

## Room P

**Wed. May 25**

Presentation Time

<10:30~11:30>

Online Room PosterP3

### A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS

- 1P3B001 Syntheses of Thermoresponsive Acrylamide Alternating Copolymers via Cyclopolymerization and Post-Polymerization Modification  
Shimpei Maruyama, Kentaro Shibata, Makoto Ouchi
- 1P3B002 Precision Syntheses of Acrylamide-Hydroxyethyl Vinyl Ether Alternating Copolymers via Radical Cyclopolymerization and Aminolysis Post-Polymerization Modification  
Zhengzhao Jiang, Xiaoyan Xu, Makoto Ouchi
- 1P3B003 Synthesis of Hydroxy-Group Containing Multiple-Substituted Polymers via Polymerization of Compounds Exhibiting Keto-Enol Tautomerism  
Taiki ISODA, Naoki FUJIWARA, Konomi YAMASHITA, Hironobu WATANABE, Mineto UCHIYAMA, Masami KAMIGAITO
- 1P3B004 Precision Synthesis and Evaluation of Monodisperse Thermoresponsive Polymer Combining Living Radical Polymerization and Preparative Purification  
Keito HIRANO, Natsumi OHIRA, Kenta SOMA, Mineto UCHIYAMA, Masami KAMIGAITO
- 1P3B005 Radical polymerization of vinyl monomer mediated by cyclic RAFT agent  
Kota Oto, Akinori Takasu
- 1P3B006 Polymerization of Vinyl Methacrylate in MOF Pore for Hetero-Ladder Polymer  
Rintaro Yamaguchi, Yuki Kametani, Takashi Uemura
- 1P3B007 Development of heterogeneous PET-RAFT polymerization system using silica particle-immobilized porphyrin  
Masanori Nagao, Aya Horie, Yu Hoshino, Yoshiko Miura

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 1P3B009 Investigation of Mechanical Properties of Water-Based Latex Films with Different Particle Structures  
Hayato Suzuki, Yuma Sasaki, Kazuya Uenishi, Kazuko Nakazono, Toshikazu Takata, Daisuke Suzuki
- 1P3B010 Preparation of the cured epoxy resins without glycidyl ether structure and evaluation of their properties  
Naoya Yamaguchi, Toshiyuki Oyama, Kazuo Arita
- 1P3B011 Enhanced Mechanical Properties of Biopolybenzimidazoles by Silica-particle Etching  
Jiabei Zhou, Aniruddha Nag, Xianzhu Zhong, Kenji Takada, Tatsuo Kaneko
- 1P3B012 Fabrication of Mechanical Metamaterial Structures for 3D Chiral Transformation  
Yukihide Tashiro, Koki Yagyu, Syo Kazukuchi, Hiroshi Endo
- 1P3B013 Modification of alicyclic epoxy resin by utilizing in situ polymerization of methacrylates and acrylates  
Risa Kimura, Toshiyuki Oyama
- 1P3B014 Attempt to elucidate the affinity effect that contributes to enhancing the physical properties of polymer-based composite containing rotaxane and nanocellulose

Ko Harada, Chu Pinjung, Atsuhiko Fujimori

- 1P3B015 Creation of fluorinated polymer / fluorinated carbon nanotube composite with introduced dispersion agent as third component and its drawn orientation characteristics  
Kai XU, Ahmed A. Almarasy, Atsuhiko Fujimori
- 1P3B016 Grafting of polythiophene to silica nanoparticles by surface-graft polymerization (I) -Control of graft chain length-  
Minghao Yuan, Masahiro Fujita, Yuko Takeoka, Masahiro Rikukawa
- 1P3B017 Development of self-healable and ionic conductive hybrids using ion-dipole interaction  
Yuito SONTA, Yusuke SASAKI, Hideharu MORI
- 1P3B018 Synthesis of polystyrene derivative-silica hybrids using thiol-ene reaction  
Asuka Kitahara, Eri Matsukawa, Kimihiro Matsukawa, Kaoru Adachi
- 1P3B019 Evaluation of up-conversion based on triplet- triplet annihilation in the hydrophobic clay thin films  
Ayaka Tsuchiya, Hideki Kawai
- 1P3B020 Fabrication of heat-resistant conductive composites using microwave heating.  
Shun KURANOUCI, Hiroshi SAITO, Tetsu MITSUMATA, Norio TSUBOKAWA, Akihiro ORITA, Atsushi TAKAHASHI, Saori MIURA, Takeshi YAMAUCHI
- 1P3B021 Humidity-Resistant Self-Healing Polymer Glasses: A New Design Principle Based on Nano-Phase Separation  
Yuta Fujisawa, Yiling Nan, Atsushi Asano, Yu Yanagisawa, Keiichi Yano, Yoshimitsu Itoh, Takuzo Aida
- 1P3B022 Development of the material search technique for photosensitive polymer  
Masaru Yamasaki, Minoru Hoshino, Akitoshi Tanimoto, Masahiko Ebihara, Tatsuya Makino, Masahiro Miyasaka, Yasuharu Murakami, Hanaoka Kyohei

Online Room PosterP4

## **B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES**

- 1P4B026 Direct Observation of Microscopic Deformation of Deuterated Molecular Chains for Investigating Relationship of Molecular Weight Distribution and Tensile Properties of Semi-Crystalline Polymeric Solids  
Takumitsu Kida, Ryo Tanaka, Takeshi Shiono, Masayuki Yamaguchi
- 1P4B027 Formation of isotactic polypropylene  $\alpha$  form crystals with different order and their melting and recrystallization behaviors  
Koji Yamada, Kenichi Funaki, Takahiro Miyoshi, Misako Inagaki, Koji Nozaki, Ken Taguchi, Akihiko Toda
- 1P4B028 Crystallization under shear flow for isotactic polypropylene containing sorbitol-derivative  
Khunanya Janchai, Takumitsu Kida, Takahiro Inoue, Shohei Iwasaki, Masayuki Yamaguchi
- 1P4B029 Effect of low-molecular-weight polystyrene on shear viscosity of polypropylene  
Nantina Moonprasith, Takumitsu Kida, Muhammad Shahrulnizam Nasri, Riza Asmaa Saari, Panitha Phulkerd, Masayuki Yamaguchi
- 1P4B030 Corporation of Mixed Solution of Butanol and Acetone by Syndiotactic Polystyrene with Nanopore Crystal  
Takahiko Nakaoki, Saki Fujino
- 1P4B031 Porous particles of Stereocomplex Poly lactic acid  
Takahiko Nakaoki, Yoshiki Tamura

- 1P4B032 Molecular dynamics of melt-memory effect in crystallization: Effects of melt structure on recrystallization pathway and crystal deformation/fracture  
Takashi Yamamoto,Althaf Hussain,Shigeru Yao
- 1P4B033 Quasi-elastic Neutron Scattering Study on Dynamics of SBR in SBR-silica Nanocomposites  
Takeshi Yamada,Taiki Tominaga,Masayuki Kawazoe,Sousa Nicolas R de
- 1P4B034 All-atom simulation of formation and dissolution of Polyethylene Glycol crystals under Stretching  
Kosuke Aomura,Koichi Mayumi,Kazushi Fujimoto,Hideaki Yokoyama,Kohzo Ito
- 1P4B035 Crystallization behavior of Poly( $\epsilon$ -caprolactone) brushes with Poly(vinyl butyral) as an additive  
Takayuki Ikehara,Syuuta Hara,Yuudai Tega
- 1P4B036 Melting and reorganization behavior of propylene random copolymer containing polymorphic crystals  
Ken TAGUCHI,Akihiko TODA,Ken-ichi FUNAKI,Koji YAMADA

#### D. BIOPOLYMERS AND BIORELATED POLYMERS

- 1P4B038 Biosynthesis of the C-terminal domain of major ampullate spidroin in marine purple photosynthetic bacterium *Rhodovulum sulfidophilum*.  
Takuma Kawaguchi,Choon Pin Foong,Ali D. Malay,Keiji Numata
- 1P4B039 HS-AFM analysis of spider silk protein MaSp2  
Haruka Taketa,Takuma Kawaguchi,Choon Pin Foong,Hiroataka Uji,Keiji Numata
- 1P4B040 Synthesis and evaluation of self-assembling peptoid  
Yuya Yamada,Yoshiaki Hirano
- 1P4B041 Evaluation of amelogenin-derived peptide for biomineralization  
Yusuke Tamba,Tatsuo Yajima,Masato Ueda,Yoshiaki Hirano
- 1P4B042 HAP mineralization on scaffolds composed of collagen and  $\beta$ -turn peptide composites for bone repairing material  
Mio Takada,Shogo Matsubara,Masahiro Higuchi
- 1P4B043 Preparation and characterization of capsules formed from Biodegradable Coacervate droplets and SrxCa<sub>1-x</sub>CO<sub>3</sub> Shells.  
Yuya Mizuno,Syuhei Komatsu,Akihiko Kikuchi
- 1P4B044 Design of pH-Responsive Polypeptide Nanoparticles with Dynamic Molecular Binding Sites  
Tomoya Iwagaki,Masaaki Kanazawa,Akifumi Kawamura,Takashi Miyata

#### Wed. May 25

Presentation Time

<12:30~13:30>

Online Room PosterP1

#### A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS

- 1P1C001 Syntheses of Sequence-Controlled Polymers with Side-Chain Transformable (Meth)acrylsulfonamide Monomers  
Tamaki Kondo,Tomoka Yoshimura,Makoto Ouchi
- 1P1C002 Radical (Co)polymerizations of Vinylene, Vinylidene, and Butadiene Derivatives Bearing Two Boronic Acid Ester Moieties  
Koki Hirano,Tsuyoshi Nishikawa,Makoto Ouchi
- 1P1C003 Interaction between sugar-containing polymer and lectin  
Kaito Yokota,shin-ichi Yusa
- 1P1C004 Precision Polymerization of Conjugated Diene Derived from Cinnamic

Aldehyde

Yasunobu Isobe, Tomohiro Kubo, Kotaro Satoh

- 1P1C005 Synthesis and Polymerization of Cyclic Vinyl Monomer Bearing Multiple Functional Groups  
shoji Hirabayashi, Yasuhiro Kohsaka
- 1P1C006 Effect of templates on the radical cyclopolymerization of a diacrylate forming 20- membered ring  
Daiki Yagura, Yoshimasa Matsumura, Bungo Ochiai

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 1P1C008 Step- $\pi$ -conjugated polymers (176) Synthesis of macromolecular wire with two different blocks.  
Kota Tanaka, Haoxuan Guo, Hiroyuki Aota
- 1P1C009 Step- $\pi$ -conjugated polymers (177) Photoinduced electron transfer of macromolecular wire with electron donor and acceptor at terminals  
Daisuke Kitayama, Haouxuan GUO, Hiroyuki Aota
- 1P1C010 Step- $\pi$ -conjugated polymers (178) Investigation of optimal reaction conditions for pseudo-living polymerization and synthesis of structure-controlled polymers .  
Nozomi Tokura, Haoxuan GUO, Hiroyuki Aota
- 1P1C011 Step- $\pi$ -conjugated polymers(179) Synthesis of macromolecular wire with different skeletons in the main chain.  
Daisuke Morinaka, Haoxuan GUO, Hiroyuki Aota
- 1P1C012 Sensitizer-Host-Annihilator ternary blend films for improvement in solid-state photon upconversion  
Yasunari Tamai, Yuji Sakamoto
- 1P1C013 Improvement of prediction accuracy by machine learning of photophysical properties of organic fluorescent materials  
Masahiro Koike, Shunichiro Ito, Kazuo Tanaka, Tsuyoshi Koga
- 1P1C014 Energy-gap law of nonradiative transition in fused ring  $\pi$  conjugated molecules  
Yuki Sato, Takumi Tanaka, Masahiko Saito, Tsubasa Mikie, Itaru Osaka, Hideo Ohkita
- 1P1C015 Size control of silica domain of polymethacrylate-silica nanocomposites and their physical properties  
Shinya Watanabe, Noeru Kishita, Reiko Saito
- 1P1C016 physicochemical and functional properties of poly(ethylene carbonate)/organoclay composites  
Kota Ishihara, Yoichi Tominaga
- 1P1C017 Preparation and evaluation of a blended electromagnetic wave shield sheet by combining carbonized algae residue, conductive polymer and cellulose  
Kyoka Komaba, Makoto M Watanabe, Reiji Kumai, Hiromasa Goto
- 1P1C018 Hybrid Polycyclosiloxanes Bearing Bio-Based Benzoxazine as Side-Chain Crosslinking Moieties: Synthesis and Characterization  
Buket Akkus, Huie Zhu, Masaya Mitsuishi
- 1P1C019 Fabrication of diodes using titanium dioxide films deposited by electrodeposition  
Yoshiyuki Tsukiyama, Mitsuru Watanabe, Koji Mitamura, Masashi Nakamura, Toshiyuki Tamai, Hiroyuki Enomoto, Seiji Warase
- 1P1C020 Biodegradable property of polymer composites filled with lignin extracted by simultaneous enzymatic saccharification and comminution  
Takumi Karasawa, Kazuhiro Shikinaka, Yuichiro Otsuka, Yoichi Tominaga
- 1P1C021 Effect of silane coupling agent on tribological and mechanical properties of

cellulose nanofiber/epoxy composites  
Hiroki Uramatsu,Hiroshi Eguchi,Kenji Nagata

1P1C022 Stress transfer X-ray analysis of poly-L-lactic acid / hydroxyapatite composites  
Chenyue He,Takuya Matsumoto,Takashi Nishino

Online Room PosterP2

### **B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES**

- 1P2C026 Effects of Thermal History on Structure of Silica Compound Rubber  
Takahiro Tono,Yusuke Nakazawa,Takama Suzuki,Yasuaki Ando,Mamoru Aizawa,Tomoko Fukazawa
- 1P2C027 Stress-Induced Crystal Transformation of Poly(butylene naphthalate)  
Tatsuya Teranishi,Takuya Matsumoto,Takashi Nishino
- 1P2C028 Additive effects of paraffin on mechanical properties of high-density polyethylene  
Bin Ropandi Mohammad Akid Naquiuddin,Asae Ito,Koh-hei Nitta
- 1P2C029 Local deformation behaviors of thermoplastic elastomers studied by transmission electron microscopy  
Junsei Aoki,Daisuke Watanabe,Tomohiro Miyata,Hsao-Fang Wang,Hironori Marubayashi,Hiroshi Jinnai
- 1P2C030 Study of Higher-Order Structure of Poly(trimethylene terephthalate) by Low-Frequency Vibrational Spectroscopy  
Yota Maruyama,Harumi Sato
- 1P2C031 Structures and properties of electrospun polyamide nanofibers from deuterated solvents  
Dongyang Li,Wataru Takarada,Takuya Yamamoto,Hidetoshi Matsumoto
- 1P2C032 Effect of nucleating agent on polymer crystallization analyzed using the original Avrami model  
Akihiko Toda
- 1P2C033 Molecular entanglement characteristics and its melt drawability of reactor blended ultrahigh-molecular-weight polyethylene  
Ayaka Takazawa,Masaki Kakiage,Hiroki Uehara,Takeshi Yamanobe,Yui Shimizu,Takuya Ohnishi,Yasutake Wakabayashi,Shigehiko Abe
- 1P2C034 Effect of high-pressure hydrogen gas on crystalline polymer materials  
Fumitoshi Kaneko,Keiko Ohyama,Hirotsada Fujiwara,Shin Nishimura
- 1P2C035 Local structure and growth mechanism of polymer spherulites studied by nanodiffraction imaging  
Hironori Marubayashi,Koichi Azuma,Shusuke Kanomi,Tomohiro Miyata,Hiroshi Jinnai
- 1P2C036 Light Scattering from poly(p-phenylene sulfide) crystallized near glass transition temperature  
Yasutoshi TANZAWA,Taichi INUKAI

### **D. BIOPOLYMERS AND BIORELATED POLYMERS**

- 1P2C038 A novel method to link in the field of engineering and biological knowledge  
Shuichi Hirose,Shogo Yamamoto,Toru Teraya,Masakazu Kobayashi,Seiichiro Kishishita,Hideaki Miyake,Kosuke Baba,Masato Konya,Yoshiaki Fukuda,Shigeki Morii
- 1P2C039 Development of a transient chemical reaction cycle of amphiphiles under aqueous environments  
Yume Nakagawa,Miki Mori,Kohei Sato,Kazushi Kinbara
- 1P2C040 Evaluation of cell adhesion and detachment phenomenon on the

cytocompatible phospholipid polymer bearing phenylboronic acid  
Masaki Harada, Yuta Yoshizaki, Tomohiro Konno

- 1P2C041 Structural changes of alkaline-treated woods and evaluation of liquid absorption and compression behaviors.  
Rika Takenaka, Daisuke Ishii
- 1P2C042 Evaluation of wetting behavior of micro-protrusion structures covered by metal surfaces  
Sumire Isachi, Daisuke Ishii
- 1P2C043 Excretion analysis of uric acid and indoxyl sulfate in rat intestinal-loop using mercaptobenzimidazole-modified electrode  
RINA KUTSUNO, TAISEI NONAKA, KIMIYOSI ICHIDA, KYOKO FUJITA
- 1P2C044 Effect of unusual amino acid-containing peptide segments on structural feature of a multi-functional molecular frame  
Takahiro Suzuki, Yoshihito Inai

