Interface within Lithium Ion Battery (1. National Cheng Kung University (Taiwan)) ***Chan-En Fang**¹

PT08-43 From Lying Chain Molecules into Nanoflatcables. Transformation in Physisorbed Monolayers on Graphite (0001) (1. Tokyo University of Agriculture and Technology (Japan), 2. Kitasato University (Japan)) ***Hayato Sanada**¹, Yuichiro Asoma¹, Hiroyuki Ozaki¹, Masashi Hasegawa²

[T9] Biocolloids, Biomaterials, Biointerfaces and Biomimetics

PT09-01 Nanogels of Zwitterionic Polymer-Conjugated Potently Inhibit Amyloid β -Protein Fibrillogenesis (1. Tianjin University (China)) Guangfu Zhao¹, Fengjuan Qi¹, Yan Sun¹, ***Xiaoyan Dong**¹

PT09-02 Study on nanoimprint technology of plant structure with super water repellent structure (1. Litho Tech Japan Corporation (Japan), 2. Ritsumeikan University (Japan)) ***Atsushi Sekiguchi**¹, Tomoki Nishino², Hiroshi Tanigawa²

PT09-03 Superhydrophobic surface mimicking the surface structures of termite wing showing dual wettability (1. Ryukoku University (Japan), 2. Asahikawa Medical University (Japan), 3. Tokyo University of Pharmacy and Life Sciences (Japan), 4. RIKEN (Japan)) ***Ryo Nishimura**¹, Hiroyuki Mayama², Satoshi Yokojima^{3,4}, Shinichiro Nakamura⁴, Kingo Uchida¹

PT09-04 Organic-inorganic Hybrid Particles Made from Biodegradable Coacervate Droplets for Bone Tissue Engineering (1. Tokyo University of Science (Japan), 2. Osaka University (Japan)) ***Syuuhei Komatsu**¹, Shuhei Abe¹, Taka-Aki Asoh², Akihiko Kikuchi¹

PT09-05 Controlling nanomaterials and their interfaces for nanomedicine applications (1. Universite de Paris (France)) ***Jean-Francois Berret**¹

PT09-06 The Effect of Surface Potential on Specific and Nonspecific Interaction with Phosphorylcholine Groups (1. National Taiwan University (Taiwan)) ***Jhih Guang Wu**¹, Shyh Chyang Luo¹

PT09-07 Solid-State NMR as a Powerful Tool for the Characterization of Peptide Functionalized Silica-Nanochannels Mimicking Biological Hybrid Materials (1.

Technische Universität Darmstadt (Germany)) ***Martin Brodrecht**¹, Bharti Kumari¹, Hergen Breitzke¹, Torsten Gutmann¹, Gerd Buntkowsky¹

PT09-08 Enhanced Function of Chondrocytes in Degradable IPN gel by Accelerating Spatial Motility of Chemically Conjugated Growth Factor via PEG Linker in Hydrogel (1. Graduate School of Science, Tokyo University of Science (Japan), 2. Faculty of Engineering, Yokohama National University (Japan), 3. Faculty of Science, Tokyo University of Science (Japan), 4. National Institute of Technology, Oyama College (Japan), 5. Water Frontier Science and Technology Research Center, Research Institute for Science and Technology, Tokyo University of Science (Japan)) ***Shohei Ishikawa**¹, Hiro Yamaguchi¹, Kazutoshi Iijima², Shigehito Osawa³, Michihito Iijima⁴, Hidenori Otsuka^{1,3,5}

PT09-09 Hybrid Isotropic and Janus Particles with Immobilized Enzymes for Catalytic Applications (1. Leibniz Institute of Polymer Research Dresden, Functional Particles and Interfaces Group (Germany), 2. Institute of Physical Chemistry of Polymeric Materials, Dresden University of Technology (Germany), 3. Institute of Biochemistry, Dresden University of Technology (Germany), 4. Sächsisches Textilforschungsinstitut e.V.(Germany)) ***Claudia Marschelke**^{1,2}, Dorina Köpke³, Anke Matura³, Marco Sallat⁴, Alla Synytska^{1,2}

PT09-10 Optical properties of green lacewing wings with surface nanostructure (1. Yamagata University (Japan), 2. Aoyama Gakuin University (Japan), 3. Ritsumeikan University (Japan)) ***Kazunari Yoshida**¹, Leona Takahashi², Akito Takashima², Yasuhiro Fujii³, Izumi Nishio²

PT09-11 Morphological and Mechanical Characterization of Synthetic ECM to Suppress Cancer Metastasis (1. OIST (Japan)) Sona Roy¹, ***Sachie Yukawa**¹, William Cortes¹, Ryo Kanno¹, Ye Zhang¹

PT09-12 Micro-/Nanoscale structure of infant water strider (1. Osaka University (Japan), 2. Asahikawa Medical University (Japan)) ***Kaoru Uesugi**¹, Hiroyuki Mayama², Keisuke Morishima¹

PT09-13 Medical flow path sensor for dielectric measurement (1. College of Science and Engineering, Ritsumeikan University (Japan), 2. The Research Organization of Science and Technology, Ritsumeikan University (Japan), 3. AXIS NET INC(Japan), 4. Department of Chemistry, Asahikawa Medical University (Japan), 5. JR West Japan Consultants Company (Japan)) ***Ko Ishibashi**¹, Kouki Kawakami¹, Hiroshi Tanigawa², Takayoshi Ueda³, Hiroyuki Mayama⁴, Kenichi Kuribayashi⁵, Mizuho Okamoto⁵, Tomoki Nishino¹

PT09-14 Preparation of Cationic Gel Particles That Degrade under Reducing Environments (1. Department of Chemistry and Materials Engineering, Kansai University (Japan), 2. ORDIST, Kansai University (Japan)) ***Shun Fujisawa**¹, Akifumi Kawamura^{1,2}, Takashi Miyata^{1,2}

PT09-15 Basic Study of Measurement System for Particle-Mixed Solution Flowing in a Small Diameter Tube (1. College of Science and Engineering, Ritsumeikan University (Japan), 2. The Research Organization of Science and Technology, Ritsumeikan University (Japan), 3. AXIS NET INC.(Japan), 4. Department of Chemistry, Asahikawa Medical University (Japan), 5. JR West Japan Consultants Company (Japan)) ***Kouki Kawakami**¹, Ko Ishibashi¹, Hiroshi Tanigawa², Takayoshi Ueda³, Hiroyuki Mayama⁴, Kenichi Kuribayashi⁵, Mizuho Okamoto⁵, Tomoki Nishino¹

PT09-16 Effect of aqueous ethanol pre-treatment on rheological properties and secondary structure of milk whey

and dried egg white proteins (1. Junior College at Mishima, Nihon University (Japan)) ***Naoko Yuno-Ohta**¹, Aoi Saegusa¹, Manami Shinozaki¹, Mayumi Hoshiko¹, Emi Ohtake¹

PT09-17 Surface Enhanced Raman Scattering Nanoplatfoms for Ultra-sensitive Chemical and Biological Detections (1. National Cheng-Kung University (Taiwan)) ***Chih-Chia Huang**¹

PT09-18 Preparation of Hydroxyapatite Composite Materials Utilizing Peptides for Improving Osseointegration (1. Tokyo University of Science (Japan), 2. Keio University (Japan)) ***Shun Tanaka**¹, Yusuke Yataka¹, Kazutoshi Iijima¹, Teruhiko Matsubara², Toshinori Sato², Mineo Hashizume¹

PT09-19 Suppression of the Formation of Interdigitated Structure in Ether-Linked Phosphatidylcholine Bilayer by Cholesterol (1. Tokushima University (Japan)) ***Nobutake Tamai**¹, Takuya Izumikawa¹, Maiko Uemura¹, Masaki Goto¹, Hitoshi Matsuki¹

PT09-20 Preparation of Hydroxyapatite-Nonwoven Silica Fiber Composite Substrates and Their Effects on Mesenchymal Stem Cells as Bone-Like Scaffolds (1. Tokyo University of Science (Japan), 2. Yokohama National University (Japan)) ***Yasuyuki Okano**¹, Shohei Ishikawa¹, Kazutoshi Iijima², Yusuke Yataka¹, Hidenori Otsuka¹, Mineo Hashizume¹

PT09-21 Direct observation of protein in carbon nano test tube by TEM (1. National Institute of Advanced Industrial Science and Technology (Japan), 2. Neutron Science and Technology Center, Comprehensive Research Organization for Science and Society (CROSS)(Japan), 3. Institute of Multidisciplinary Research for Advanced Materials, Tohoku University (Japan)) ***Tracy T Chuong**¹, Hiroki Iwase², Takashi Kyotani³, Tetsuji Itoh¹

PT09-22 Ultra-sensitive assay of enzymatic hydrolysis of water-insoluble substrates by using an inkjet patterning device (1. Japan Agency for Marine-Earth Science and Technology (Japan)) ***Mikiko Tsudome**¹, Shigeru Deguchi¹

PT09-23 High oxidation state metal hollow nanoparticle as an ultra-strong bactericide (1. National Pingtung University (Taiwan)) ***Mei-Yi Liao**¹

PT09-24 Controlling of Liquid Transport Velocity of Bioinspired Open-type Micro-blade Arrays (1. Graduate School of Engineering, Nagoya Institute of Technology (Japan)) ***Rikima Kuwada**¹, Taro Yao¹, Koji Muto¹, Daisuke Ishii¹

PT09-25 Preparation of Amphiphilic Block Copolymer Assembly/Calcium Phosphate Hybrids in Simulated Body Fluids (1. Tokyo University of Science (Japan)) ***Kanaho Yamaguchi**¹, Yusuke Yataka¹, Kazutoshi Iijima¹, Mineo Hashizume¹

PT09-26 Complex Formation of Polyphenol Compounds with Polysaccharides (1. Department of Innovative Systems Engineering, Nippon Institute of Technology (Japan), 2. Department of Applied Chemistry, Nippon Institute of Technology (Japan)) ***Namiki Asano**¹, Kenichi Niikura²

PT09-27 Zwitterionic Peptide Probe Selected through *in vitro* Ribosome Display for Electrochemical Protein Sensing (1. Department of Materials Science and Engineering, National Taiwan University (Taiwan), 2. Emergent Bioengineering Materials Research Team, RIKEN Center for Emergent Matter Science (Japan)) ***Mi Chin**¹, Seiichi Tada², Min-Han Tsai¹, Yoshihiro Ito², Shyh-Chyang Luo¹

PT09-28 Lanthanide Composite Polymer Colloid with Optical and Magnetic Properties (1. Graduate School of Science and Engineering, Chiba University (Japan), 2. Graduate School of Engineering, Chiba University (Japan)) ***Mikiya Yamamoto**¹, Keiki Kishikawa², Michinari Kohri²