### Wed. May 25

Presentation Time

<13:30~14:30>

Online Room PosterP3

### A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS

- 1P3D001 Toward Synthesis of Degradable Polymers by Radical Polymerization of Cyclic Ketene Aminals  
Shoki YOSHIMURA, Yuki SAKATA, Marina MATSUDA, Chihiro HOMMA, Mineto UCHIYAMA, Masami KAMIGAITO
- 1P3D002 Toward Synthesis of Degradable Polymers by 1,5-Shift Radical Polymerization  
Masato IMAI, Kaoru MATOBA, Takayuki TANIMOTO, Mineto UCHIYAMA, Masami KAMIGAITO
- 1P3D003 Reversible Chain Transfer Catalyzed Polymerization Using Carbon Catalyst in Miniemulsion Polymerization System  
Masaya Sadakane, Yukiya Kitayama, Eiji Yuba, Atsushi Harada
- 1P3D004 Polymerization of More-Activated Monomers Using Poly(Vinyl Ether) Macro-CTA  
Mikito Muratomi, Mikiya Ishihara, Atsushi Matsumoto, Yasushi Maeda, Shinji Sugihara
- 1P3D005 Synthesis of poly( $\alpha$ -methylene- $\gamma$ -butyrolactone) by radical polymerization mediated by metal reduction ability of a facultative bacterium and the evaluation of its biodegradability  
Kota Nishii, Kayo Terada, Kazusato Oikawa, Kousuke Tsuchiya, Keiji Numata
- 1P3D006 Synthesis of dithiocatechol-functionalized polymers  
Jincai Li, Hiroataka Ejima

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 1P3D008 Development of Monodispersed Cross-Linked Polymer Liquid Crystal Particles with Controlled Molecular Orientation  
Kazuki Kawai, Shodai Hayashi, Tomoki Shigeyama, Kyohei Hisano, Osamu Tsutsumi
- 1P3D009 Circularly polarized luminescence of helical aromatic conjugated polymers synthesized in chiral liquid crystal field  
Hiroki Emi, Satoru Yoshida, Hiromasa Yamamoto, Kosuke Kaneko, Tomonori Hanasaki, Kazuo Akagi
- 1P3D010 Photocontrol of Circularly Polarized Luminescence Induced in Conjugated Polymers using Photoinvertible Chiral Liquid Crystals

Satoru Yoshida,Santa Morikawa,Kosuke Kaneko,Tomonori Hanasaki,Kazuo Akagi

- 1P3D011 Heterogeneous structural analysis and transparency evaluation of transparent polymers for optical communication  
Takahiro Hiraide,Daiki Tenma,Norihisa Tanio
- 1P3D012 Study on Ruthenium Complex for Light-Emitting Electrochemical Cells using Polymer Gel with Ionic Liquid  
Kazuto Ogura,Atsushi Aoki
- 1P3D013 Effect of Hybridization of Luminescent Iridium Complexes with Polysilsesquioxane on Luminescence Properties  
Yuki Kuroda,Masashi Nakamura,Koji Mitamura,Mitsuru Watanabe,Masahiro Muraoka,Seiji Watase
- 1P3D014 Optical Properties and Energy Transfer Mechanism in Beta-Diketone-Type Eu(III) Complexes containing Arsine Oxide Ligands  
Haruki Shimoji,Toshiki Fujii,Akifumi Sumida,Hiroaki Imoto,Kensuke Naka
- 1P3D015 Synthesis and functionalization of silsesquioxane nanoparticles containing fluoroalkyl groups  
Shota MURATA,Hideharu MORI
- 1P3D016 Synthesis and morphology design of multi-layered nanocomposite microgels  
Takumi Watanabe,Satoki Ushida,Haruka Minato,Daisuke Suzuki
- 1P3D017 Preparation and physical properties of acryl/ alumina transparent hybrid materials using charge repulsion  
Yuma Fujita,Kaito Suzuki,Hideki Sugimoto,Syogo Nobukawa,Katsuhiko Inomata
- 1P3D018 Synthesis of aromatic polyamide-silica composite particles capable of selectively separating metal ions  
Yayoi Yoshioka,Takuya Ehiro
- 1P3D019 Preparation and physical properties of urethane acrylate / alumina transparent composite material  
Kazuki Okabe,Nanaho Shirota,Hideki Sugimoto,Syogo Nobukawa,Katsuhiko Inomata
- 1P3D020 The effect of nanostructure of poly(tert-butyl methacrylate-silica) nanocomposites on mechanical properties  
Noeru Kishita,Shinya Watanabe,Reiko Saito
- 1P3D021 Preparation and physical properties of cellulose nanofiber/acryl transparent composite materials  
Kousuke Kondou,Yuki Tsuchida
- 1P3D022 The preparation of Janus nanosheets through the growth of poly(methyl methacrylate) in one side of haxaniobate nanosheets and subsequent exfoliation  
Ryosuke Ishikawa,Takuma Kamibe,Ryoko Suzuki,Regis Guegan,Renzhi Ma,Kimihiko Matsukawa,Yoshinobu Tujii,Yoshiyuki Sugahara

Online Room PosterP4

## **B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES**

- 1P4D026 Sub-micron Scale Structural Analysis of Stretched Polyethylene by STXM  
Masato Arakawa,Mizuki Kishimoto,Yohei Nakanishi,Kazuki Mita,Mikihito Takenaka
- 1P4D027 Adsorption of ethanol for syndiotactic polystyrene/atactic polystyrene or poly(2,6-diphenyl-1,4-phenylene oxide).  
Takahiko Nakaoki,Mikito Nishioka
- 1P4D028 Spherulite growth of polymers from the melt under electric field  
Masahiro OHMORI,Masato HASHIMOTO,Tomoko MIZUGUCHI,Susumu

## FUJIWARA

- 1P4D029 A study of the intermolecular interactions of styrene acrylonitrile copolymer by low-frequency Raman spectroscopy.  
Hiromasa Yamamoto, Harumi Sato
- 1P4D030 Absorption of ethanol in ethanol aqueous solution of syndiotactic polystyrene depending on ethanol concentration  
Takahiko Nakaoki, Manato Yamawaki
- 1P4D031 Structural Analysis of Polymer Electrolyte Fuel Cell Membranes under Moisture Regulated Stretching  
SORA WATANABE, GO MATSUBA
- 1P4D032 The effects of annealing on the fracture of PMMA  
Daisuke Iwahara, Shotaro Nishitsuji, Hiroshi Ito, Mikihiro Takenaka, Masaru Ishikawa, Takashi Inoue
- 1P4D033 Thermal Behavior of Poly(butylene succinate) by Low-frequency Raman and Terahertz Spectroscopy  
Kohei Ito, Harumi Sato
- 1P4D034 Structural Analysis of Conductive Filler Composite Self-Healing Materials  
Kengo Nishiura, Go Matsuba, Junsu Park, Yoshinori Takashima
- 1P4D035 Anisotropic and Macroscopic Structural Change Driven by Molecular Scale Reversible Orientation  
Kohei Amada, Wataru Kukai, Jun Matsui
- 1P4D036 Composition Ratio Dependence of Self-Assembled Structures Formed by Comb-shaped Random Copolymers  
Mao Kikuchi, Nozomi Saito, Mizuki Ooke, Shusaku Nagano, Shotaro Nishitsuji, Jun Matsui
- 1P4D037 Chemical Functionalization of Novel Free-Standing Reticular Polymeric Nanomembranes Formed within Unconventional Electric Double Layer  
Yudai Yokoyama, Yoshimitsu Itoh, Pier-Luc Champagne, Takuzo Aida
- 1P4D038 Effect of polymer end groups on the formation of pseudo-polyrotaxane nanosheet  
Riku Kanno, Shuntaro Uenuma, Hideaki Yokoyama, Kohzo Ito
- 1P4D039 Preparation of Ionic Diodes from Porous SiO<sub>2</sub> Thin Films and Polymer LbL Films  
Narumi KUMAKURA, Yuya ISHIZAKI, Shunsuke YAMAMOTO, Masaya MITSUISHI
- 1P4D040 Development of surface initiated living polymerization of phenylacetylene derivatives on gold substrates  
Naoya Asakura, Tsuyoshi Taniguchi, Tatsuya Nishimura, Katsuhiko Maeda
- 1P4D041 Development and evaluation of novel functional materials that mimic bee's antenna cleaner  
Masanori Yoshida, Rikima Kuwada, Shuto Ito, Daisuke Ishii

## D. BIOPOLYMERS AND BIORELATED POLYMERS

- 1P4D043 Incorporation of model membrane proteins in lipid nanodiscs consisting of phospholipid and amphiphilic cyclic peptides  
Hiroki Miwa, Ryosuke Nagao, Isamu Akiba
- 1P4D044 Development of amino-acid-modified chitosan nanoparticles for controlled gel degradation and evaluation of their stability in biological environments  
Masato Ogawa, Yoshihiko Murakami
- 1P4D045 Temperature dependence of near-infrared to visible up-conversion in dye-encapsulated liposomes  
Ryoya Tagata, Hideki Kawai
- 1P4D046 Fabrication of titanium dioxide coated peptide nanowire composites on the



templates composed of gold nanoparticle networks and their electrochemical properties

Toma Iwakiri, Hikari Suzuki, Shogo Matsubara, Masahiro Higuchi

1P4D047 Evaluation of up-conversion in dye-encapsulated nanoparticles  
Ryota Mizutani, Hideki kawai

1P4D048 Evaluation of up-conversion in cholesterol-containing liposomes  
Urara Hioki, Hideki Kawai

### **Wed. May 25**

Presentation Time

<14:30~15:30>

Online Room PosterP1

### **A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

1P1E001 Controlled Cationic Polymerization with Redox-Active Catalysts Containing Heavy Element  
Shuhe Hayashi, Koji Takagi

1P1E002 Cationic Polymerization of Styrene Derivatives Using Pnictogen, Chalcogen, Halogen Bonding Organocatalysts as Lewis Acid  
Tomoki Hasegawa, Nao Sakakibara, Koji Takagi

1P1E003 Cationic polymerization of  $\epsilon$ -caprolactone using natural organic acid under bulk condition  
Moe Sasai, Suguru Motokucho, Hisayuki Nakatani

1P1E004 Design of Salicylic Acid-Based Initiators toward Stereospecific Living Cationic Polymerization of Vinyl Ether  
JeongHyeon Lee, Hiroyuki Kubota, Makoto Ouchi

1P1E005 Investigation toward ABC-Type Periodic Terpolymer Synthesis via Photoinitiated Living Cationic Terpolymerization of Vinyl ether, Oxirane, and Ketone  
Yuto Eguchi, Arihiro Kanazawa, Sadahito Aoshima

1P1E006 Cationic Copolymerization of Sugar-Derived Cyclic Acetals  
Aya Katto, Arihiro Kanazawa, Sadahito Aoshima

1P1E007 Alkali Metal Carboxylate-Catalyzed Controlled/Living Ring-opening Polymerization of Epoxides  
Tianle Gao, Xiaochao Xia, Takuya Isono, Kenji Tajima, Toshifumi Satoh

### **C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS**

1P1E009 Electrochemically generated upconverted luminescence from acene compounds using DNA hybrid film incorporating  $\text{Ru}(\text{bpy})_3^{2+}$   
Ryuki Ozawa, Kazuki Nakamura, Takashi Tachikawa, Norihisa Kobayashi

1P1E010 Structure and chiral photophysical properties of chiral Eu(III) complex associated with hydrophobic DNA containing alkylammonium cations  
Ren Kaneko, Kazuki Nakamura, Norihisa Kobayashi

1P1E011 Step  $\pi$ -conjugated polymer (180) Synthesis and study of electron transfer for amphiphilic macromolecular wire with different energy levels  
Yusei Takahashi, Haoxuan GUO, Hiroyuki Aota

1P1E012 Step- $\pi$ -conjugated polymer(181)Electron transfer evaluation of Pt and Pt/TiO<sub>2</sub> bonded to macromolecular wires.  
Natsuki Kobayashi, Takuya Nakamura, Haoxuan GUO, Hiroyuki Aota

1P1E013 Step- $\pi$ -conjugated polymers (182) Preparation of a macromolecular-wire devices synthesized by stepwise methods on Au electrode  
Yuriko Takemura, Haoxuan GUO, Hiroyuki Aota

1P1E014 Syntheses and properties of narrow-bandgap polymers (30) Synthesis of

narrow-band-gap polymers capable of bonding with silver nanoparticles  
Ryo Nishimura, Haoxuan GUO, Hiroyuki Aota

- 1P1E015 Chirality amplification based on salt formation between optically active camphorsulfonic acid and an imidazole-containing fluorenone derivative  
Xiaoyuan Wang, Masayoshi Bando, Zhiyi Song, Tamaki Nakano
- 1P1E016 Chemical adhesion of an acryl film to a glass substrate using the Cu-free click reaction  
Yusuke Kanki, Sayuki Kanemitsu, Shota Yamamoto, Koki Miyahara, Kenta Morita, Masaki Matsui, Tatsuo Maruyama
- 1P1E017 Strong Instant Underwater Adhesives by Using Hydrophobic Hydrogen Bonding Unit  
Kohei Kikkawa, Yu Yanagisawa, Yoshimitsu Itoh, Takuzo Aida
- 1P1E018 Factors dominantly affecting the adhesive strength of acrylamide-based hydrogels  
Aya Mizutani Akimoto, Yuto Nakano, Takafumi Enomoto, Taihei Nishimoto, Ying Gao, Yuji Ohta, Nobuyuki Tanaka, Yo Tanaka, Xiang Li, Mitsuhiro Shibayama, Ryo Yoshida
- 1P1E019 Structure formation using polymerization-induced phase separation and creation of hydrophobic surfaces  
Shodai Onozato, Yasuhito Suzuki, Akikazu Matsumoto
- 1P1E020 Observation of fluid behavior at the interface of the concentrated polymer brush using PIV  
Ken Tamamoto, Yuji Kinose, Yoshinobu Tsujii
- 1P1E021 Patterning of Super-hydrophilic Polymer Brush on TiO<sub>2</sub>-containing Coating for Self-cleaning Applications  
Kenya Katayama, Daichi Nakamura, Yoshimi Iijima, Hidetoshi Iijima, Kenichi Oyaizu, Takeo Suga
- 1P1E022 Friction force anisotropy of the metal micro groove structures by sliding directions.  
Yohei Shimada, Yuji Hirai, Masatsugu Shimomura

Online Room PosterP2

## **B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES**

- 1P2E026 Polypyrrole-coated Fatty Acid Particles as Liquid Marble Stabilizer  
Yusuke Tsumura, Anne-Laure Fameau, tomoyasu Hirai, Yoshinobu Nakamura, Syuji Fujii
- 1P2E027 Synthesis of nitrogen-containing carbon tubes by near-infrared light irradiation  
Kanade Matsui, Kenshin Yamamoto, Keigo Oyama, Tomoyasu Hirai, Yoshinobu Nakamura, Syuji Fujii
- 1P2E028 Stabilization of Non-aqueous Polyhedral Liquid Marbles  
Yamato Iwata, Tomoyasu Hirai, Yoshinobu Nakamura, Syuji Fujii
- 1P2E029 Non-spherical Polymer Particles Synthesized by Solvent-free Polyaddition Reaction  
Shoichiro Aoki, Tomoyasu Hirai, Yoshinobu Nakamura, Syuji Fujii
- 1P2E030 Particle size control mechanism of surface-modified hollow silica nanoparticles  
MINGHAO LU, Yuichi Iki, Keisuke Inagaki, Reiko Saito
- 1P2E031 Polymer Nanogels Possessing Hierarchical Structure by Aqueous Dispersion Polymerization  
Shunsuke Takigawa, Yukiya Kitayama, Eiji Yuba, Atsushi Harada
- 1P2E032 Preparation of polypropylene/polystyrene composite particles by seeded emulsion polymerization

Ryohei Morimoto, Toyoko Suzuki, Hideto Minami

- 1P2E033 Preparation of hydrophilic hollow bio-based polymer particles  
Katsuhiko Onita, Miku Onishi, Taro Omura, Takeshi Wakiya, Toyoko Suzuki, Hideto Minami
- 1P2E034 Preparation of Electro-Optical Responsive Liquid Crystal Nanocapsules by Miniemulsion Polymerization of O/W Emulsion Monomer Droplets  
Reina Kojima, Michinari Kohri, Tatsuo Taniguchi, Keiki Kishikawa, Takashi Karatsu

#### **D. BIOPOLYMERS AND BIORELATED POLYMERS**

- 1P2E036 Stabilization of Nucleic Acid Triplexes by Cationic Comb-Type Copolymers with Different Main Chain Frameworks  
Raito Hayashi, Youta Abe, Naohiko Shimada, Shigeru Yamago, Atushi Maruyama
- 1P2E037 Photoswitching for DNA strand displacement reaction by photoresponsive polymer  
Yuki Hirayama, Atsushi Maruyama, Naohiko Shimada
- 1P2E038 Automated control of microtubules swarm programmed with a DNA cascade reaction  
Kohei Nishiyama, Daiki Matsumoto, Ibuki Kawamata, Arif Md. Rashedul Kabir, Kazuki Sada, Shin-ichiro Nomura M., Akira Kakugo
- 1P2E039 End-activation of self-immolative poly(carbamate) derivatives in response to external stimuli  
Ren Ishiyama, Yudai Takahashi, Shione Fukumoto, Syuuhei Komatsu, Akihiko Kikuchi, Yoshitsugu Akiyama
- 1P2E040 Synthesis of Biocompatible Aliphatic Polycarbonate-Based Copolymers Including Lactone Sequences  
Natsuha Momma, Kazuki Fukushima, Takashi Kato
- 1P2E041 Development of the lipase-immobilized core-shell fibermats using cellulose acetate as a shell layer  
Taira Ishiguro, Toshihisa Mizuno, Akiko Obata, Shoma Muramathu, Tomohito Takagi
- 1P2E042 Effect of calcium salt on hydration structure of cholinephosphate-type polymer brush  
Takumi Komiya, Motoyasu Kobayashi
- 1P2E043 Development of Polyion Complex Vesicle loaded with a pH sensitive fluorescence probe  
Takumi Obara, Yasutaka Anraku, Jumpei Norimatsu, Takayoshi Watanabe
- 1P2E044 Development of a novel self-assembling peptide capable higher-order structural transition for injured brain regeneration  
Atsuya Yaguchi, Hirotsugu Hiramatsu, Itsuki Ajioka, Takahiro Muraoka
- 1P2E045 A promoted redox activity of copper complexes by forming locally concentrated state through installing on the polymer sidechains toward antibacterial application  
Shigehito Osawa, Kenichi Kitanishi, Maho Kiuchi, Motoyuki Shimonaka, Hidenori Otsuka
- 1P2E046 Characterization of matrix-bound nanovesicles (MBVs) derived from various decellularized tissues.  
Mako Kobayashi, Yoshihide Hashimoto, Jun Negishi, Hideki Saga, Yoshihiro Sasaki, Kazunari Akiyoshi, Tsuyoshi Kimura, Akio Kishida
- 1P2E047 Design of hydrophobized alginates and association behavior  
Kaori Moriwaki, Shin-ichi Sawada, Yoshihiro Sasaki, Kazunari Akiyoshi

Presentation Time  
<15:30~16:30>  
Online Room PosterP3

### **A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

- 1P3F001 Radical and anionic polymerizations of polar vinyl monomers by Lewis pair catalysts  
Riki Akita, Mayo Horibe, Shin-ichi Matsuoka, Masato Suzuki
- 1P3F002 Lewis pair polymerization of n-butyl acrylate using boron compounds as a Lewis acid  
Yuka Naganawa, Shin-ichi Matsuoka, Masato Suzuki
- 1P3F003 Anionic Polymerization of (Meth)acrylic Thioester Utilizing Their High Reactivity  
Shuhei Nakagawa, Haruna Morishima, Shinichi Matsuoka, Koji Takagi, Masahito Suzuki
- 1P3F004 Chain-end modification of sequence-controlled oligomer composed of 1,1-diphenylethylene derivatives by successive living anionic addition reaction  
Tomohiko Nishijima, Kazuki Takahata, Raita Goseki, Takashi Ishizone
- 1P3F005 Anionic polymerizability of 5-substituted-2-isopropenylthiophenes  
Yuki Kurishiba, Raita Goseki, Takashi Ishizone
- 1P3F006 Design of acrylate monomers for ring-opening polymerization by conjugate substitution reaction and the synthesis of unsaturated polyesters  
Natsumi Nishiie, Yasuhiro Kohsaka
- 1P3F007 Chirality induction to polydibenzofulvene derivatives having pi-stacked conformation  
Chenxi Tu, Masayoshi Bando, Zhiyi Song, Tamaki Nakano

### **C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS**

- 1P3F009 Induced hybrid phase in binary polymer blends of in side-chain liquid crystal polymers of different main chains.  
Tatsunaga Nakajima, Naoki Hida, Takahiro Seki, Shusaku Nagano
- 1P3F010 Optical control of Photoresponsive side-chain liquid crystalline polymer blends  
Takumi Kokubo, Tatsunaga Nakajima, Naoki Hida, Takahiro Seki, Shusaku Nagano
- 1P3F011 Design and Photo-Alignment of Photoresponsive Side-Chain Liquid Crystal Copolymers with Random Planar Orientation Exhibiting High-Temperature Liquid Crystal Phase  
Riku HIROSE, Miho KOBAYASHI, Naoki HIDA, Takahiro SEKI, Shusaku Shusaku NAGANO
- 1P3F012 Study on effects of spacer length for forming highly ordered smectic phases induced by side-chain liquid-crystalline copolymers.  
Yuma Shibuya, Naoki Hida, Takahiro Seki, Shusaku Nagano
- 1P3F013 Organized Structures of Side-Chain Liquid Crystal Polymers with an Ether Bond Spacer  
Mahiro Shimada, Naoki Hida, Takahiro Seki, Shusaku Nagano
- 1P3F014 In situ formation of fluorescent salicylideneaniline in photoalignable LC polymeric film with NBA side group.  
Hiroki Furukawa, Toshiki Nishizono, Mizuho Kondo, Nobuhiro Kawatsuki
- 1P3F015 Hydrothermally crosslinkable fluorescent polymer and its self-assembly into insoluble micro-particles  
Yuta Ihara, Lin Chen, Jhu Can-He, Hiroshi Yamagishi, Masaki Horie, Yohei Yamamoto

- 1P3F016 Surface Segregation Behavior of Hydrophilic Octasilicate Derivatives in a Polymer Matrix  
Ichiyou Tokuami, Rina Suzuki, Mayu Nagao, Hiroaki Imoto, Kensuke Naka
- 1P3F017 Effect of structure and physical properties of super engineering plastics on friction and wear behavior  
Syuya Kawabata, Rei Hondo, Syota Suzuki, Masaki Kakiage, Hiroki Uehara, Takeshi Yamanobe, Masaya Nakajima, Taku Naganuma, Junichi Nozawa, Yoshiyuki Matsumoto, Tetsuya Sonobe
- 1P3F018 Single-molecule mechanics measurement of electrostatic attraction by a cationic polymer chain and an anionic polymer chain  
Ken-ichi Shinohara, Yuga Onuki, Hideo Higuchi
- 1P3F019 Morphology control of gold nanoparticles immobilized on an amino group-displayed plastic substrate  
Sarina Yoshida, Takane Tsuchi, Mimari Matsumoto, Kenta Morita, Tatsuo Maruyama
- 1P3F020 Remote Manipulation of Elastomer Film Containing Liquid Metal by Near-Infrared Laser  
Hizuma Takahashi, Minami Taya, Hiroshi Endo
- 1P3F021 Fabrication of UV-cured films of methacrylate resins containing disulfide bonds for pollutant removal  
Masahiro Furutani, Keiji Washida
- 1P3F022 Analysis of the mechanism of penguin feathers to withstand high water pressure  
Ryosuke KAWASAKI, Daisuke ISHII, Rikima KUWATA, Yosuke ZAITSU, Masanori KURITA

Online Room PosterP4

## **B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES**

- 1P4F026 Quantifying the contributions of crystallinity and crosslinking density in Energy Storage Capacity of Shape-memory Polymers  
FULATI AILIFEIRE, Koichiro Uto, Mitsuhiko Ebara
- 1P4F027 Effect of inhibition of crosslinking in radical polymerization of a methacrylate with five-membered cyclic carbonate on mechanical properties  
Tetta Seki, Yoshimasa Matsumura, Bungo Ochiai
- 1P4F028 Evaluation of Mechanical Properties of Epoxy Resin with Heterogeneous Structure via Nanoindentation  
Runa Otani, Eri Nakagawa, Takahito Ohmura, Yoshihisa Fujii, Naoya Torikai
- 1P4F029 Organic salts composed of tetracene dibenzenesulfonic acid and alkylamines: control of molecular arrangements and their relationship with concomitant photoelectric properties  
Hiroki Imoba, Kouki Oka, Norimitsu Tohnai
- 1P4F030 Melting and recrystallization behaviors of strained silicone rubber  
Miyu Umeda, Hal Suzuki
- 1P4F031 Evaluation of Water Diffusion Behavior on Crop Surfaces by Site  
Junki Miyamoto, Daisuke Ishii
- 1P4F032 Evaluation of barnacle larvae settlements on the patterned surface functional groups substrates  
Jumpei Watanabe, Kei Mikami, Takayuki Murosaki, Yasuyuki Nogata, Masatsugu Simomura, Yuji Hirai
- 1P4F033 Analysis of Hydrogen Bonds inside Reverse Micelles by Molecular Dynamics Simulation  
Yuri Ono, Tomoko Mizuguchi, Mao Fukuyama
- 1P4F034 Molecular dynamics simulation of the micelle formation and self-sorting of

amphiphilic copolymers  
Nami Sato, Tsuyoshi Koga

- 1P4F035 Complex formation of lysine-containing copolymer with copper and its pH-responsibility  
Kengo Takagi, Chun-Jen Huang, Shin-ichi Yusa
- 1P4F036 Evaluation of surface structure of microspheres with different charge distribution  
Ryuji Namioka, Takumi Inui, Nishizawa Yuichiro, Daisuke Suzuki
- 1P4F037 Evaluation of Compressed Microgel Arrays Adsorbed at Air/Water Interfaces  
Haruka Minato, Tetsuya Noguchi, Kohei Yanagi, Daisuke Suzuki
- 1P4F038 Self-Assemblies of Zwitterionic Block Copolymers containing Phosphobetaine and Their Salt Responsivities  
Shu Morita, Hideki Matsuoka, Yoshiyuki Saruwatari

#### **D. BIOPOLYMERS AND BIORELATED POLYMERS**

- 1P4F040 Development of asymmetric transmembrane amphiphiles  
Aoi Okuma, Kohei Sato, Kazushi Kinbara
- 1P4F041 Polyion complexes (PIC) aggregates with glucose groups-containing shells  
Tomoki Ando
- 1P4F042 Formation of Amphiphilic Liquid Crystalline Polymer Self-Assemblies and Their Morphological Control  
Maika Togawa, Yuki Hirano, Yasuaki Inoue, Akifumi Kawamura, Takashi Miyata
- 1P4F043 Elucidation of the effect of microtubule-associated proteins on the viscoelasticity of microtubules  
Kosuke Matsumura, Akira Kabasawa, Kazuki Sada, Kiyotaka Tokuraku, Arif Md. Rashedul Kabir, Akira Kakugo
- 1P4F044 pH-responsive control of lipid membrane morphology by amphiphilic polymers  
Nao Kaneko, Shutaro Takahashi, Naohiko Shimada, Eiji Yuba, Atsushi Harada, Atsushi Maruyama
- 1P4F045 Design and function of reactive magnetic nanogels for biomolecular delivery  
Katsuya Ozeki, Shinichi Sawada, Yoshihiro Sasaki, Kazunari Akiyoshi, Ryosuke Mizuta
- 1P4F046 Preparation of reversible hydrogels with star-shaped zwitterionic polymers  
Yoshiki Hosobe, Yuta Yoshizaki, Tomohiro Konno
- 1P4F047 Design and Size Control of One-Dimensional Molecular Assemblies Composed of Amphiphilic Graft Copolymers  
Yusuke Sakamoto, Tomoki Nishimura

#### **Thu. May 26**

Presentation Time

<9:30~10:30>

Online Room PosterP1

#### **A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

- 2P1A001 Synthesis and characterization of threonine/glutamic acid-based self-healing polymeric materials  
Ryo Kudo, Yurika Tani, Ryo Yonenuma, Hideharu Mori
- 2P1A002 Synthesis and surface characterization of cyclic polycaprolactone containing perfluoroheptyl group  
Kota Manabe, Kenji Sugiyama
- 2P1A003 SYNTHESIS AND SURFACE PROPERTY OF END-FUNCTIONALIZED

## POLYCAPROLACTONE WITH PERFLUOROOCYLAZOBENZENE MOIETIES

Keita Okuzawa, Kenji Sugiyama

- 2P1A004 Precision synthesis and film surface properties of hydrophobic multi-branched star polymers with various structures.  
Hiroki Tanigawa, Shohei Ida, Shokyoku Kanaoka
- 2P1A005 Synthesis and properties of tripodal poly(methyl methacrylate) utilizing an incompletely condensed cage silsesquioxane as a scaffold  
Ryota Tanaka, Amato Igarashi, Taihei Hayashi, Hiroaki Imoto, Kensuke Naka
- 2P1A006 Synthesis of Various Thermoresponsive Polymers by Living Cationic Polymerization Using Multifunctional Initiator and Their Thermoresponsive Behavior in Water  
Yuyu Furuki, Arihiro Kanazawa, Sadaito Aoshima
- 2P1A007 Formation and property of st-PMMA/coronene inclusion complex  
Ituki Tousya, Wakana Miyamoto, Tomohiro Ueno, Hitomi Mukai, Takehiro Kawauchi
- 2P1A008 Molecular Simulation of Living Supramolecular Polymerization  
Yudai Taguchi, Tsuyoshi Koga
- 2P1A009 Supramolecular assembly of structured macrocyclic polyamides  
Shogo Nakamura, Hiroyuki Tamada, Kohei Sato, Kazushi Kinbara
- 2P1A010 Oxidation Mechanism in Polymer Surface Modification using Photo-activated Chlorine Dioxide  
Keita Yamamoto, Haruyasu Asahara, Tsuyoshi Inoue
- 2P1A011 Synthesis of Polyaniline in an organic liquid crystal.  
Ryo Miyashita, Hiromasa Goto
- 2P1A012 Synthesis and Characterization of Polypyrroles Using Germanium Catalyst and Plasma  
Kazuki Yanagida, Hiromasa Goto

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 2P1A014 Partially-fluorinated anion-conductive terpolymers: effect of aliphatic side chains on membrane properties  
Yoshihiro Ozawa, Kenji Miyatake
- 2P1A015 Effects of succinonitrile on the relationship between ionic conductivity and structural relaxation time of PEO-based electrolytes  
Tatsuya Shiraiishi, Yuya Doi, Takashi Uneyama, Yuichi Masubuchi
- 2P1A016 Synthesis and Characterization of Supramolecular Electrolytes Composed of Polyether and Boroxine (1) - Effect of Polyether with Amino Group on One Chain End on Various Properties -  
Mengen Guo, Kouhei Takahashi, Yuko Takeoka, Masahiro Rikukawa, Masahiro Fujita
- 2P1A017 Development of Lithium-Ion Conductive Liquid Crystals Having Fluorinated Mesogens  
Shingo Takegawa, Eiji Hosono, Kazuma Hamaguchi, Junya Uchida, Takashi Kato
- 2P1A018 Fabrication and evaluation of polymer nanofiber composite electrolyte membranes with various lithium salt concentrations  
Kenta Sando, Nohara Yokota, Manabu Tanaka, Hiroyoshi Kawakami
- 2P1A019 Mechanical and structural characteristics of the ionic liquid-based gel electrolytes with a homogeneous polymer network  
Mayu Osugi, Kenta Fujii
- 2P1A020 Ion-conductive properties of carbonate-based polyurethane electrolytes  
Yuta Fujiyoshi, Yoichi Tominaga
- 2P1A021 Preparation and Characterization of Solid Electrolytes Using Ionic Plastic

Crystals and Ionic Conducting Polymer (I) -Effects of IPC Addition on Various Properties-

Shuho Akakabe,Ryoutarou Sekiguchi,Yuko Takeoka,Masahiro Rikukawa,Masahiro Fujita

- 2P1A022 Synthesis of Highly Hydrophilic TEMPO-substituted Polymer Nanoparticles as Cathode-active Materials for Redox Flow Batteries with pH-Neutral Aqueous Electrolytes  
Ayano Tsukamoto,Kan Hatakeyama,Hiroki Aramaki,Junichi Oizumi,Kenichi Oyaizu
- 2P1A023 IrO<sub>2</sub> decorated conjugated polymer substrate as highly durable water splitting catalyst  
Yusaku Asai,Rajashekar Badam,Noriyoshi Matsumi

Online Room PosterP2

## **B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES**

- 2P2A026 Particle Dispersion and Viscoelastic Property for the Polystyrene Composite with Mixed Fumed Silica with Hydrophilic and Hydrophobic Surfaces  
Momona Fukuura,Yoshihisa Fujii,Naoya Torikai
- 2P2A027 Analysis of epoxy/silica nanostructures by STEM-ELNES  
Shin Horiuchi,Takeshi Hanada,Atsumi Shundo,Satoru Yamamoto,Keiji Tanaka
- 2P2A028 Theoretical Study on Baroplastic Behavior of Block Copolymers  
Hiroki Degaki,Ikuo Taniguchi,Shigeru Deguchi,Tsuyoshi Koga
- 2P2A029 Toughness and Heat Resistance Improvement Effect of Alicyclic Epoxy Thermoset Modified with POSS having Different Functional Groups  
Yosuke Hosaka,Miyuki Harada,Daisuke Tanida,Yusaku Sainohira,Akihiro Shibamoto
- 2P2A030 Effects of multicyclic polymers on structure and properties of thermoplastic elastomers  
Hironori Marubayashi,Atsushi Imasaki,Yamato Ebii,Yoshinobu Mato,Takuya Isono,Toshifumi Satoh,Hiroshi Jinnai
- 2P2A031 Effects on Particle Dispersion and Rheological Property for a Polystyrene Composite by Mixing Dry Silica with Different Aggregation States  
Miyu Iwata,Yoshihisa Fujii,Naoya Torikai
- 2P2A032 Investigation of characteristic cylindrical structures formed from ABAC Tetrablock Terpolymers.  
Tsuyoshi Orido,Jiro Suzuki,Atsushi Takano,Yushu Matsushita