PT09-29 Full-Colored Magnetic Colloidal Particles Based on a Holmium-Coordinated Polymer (1. Graduate School of Science and Engineering, Chiba University (Japan), 2. Graduate School of Engineering, Chiba University (Japan)) ***Kotona Kohaku**¹, Keiki Kishikawa², Michinari Kohri²

PT09-30 Characterization of Polysaccharide Composite Films Prepared via Polyion Complex Particles (1. Yokohama National University (Japan)) ***Makoto Yamazaki**¹, Kazutoshi Iijima¹

PT09-31 Controlling self-healing rate of chitosan-based hydrogel using both of Schiff base and amide bonds for cross-linking (1. Tokyo University of Science (Japan)) ***Kazuki Kudo**¹, Shohei Ishikawa¹, Shigehito Osawa¹, Hidenori Otsuka¹

PT09-32 Fabrication of micropatterned substrate for forming and collecting spheroids based on phase transition of spin-coated thermo-responsive polymer (1. Graduate School of Science, Tokyo University of Science (Japan), 2. Faculty of Science, Tokyo University of Science (Japan)) ***Kota Miyanaga**¹, Shohei Ishikawa¹, Shigehito Osawa^{1,2}, Hidenori Otsuka^{1,2}

PT09-33 Characterization of lipid nanodiscs formed by self-assembly of cyclic peptide biosurfactant "surfactin" (1. Research Institute for Chemical Process Technology (CPT), National Institute of Advanced Industrial Science and Technology (AIST)(Japan), 2. New business Development Division, KANEKA Corporation (Japan), 3. Faculty of Science and Technology, Tokyo University of Science (Japan)) ***Ryodai Moriyama**¹, Toshiaki Taira¹, Tadao Tsuji², Satohiro Yanagisawa², Kenichi Sakai³, Hideki Sakai³, Tomohiro Imura¹

PT09-34 Formation of lipid nanodiscs from antimicrobial model peptides with different hydrophilic/lipophilic face balance (1. Faculty of Science and Technology, Tokyo University of Science (Japan), 2. Research Institute for Chemical Process Technology (CPT), National Institute of Advanced Industrial Science and Technology (AIST)(Japan)) ***Shusei Yamamoto**^{1,2}, Toshiaki Taira², Masaaki Akamatsu¹, Kenichi Sakai¹, Hideki Sakai¹, Tomohiro Imura²

PT09-35 Estimating Protein Adsorption Free Energy at Interface from Molecular Dynamics Simulations (1. National Cheng Kung University (Taiwan)) ***Yun-Chi Wu**¹

PT09-36 Sinking-Floating Control on a Hydrophilic-Hydrophobic Pattern Mimicking a Surface of Dixidae Larvae's Abdomen (1. Graduate School of Engineering, Nagoya Institute of Technology (Japan)) ***Naoya Tagata**¹, Daisuke Ishii¹

PT09-37 Synthesis of Polymer Segment Grafting Multiple Metal Complexes via Polymerization of the Pre-formed Monomer Metal Complexes (1. Graduate School of Science, Tokyo University of Science (Japan), 2. Department of Applied Chemistry, Faculty of Science, Tokyo University of Science (Japan)) ***Sosuke Kurokawa**¹, Shigehito Osawa^{1,2}, Hidenori Otsuka^{1,2}

PT09-38 Hydration of Organonitriles Catalyzed by Colloidal Ruthenium Catalysts derived from *Leptothrix* Bacteria (1. Okayama University (Japan)) ***Toshiyuki Oshiki**¹, Tatsuma Shiotsu¹, Makoto Nakanishi¹

PT09-39 Metabolism change of *Proteus mirabilis* with differentiation into Swarmer cells (1. Tokyo University of Technology Graduate School Bionics Program (Japan), 2. Tokyo University of Technology (Japan)) ***Ryota Shimozato**¹, Taro Urase², Satoshi Sasaki²

PT09-40 Direct translocation of negatively charged nanoparticle across negatively charged cell membrane (1. Osaka Prefecture University (Japan)) ***Yoko Ikeda**¹, Hideya Nakamura¹, Shuji Ohsaki¹, Satoru Watano¹

PT09-41 Contrasting change upon BSA denaturation of hydration numbers determined by THz spectroscopy and DSC (1. University of Tsukuba (Japan)) ***Ayumi Kaneko**¹, Mafumi Hishida¹, Yasuhisa Yamamura¹, Kazuya Saito¹

PT09-42 Permeation mechanism analysis of cell penetrating peptides using flow cytometer (1. Faculty of Science and Technology, Tokyo University of Science (Japan), 2. Research Institute for Science and Technology, Tokyo University of Science (Japan)) ***Kiichi Yokoyama**¹, Kazuki Tanaka¹, Masaaki Akamatsu¹, Kenichi Sakai^{1,2}, Hideki Sakai^{1,2}, Kazutami Sakamoto^{1,2}

PT09-43 Experimental investigation of nanoparticle translocation across cell membrane under weak electric potential (1. Osaka Prefecture University (Japan)) ***Masataka Hata**¹, Hideya Nakamura¹, Shyuji Ohsaki¹, Satoru Watano¹

PT09-44 High-sensitivity DSC study on human stratum corneum from a single individual (1. Kyoto Institute of Technology (Japan)) ***Satsuki Uchiumi**¹, Soichi Tatsumi¹, Haruhiko Yao¹

[T10] Colloids and Energy

PT10-01 Double Promoter Enhanced Mixed Methane-THF Hydrate Formation at Higher Temperature and Low Pressure (1. The Petroleum and Petrochemical College, Chulalongkorn University (Thailand), 2. National University of Singapore (Singapore), 3. Center of Excellence in Petrochemical Materials Technology (PETROMAT)(Thailand), 4. UOP, A Honeywell Company (USA)) ***Katipot Inkong**¹, Hari Prakash Veluswamy², Pramoch Rangsunvigit^{1,3}, Santi Kulprathipanja⁴

PT10-02 Polyimines with Electron-withdrawing Groups in Main Chain: Synthesis and Hole-Buffering Application in Polymer LEDs (1. National Cheng Kung University, Department of Chemical Engineering (Taiwan)) ***Yun Chen**¹, Yu-Lin Jheng¹, Sheng-Fong Lin¹

PT10-03 Highly efficient and selective extraction/back-extraction of platinum group metals by ionic liquids with designed amino moieties (1. Tohoku University (Japan)) ***Chisato Hanzawa**¹, Mizuho Yabushita¹, Kiyoshi Kanie¹, Atsushi Muramatsu¹

PT10-04 Effect of Pt Loading on the Adsorption of Perfluoro-sulfonic Acid Ionomer in Catalyst Ink for Polymer Electrolyte Fuel Cells (1. TOYOTA CENTRAL R&D LABS., INC.(Japan)) ***Wataru Yoshimune**¹, Masahi Harada¹

PT10-05 Enhanced Thermoelectric Performance of n-type Carbon Nanotube Material: Conjunctive Effect of Electron Donating Copolymer and Structural Isomer Diphenylhydrazine (1. Department of Applied Chemistry, Sanyo-Onoda City University (Japan), 2. Professor Emeritus, Tokyo University of Science Yamaguchi(Japan)) ***Shinichi Hata**¹, Jin Tomotsu¹, Kanto Maeshiro¹, Yukihide Shiraishi¹, Naoki Toshima²

PT10-06 Heterostructured Cu-Ni selenide nanocrystals formed by cation exchange reaction as efficient water oxidation catalyst (1. Institute for Chemical Research, Kyoto

University (Japan), 2. Graduate School of Science, Kyoto University (Japan) ***Masaki Saruyama**¹, Sungwon Kim², Hiroki Mizuno², Toshiharu Teranishi¹

PT10-07 Effects of Amino Acids on Methane Hydrate Formation at Mild Conditions for Natural Gas Storage Applications (1. Petroleum and Petrochemical College, Chulalongkorn University (Thailand), 2. Center of Excellence on Petrochemical Materials Technology (PETROMAT), Chulalongkorn University (Thailand), 3. UOP, A Honeywell Company (USA)) ***Kan Jeenuang**¹, Katipot Inkong¹, Pramoch Rangsungvigit^{1,2}, Santi Kulprathipanja³

PT10-08 Evaluation on the Photocatalytic Rate, Degradation Processes of Various Types of Dyes Using Nano-TiO₂ Dispersion (1. Nagoya Institute of Technology (Japan)) ***Takuya Nohara**¹, Yasushi Yamamoto¹, Akihiro Yoshino¹

PT10-09 Characteristics of light wavelengths as a nitrite-oxidizing bacteria inhibitor (1. University of Suwon (Korea)) ***Seo-Hyun Kim**¹, Ki-Hak Park¹, Yun-Bin Hwang¹, Mi-Ri Song¹, Keug-Tae Kim¹

PT10-10 Conversion of Methane to Methanol Using Photocatalytic Activity of Mesoporous WO₃ with Small Metal-Cluster Cocatalyst (1. Tokyo University of Science (Japan)) ***Marika Aoki**¹, Yuki Iwamatsu¹, Tokuhisa Kawawaki¹, Yuichi Negishi¹

PT10-11 Application of Boron-Doped Nanodiamond to Aqueous Supercapacitor device (1. Dept., of Pure and Applied Chemistry, Tokyo Univ. of Sci., Japan (Japan), 2. Daicel Corporation (Japan)) ***Seiya Sugai**¹, Kenjo Miyashita¹, Takeshi Kondo¹, Masahiro Nishikawa², Takahiro Tei², Toshifumi Tojo¹, Makoto Yuasa¹

PT10-12 Metal and metal oxide nanoparticles for rechargeable batteries (1. Hokkaido University (Japan), 2. Chulalongkorn University (Taiwan), 3. Chung Yuan Christian University (Thailand)) ***Mai Thanh Nguyen**¹, Tetsu Yonezawa¹, Lyn Marie Z. De Juan-Corpus², Wei-Ren Liu³, Soorathep Kheawhom²

PT10-13 Improvement of Water-Splitting Photocatalytic Activity Using Au₂₅ Alloy Cluster Cocatalyst Doped with Pd or Pt (1. Tokyo University of Science (Japan), 2. Tokyo Metropolitan University (Japan)) ***Kosuke Wakamatsu**¹, Yuki Kataoka¹, Tokuhisa Kawawaki¹, Akihide Iwase¹, Seiji Yamazoe², Akihiko Kudo¹, Yuichi Negishi¹

PT10-14 Oxygen evolution reaction catalyzed by CuO electrocatalyst derived from 1 nm sized Cu-based colloidal clusters (1. TOYOTA CENTRAL R&D LABS., INC. (Japan)) ***Tepei Nishi**¹, Shunsuke Sato¹, Takeo Arai¹, Takeshi Morikawa¹