## **D. BIOPOLYMERS AND BIORELATED POLYMERS**

- 2P2A034 Enzymatic synthesis of peptides with cysteine at N-terminal and polymerization using Native Chemical Ligation  
Shota Sakamoto,Seiya Fujita,Hiroataka Uji,Kousuke Tsuchiya,Keiji Numata
- 2P2A035 Chemical synthesis of resilin-directed polypeptide by dityrosine crosslinking  
Shogo Takemura,Shota Sakamoto,Hiroataka Uji,Kousuke Tsuchiya,Keiji Numata
- 2P2A036 Study on improving the efficiency of the mitochondrial targeting peptide by stabilizing the helical structure  
Mako Kuzumoto,Naoya Abe,Ayaka Tateishi,Kayo Terada,Seiya Fujita,Simon Sau Yin Law,Tsuyohiko Fujigaya,Keiji Numata
- 2P2A037 Synthetic condition and structure evaluation of peptide sequence containing unusual amino acid residues  
Hiromasa Sugiura,Yoshihito Inai



- 2P2A038 Effect of the amino acid sequence in a short-chain peptide on the stereocomplex formation  
Shiho Seguchi, Takane Tsutii, Sayuki Kanemitsu, Kunihisa Sugimoto, Kennta Morita, Tatsuo Maruyama
- 2P2A039 Degradation of amide bonds using self-assembling peptides  
Toshihisa Kimura, Natsumi Shimizu, Kenta Morita, Tatsuo Maruyama
- 2P2A040 Protein folding promotion by thiol compounds bearing cationic units  
Mai Kitamura, Shunsuke Okada, Takahiro Muraoka
- 2P2A041 Structural stabilization of microtubules by photoaffinity labeling of Tau-derived peptide  
Soei Watari, Hiroshi Inaba, Rashedul Kabir Arif Md., Akira Kakugo, Kazuki Sada, Kazunori Matsuura
- 2P2A042 Presentation of post-crosslinkable copolymer onto cell surfaces and examination of cross-linking reaction between them  
Tatsuki Nakakubo, Toshihisa Mizuno
- 2P2A043 Polydopamine-Assisted Surface Functionalization of Exosomes  
Chenyu Wang, Hirotaka Ejima
- 2P2A044 Development of drug-releasing sheets formed from multiple polysaccharides  
Shoya Homma, Yoshihiko Murakami
- 2P2A045 Design of Tissue-Adhesive Microparticles for Perforation Closure after Early Gastrointestinal Cancer Removal  
Shima Ito, Akihiro Nishiguchi, Fumisato Sasaki, Hidehito Maeda, Masayuki Kabayama, Akio Ido, Tetsushi Taguchi
- 2P2A046 PEG-grafted degradable thermoresponsive hydrogels capable of repeatedly removing adsorbed proteins  
Naoki Kamei, Syuuhei Komatsu, Akihiko Kikuchi
- 2P2A047 Body distribution of water-soluble polymeric MRI contrast agent for stem cell tracking  
Chihiro Hiruno, Kyoko Fukazawa, Yuichi Ohya, Tetsuji Yamaoka
- 2P2A048 Design of polysaccharide nanogels conjugated adjuvants and function of antigen carrier  
Yuki Yazawa, Shinichi Sawada, Yoshihiro Sasaki, Kazunari Akiyoshi

#### **Thu. May 26**

Presentation Time

<10:30~11:30>

Online Room PosterP3

#### **A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

- 2P3B001 Synthesis of optically active star-shaped polyacetylenes by core gel method  
Shota Mino, Masahide Goto, Hiromitsu Sogawa, Fumio Sanda
- 2P3B002 A relationship between structures and thermoresponsive properties of PAMAM dendrimers with two kinds of oxazoline units on the surface  
Yui Nishikawa, Makoto Kishi, Keigo Aoi
- 2P3B003 Synthesis and thermoresponsive properties of a PAMAM dendrimer having N-acyl imino unit and N-hydroxyethyl amido unit at the surface sector  
Takumi Ueyama, Makoto Kishi, Keigo Aoi
- 2P3B004 Synthesis of Hyperbranched Polymer Derived from Caffeic Acid using Acid Catalysts  
Risa Fujita, Tomohiro Kubo, Kotaro Satoh
- 2P3B005 Synthesis of brush block copolymers bearing hyperbranched polyamide and polyhedral oligomeric silsesquioxane at side chain by means of ring-opening metathesis polymerization  
Shuuji NAKAZAWA, Mizuki SATO, Hiroki KOBAYASHI, Yoshihiro

OHTA, Tsutomu YOKOZAWA

2P3B006 Synthesis of polyether bottlebrushes  
Moeka Tamaki, Kohji Ohno, Yoshinobu Tsujii

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

2P3B008 Relationship between Efficient Power Conversion and Energy Loss in Nonfullerene Polymer Solar Cells  
Rei Shirouchi, Toshiharu Saito, Shin-ichiro Natsuda, Yasunari Tamai, Hideo Ohkita

2P3B009 Dependence of fill factor on the active layer thickness in all polymer solar cells based on crystalline donor polymers  
Jihun Jeon, Hyung Do Kim, Hideo Ohkita

2P3B010 Relationship between Interfacial Charge Transfer State and Open-Circuit Voltage in Various Polymer Solar Cells with Different Acceptors  
Takumi Ishikawa, Takuya Ide, Hyung Do Kim, Hideo Ohkita

2P3B011 Azo and imino groups containing BIAN based porous conjugated polymer and its applications for anodic material in lithium-ion secondary batteries  
Bharat Srimitra Mantripragada, Rajashekar Badam, Noriyoshi Matsumi

2P3B012 Fast charging lithium-ion full cell using polymer derived heavily nitrogen doped carbon  
Kottisa Sumala Patnaik, Badam Rajashekar, Tatsuo Kaneko, Noriyoshi Matsumi

2P3B013 Studies on mechanism of improvement of Li ion battery performance in the presence of poly(vinylphosphonic acid) anodic binder  
Noriyuki Takamori, Tadashi Yamazaki, Badam Rajashekar, Noriyoshi Matsumi

2P3B014 Effect of function group content on carbon black substrate on Li-O<sub>2</sub> battery performance  
LiHang Zhou, Rajashekar Badam, Noriyoshi Matsumi

### F. INDUSTRIAL POLYMERS AND TECHNOLOGY

2P3B016 Temperature dependence of diffusion coefficients of water in contact with cis-1,4-polyisoprene  
Hikaru Higuchi, Tomoko Ikeda-Fukazawa

2P3B017 Studies on the effects of natural rubber proteins on the strain-induced crystallization of natural rubber sheets.  
Takato Matsui, Choon Pin Foong, Takuma Aoyama, Hiroyasu Masunaga, Katsuhiko Tsunoda, Kenji Urayama, Kousuke Tsuchiya, Keiji Numata

2P3B018 Preparation and properties of polymer alloys consisting of multi-functionalized benzoxazine and bismaleimide resins  
Taichi Shibatsuka, Kouya Ishii, Takehiro Kawauchi

2P3B019 Examination of spinning conditions for water-system silicone-modified polyurethane nanofibers  
Toshihisa Tanaka, Kaisuke Nishibu, Keishiro Ono, Daisuke Noda, Shinji Irifune, Hiromasa Sato

2P3B020 Fabrication of high heat-resistant poly(ether ketone) nanofibers by electrospinning  
Tomoyuki Nomura, Tomoki Maeda, Atsushi Hotta

2P3B021 Fabrication of stimuli-responsive microcapsules by maskless exposure technique  
Shunsuke Nagahama

2P3B022 Release behavior of cationic surfactant ion from intercalated complex of montmorillonite and CPC dispersed in the polymer matrix

Kenya Matsuo, Takeru Kameyama, Takumi Okihara

- 2P3B023 Surface Modification of Polyethylene Naphthalate Substrates by Plasma Treatment and UV Irradiation and their Application in Electroless Deposition: the Chemical and Physical Properties of the Substrate Surface Layer  
Toshiyuki Tamai, Mitsuru Watanabe, Yasuyuki Kobayashi, Jyunpei Kobata, Rie Kakehashi, Yoshio Nakahara, Setsuko Yajima
- 2P3B024 Physiochemical analysis of hard shell of plants and design guidelines for functionally graded materials  
Rikima Kuwada, Daisuke Ishii

Online Room PosterP4

## **B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES**

- 2P4B026 Transparent glass fiber composite from a refractive index adjustable polymer blend  
Takayuki Hirai, Kenichi Yagi, Kyoko Nakai, Kazuo Okamoto, Takuro Matsunaga, Hirotaka Okamoto
- 2P4B027 Control of nanophase separation structure and mechanical properties of acrylic elastomer by trifluoroethyl group.  
Yuki Hirayama, Yoshimasa Matsumura, Bungo Ochiai
- 2P4B028 Mechanical and Adhesive Properties of Liquid Crystalline Epoxy/Clay Composites  
Hiroya Yamamoto, Miyuki Harada
- 2P4B029 Viscoelastic properties of natural rubber with polystyrene nanomatrix structure  
Seiichi Kawahara, Kota Endo, Yoshimasa Yamamoto
- 2P4B030 Thermal Conductivity of Liquid Crystalline Epoxy/Cellulose Nanofiber Composites  
Miku Kimura, Saki Ota, Miyuki Harada
- 2P4B031 Aggregation States and Thermal Molecular Motion of Poly(glycolic acid)/hyperbranched Polymer Composites in a Nanofiber State  
Reiki Eto, Hisao Matsuno, Keiji Tanaka
- 2P4B032 Investigation of Molecular Weight Dependence of Domain Size of MicroPhase-Separated Structures for ABC Triblock Terpolymers.  
Ayane Kitahara, Tsuyoshi Orido, Jiro Suzuki, Takashi Honda, Atsushi Takano, Yushu Matsushita

## **D. BIOPOLYMERS AND BIORELATED POLYMERS**

- 2P4B034 Cryoprotectant activity of fragment peptides from anti-freezing proteins  
Yota Imahori, Kazuya Matsuo, Tomonori Waku, Akio Kobori
- 2P4B035 Synthesis and Structural Analysis of Coordination Polymers Composed of Peptides with N-methylalanine Residues  
Yiying Peng, Yota Shiratori, Jumpei Morimoto, Shinsuke Sando
- 2P4B036 Development of cell-penetrating bioconjugate phospholipid polymers for antigen delivery  
Koki Onoda, Yuta Yoshizaki, Tomohiro Konno
- 2P4B037 Development of a cell type-selective PG-surfactant for the transport of exogenous peptides  
Momoka Yamada, Natsumi Sumito, Toshihisa Mizuno
- 2P4B038 Controlled association of nanogel with protein by controlled microwave irradiation  
Yunting Ma, Tomoya Yagita, Yoshihiro Sasaki, Hikaru Takaya, Shinichi

Sawada, Kazunari Akiyoshi

- 2P4B039 Peptide-based anticancer drug that induces apoptosis of cancer cells via tyrosine kinase-triggered intracellular self-assembly  
Kenta Morita, Kanon Nishimura, Shota Yamamoto, Natsumi Shimizu, Takashi Aoi, Atsuo Tamura, Tatsuo Maruyama
- 2P4B040 Synthesis and conformational analysis of helical peptide sequence designed by incorporation of unusual amino acid  
Yuka Hanamura, Yoshihito Inai
- 2P4B041 Effects of ionic structure and water content on dissolution and refolding of aggregated cellulase in hydrated ionic liquids  
Kazune Kobayashi, Anna Ito, Syun Yanagisawa, Kimiyoshi Ichida, Kyoko Fujita
- 2P4B042 Degradation mechanism on retinal prosthesis using photoelectric dyes coupled to polyethylene film surface  
Mayu Mitsui, Koichiro Yamashita, Tetsuya Uchida
- 2P4B043 Development of the lactate dehydrogenase (LDH)-encapsulated core-shell fibermat  
Yuna Kato, Toshihisa Mizuno
- 2P4B044 Evaluation of retinal prosthesis using photoelectric dyes with various anions for improving durability  
Masato Matsushima, Koichiro Yamashita, Tetsuya Uchida
- 2P4B045 Corrosion and Adhesion Behavior of Osteoblasts of Pure Magnesium with Polydopamine Coating  
Sayuki Yoshitomi, Minoru Sugiyama, Youichi Mizuno, Daiki Sannomiya, Kunimitsu Nakamura, Sachiro Kakinoki
- 2P4B046 Evaluation of bacteria adhesion onto surfaces immobilized with peptide mimicking collagen backbone.  
Yuma Matsushita, Yasuhiko Iwasaki, Masato Ueda, Sachiro Kakinoki
- 2P4B047 Effect of hydration swelling layers on cell/polymer material interactions  
Yuki Sudo, Shin-nosuke Nishimura, Daiki Murakami, Masaru Tanaka
- 2P4B048 Effect of hydrophilic side-chain terminal groups on hydration state and antithrombogenicity of polymers  
Azusa Yamamoto, Shingo Kobayashi, Masaru Tanaka

#### **Thu. May 26**

Presentation Time

<12:30~13:30>

Online Room PosterP1

#### **A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

- 2P1C001 Synthesis by Dehydration Condensation and Evaluation of Conjugated Polymers containing Azine Bonds in the main chain  
Kyoya KOBAYASHI, Hiroki MURAKAMI, Keita SUZUKI, Takaki KANBARA, Junpei KUWABARA
- 2P1C002 Metal-free synthesis of  $\pi$ -conjugated polymers using divanillin-derived monomers via cycloaddition polymerization  
Yuki Kakita, Hiromitsu Sogawa, Fumio Sanda
- 2P1C003 Synthesis of semi-aromatic polyimides with suppressed salt formation and application to low dielectric materials  
TSUTOMU SATO, TAIKI ENDO, TOMOAKI MAENO, YASUNORI KAWABATA, TOMOYA HIGASHIHARA
- 2P1C004 Synthesis of Aromatic Poly(ether)s by  $S_NAr$  Reaction Activated with Phosphine Sulfides and Their Transformation to Polyelectrolytes Possessing Tetra-arylphosphonium Units  
Ryoyu Hifumi, Shinsuke Inagi, Ikuyoshi Tomita

- 2P1C005 Synthesis and Anomalous Refractive Index Properties of Poly(phenylene sulfide) Derivatives Bearing Sulfur-Containing Pendants and Hydroxy Groups  
Seigo Watanabe, Hiromichi Nishio, Kenichi Oyaizu
- 2P1C006 Synthesis of Novel Poly(arylene ether)s with Triphenylamine and Triazine Units  
Yuta Oyama, Ryosuke Takahashi, Tomoya Higashihara
- 2P1C007 Synthesis of fluorine-containing polyimides from tetracarboxylic dianhydrides with perfluoroalkylene groups  
Ryuhei Niinuma, Tadashi Tsukamoto, Yuji Shibasaki, Yoshiyuki Oishi

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 2P1C009 Preparation of highly porous heat-resistant polybenzoxazole network films and their electrical conductivities  
Atsu Goto, Tetsuya Uchida
- 2P1C010 Fabrication of new platinum-loaded polymer-grafted CNT for application as fuel cell electrode materials.  
Tsukasa SAITO, Hiroshi SAITO, Tetsu MITSUMATA, Norio TSUBOKAWA, Takeshi YAMAUCHI
- 2P1C011 Performance improvement of oxygen barrier sandwich PEM by thickness reduction  
Zulfi Al Rasyid Gautama, Yasir Arafat Hutapea, Stephen M. Lyth, Kazunari Sasaki, Masamichi Nishihara
- 2P1C012 Fabrication and properties of crosslinked-PVA nanofiber-framework composite membrane for fuel cell  
Yasutaka Kuwahara, Toyotaka Nakae, Kazuma Komine, Hiroyoshi Kawakami
- 2P1C013 Preparation of cathode catalysts of polymer electrolyte fuel cells by pyrolysis of polymer precursors consisting of metallic phthalocyanine and  $\pi$ -electron conjugated moieties  
Hiroki Matsumoto, Takafumi Suzuki, Hidenori Takasawa, Tsukasa Ichikawa, Izuru Kobayashi, Nobukatsu Nemoto, Yudai Kitagawa, Kotaro Yoshioka, Yuki Sakamoto, Masaji Akimoto
- 2P1C014 Local oxygen transport resistance reduction in PEFC electrocatalyst layer by gas permeable ionomers  
Yasir Arafat Hutapea, Zulfi Al Rasyid Gautama, Akari Hayashi, Kazunari Sasaki, Masamichi Nishihara
- 2P1C015 Electrical conductivity of silica capsules coated with sodium polystyrene sulfonate  
Yuichi Iki, Reiko Saito
- 2P1C016 Controlled disassembly of pseudo-polyrotaxane nanosheets by axial-end modification  
Yumi Shikano, Shuntaro Uenuma, Hideaki Yokoyama, Kohzo Ito
- 2P1C017 Functionalization of Pseudo-polyrotaxane Nanosheets by Click Reaction  
Minaka Sugano, Shuntaro Uenuma, Naoki Ando, Hideaki Yokoyama, Kohzo Ito
- 2P1C018 Preparation of high heat and thermal conductivity rigid polymer nanofibers and their application to polycarbonate composite films.  
Takafumi Mitsue, Tetsuya Uchida
- 2P1C019 Development of Water Dispersible Curcumin Hyperbranched Polymer  
Yusuke Nakayama, Sunnam Kim, Tsuyoshi Hukaminato, Seiji Kurihara