PT10-15 Size Controlled Rhodium Oxide Cocatalysts for Highly Active Water-Splitting Photocatalysts (1. Tokyo University of Science (Japan), 2. Tokyo Metropolitan University (Japan)) ***Shuhei Ozaki**¹, Yutaro Mori¹, Tokuhisa Kawawaki¹, Akihide Iwase¹, Seiji Yamazoe², Akihiko Kudo¹, Yuichi Negishi¹

[T11] Nanomedicine and Pharmaceutical Science

PT11-01 Preparation of Multi-stimuli-responsive Gel Particles by Soap-free Emulsion Polymerization for DDS Carriers (1. Department of Chemistry and Materials Engineering, Kansai University (Japan), 2. ORDIST, Kansai University (Japan)) ***Akifumi Kawamura**^{1,2}, Ayaka Harada¹, Takashi Miyata^{1,2}

PT11-02 Transcutaneous immunotherapy of pollinosis using solid-in-oil nanodispersions loaded with pollen-galactomannan conjugate (1. Department of Applied

Chemistry (Japan), 2. Center for Future Chemistry (Japan), 3. Advanced Transdermal Drug Delivery System Center, Kyushu University (Japan)) ***Qingliang Kong**¹, Kouki Higashijima¹, Momoko Kitaoka¹, Yoshiro Tahara¹, Rie Wakabayashi¹, Noriho Kamiya^{1,2,3}, Masahiro Goto^{1,2,3}

PT11-03 Preparation of Temperature-responsive Self-assemblies Composed of Amphiphilic Liquid Crystalline Polymers and Their Applications as Drug Carriers (1. Department of Chemistry and Materials Engineering, Kansai University (Japan), 2. ORDIST, Kansai University (Japan)) ***Yuki Hirano**¹, Yasuaki Inoue¹, Akifumi Kawamura^{1,2}, Takashi Miyata^{1,2}

PT11-04 Development of microbead-supported proteoliposomes with recombinant membrane receptors using a baculovirus gene expression system (1. Division of Chemistry for Materials, Graduate School of Engineering, Mie University (Japan)) ***Seiwa Nishio**¹, Kohei Nakanishi¹, Yushi Isozaki¹, Masahiro Tomita¹, Kanta Tsumoto¹

PT11-05 Random copolymer grafting oligo. (ethylene glycol)s and zinc complexes with dipicolylamine to design polyplex loading plasmid DNA toward gene delivery (1. Dept. of Chem., Grad. Sch. of Sci., Tokyo Univ. of Sci. (Japan), 2. Dept. of Appl. Chem., Fac. of Sci., Tokyo Univ. of Sci. (Japan)) ***Sayaka Kubo**¹, Shigehito Osawa^{1,2}, Hidenori Otsuka^{1,2}

PT11-06 Elucidation of lyoprotective effect of alkyl carboxybetaines on liposomes (1. Department of Pure and Applied Chemistry, Tokyo University of Science (Japan), 2. RIST., Tokyo University of Science (Japan)) ***Toshifumi Tojo**¹, Genki Itoh¹, Tatsuo Aikawa¹, Takeshi Kondo^{1,2}, Makoto Yuasa^{1,2}

PT11-07 The Inhibitory effects of gold nanoparticles on VEGF-A-induced cell migration in choroid-retina endothelial cells (1. Fu Jen Catholic University (Taiwan)) ***Chi-Feng Hung**¹, Chi-Ming Chan¹, Hsin-Ju Li¹

PT11-08 Transcutaneous delivery of peptide antigen using a reverse micellar drug carrier: an effect of monoacyl glycerol as a permeation enhancer (1. Department of Applied Chemistry, Graduate School of Engineering, Kyushu University (Japan), 2. Kobayashi Pharmaceutical Co., Ltd. (Japan)) ***Shuto Kozaka**¹, Takahiro Nakata², Taro Ueda², Masahiro Goto¹

PT11-09 Fabrication of biodegradable disc-shaped particles carrying antibiotics for pulmonary delivery (1. Graduate School of Engineering, Tokai University (Japan), 2. Micro/Nano Technology Center, Tokai University (Japan)) ***Pinyo Mekwatanakarn**¹, Shota Yoshida¹, Yosuke Okamura^{1,2}

PT11-10 Fabrication and evaluation of liposomes for liver fibrosis treatment (1. Graduate School of Engineering, Tokai University (Japan), 2. Micro/Nano Technology Center, Tokai University (Japan)) ***Miyu Tanahashi**¹, Shota Yoshida¹, Yosuke Okamura^{1,2}

PT11-11 Erythrocyte membrane-coated nanoparticles: a biomimetic optimization study by experimental design (1. Faculty of Pharmacy, University of Coimbra (Portugal), 2. Centre for Neurosciences and Cell Biology, University of Coimbra (Portugal), 3. Coimbra Chemistry Centre, University of Coimbra (Portugal)) João Basso^{1,2}, Maria Mendes^{1,2}, Jéssica Silva^{1,2}, João Sousa^{1,3}, Alberto Pais³, ***Carla Vitorino**¹

PT11-12 Serinol-based nanostructured lipid nanoparticles for glioblastoma treatment (1. Faculty of Pharmacy, University of Coimbra (Portugal), 2. Centre for Neurosciences and Cell

Biology (CNC), University of Coimbra (Portugal), 3. Coimbra Chemistry Center, Department of Chemistry, University of Coimbra (Portugal), 4. Institute for Advanced Chemistry of Catalonia (IQAC-CSIC)(Spain), 5. Networking Center on Bioengineering, Biomaterials and Nanomedicine (CIBER-BBN)(Spain) Maria Mendes^{1,2}, João Basso^{1,2}, Jéssica Silva^{1,2}, João Sousa^{1,3}, Santiago Grijalvo^{4,5}, Ramon Eritja^{4,5}, Alberto Pais³, ***Carla Vitorino**^{1,2,3}

PT11-13 Batch-to-batch variability of semisolid topical drug products (1. Faculty of Pharmacy, University of Coimbra (Portugal), 2. Coimbra Chemistry Center, Department of Chemistry, University of Coimbra (Portugal), 3. Laboratórios Basi, Mortágua (Portugal), 4. Centre for Neurosciences and Cell Biology (CNC), University of Coimbra (Portugal)) Margarida Miranda^{1,2}, Alberto Pais², Catarina Cardoso³, ***Carla Vitorino**^{1,2,4}

PT11-14 The interaction of colloidal particles with human hemoglobin: photoexcitation effect (1. Lomonosov Moscow State University (Russia)) ***Mariya Gogoleva**¹, Boris Yakimov¹, Evgeny Shirshin¹

PT11-15 Monoclonal antibody conjugated liposomal nanoparticles encapsulating siRNA/multifunctional peptide-nanocomplex (1. Tokyo University of Pharmacy and Life Sciences (Japan), 2. Juntendo University (Japan)) ***Yuuki Takashima**¹, Shogo Nishida¹, Bunta Yamauchi¹, Keisuke Segami¹, Yutaka Fujii¹, Yuta Adachi¹, Hisako Ibaraki¹, Yasuo Seta¹, Takeshi Fukuhara²

PT11-16 The reduction of neutrophilic inflammation and the related pulmonary injury can be modulated by the droplet size of anti-inflammatory nanoemulsions (1. Department of Anesthesiology, Chang Gung Memorial Hospital (Taiwan), 2. Graduate Institute of Biomedical Sciences, Chang Gung University (Taiwan), 3. Graduate Institute of Natural Products, Chang Gung University (Taiwan), 4. Institute of Macromolecular Chemistry, Czech Academy of Sciences (Czech Republic), 5. Department of Analytical Chemistry, Faculty of Science, Charles University (Czech Republic)) Huang-Ping Yu¹, Fu-Chao Liu¹, Cheng-Yu Lin², Ani Umoro³, Jiří Trousi^{4,5}, Jia-You Fang^{1,2,3}, ***Tsong-Long Hwang**^{1,2,3}

[T12] Application of Colloids–Cosmetics, Detergents, Household Products, Foods and Paints

PT12-01 Spraying and Adhesion Characteristics of Foaming Agents for a Foam Decontamination (1. Korea Atomic Energy Research Institute (Korea)) ***Chong-Hun Jung**¹, In-Ho Yoon¹, Seon-Byeong Kim¹, Byum-Kyung Seo¹

PT12-02 Improvement of stability to oxidation of walnut oil and ginger essential oil by encapsulation (1. Universitat de Barcelona (Spain)) Diego Milián¹, Sharmaine Atencio¹, Esther Santamaria¹, Alicia Maestro¹, Jose Maria Gutierrez¹, ***Carmen Gonzalez Azon**¹

PT12-03 Characteristic changes of aqueous solutions of hydroxycitric acid derivative with neutralization and analysis of their micellar structure (1. NIPPON MENARD COSMETIC CO., LTD. (Japan), 2. Nagoya Institute of Technology (Japan)) ***Takayuki Yamada**¹, Tsuyoshi Yamaguchi¹, Hiroyuki Asano¹, Hitoshi Sawada¹, Katsuhiko Yamamoto²

PT12-04 Technology for reducing paint-spatter in roller coating by rheology control (1. Nippon Paint Holdings Co., Ltd. (Japan)) ***Satoshi Ishida**¹

PT12-05 Fiber Analysis Using a Combination of Raman Spectroscopy and X-ray Fluorescence Analysis (1. Tokyo

University of Science (Japan)) ***Yawara Sengoku**¹, Shinsuke Kunimura¹

PT12-06 Structural analysis of pharmaceutical emulsions obtained by the liquid crystal emulsification (1. Central R&D Laboratories, Kobayashi Pharmaceutical Co., Ltd. (Japan), 2. Research Institute for Electronic Science, Hokkaido University (Retired)(Japan)) ***Yozo Kudo**¹, Shunsuke Takane¹, Kaoru Tsujii², Akira Uno¹

PT12-07 Multiple Levers of Lamellar Gel Network in Hair Conditioners for Broad Spectrum of Sensorial Performance (1. Singapore Innovation Center, Procter & Gamble (Singapore), 2. Brussels Innovation Center, Procter & Gamble (Belgium)) ***Toshiyuki Iwata**¹, Chetan Yagnik¹, Nobuaki Matsuoka¹, Pierre Verstraete²

PT12-08 Application of threadlike micelle to inorganic slurries (1. R&D - Performance Chemicals Research, Kao Corporation (Japan)) ***Kouji Koyanagi**¹

PT12-09 What Makes Rice Flour Surface Active (1. Hiroshima University, Graduate School of Integrated Sciences for Life (Japan)) ***Masumi Villeneuve**¹, Yukari Kuga¹