Online Room PosterP2

### B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES

- 2P2C026 Multifunctional benzoxazines with  $\pi$ -conjugated moieties: synthesis, thermal curing, and CO<sub>2</sub> adsorption  
Masanobu Muraoka, Masahide Goto, Masaki Minami, Da-yang Zhou, Takeyuki Suzuki, Tatsuo Yajima, Jun'ichi Hayashi, Hiromitsu Sogawa, Fumio Sanda
- 2P2C027 Principles for Determining the Critical crack length of Tough and Self-Healing Polyampholyte Gels  
Reina WATANABE, Kunpeng Cui, JianPing GONG
- 2P2C028 Relationship between magnetorheological effect and flowability of gel-matrix for carrageenan magnetic hydrogels  
Masahiro Kaneko, Kawai Mika, Mitsumata Tetsu
- 2P2C029 Synthesis and properties of bio-based carbonate resins using tyramine as a starting material  
Soma GOTO, Kozo MATSUMOTO
- 2P2C030 Swelling Properties in Polyacrylonitrile Gel prepared by Freezing and Thawing Method and the Semidilute scaling of Osmotic Pressure  
Yutaka Tanaka, Sho Nakajima, Shogo Furui
- 2P2C031 Deformation-Driven Volume Change in Polyelectrolyte Gels  
Akihiro Nagano, Kenji Urayama
- 2P2C032 Synthesis and Swelling Behavior of Bilayer Gels by Free Radical Polymerization in Phase-Separated Solvent System  
Ryuto Soma, Shohei Ida, Shokyoku Kanaoka
- 2P2C033 Effects of Primary Structure of Reactive Polymers on Gel Structure and Mechanical Properties  
Tsutomu Furuya, Tsuyoshi Koga
- 2P2C034 Numerical Simulation of Neck Propagation in Double Network Hydrogel  
Isamu Riku, Koji Mimura
- 2P2C035 Relationship between the nanostructures of hydrogel microspheres and chemical species  
Yuichiro Nishizawa, Takayuki Uchihashi, Daisuke Suzuki

#### **D. BIOPOLYMERS AND BIORELATED POLYMERS**

- 2P2C037 Novel method for preparing porous sheets by using spontaneous emulsification  
Tuan Vu Bui, Yoshihiko Murakami
- 2P2C038 Fabrication of Calcium Carbonate coated Vesicles having target recognition and the pH regulated Drug Release abilities for DDS Carrier  
Nana Kato, Syogo Matsubara, Masahiro Higuchi
- 2P2C039 The development of molecular block using ursodeoxycholic acids as cell membrane disruption molecules  
Kazuki Moroishi, Masahiko Nakamoto, Michiya Matsusaki
- 2P2C040 Fabrication of Membrane-type Enzyme Clusters Targeted Polyglutamic Acid Derivatives that Synergistically Inhibit Cancer Cell Proliferation  
Yuki Koba, Masahiko Nakamoto, Michiya Matsusaki
- 2P2C041 Preparation of DDS carriers having magnetite shell and the regulation of drug release  
Yuuka Chinda, Shogo Matsubara, Masahiro Higuchi
- 2P2C042 Ligand number-tunable graft copolymers: Synthesis and cellular uptake evaluation  
Masaru Cho, Yurugi Kinoshita, Mitsuru Naito, Yusuke Watanuki, Jongmin Yum, Beob Soo Kim, Yuichi Yamasaki, Kanjiro Miyata
- 2P2C043 Self-assembly of Copolymers Consisting of a Glycerol-based Monomer and a Vitamin E Monomer  
Xiaoxi Liu, moemi Matsuda, Tooru Ooya

- 2P2C044 Preparation of phospholipid polymer nanoparticles with functional surface property for controlled release of bioactive molecules  
Yuki Harada, Yuta Yoshizaki, Tomohiro Konno
- 2P2C045 Stimuli-responsive drug release using with cytocompatible phospholipid polymer bearing reversible binding to poorly soluble compounds  
Ryoko Hosaka, Yuta Yoshizaki, Tomohiro Konno

**Thu. May 26**

Presentation Time

<13:30~14:30>

Online Room PosterP3

**A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

- 2P3D001 Synthesis of Periodic Polymers Possessing the Dense 1,2,3-Triazole Backbone  
Tomoki Omae, Yuri Kamon, Masaki Nakahata, Akihito Hashidzume
- 2P3D002 Synthesis and Characterization of Novel Polyimides Derived from Diamine Monomers Containing Perfluoroalkylene Unit and Ethyl Group  
Tamako Nakamura, Yuriko Ito, Tadashi Kanbara, Ryohei Ishige, Shinji Ando, Tomoko Yajima
- 2P3D003 Preparation of Itaconyl dichloride of high purity and its application to the synthesis of unsaturated polyesters  
Yoshino Aoki, Ryo Kawatani, Yasuhiro Kohsaka, Souichi Tezuka, Yoshikazu Kimura
- 2P3D004 Polymer Synthesis by Baylis-Hillman Reaction of Vinyl ketones Containing Fluorene Skeleton  
Masatoshi Ohyama, Rie Yasuda, Hirotsugu Kuratani, Yasuhiro Kohsaka
- 2P3D005 Synthesis of chiral polyurethane and cyclic dimer and their aggregation-induced chirality amplification  
Zhiyi Song, Ginyu Wang, Adriana Pietropaolo, Masayoshi Bando, Naofumi Naga, Tamaki Nakano
- 2P3D006 Effect of Monomer Structure on Polymerization Reactivity in Polyhydroxyalkylation Using Superacid  
Mariko Fukaya, Kazuya Matsumoto, Mitsutoshi Jikei
- 2P3D007 Poly(thioether) Degradable via Main-Chain Scission: Controls of Polymerization and Depolymerization by Understanding Reaction Mechanisms  
Anri Tanaka, Keito Hagiwara, Ryo Kawatani, Yasuhiro Kohsaka
- 2P3D008 Synthesis of degradable biopolyurethanes containing cleavable disulfide bonds  
Riko Ikezumi, Hiromitsu Sogawa, Fumio Sanda

**C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS**

- 2P3D010 Photocatalytic reaction by metal complexes accumulated on normally oriented one-dimensional cylindrical channel surface  
Sadayuki Asaoka, Maki Komoda, Keita Nakao, Yoshiaki Tanio
- 2P3D011 Chirality-Amplification Sensing Using a Dynamic Helical Oligomer  
Amane Homma, Gaku Fukuhara
- 2P3D012 Gas transport properties of polypyrrolone - silica hybrid membranes  
Ayumi Asano, Tomoyuki Suzuki
- 2P3D013 Asymmetric catalysts utilizing seaweed-derived polysaccharides: synthesis, structure and their catalytic activity  
Manaho Murakishi, Hiromitsu Sogawa, Fumio Sanda

- 2P3D014 Fluorescence sensing of fluoride ion using poly(diphenylacetylene) derivatives bearing pendant anilide groups  
Keisei Nagasawa, Daisuke Hirose, Katsuhiko Maeda
- 2P3D015 Biomass-derived adsorbent for selective capture of certain organic compounds  
Shinsuke Tokuoka, Masato Seno, Hirofumi Fukunaga, Shigeki Uehira
- 2P3D016 A Soluble Polymer-Supported Chiral Dirhodium(II) Complex : Recyclable Catalyst for Asymmetric Intramolecular C-H Insertion Reactions  
Hitomi Sato, Koji Tsubowa
- 2P3D017 Gas permeation property of PIM-1 membrane at high temperature  
Mizuki Akatsuka, Masafumi Yamato, Hiroyoshi Kawakami
- 2P3D018 Rim modified cyclodextrin derivatives containing polymer chain  
Kaito Yamashita, Reiko Saito
- 2P3D019 Preparation of Supramolecular Structure from 6-O-Methylated Cyclodextrin  
Haruya Ishida, Justine Kalaw, Hajime Shigemitsu, Toshiyuki Kida
- 2P3D020 Fabrication of polyarylate nanofibers by solution electrospinning using pyridine/chloroform mixed solvent  
Shigeki Okada, Tomoki Maeda, Atsushi Hotta
- 2P3D021 Preparation of crystalline polyimide nanofiber by using solution crystallization  
Shota Kumano, Tomoyasu Takaki, Kei Suzuki, Satoshi Matsushima, Toshiyuki Goshima, Tetsuya Uchida

Online Room PosterP4

## **B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES**

- 2P4D026 Epoxy resins with high heat resistance via a new process  
Hajime Kimura, Morio Yonekawa, Keiko Ohtsuka
- 2P4D027 Development of High Tg and High Barrier Properties Materials via Schiff Base-derived Self-polymerization of Mesogenic Epoxy Resins  
Saki Ota, Naho Ueda, Koji Michishio, Miyuki Harada
- 2P4D028 High thermal conductivity of epoxy-modified benzoxazine by liquid crystal structure formation  
Momoka Takahashi, Maki Murai, Ryusei Nakane, Miyuki Harada
- 2P4D029 An Effect of Flexibility of Epoxy Component on Reaction Kinetics and Mechanical Properties of Epoxy Resins  
Nguyen Thao Phan, Mika Aoki, Atsuomi Shundo, Satoru Yamamoto, Keiji Tanaka
- 2P4D030 Study on Morphology and Mechanical Properties of Polyisoprene Ionomers Neutralized with Different Metal Cations  
Rina Takahashi, Yohei Miwa, Shinichiro Hamajima, Shoichi Kutsumizu
- 2P4D031 Dynamics Analysis of Dynamic Bond Elastomers via Coarse-Grained Molecular Dynamics Simulations.  
Yusuke Yasuda, Hiroshi Morita
- 2P4D032 Observation of Strain-Induced Crystallization in Slide-Ring Gels near Crack Tip  
Sohei Kawahara, Chang Liu, Koichi Mayumi, Hideaki Yokoyama, Kohzo Ito
- 2P4D033 Physical properties and functionalization of bottle brush polymer cross-linked gels  
Takuto Hirayama, Taichi Nishi, Keita Namba, Takahide Takenami, Takuma Kureha
- 2P4D034 Full-atom molecular dynamics simulation of sliding dynamics of polyrotaxanes



Haru Shinohara,Yusuke Yasuda,Koichi Mayumi,Kazushi Fujimoto,Hideaki Yokoyama,Kohzo Ito

2P4D035 Biaxial Stretching of Polycatenane Network  
Hiroya Kawanishi,Takuma Aoyama,Kenji Urayama

#### **D. BIOPOLYMERS AND BIORELATED POLYMERS**

2P4D037 Evaluation of Hyaluronic Acid-Coated Polyion Complex Micelles Carrying Antigen and Adjuvant as Intranasal Vaccine  
Takuma Kato,Kengo Suzuki,Yuta Yoshizaki,Nobuo Murase,Yuichi Ohya

2P4D038 Development of drug carrier-chitosan hybrid formulation for oral drug delivery  
Michihiro Beppu,Yoshihiko Murakami

2P4D039 Preparation of porous microparticles with ultra-low-density by using spontaneous emulsification for the pulmonary DDS application  
Ryo Taguchi,Yoshihiko Murakami

2P4D040 Inclusion Complexation Behavior of Avigan into Cyclodextrin  
Kanade Kudo,Noriyuki Nakajima,Masahiro Hamada,Yasuhito Koyama

2P4D041 Macrophage surface lectin recognition of hydrophobized polysaccharide nanogels and function of antigen carriers  
Tatsuhiko Okuda,Shin-ichi Sawada,Yoshihiro Sasaki,Kazunari Akiyoshi

2P4D042 Development of antigenic peptide delivery system by using intracellular environment-responsive peptide nanofibers  
Masaya Yamamoto,Kazuya Matsuo,Tomonori Waku,Akio Kobori

2P4D043 Evaluation of cationic polysaccharide nanogels as mucosal vaccine carrier by mucosal epithelial model  
Sotaro Iguchi,Shinichi Sawada,Yoshihiro Sasaki,Kazunari Akiyoshi

2P4D044 Preparation of peptide-chlorophyll conjugates for the development of pH-responsive photosensitizers  
Miyu Nagatani,Masahiro Higuchi,Hitoshi Tamiaki,Shogo Matsubara

#### **Thu. May 26**

Presentation Time

<14:30~15:30>

Online Room PosterP1

#### **A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

2P1E001 Synthesis of Polynorbornenes by Ring-Opening Metathesis Polymerization and Terminal Functionalization of the Formed Polymers with Platinum-Acetylide Complexes  
Shoichiro Uchiyama,Taichi Sotani,Hiromitsu Sogawa,Fumio Sanda

2P1E002 Synthesis of optically active polyacetylenes by cyclopolymerization of  $\alpha,\omega$ -heptadiyne derivatives  
Ryo Nishimoto,Hiromitsu Sogawa,Fumio Sanda

2P1E003 Terminal functionalization and coupling reaction of polynorbornene with platinum acetylide complex  
Naoki Shimada,Shoichiro Uchiyama,Taichi Sotani,Hiromitsu Sogawa,Fumio Sanda

2P1E004 Ring-opening metathesis (co)polymerization of the ester-functionalized polycyclic cyclobutene derivatives  
Yuta Asano,Shin-ichi Matsuoka,Masato Suzuki

2P1E005 Synthesis of poly[(lactic acid)-alt-(ethylene glycol)] by ring-opening polymerization of 3-methyl-1,4-dioxan-2-one  
Kohei Yamamoto,Nobuyoshi Nomura

- 2P1E006 Synthesis of stereoselective poly(lactic acid) from cyclic monomer consisting of racemic lactic acid and acetone  
Yusuke Yagi,Kazuho Sakai,Nobuyoshi Nomura
- 2P1E007 Nonstoichiometric Polycondensation by Direct Arylation Reaction  
Lisa TAKIMOTO,Akihiro TAKAMOTO,Junhui CHEN,Junpei KUWABARA,Takaki KANBARA
- 2P1E008 Controlled Copolymerization by Metal Complexes [92] Reaction Rate of Alternating Copolymerization of Carbon Dioxide with Epoxides Having Various Cyclic Side Chains and Thermal Properties of The Thus-Produced Copolymer  
Ai Fuwa,Minayo Osanai,Masayoshi Honda,Hiroshi Sugimoto

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 2P1E010 Development of polybenzoxazole - silica hybrid membranes for gas separation  
Rena Kitagawa,Tomoyuki Suzuki
- 2P1E011 Porous molecular crystal abruptly releasing humid air upon light irradiation  
Kentaro Maejima,Hiroshi Yamagishi,Ken Albrecht,Yohei Takeda,Yuka Ikemoto,Heishun Zen,Yohei Yamamoto
- 2P1E012 Porous organic salts based on charge-assisted hydrogen bond networks of disulfonic acids and amines and modification of pore surface  
Miki Naruoka,Kohei Okubo,Kouki Oka,Norimitsu Tohnai
- 2P1E013 Fabrication and gas permeation property of gas separation membrane including nanofiber framework  
Kaito Udo,Masafumi Yamato,Hiroyoshi Kawakami
- 2P1E014 Synthesis of Cellulose Acetate Network Using Crownether Crosslinker and Its Molecular Recognition Ability  
Yusuke Murakami,Kenjiro Onimura,Kazuhiro Yamabuki
- 2P1E015 A Study on Molecular Structure and Water Content of Reverse Osmosis Membranes  
Yuto Ozeki,Fumiya Hirosawa,Hayato Higuchi,Masaya Miyagawa,Hiromitsu Takaba
- 2P1E016 Phenylacrylamide oligomers with completely defined steric structure prepared by radical polymerization  
Hinako Iwamoto,Satoki Fukuda,Sotaro Akashi,Yusuke Saito,Masanori Nagao,Yu Hoshino,Yoshiko Miura
- 2P1E017 Identification of Microstructural Alterations on Polymer Backbones by MOFs  
Daichi Koga,Nobuhiko Hosono,Takashi Uemura
- 2P1E018 Iminoboronate-functionalized dendrimers with saccharide recognition ability  
Akira Matsumoto,Tsuyoshi Minami
- 2P1E019 Preparation of novel chiral silica using polymers with polyhedral oligomeric silsesquioxane (POSS) side chain.  
Naoki Kurono,Satoshi Kometani,Yoshinobu Nakamura,Shuji Fujii,Tomoyasu Hirai
- 2P1E020 Synthesis of Polyurethane Covalent Organic Frameworks and Their Application as Ligands for Catalysis  
Masayoshi Bando,Wentao Zhu,Zhiyi Song,Naofumi Naga,Mayumi Nishida,Tamaki Nakano

Online Room PosterP2

### B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES

- 2P2E026 Dynamics of polymer chains and water within the DN-polymers

Taiki Tominaga, Takeshi Yamada

- 2P2E027 Network structures of biocompatible hydrogels revealed by probe diffusion dynamic light scattering  
Keita Namba, Takuto Hirayama, Takuma Kureha
- 2P2E028 Control of film thickness of hollow spherical bacterial cellulose gel aimed at stable encapsulation without leakage  
Hiroki Saito, Toru Hoshi, Takao Aoyagi
- 2P2E029 Relationship between structural flexibility of Hydrogen Bonds and Mechanical Properties of Crosslinked Polymers  
Rena Tajima, Shintaro Nakagawa, Wataru Nakao, Naoko Yoshie
- 2P2E030 The research on the thermodynamic behavior of thermal-switching hydrogels  
Dong Shi, Yuki Inoue, Takayuki Nonoyama, Jian Ping Gong
- 2P2E031 Properties of thermosetting-resins obtained from bismaleimide (BMI) derivatives and poly(silarylenesiloxane) ones with different content of allyl moiety  
Tsubasa Onoue, Kako Oshima, Hina Shishido, Tsukasa Ichikawa, Nobukatsu Nemoto, Yuki Hakamata, Kazuto Umezu
- 2P2E032 Study of intermolecular hydrogen bonds of carrageenan by Raman spectroscopy  
Tomoaki Segawa, Harumi Sato
- 2P2E033 Influence of hard segment contents on mechanical properties and internal structural changes of polyurethane adhesives  
Kakeru Obayashi, Chao-Hung Cheng, Rasha Bayomi, Atsushi Takahara, Ken Kojio
- 2P2E034 Nanoscale Direct Observation of Network Rupture in Hydrogel using Mechanoradical Polymerization  
Masahiro Yoshida, Ryuji Kiyama, Jian ping Gong
- 2P2E035 Creation of tough and anisotropic hydrogels utilizing mesoscale structure of natural products  
Shou Ohmura, Tasuku Nakajima, Jian Ping GONG

#### **D. BIOPOLYMERS AND BIORELATED POLYMERS**

- 2P2E037 Zwitterionic arginine methacrylamide for mRNA delivery carrier  
Naoki Taguchi, Akihisa Otaka, Yoshiaki Hirano, Tetsuji Yamaoka
- 2P2E038 Molecular Design of Polyaspartamide Derivatives with Alicyclic Moieties for Systemic mRNA Delivery  
Jongmin Yum, Beob Soo Kim, Mitsuru Naito, Hyun Jin Kim, Kanjiro Miyata
- 2P2E039 Synthesis of well-defined branched phospholipid polymers for nucleic acid delivery  
Yuta Yoshizaki, Tomohiro Konno
- 2P2E040 Bioactivity evaluation of polysaccharide oligonucleotide complexes that deliver two antisense oligonucleotides at once.  
Yuki Hata, Sumiya Kazuki, Hiroto Izumi, Kazuo Sakurai
- 2P2E041 Development of DDS utilizing dendrimer type DNA origami nanostructure  
Yuki MINAMIDE, Yuki MANO, Haruki TANAKA, Akinori KUZUYA
- 2P2E042 Design of Protein Capsules Capable of Encapsulating Guest Proteins and Evaluation of Cytosolic Delivery of guest proteins by the aid of Antibody Modification  
Kousuke Takahashi, Toshihisa Mizuno, Taiki Nishiyama
- 2P2E043 Peptide lipid that is responsive to tyrosine kinase for induction of apoptosis  
Natsumi Shimizu, Sayuki Kanemitsu, Tomoko Yashiro, Kenta Morita, Takashi Aoi, Tatsuo Maruyama

2P2E044 Induction of cellular senescence in cancer cells using an epigenetic control carrier  
Haruka Mitome, Shuntaro Kimura, Kiyoshi Sato, Hiroyoshi Kawakami

**Fri. May 27**

Presentation Time

<9:30~10:30>

Online Room PosterP1

**A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

- 3P1A001 Water-induced dehydration of boratrane methacrylate–styrene random copolymers based on Lewis adduct-dissociating hydrolysis of boratrane  
Akira Takahashi, Masahiro Yamanishi, Atsushi Kameyama
- 3P1A002 Synthesis of functional polymer materials via radiation-induced graft polymerization and multi-component reactions  
Kiho Matsubara, Masaaki Omichi, Noriaki Seko, Ryohei Kakuchi
- 3P1A003 Synthesis of Fluorine Containing Polystyrene by Photoinduced Perfluoroalkylation  
Ai Yamaguchi, Tadashi Kanbara, Tomoko Yajima
- 3P1A004 Synthesis of Reactive Poly(phenylene sulfide)s and Their Crosslinking with Difunctionalized-POSS through Click Reaction  
Tomohiro Miura, Seigo Watanabe, Kenichi Oyaizu
- 3P1A005 Amino Group Modification of Poly(vinyl alcohol) Side Chains and Evaluation of pH and Temperature Responsive  
Ryo Fujiwara, Ryo Kagitani, Miyuki Oshimura, Tomohiro Hirano, Koichi Ute
- 3P1A006 Synthesis of Chemical Gels Containing Poly(crownether) and Conversion to Physical Gels by Stimulation  
Hana ITO, Kenjiro Onimura, Kazuhiro YAMABUKI
- 3P1A007 DFT Study on Side Chain Degradation Reaction Mechanism of Perfluorosulfonic Acid Ionomers  
Makoto Yamaguchi
- 3P1A008 Investigation on induction of function based on dynamic exchange reaction between polypeptide side chains and the photo-cleavable target molecule  
Shun Takada, Toshiyuki Oyama

**C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS**

- 3P1A010 Higher-order liquid crystal phase induced on the surface of Azobenzene polymer film  
Chikara Kawakami, Keisuke Takishima, Mitsuo Hara, Shusaku Nagano, Takahiro Seki
- 3P1A011 Mechano-Optical Properties of Chiral-Liquid-Crystalline Elastomers with Precisely Controlled Molecular Orientation  
Yuki Shikata, Maki Yanagihara, Kyohei Hisano, Osamu Tsutsumi
- 3P1A012 Homeotropic alignment of nematic liquid crystals induced by dissolving side-chain liquid crystalline copolyethers.  
Kouki Itou, Osamu Haba, Yuichi Momoi
- 3P1A013 Preparation of side-chain liquid crystalline polymer films via RAFT photopolymerization initiating from free surface  
Daisuke Furuta, Mitsuo Hara, Takahiro Seki
- 3P1A014 Bending motion induced by near-infrared laser light irradiation of liquid crystalline elastomer containing narrow bandgap polymers  
Takumi Shimono, Haoxuan Guo, Hiroyuki Aota, Takahiro Yamamoto, Hirosato Monobe

- 3P1A015 Magnetorheological effect of magnetic elastomers with highly embedded magnetic particles  
Rio Urano,Mika Kawai,Tetsu Mitsumata
- 3P1A016 Design of elastomer with the acrylate polymer bearing multiple vinyl groups as polymerizable units at the side groups and unique elongation behavior  
Tatsuya Aoyama,Mikihiro Hayashi
- 3P1A017 Evaluation for the chain structure of magnetic particles in magnetic elastomers by X-ray computed tomography  
Kejun Chen,Yoshihiro Takeda,Takayuki Maruyama,Mika Kawai,Tetsu Mitsumata
- 3P1A018 Soft material with phase separation-induced glass transition  
Mayu WATANABE,Ryuji KIYAMA,Dong SHI,Takayuki NONOYAMA,Jian Ping GONG
- 3P1A019 Mechano-optical effects of cholesteric liquid crystal elastomers in various deformation modes  
Saki Mori,Kenji Urayama
- 3P1A020 Gas-Responsive Silicone Elastomers Toughened by CO<sub>2</sub>  
Hanako Yoneda,Yohei Miwa,Takehito Ohya,Hayato Nakamura,Shoichi Kutsumizu

Online Room PosterP2

#### **B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES**

- 3P2A026 Revisiting the second virial coefficient of ring polymers in the  $\Theta$  state: Effects of local chain conformation  
Makiko Hirota,Daichi Ida
- 3P2A027 Side-chain-dependence of conformation of poly(vinyl alcohol alkylcarbamate)s in solution  
Shodai Miura,Akiyuki Ryoki
- 3P2A028 Dilute Solution Properties of Quaternarized Poly(2-vinyl pyridine)  
Tomoya Chosa,Yo Nakamura
- 3P2A029 Tailoring the Viscosity of Ionic-Liquid-Based Polyelectrolyte Solutions Based on Manning's Counterion Condensation Model  
Atsushi Matsumoto,Hiroto Osada,Ryosuke Ukai,Shinji Sugihara,Yasushi Maeda
- 3P2A030 Reentrant (Re-dissolve) Behavior of Bovine Serum Albumin Depending on the Concentration of Multi-Valent Cations  
Yusuke Sanada,Takafumi Ise,Ryutaro Inoue,Yukiteru Katsumoto
- 3P2A031 Denaturation and Renaturation of Xanthan Induced By Adding Urea  
Yudai Yamaguchi,Kazuto Yoshida,Yasuhiro Matsuda

#### **D. BIOPOLYMERS AND BIO-RELATED POLYMERS**

- 3P2A033 Preparation of amphiphilic glycopolymer via post-polymerization modification  
Tomohiro Fukuda,Yukari Iida
- 3P2A034 Development of a hyaluronic acid -polymeric micelles hybrid gel for the application of tissue-adhesive materials  
Miki Tatsuma,Yoshihiko Murakami
- 3P2A035 Development of chitosan-polymeric micelles hybrid gel sheets for wound dressing  
Ryosuke Wakao,Yoshihiko Murakami
- 3P2A036 Studies on density-dependence of glycan ligands in Siglecs interaction  
Risa Naka,Ayaka Tateishi,Keiji Numata,Masashi Ohmae

- 3P2A037 Anomeric Modifications Exploiting 1,2-Anhydrosugar Generated in situ  
Misaki Suzuki,Noriyuki Nakazima,Masahiro Hamada,Yasuhito Koyama
- 3P2A038 Preparation of temperature-responsive injectable polymer that can be decomposed by photo-irradiation  
Itsuki Kasatani,Ayaka Asida,Nobuo Murase,Yuichi Ohya
- 3P2A039 Design of beta-hairpin peptide for peptide hydrogel scaffold  
Shota Yamauchi,Takayuki Miyabe,Yoshiaki Hirano
- 3P2A040 Preparation of alginic acid/poly(2-oxazoline) hybrid gels and cell-preservation  
Makoto Tsurube,Akinori Takasu
- 3P2A041 Design of Enzymatically Degradable Hydrogels with Temporally Modulated Mechanics to Regulate the Differentiation of Stem Cell Fate  
Riho Tanimoto,Mitsuhiro Ebara,Koichiro Uto
- 3P2A042 Tissue engineering technology for peripheral nerve regeneration using injectable and biodegradable PLGA-PEG-PLGA/LAPONITE nanocomposite gel  
Naohiro Yoshinobu,Kimika Ono,Koji Nagahama
- 3P2A043 Preparation and characterization of gelatin gels with inorganic surface layer for bone defect treatment  
Syuuhei Komatsu,Yusuke Kadokura,Akihiko Kikuchi
- 3P2A044 Design and function of nanogel cross-linked microgels for construction of cell hybrid spheroids  
Jiarui Song,Kazunari Akiyoshi,Yoshihiro Sasaki,Shinichi Sawada
- 3P2A045 Development of gamma-ray cross-linked gelatin hydrogel for artificial blood vessels equipped controlled drug release property  
Mayu Ueno,Satoshi Ohno,Shota Ishida,Daisuke Miyazaki,Yuto Honda,Makoto Matsui,Takahiro Nomoto,Takashi Endo,Toshio Takayama,Tomoko Oyama,Mitsumasa Taguchi,Nobuhiro Nishiyama,Yutaka Miura
- 3P2A046 Design of biodegradable inks for bio 3D printing and application to regenerative medicine scaffold  
Ryo Takahashi,Yoshihiro Sasaki,Shunya Hayashi,Shin-ichi Sawada,Kazunari Akiyoshi

**Fri. May 27**

Presentation Time

<10:30~11:30>

Online Room PosterP3

**A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

- 3P3B001 Synthesis and Functionalization of Active Ester Modified Cyclosiloxane  
Tomoki Sato,Huie Zhu,Masaya Mitsuishi
- 3P3B002 Unique Polymerization of  $\alpha,\beta$ -Unsaturated Acylsilane with Silyl Migration  
Tomoki Yoshimatsu,Ryo Sato,Shin-ichi Matsuoka,Koji Takagi,Masato Suzuki
- 3P3B003 Development of Radical Polymerization System Using Stable Anthracene Radicals in Clay Interlayers  
Yugo Okada,Kyohei Hisano,Fuminao Kishimoto,Osamu Tsutsumi
- 3P3B004 Precision Synthesis of Mainchain Rigid Polymers by Click Living Polymerization of Conjugated AB Monomers  
Seiichiro Uchida,Tomohiro Kubo,Kotaro Satoh
- 3P3B005 Click Living Polymerization of Alkyne and Azide-Terminated Heterotelechelic Oligomers  
Yasuaki Kobayashi,Tomohiro Kubo,Kotaro Satoh

- 3P3B006 Synthesis of chiral syndiotactic styrene trimers  
Sorachi Saito, Yuma Tanaka, Naoki Fukaya, Kazutada Ikeuchi, Keiji Tanino, Kenta Kokado, Kazuki Sada
- 3P3B007 Synthesis and Conformational Analysis of Photoresponsive Optically Active Platinum Complexes Bearing Azobenzene Moieties  
Kohei Iwata, Shinichi Iba, Hiromitsu Sogawa, Fumio Sanda

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 3P3B010 The mechanical properties like soft biological tissues of Poly(2-methoxyethyl acrylate)-silica composite elastomer  
Daiki Miyake, Fumio Asai, Mitsuo Hara, Takahiro Seki, Yukikazu Takeoka
- 3P3B011 Control of mechanical properties of thermoplastic PDMS elastomers by charge transfer interactions with additives  
Ryosuke Hamamoto, Shogo Amemori, Yasuhiro Sigeta, Takuya Kurihara, Tomonori Ida, Motohiro Mizuno
- 3P3B012 Design of Deformable Soft Robot with Auxetic Structure Based on Pneumatic Control  
Yukihide Tashiro, Chihiro Yamada, Yuki Honda, Hiroshi Endo
- 3P3B013 Preparation of Photoresponsive Films with Controllable Surface Properties and Stem Cell Behavior on Their Surfaces  
Neiro Kodama, Takafumi Noguchi, Misato Higashino, Akifumi Kawamura, Takashi Miyata
- 3P3B014 Ultrafast self-healing elastomer crosslinked via segregation of fluoroalkyl side chains  
Yohei Miwa, Taro Udagawa, Shoichi Kutsumizu
- 3P3B015 Analysis of Swelling and Temperature-responsiveness of Hydrogels  
Taichi Nishi, Yuki Takahashi, Takuto Hirayama, Takuma Kureha
- 3P3B016 Synthesis of photoluminescent supramolecular gels derived from phenylenediamine hydrochlorides and metal sensing  
Kazuki Tateishi, Hiromitsu Sogawa, Fumio Sanda
- 3P3B017 Stabilization of hydrogen-bonded network structures of supramolecular gels using photodimerization  
Momoka Okajima, Nanako Matsuo, Kazuhiro Yabuuchi, Masaya Moriyama
- 3P3B018 Synthesis and physical properties of gels with a homogeneous network structure of biocompatible polymers  
Yuka Hasegawa, Yuria Otsuka, Xiang Li, Masashi Ohira, Taiki Hoshino, Masaru Tanaka, Shinnosuke Nishimura, Mitsuo Hara, Takahiro Seki, Yukikazu Takeoka
- 3P3B019 Design of gels with crosslinked domain structure exhibiting thermoresponsive simultaneous changes in mechanical and fluorescent properties.  
Takahiro Okuno, Shohei Ida, Kazumasa Suzuki, Hiroki Takeshita, Masatoshi Oyama, Keiji Nakajima, Shokyoku Kanaoka
- 3P3B020 Material with brain-like long-term dynamic memory by using LCST-type phase separation gel  
Yuki INOUE, Dong SHI, Takayuki NONOYAMA, JianPing GONG

Online Room PosterP4

### B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES

- 3P4B026 Solution property on the LCST-type phase separation of Poly(2-isopropyl-2-oxazoline) in ionic liquids  
Mai Ueda, Yuji Kamiyama, Takeshi Ueki, Yukiteru Katsumoto, Keisuke Watanabe

- 3P4B027 Single chain structure of poly(*N-tert*-butylacrylamide)-based amphiphilic alternating multiblock copolymers in solution and relationship of block amphiphile  
Mizuki Hirano,Yusuke Sanada,Yukiteru Katsumoto
- 3P4B028 Synthesis of New Thermoresponsive Polymers Possessing the Dense 1,2,3-Triazole Backbone  
Koji Okuno,Takuya Arisawa,Yuri Kamon,Masaki Nakahata,Akihito Hashidzume
- 3P4B029 Solution properties of poly(ethylene oxide)-poly(2-methoxyethyl acrylate) alternating multiblock copolymer in water  
Narumi Uematsu,Yukiteru Katsumoto,Yusuke Sanada,Keisuke Watanabe
- 3P4B030 Phase Separation Kinetics in the Aqueous Solution of Poly(*N*-isopropylacrylamide)  
Takahiro Sato,Jiayun Han
- 3P4B031 Study on Viscoelasticity of Single Polymer Chains by Noise Analysis Nanofishing Using Atomic Force Microscopy  
Masato Mori,Xiaobin Liang,Ken Nakajima