[S1] How Can Colloid and Interface Chemistry Contribute to Global Sustainability–Surfactants, Water and Energy–

PS01-01 Crosslinking agent/initiator-free polymer-gel synthesis by using in-liquid plasma method (1. Sophia University (Japan)) ***Seiya Sawada**¹, Satoshi Horikoshi¹

PS01-02 Oxide-encapsulated Sn-based Phase Change Material Particles for Thermal Energy Storage (1. Hokkaido University (Japan)) ***Tetsu Yonezawa**¹, Shilei Zhu¹, Mai Thanh Nguyen¹

PS01-03 Surface tension of mixtures of Surfactants with polyacrylamide (1. al-Fabafi Kazakh National University (Kazakhstan), 2. Kazakh-British Technical University (Kazakhstan), 3. China University of Petroleum (China)) ***Zhanar B. Ospanova**¹, Nurgeldi Abeu¹, Saule B. Aidarova², Kenzhebek Ibrashev², Kang Wanli³

[S2] Creation and Application of Two Dimensional Atomic and Molecular Materials and Devices

PS02-01 Analysis of ion channel functions using artificial bilayer lipid membranes (1. Tohoku University (Japan), 2. Tohoku Fukushi University (Japan)) ***Madoka Sato**¹, Ryo Yokota¹, Yusuke Tsuneta¹, Miki Kato¹, Daichi Yamaura¹, Daisuke Tadaki¹, Maki Komiyama¹, Hideki Yamamoto¹, Michio Niwano², Ayumi Hirano-Iwata¹

PS02-02 Evaluation and control of substrate-induced membrane potential in supported lipid bilayer (1. Toyohashi University of Technology (Japan)) ***Junichi Sato**¹, Ryugo Tero¹

PS02-03 Supported lipid bilayers of *Escherichia coli* lipids containing diacylglycerol (1. Toyohashi University of Technology (Japan)) ***Yasuhiro Kakimoto**¹, Ryugo Tero¹

[S3] Membranous and Membraneless Interfaces: Towards Artificial Cellular Complexity

PS03-01 Microgel spontaneous buckling by internal heterogeneity (1. Tokyo University of Agriculture and Technology (Japan), 2. Ochanomizu University (Japan), 3. The University of Tokyo (Japan)) ***Keisuke Koyanagi**¹, Kazue Kudo², Miho Yanagisawa³

PS03-02 Molecular diffusion inside polymer microdroplets (1. Institute of Engineering, Tokyo University of Agriculture and

Technology (Japan), 2. Komaba Institute for Science, The University of Tokyo. (Japan), 3. Department of Basic Science, The University of Tokyo (Japan)) ***Yuta Kobori**¹, Chiho Watanabe², Miho Yanagisawa^{2,3}

PS03-03 Effects of electric field conditions and voltage manipulation on lipid membrane formation in electroporation (1. Shinshu University (Japan)) Ryuichi Chiba¹, ***Daisuke Saeki**¹, Yukihisa Okumura¹

PS03-04 Compartmentalization of lipid membrane dome formed by electroformation using micromanipulation techniques (1. Shinshu University (Japan)) ***Masato Kajiki**¹, Daisuke Saeki¹, Yukihisa Okumura¹

[S4] Colloidal Dispersion and Aggregation in Materials for Sustainability

PS04-01 Sedimentation Particle Size and Porosity Estimation by Disc Centrifuge (1. CNT-Application Research Center, AIST (Japan)) ***Yuichi Kato**¹, Takahiro Morimoto¹, Kazufumi Kobashi¹, Takeo Yamada¹, Toshiya Okazaki¹, Kenji Hata¹

PS04-02 Colloidal Stabilization of Quantum Dots in Water by Atom Transfer Radical Polymerization with Methoxy[oligo. (ethyleneglycol)] Methacrylate (1. Faculty of Systems Engineering, Wakayama University (Japan), 2. Faculty of Engineering, Saitama Institute of Technology (Japan)) ***Yoshio Nakahara**¹, Kazuki Machiya¹, Hiroki Kunitsu¹, Mutsuo Tanaka², Setsuko Yajima¹

PS04-03 Metallic Core-shell Phase Change Material with Low Melting Temperature (1. Hokkaido University (Japan)) ***Tetsu Yonezawa**¹, Shilei Zhu¹, Mai Thanh Nguyen¹

PS04-04 Synthesis of Pseudo-Polymer Magnetite Nanoparticles with Controlled Shapes and Sizes and the Application to Stimuli Responsive Lyotropic Liquid Crystal under Magnetic Field (1. Tohoku University (Japan), 2. Sendai College (Japan)) ***Chen Shen**¹, Masaki Matsubara², Mizuho Yabushita¹, Sachiko Maki¹, Atsushi Muramatsu¹, Kiyoshi Kanie¹

PS04-05 Effect of silane coupling agents on copper-based conductive inks for flexible paper based electronics with enhanced flexibility and environmental durability (1. Kansai University (Japan)) ***Hideya Kawasaki**¹, Shintaro Sakurai¹, Takuma Uda¹

PS04-06 Jellylike Flexible Sensors Containing Pre-aggregated Gold Nanoparticles for Plasmonic Sensing of Repellants (1. Kyoto University (Japan)) ***Takao Fukuoka**¹, Samir Kumar¹, Kyoto Namura¹, Motofumi Suzuki¹