#### **D. BIOPOLYMERS AND BIORELATED POLYMERS**

- 3P4B033 Design of nucleic acid-modified polysaccharides and evaluation of the association behavior  
Hono Inoue,Shin-ichi Sawada,Yoshihiro Sasaki,Kazunari Akiyoshi
- 3P4B034 Formation Behavior of Amylose-Polyester Inclusion Complexes by Vine-Twining Polymerization  
Masaaki Iwamoto,Ryuta Watanabe,Kazuya Yamamoto,Jun-ichi Kadokawa
- 3P4B035 Development of bio-adhesive with guanidinylated chitosans  
Hironori Izawa,Sasuke Matsuzaki,Minoru Morimoto,Shinsuke Ifuku
- 3P4B036 Design and Function amphiphilic copolymers for presentation of biomolecules on cell membranes  
Yudai Sadanami,Shin-ichi Sawada,Yoshihiro Sasaki,Kazunari Akiyoshi,Ryosuke Mizuta
- 3P4B037 Synthesis and aggregation behavior of complex-type sialooligosaccharyl peptides conjugated with oligophenylalanine  
Sotaro Tsuji,Tomonari Tanaka
- 3P4B038 Sterilization using high hydrostatic pressure for decellularized grafts  
Akihisa Otake,Tetsuji Yamaoka
- 3P4B039 Development of bioactive polymer-modified column for separation and separation of specific cells.  
Moe Kato,Yuki Usui,Takahiro Kishioka,Taito Nishino,Tadashi Nakaji-Hirabayashi
- 3P4B040 Development of tissue engineering materials for lymphatic vessel regeneration  
Tatsuya Dode,Kimika Ono,kouzi Nagahama
- 3P4B041 Analysis of bone formation ability of polymer-inorganic hybrid capsules capable of loading drugs.  
Takuro Aikawa,Syuuhei Komatsu,Taka-Aki Asoh,Akihiko Kikuchi
- 3P4B042 Development of Photocrosslinkable Polymers as Scaffolds for Construction of Artificial Cartilage Tissue  
Ryoma Takagi,Chiaki Yoshikawa,Tadashi Nakaji-Hirabayashi
- 3P4B043 Development of glucose controlled releasable microcapsule and application for 3D cell culture  
Tomoya Matsuo,Daisuke Tomioka,Michiya Matsusaki
- 3P4B044 Development of the photo-responsive cell culture materials from the novel



biomaterial, shellac derivatives  
Yurino Sunakawa, Mai Kondo, Toshihisa Mizuno

- 3P4B045 Thermoresponsive block copolymer brush for umbilical cord-derived mesenchymal stem cell separation  
Kenichi Nagase, Ayumu Ota, Hideko Kanazawa
- 3P4B046 Restoration of mitochondrial quality control mechanism in senescent stem cells by mitophagy-inducing nanocarriers  
Kohei Shibusawa, Koki Mino, Keisuke Ashiba, Kiyoshi Sato, Hiroyosi Kawakami

**Fri. May 27**

Presentation Time

<12:30~13:30>

Online Room PosterP1

**A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

- 3P1C001 Design and Characterization of Stimulus-responsive Supramolecular Materials with Interpenetrating Rotaxane Dimers Incorporated into the Polymer Main-chain  
Risako KAMOTO, Kenjiro ONIMURA, Kazuhiro YAMABUKI
- 3P1C002 Solvent solubility modification of polyrotaxane composed of Pillar[5]arene and PEG  
Yuhei Kobayashi, Shota Ando, Yokoyama Hideaki, Ito Kohzo, Tomoki Ogoshi, Seo Akishige, Takeuchi Hiromitsu
- 3P1C003 Synthesis and mechanical properties of poly(butyl acrylate) network crosslinked with rotaxane structure  
Yamato Ebii, Yoshinobu Mato, Takuya Isono, Takuya Yamamoto, Kenji Tajima, Toshifumi Satoh
- 3P1C004 Precise synthesis of poly lactic acid/poly ethylene glycol block copolymer with acid-base catalyst  
Shiori Yano, Joji Kadota, Akinori Okada, Hiroshi Hirano
- 3P1C005 Temperature and pH responsibility of poly(alkyl methacrylate)s bearing with both N,N-dimethyl amino group and oxyethylene glycol unit  
Hinata Takazawa, Kenji Sugiyama
- 3P1C006 Self-assembly behavior of a tripodal triptycene-terminated polyethylene glycol in water  
Yugen Chen, Fumutaka Ishiwari, Tomoya Fukui, Takashi Kajitani, Takanori Fukushima
- 3P1C007 Synthesis of Sequential ABC-type Triblock Copolymers Containing Poly(3-hexylthiophene) Segments  
Souki Ito, Shin Inagaki, Tomoya Higashihara

**C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS**

- 3P1C009 Flexible Sensor Base on Piezoionic Effect  
Tian Liang, Takaya Furuyama, Hidenori Okuzaki
- 3P1C010 Electrochemical Synthesis of Soluble Self-doped PEDOT  
Yuxin Jing, Hidenori Okuzaki
- 3P1C011 Soluble Self-doped PEDOT: Effect of Polymerization Temperature  
Ken Shin Ishizaki, Yuxin Jing, Hidenori Okuzaki
- 3P1C012 Preparation of conducting fullerene gel composed of self-doped conducting polymer and evaluation of its electrical property  
Masahiro WATANABE, Hiroshi SAITO, Tetsu MITSUMATA, Norio TSUBOKAWA, Takeshi YAMAUCHI, Hirofumi MIAKE, Yuichi YANO, Keitaro MATSUMARU

- 3P1C013 Polymerization of 2,6-bis(4-acetoxy-3,5-di-tert-butylphenyl)benzo[1,2-b:5,4-b']difuran derivatives and magnetic property of the corresponding phenoxy radicals  
haruka Miura,Masahiro Teraguchi,Toshiki Aoki,Takashi Kaneko
- 3P1C014 Development of thermosetting electrically conductive resin using polyaniline penetrated by monomer.  
Motoki Sakagami,Katsuya Yaginuma,Kohei Takahashi,Teruya Goto,Tatsuhiko Takahashi
- 3P1C015 Photoresponsive properties of supramolecular gels based on multicomponent gelators containing coumarin moieties  
Shunki Sasamoto,Kazuhiro Yabuuchi,Masaya Moriyama
- 3P1C016 Supramolecular hydrogel Formation Between Polyamines and Polyglycerol Dendrimers  
Shiho Kawasaki,Tooru Ooya
- 3P1C017 Gelation of Hyperbranch Glycerol-Modified Polyrotaxanes via Hydrogen Bonding and Those Bioerosion  
Kiyotaka Tanaka,Tooru Ooya
- 3P1C018 Preparation of hydrogels by simultaneous dual polymerization of radical polymerization and polyaddition  
Ryo Kawatani,Yasuhiro Kohsaka
- 3P1C019 Synthesis of slide-ring hydrogels using photodimerization of cinnamic acid for cross-linking  
Takahiro Fujita,Masatoshi Kidowaki
- 3P1C020 Synthesis of slide-ring hydrogels crosslinked by Diels-Alder reaction and their application to self-healing materials  
Tsuyoshi Takigawa,Masatoshi Kidowaki
- 3P1C021 Unusual dissolution of PEG-chains in concentrated LiFSA/ionic liquid electrolytes: Application to Li-ion battery gel electrolytes  
Namie Ikeda,Kenta Fujii
- 3P1C022 Synthesis and characterization of the zwitterionic polymer nanogel for implantable biofuel cell  
takehiro sato,yixuan huang,tsukuru masuda,madoka takai

Online Room PosterP2

## **B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES**

- 3P2C026 Analysis of Viscoelastic Effect on Crack Propagation of Soft Materials  
Ayano Kozono,Thanh-Tam Mai,Kenji Urayama
- 3P2C027 Study on the temperature dependence of elastic modulus of single polymer chains by nanofishing  
Shunichi Nomura,Xiaobin Liang,Ken Nakajima
- 3P2C028 Electrophoretic Mobility of Concentrated Microparticle Suspensions Examined by Electrophoretic Ultrasound Scattering Techniques  
Mao Yamada,Tomohisa Norisuye
- 3P2C029 Elasticity of Glassy- and Rubbery- Microparticles by Ultrasound Scattering Techniques  
Kenichiro Ishimoto,Kazuto Tsuji,Tomohisa Norisuye
- 3P2C030 Local Motion Analysis of Methylcellulose in Water using Quartz Crystal Microbalance  
Kenji Yamaoka,Toshihisa Fujii,Naoya Torikai
- 3P2C031 Preparation and characterization of cubic liquid crystal phase at room temperature by self-assembly of metal complex  
Nao Komiyama,Yohei Miwa,Shoichi Kutsumizu,Keiki Kishikawa,Michinari Kohri

- 3P2C032 Chiroptical properties of ethyl cellulose-based lyotropics composed of left- and right-handed cholesteric liquid crystals  
Yuuki Sato, Kazuki Sugimura, Hiroshi Kamitakahara
- 3P2C033 Construction and Order Formation of Liquid Crystalline Polymers Using Non-Covalent Interactions  
Shougo Nakagawa, Ayaka Mitsutake, Masanori Nata, Seiji Ujiie

#### **E. POLYMERS AND ENVIRONMENT**

- 3P2C035 Physical property and biodegradability evaluation of microbeads prepared from microbial polyester  
Natsumi Hyodo, Hongyi Gan, Satoshi Kimura, Ken-ichi Kasuya, Tadahisa Iwata
- 3P2C036 Synthesis of hydrophilic aliphatic polyester via enzyme-catalyzed polymerization of N-protected monomer  
Yuya Oyama, Naruki Kurokawa, Atsushi Hotta
- 3P2C037 Fabrication of multilayer films composed of Polysaccharide ester derivatives and P(3HB-co3HHx) and the biodegradability  
Jobu Tateiwa, Satoshi Kimura, Tadahisa Iwata
- 3P2C038 Marine Biodegradable Effects of Polyrotaxane Materials and Future Developments  
Shota Ando, Kohzo Ito
- 3P2C039 Effects of Particle Size of Biodegradable Polymer on Biodegradation in Seawater  
Shodai Hino, Naoko Yamano, Norioki Kawasaki, Tsutomu Nakamura, Atsuyoshi Nakayama
- 3P2C040 Development of biodegradable plastic composite materials using general-purpose plastics  
Kensuke Miyazaki, Ryouya Masaki, Takashi Yoshida
- 3P2C041 Preparation, properties and structural evaluation of melt-spun fibers of  $\alpha$ -1,3-glucan short-chain and long-chain mixed esters  
Yutaro Uenoyama, Satoshi Kimura, Hongyi Gan, Tadahisa Iwata
- 3P2C042 Synthesis and Biodegradability of Tartaric acid-based Poly(ester-thioether)s  
Akinori Takasu, Kaho Kataoka
- 3P2C043 Synthesis and Biodegradability of Unsaturated Polyesters by Diastereoselective Thiol-Yne Reaction  
Katsuhisa Yano, Akinori Takasu
- 3P2C044 Study on interaction between itaconic acid-based bionylons and water  
Hongong YIN, Huaiyu Wang, Asif Ali Mohammed, Kenji Takada, Tatsuo Kaneko

#### **Fri. May 27**

Presentation Time

<13:30~14:30>

Online Room PosterP3

#### **A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

- 3P3D001 Design of Catenanes by Ring-Closing without Highly Dilutions  
Hirotake Yato, Akinori Takasu, Masahiro Higuchi
- 3P3D002 Precise synthesis of degradable polymers by living cationic polymerization inspired by the degradation mechanism of enzymes  
Akihisa Numao, Arihiro Kanazawa, Sadahito Aoshima
- 3P3D003 Precise synthesis via living cationic polymerization and then thermosensitive behavior of alternating copolymers consisting of ionic liquid moiety-containing vinyl ether and conjugated aldehydes

Masahiro Ueda, Daichi Yokota, Arihiro Kanazawa, Sadahito Aoshima

3P3D004 Unraveling Properties of Graphene Nanoribbons Using Metal-Organic Frameworks

Masayuki Hasegawa, Takashi Kitao, Takashi Uemura

3P3D005 Synthesis of poly(3-hexylthiophene)-block-poly(2-vinylpyridine) oriented optical transistor memory device materials

Hiroya Shimizu, Higashihara Tomoya, shin Inagaki

3P3D006 Electrochemical Polymerization of Conductive Polymer in Biomaterials

Kyoka Komaba, Naoto Eguchi, Masanori Toyofuku, Nobuhiko Nomura, Hiromasa Goto

### **C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS**

3P3D008 Development and Characterization of Proton-Electron Conductors Using

Diblock Copolymers (I) - Investigation of polymer synthesis -

Nanami Tanaka, Masahiro Rikukawa, Yuko Takeoka, Masahiro Fujita

3P3D009 Development of Radical Quenchers for Polymer Electrolyte Fuel Cells (I) - Evaluation of Fullerenols-

Naoto Oniki, Masahiro Rikukawa, yuko Takeoka, Masahiro Fujita

3P3D010 Organic Stochastic Resonant Devices Using Pi-Conjugated Polymers as Noise Generators

Aki Yan, Naoki Asakawa

3P3D011 Stochastic capacitor using self-organized nano-thin film based on binary mixture of semicrystalline polymer/small-molecular liquid crystal

Yuya Enomoto, Naoki Asakawa

3P3D012 Preparation and Electrochemical Properties of Mixed-Conducting Polymer Nanoparticle Films

Katsumi ABE, Shuhei KINDAICHI, Shunsuke YAMAMOTO, Masaya MITSUISHI

3P3D013 Structures and Device Properties of Conjugated Polymer Films Blended with Temperature Responsive Polymer

Shuhei Kindaichi, Shunsuke Yamamoto, Yasuo Okajima, Masaya Mistuishi

3P3D014 A red-emissive rotaxane-based supramolecular mechanophore based on FRET mechanism

Tatsuya Muramatsu, Yoshimitsu Sagara

3P3D015 Evaluation of the stimuli-responsive gel using polysaccharides

Koumei Harajiri

3P3D016 Selective separation of organic halogen compounds with hydrogel adsorbents

Takahide Takenami, Naoki Suda, Takuma Kureha

3P3D017 Fabrication and electrical properties of conductive fibers composed of Self-doped conducting polymer

Kohei ITAYA, Hiroshi SAITO, Tetsu MITSUMATA, Norio TSUBOKAWA, Takeshi YAMAUCHI, Hirofumi MIYAKE, Yuichi YANO, Keitaro MARUMATSU

3P3D018 Electrochemical characterization of self-oscillating polymer brushes for active control of oscillation behavior

Keita Terui, Takafumi Enomoto, Shunsuke Yagi, Aya Akimoto, Ryo Yoshida

3P3D019 Preparation and characterization of hydrogel microellipsoids

Takahisa Kawamoto, Kohei Inui, Haruka Minato, Daisuke Suzuki

3P3D020 Dual pH/temperature stimuli-responsive properties of anionic terminal dendrimers with different bound numbers of phenylalanine

Yunshen Fu, Chie Kojima

3P3D021 Thermo-responsiveness of phenol resins in mixed organic solvents

Natsuki Inaba, Miwa Kubota, Kazuki Sada

## B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES

- 3P4D026 "Negative" Interfacial Energy at Dynamic Polymer Brush Interface  
Masayuki Saito, Norifumi Yamada, Kohzo Ito, Hideaki Yokoyama
- 3P4D027 Cationic polymer brushes that form spontaneously at air interface  
Gota Kawano, Norifumi Yamada, Kohzo Ito, Hideaki Yokoyama
- 3P4D028 Observation of Polymer Films Surface Properties Modified by Plasma Treatment under Air Environment  
Shintaro Yasuda, Yoshihisa Fujii, Naoya Torikai
- 3P4D029 Thermal Stability and Interfacial Structure of a Polystyrene Thin Film on the Adsorbed Layer of Polymer Blend with Different Molecular Weights  
Motoyuki Ozaki, Yoshihisa Fujii, Hideki Seto, Naoya Torikai
- 3P4D030 Surface Morphological Observation of (Bottlebrush Polystyrene/Linear Polystyrene) Blend Film  
Anri Nishimura, Yoshihiro Yamauchi, Sadaki Samitsu, Yoshihisa Fujii, Naoya Torikai
- 3P4D031 Study on interaction between hydrophilic concentrated polymer brush and three state of water  
Masahiro Saito, Ken Tamamoto, Keita Sakakibara, Yuji Kinose, Yoshinobu Tsujii
- 3P4D032 Understanding and Control of Liquid-Crystal Anchoring Property at Brush-like Polymer Interface  
Yoshiro Takamura, Yuji Kinose, Yoshinobu Tsujii
- 3P4D033 Molecular Dynamics Study of Water Behavior in Zwitterionic Polymer Brush-Water Interface  
Susumu Fujiwara, Yuya Fujinaga, Tomoko Mizuguchi

## E. POLYMERS AND ENVIRONMENT

- 3P4D035 Lipase-catalyzed synthesis of isocyanate-free polyurethanes and their self-healing properties (I) - Investigation of synthesis method using lipase catalyst-  
Yukiho Sonoda, Masahiro Fujita, Yuko Takeoka, Masahiro Rikukawa
- 3P4D036 Synthesis and Biodegradability of Poly(urethane-thioether)s via Thiol-Michael Polyaddition of Dianhydro Sugar-Based Diacrylates  
Akinori Takasu, Suzuka Takeuchi
- 3P4D037 Relation between block length and 1st and 2nd carbon sources of P3HA biosynthesized by *R. eutropha*  
Takahiko Nakaoki, Haruto Nakamura
- 3P4D038 High yield of P3HB from multi-step fermentation of glycerin by *R. eutropha*  
Takahiko Nakaoki, Shugo Kuratani
- 3P4D039 Preparation and characterization of bio-based vitrimers from divanillic acid and epoxidized soybean oil  
Yunfan Zhang, Yukiko Enomoto, Tadahisa Iwata
- 3P4D040 Carbon source preferentially metabolized from biosynthesis using glycerin and sodium stearate as mixed carbon sources by *R. eutropha*  
Takahiko Nakaoki, Mitsuki Nagahama
- 3P4D041 Biosynthesis of Poly(3-hydroxybutyrate) from Vegetable Oil by *R. eutropha*  
Takahiko Nakaoki, Syunya Oriuchi
- 3P4D042 Development of High Biomass Loaded Super Engineering Plastics using Glycol Lignin  
Haruka Kato, Ayumi Kobayashi, Kohei Iritani, Thi Thi Nge, Tatsuhiko

Yamada, Takashi Yamashita

- 3P4D043 Extraction of cellulose from bamboo using aqueous pyrrolidinium hydroxide solution  
Deandra Ayu Putri, Elisabeth R. D. Seiler, Morgan L. Thomas, Yuko Takeoka, Masahiro Rikukawa, Masahiro Fujita
- 3P4D044 Development of Innovative Nanofiltration Membrane  
Ryoma Miyamoto, Takanori Soya, Tomoya Yoshizaki, Masakazu Koiwa, Kouzou Takahashi

**Fri. May 27**

Presentation Time

<14:30~15:30>

Online Room PosterP1

**A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

- 3P1E001 Synthesis of disubstituted polyacetylene with both liquid crystallinity and luminescence and evaluation of electromagnetic properties  
Kyoka Komaba, Masashi Otaki, Reiji Kumai, Shigeki Nimori, Hiromasa Goto
- 3P1E002 Synthesis of geometry-controlled platinum-containing polymers bearing optically active phosphine ligands  
Takashi Horiuchi, Natsuhiko Sano, Hiromitsu Sogawa, Humio Sanda
- 3P1E003 Chiroptical properties of lipophilic Brønsted acid-type poly(phenylacetylene) derivatives  
Yuki Nishikawa, Shota Sona, Daisuke Hirose, Katsuhiko Maeda
- 3P1E004 Synthesis of novel acrylonitrile-containing nano-objects by polymerization-induced self-assembly (PISA)  
Yuta Osodo, Chiharu Kumano, Hideharu Mori
- 3P1E005 Precise Synthesis of Chain-end-functionalized Polyisobutylene with 5-Bromothieryl Group and Copolymerization with  $\pi$ -Conjugated Monomers  
Shuto Yamamoto, Naoki Matsuda, Tomoya Higashihara
- 3P1E006 Simultaneous Synthesis of [6]- and [7]Helicenes through Alkyne Benzannulation Reactions and Their Chiroptical Properties  
Kosuke Oki, Shoya Yamakawa, Tomoyuki Ikai, Eiji Yashima
- 3P1E007 Synthesis and optical properties of cyclic materials containing curved oligothiophene and acceptor aromatic  
Shota SUZUKI, Ryota SHIMADA, Yoshihiro OHTA, Tsutomu YOKOZAWA
- 3P1E008 Development of Near-Infrared Emissive Conjugated Polymers based on Boron Complexes with Two Chromophores  
Masashi Nakamura, Masayuki Gon, Kazuo Tanaka

**C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS**

- 3P1E010 Preparation of water droplets covered with pH-responsive silica particles  
Ema Onodera, Shin-ichi Yusa, Syuji Fujii, Yoshinobu Nakamura
- 3P1E011 Development of Dual-Functional Polymer Materials with Charge-Transfer Complex for Mechanostress Detection and Self-healing.  
Kanae Aoki, Naruki Ito, Ryota Yamanaka, Kenta Iitani, Keiichi Imato, Yuji Tsuchido, Naoya Takeda
- 3P1E012 Development of thermo-responsive nylons in water  
Akari Sugano, Sorachi Saito, Natsuki Inaba, Kazuki Sada
- 3P1E013 Photoexpansion of biobased polyester: evaluation of the photodeformation by time-resolved measurements  
Kenji Takada, Tatsuo Kaneko
- 3P1E014 Oscillating Behavior of Core-shell Type Self-oscillating Polymers with Built-

in Proton Supplying Sites  
Takahiro Ono, Takafumi Enomoto, Michika Onoda, Takeshi Ueki, Ryota Tamate, Aya M. Akimoto, Yoshida Ryo

- 3P1E015 Improvement of Natural Rubber Utilizing Alginic Acid  
riku kojima, soui inata, hiromitsu sogawa, fumio sanda
- 3P1E016 Synthesis, mechanical property, and self-healing property of biomass poly( $\gamma$ -methylcaprolactone) (PMCL) elastomers with varying amounts of hydrogen bonding  
Shuhei Takamura, Naruki Kurokawa, Atsushi Hotta
- 3P1E017 Three-Dimensional Deformation Analysis Using Chiral-Nematic Particles as a Probe  
Naoya Fukui, Tomoki Shigeyama, Kyohei Hisano, Osamu Tsutsumi
- 3P1E018 Double hydrophilic diblock copolymer produced by TERP polymerization  
Misato Hayashi, Shigeru Yamago, Shin-ichi Yusa
- 3P1E019 Supramolecular Nylon with High Mechanical Toughness And Rapid Photo-Responsiveness  
Junsu PARK, Hiroki TAMURA, Akira HARADA, Hiroyasu YAMAGUCHI, Yoshinori TAKASHIMA

Online Room PosterP2

## **B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES**

- 3P2E026 Observation of fluorescence probe molecule with total internal reflection fluorescence microscopy  
Satoki Kubota, Takuya Matsumoto, Ryugo Tero, Takashi Nishino
- 3P2E027 Molecular aggregation structure analysis of poly(dimethylsiloxane) films in a CO<sub>2</sub> atmosphere.  
Juko Yamada, Kakeru Obayashi, Saburo Yamamoto, Aya Fujimoto, Ken Kojio
- 3P2E028 Analysis of Deformation Behavior of Styrenic Thermoplastic Elastomers Using Nano-Touch Atomic Force Microscopy  
Airi Sato, Makiko Ito, Xiaobin Liang, Ken Nakajima
- 3P2E029 Study on PP/EPDM blends using nano-palpation atomic force microscope  
Mari Hanai, Makiko Ito, Xiaobin Liang, Ken Nakajima
- 3P2E030 Chain movements of polymer film surface observed by high-temperature in-situ AFM  
Koki Koike, Jiro Kumaki
- 3P2E031 Effect of molecular weight of poly(n-butyl methacrylate)-grafted silica particles on the adhesion strength  
Motoyasu Kobayashi, Yuki Kodama
- 3P2E032 Degradation cause analysis of GFRP (Glass Fiber Reinforced Plastics) materials by nanoscale evaluation methods (TEM-EELS, AFM-IR and SPM)  
Yoshimichi Namai, Makoto Kashihara, Shunsuke Kametani, Shuhei Fujimura, Takuya Honda, Kohta Fukui, Kazuyuki Takehira, Sawako Koga
- 3P2E033 Study for Sub-micro structure analysis in polymer materials using Photo Thermal IR Spectroscopy  
Hanae Kobayashi, Naoki Baden, Norio Urayama

## **E. POLYMERS AND ENVIRONMENT**

- 3P2E035 Compatibility of medium-chain length Poly (3-hydroxyalkanoate) biosynthesis and Poly(3-hydroxybutyrate)  
Takahiko Nakaoki, Mituki Ueda
- 3P2E036 Amphiphilic-behavior of the diblock copolymer based on biodegradable poly(butylene succinate)(PBS) and poly(2-pyrrolidone)(PA4)

Hideaki Ono, Hiroyuki Minamikawa, Koji Nemoto, Masaru Yoshida

- 3P2E037 Efficient technology for designing sustainable composites by use of materials informatics based on molecular simulation  
Tomio Iwasaki
- 3P2E038 Substituent Effects on the Hybridization of Esterified Low-Crystalline Cellulose with Poly(Lactic Acid)  
Kaito Sukagawa, Yoshimasa Matsumura, Akihiro Nishioka, Tomonori Koda, Bungo Ochiai
- 3P2E039 Esterification of alpha-1,6-graft-alpha-1,3-glucan and its characterization  
Azusa Togo, Mayumi Usagawa, Satoshi Kimura, Tadahisa Iwata
- 3P2E040 Resinification by Thermosetting of Chlorella Using Basic Compounds  
Kohei Iritani, Rinka Nihei, Takashi Yamashita
- 3P2E041 The enhancement of cellulose II crystallinity with low concentration alkali multi-steps post-treatments  
Yuki Kugo, Takuya Isono, Kenji Tajima, Toshifumi Satoh, Tomoki Erata
- 3P2E042 Preparation and properties of self-healing polyester networks composed of poly(butylene succinate-co-butylene itaconate) and thiol-terminated polyether containing disulfide linkages  
Warunya Ussama, Naozumi Teramoto, Mitsuhiro Shibata
- 3P2E043 Development of poly( $\gamma$ -glutamic acid)-based block copolymer synthesized by environment-friendly solid state polymerization  
Naoki Doi, Kazumi Hirata, Yuka Yamagishi, Kazunari Aoyama, Masayuki Kuzuya, Shin-ichi Kondo
- 3P2E044 Formation of particle-based films with high stretchability  
Yuma SASAKI, Takuma Kureha, Seina Hiroshige, Haruka Minato, Kazuya Uenishi, Kazuko Nakazono, Toshikazu Takata, Daisuke Suzuki

**Fri. May 27**

Presentation Time

<15:30~16:30>

Online Room PosterP3

**A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS**

- 3P3F001 Introducing Electron Donating Groups in Anthracene-*ortho*-Carborane Dyad toward Solid-State Deep-Red Luminescence  
Kazuhiro Yuhara, Kazuo Tanaka
- 3P3F002 Synthesis of Novel  $\pi$ -Conjugated Ladder Polymers with a Consecutively-Fused Multiple Helicene Backbone and Their Optical Properties  
Hayato Inagaki, Tomoyuki Ikai, Eiji Yashima
- 3P3F003 Synthesis of Defect-Free Fluorene-Based  $\pi$ -Conjugated Helical Ladder Polymers and Their Optical Properties  
Sayaka Miyoshi, Tomoyuki Ikai, Eiji Yashima
- 3P3F004 Effect of Substituents on the Arsenic Atom on the Properties of Dithieno[3,2-b:2',3'-d]arsoles and Application to Polymerization  
Chisa Takahara, Suzuka Iwasaki, Hyota Kihara, Hiroaki Imoto, Kensuke Naka
- 3P3F005 Double Cyclopolymerization of Trifunctional Incompletely-Condensed Cage Silsesquioxane and Their Properties  
Taishi Nakano, Keigo Okamoto, Hiroaki Imoto, Kensuke Naka
- 3P3F006 Synthesis and Self-assembly of Discrete Sugar-inorganic Block Copolymers  
Taiki Nishimura, Kenji Tajima, Takuya Isono, Toshifumi Satoh
- 3P3F007 Topological Trapping of Multicyclic Poly(dimethylsiloxane) in Silicone Rubber  
Asuka Soga, Minami Ebe, Kaiyu Fujiwara, Takuya Isono, Takuya Yamamoto, Kenji Tajima, Toshifumi Satoh



- 3P3F008 Synthesis and Properties of Polyazomethines Using Double-Decker Silsesquioxane Derivative Monomers  
Yuta Hirosawa, Tasuku Kamitani, Hiroaki Imoto, Kensuke Naka

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 3P3F010 Development of Nanostructured Water-treatment Membranes Based on Smectic Liquid Crystals  
Kazuhiro Asakura, Takeshi Sakamoto, Miaomiao Liu, Hiroyuki Katayama, Takashi Kato
- 3P3F011 Development of Functional Liquid Crystals Having Biomolecular Derivatives  
Mina Hasome, Anna Niwa, Rie Makiura, Junya Uchida, Takashi Kato
- 3P3F012 Preparation of stimuli-responsive-polymeric carriers for benzoxaborole-based drugs  
Kota Katsube, Yohei Kotsuchibashi
- 3P3F013 One-shot preparation of polyester vitrimers based on a new type cross-linking method utilizing hydrolysis and bond exchange  
Mikihiro Hayashi, Takahiro Kimura
- 3P3F014 Correlation between branch numbers at the cross-link and stress relaxation property in the vitrimer materials  
Taketo Isogai, Mikihiro Hayashi
- 3P3F015  $\beta$ -Hairpin Peptide with pH-Controllable Affinity for Tumor Cells  
Shinnosuke Nishimura, Kei Nishida, Tanaka Masaru Tanaka
- 3P3F016 Development of photo-patterning polymerization using 3D printer and control of material physical properties  
Haruka Fukunishi, Mikihiro Hayashi
- 3P3F017 Synthesis of Acrylic Network Polymer Using Mutual Plug-in Type Rotaxane Dimer as Crosslinker and Evaluation of Its Physical Properties  
Yusei Yamauchi, Kenjiro Onimura, Kazuhiro Yamabuki
- 3P3F018 Mechanical and Optical Properties of Liquid-Crystalline Elastomers incorporating Auxetic Frameworks  
Yudai Fuwa, Kyohei Hisano, Osamu Tsutsumi
- 3P3F019 Development of Highly Stretchable and Wearable Elastomer Structure with Liquid Metal Encapsulated in Auxetic Channel  
Yukihide Tashiro, Syuntaro Kondo, Hiroshi Endo

Online Room PosterP4

### B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES

- 3P4F026 Polymer plates as an aqueous bubble stabilizer  
Yuri Sakurai, Tomoyasu Hirai, Yoshinobu Nakamura, Syuji Fujii
- 3P4F027 Stabilization of liquid marble with conical particles  
Shinji Segami, Tomoyasu Hirai, Yoshinobu Nakamura, Syuji Fujii
- 3P4F028 Dynamic wetting behavior analysis of droplets in liquid on microstructured surfaces  
Honoka Sugiyama, Daisuke Ishii, Maria Inukai
- 3P4F029 Evaluation of oil-water separation behavior by polyurethane multilayer structures with different wettability  
Kazuya Uchida, Daisuke Ishii
- 3P4F030 Rapid formation of lamellar structure in poly(N-dodecyl acrylamide) using microwave-solvent annealing  
Mizuki Ohke, Jun Matsui
- 3P4F031 In-situ measurements of grazing-incidence X-ray scattering for

polycaprolactone thin films on Si substrate during seawater immersion treatments  
Mamiko Takigawa, Kenshirou Kaji, Toan Nguyen Van, Hiroyasu Masunaga, Taiki Hoshino, Chiharu Miyazaki, Yuji Aso, Shinichi Sakurai, Sono Sasaki

- 3P4F032 Investigation of correlation between preferred lamellar orientation and surface local elastic modulus in linear polymer thin films  
Kenshiro Kaji, Van Toan Nguyen, Mamiko Takigawa, Hiroyasu Masunaga, Taiki Hoshino, Shinichi Sakurai, Sono Sasaki
- 3P4F033 Molecular combing of block copolymers by the dipping method  
Kazuhiro Ito, Jiro Kumaki
- 3P4F034 Molecular interaction between fiber/polymers and low-molecular weight compounds 45. Identification of polymer films by adsorption  
Aya Inada, Hitoshi Kanazawa

### **E. POLYMERS AND ENVIRONMENT**

- 3P4F036 Chain Extension of Lignophenol with Partial Epoxy Resin Curing using Ethylene Glycol Diglycidyl Ether  
Soichi Tabata, Mitsuru Aoyagi
- 3P4F037 Preparations of composite molds of polystyrene with native lignin derivatives  
Kai Isozaki, Mituru Aoyagi
- 3P4F038 Application of recycled lignophenol for photo-sensitizers of TiO<sub>2</sub> photo-electricity conversion devices  
Yuji Haraguchi, Mitsuru Aoyagi
- 3P4F039 Specific Adsorption of Bio-related Molecules on Lignophenol Derivatives  
Anna Matsumoto, Mitsuru Aoyagi
- 3P4F040 Synthesis and Characterization of Photo-degradable Polyurethane Elastomers with Photo-sensitive Cross-linker  
Reiki Tsuchihashi, Yoshihito Ishida
- 3P4F041 Photo-oxidative degradations of polyolefins containing oxo-biodegradable additives  
Adchara Padermshoke, Tomoko Kajiwara, Yingjun An, Atsushi Takahara
- 3P4F042 Fabrication of photo-degraded plastics microparticles for evaluation of biological effects  
Tomoki Hiraoka, Mika Murakami, Tadao Tanabe, Tsuyoshi Kimura, Masaya Yamamoto
- 3P4F043 Characterization of Higher Order Structure of Ocean Microplastics.  
Tomoko Kajiwara, Akemi Kumagai, Hironori Marubayashi, Hiroyasu Masunaga, Sono Sasaki, Hiroshi Jinnai, Atsuhiko Isobe, Atsushi Takahara
- 3P4F044 Phosphorylation of ethylene-vinyl alcohol copolymer and properties  
Muneharu Kurosaki, Yukihiro Kishimoto, Takumi Okihara