PS04-07 Longevous Plasmonic Nanotags for On-dose-authentication of Medical Tablets in Supply Chain Security (1. Kyoto University (Japan), 2. Archilys (Japan), 3. Doshisha University (Japan), 4. University of Hyogo. (Japan)) ***Takao Fukuoka**¹, Hiroshi Nakanishi², Yasushige Mori³, Akinobu Yamaguchi⁴

[S5] Science & Technologies for the Sustainable Space Colony Life

PS05-01 Ostwald Ripening of Liquid/Liquid Dispersion under Quasi-microgravity (1. Chiba Institute of Science (Japan), 2. Tokyo University of Science (Japan), 3. Nikkol Group Cosmos Technical Center (Japan), 4. Space Carnival (Japan), 5. Kyowa Interface Science (Japan), 6. Japan Aerospace Exploration Agency (Japan), 7. CNR-ICMATE (Italy)) ***Mami Ozaki**¹, Masaaki Akamatsu², Kenichi Sakai², Hideki Sakai², Kazutami Sakamoto², Takeshi Misono³, Satoru

Hashimoto³, Hirotake Kobayashi⁴, Masaaki Chiba⁵, Makoto Natsuisaka⁶, Libero Liggieri⁷, Yuji Yamashita¹

[S6] Nanopores and/or Nanowindows Associated Interface Science (Nano-IS)

PS06-01 Mechanical Properties of Interfacially Treated Single Wall Carbon Nanotube Fibers (1. Suwa University of Science (Japan), 2. Shinshu University of Science (Japan)) ***Tae Yamaura**¹, Katsumi Kaneko², Shigenori Utsumi¹

PS06-02 Mesoscopic cage-like structured single wall carbon nanotube cryogels (1. Shinshu University (Japan), 2. Nagasaki University (Japan)) ***Yuito Kamijyou**¹, Radovan Kukobat¹, Dragana Stevic¹, Koki Urita², Iasamu Moriguchi², Toshio Sakai¹, Katsumi Kaneko¹

PS06-03 Copper benzene-1,3,5-tricarboxylate@graphene oxide composites (1. Budapest University of Technology and Economics (Hungary), 2. Hungarian Academy of Sciences (Hungary)) ***Andrea Doman**¹, Janos Madarasz¹, Szilvia Klebert², Gabor Dobos¹, Gyorgy Safrany², Krisztina Laszlo¹

[S7] New trends of Biological Science Research Created by Interfacial Structural Analysis - Innovation for Life Science

PS07-01 Effects of Oxygen Nanobubbles on Proliferation and Viability of Lung Cancer and Normal Cell Lines (1. Graduate School of Environmental Engineering, The University of Kitakyushu (Japan)) ***Soad Abdelmawgood Ahmed**¹, SeungWoo Lee¹

PS07-02 Biosynthesis of gold nanoparticles in unicellular alga and evaluation of their catalytic potency (1. Tokyo Denki University (Japan), 2. National Institute of Advanced Industrial Science and Technology (Japan)) Chiaki Fujii¹, Kazuki Takanashi¹, ***Etsuko Shato**¹, Tomoki Ichinose¹, Kazuhiro Kumagai², Akiko Hokura¹

PS07-03 scICP-MS analysis of gold nanoparticles biosynthesized by unicellular algae (1. Graduate School of Engineering, Tokyo Denki University (Japan), 2. Research Institute for Material and Chemical Measurement, National Institute of Advanced Industrial Science and Technology (Japan)) ***Tomoki Ichinose**¹, Koyo Ido^{1,2}, Akiko Hokura¹, Kazuhiro Kumagai², Shin-ichi Miyashita², Shin-ichiro Fujii², Kazumi Inagaki^{1,2}

[S8] Transport Phenomena at the Bio-inspired-Nano Interface & Environment

PS08-01 Facet-dependent surface charge and Pb²⁺ adsorption characteristics of hematite: CD-MUSIC modeling (1. Huazhong Agricultural University (China)) ***Yu Liang**¹, Mingxia Wang¹, Wenfeng Tan¹, Juan Xiong¹

PS08-02 Large valving motion of a wide beam using AC electro-osmotic flows (1. Shinshu University (Japan)) ***Yuki Mizuno**¹, Hideyuki Sugioka¹

PS08-03 Self-periodic motion due to induced charge electrokinetic phenomena (1. Shinshu University (Japan)) ***Masato Ishikawa**¹, Yuya Hanazawa¹, Hideyuki Sugioka¹

PS08-04 Self-propelled swing motion due to an asymmetrical heat transfer (1. Shinshu Univ. (Japan)) ***Mako Kubota**¹, Hideyuki Sugioka¹

PS08-05 Integrated fluidic circuit using Induced-charge electro-osmosis (1. Shinshu University (Japan)) ***Kenichiro Okada**¹, Hideyuki Sugioka¹

PS08-06 Al-substitution-induced defect sites enhance adsorption of Pb²⁺ on hematite (1. Key Laboratory of Arable

Land Conservation, Ministry of Agriculture, College of Resources and Environment, Huazhong Agricultural University (China) ***Mingxia Wang**¹, Yu Liang¹, Wenfeng Tan¹

PS08-07 Fabrication of the underwater adhesive material mimicked by a fish sucker (1. Grad., Chitose Ins. of Sci, and Tech. (Japan)) ***Shinpei Ootaki**¹, Yuji Hirai¹, Masatsugu Shimomura¹

