

## Room P

Bldg.4, Area4 4301

**Tue. Sep 16**

Presentation Time

<a = 10:20~11:00>

<b = 11:00~11:40>

### A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS

- 1Pa001 Synthesis of Hyperbranched Poly(ethylene oxide) Using Thiol-Ene Polyaddition  
Genki Yama, Arisa Tachibana, Masataka Kubo, Takahiro Uno
- 1Pb002 Comparison of ring PEG synthesis by intra- and bi-molecular ring-closing reactions.  
Hinako Shimazaki, Yuya Doi
- 1Pa003 Polymerization and cross-linking reaction of MMA in montmorillonite layers and solvent washing of polymerized products  
Kodai Sato, Yuya Doi
- 1Pb004 Surface modification of polymethacrylate with branched-chain polydimethylsiloxane  
Toshiki Fujii, Naoki Watanabe, Daisuke Touma
- 1Pa005 Surface Modification of Gold Nanoparticles with Polynorbornenes Containing Platinum Complexes  
Ryota Kobayashi, Hiromitsu Sogawa, Fumio Sanda
- 1Pb006 Surface characterization of star-shaped polycaprolactone end-functionalized with perfluoroheptyl groups  
Riku Satou, Asahi Takamure, Hirofumi Suzuki, Minako Kishi, Kenji Sugiyama
- 1Pa007 Synthesis and photo-reactivity of 5-armed star-shaped poly(D,L-lactide) end-functionalized with coumarin groups  
Manato Ono, Minami Matsuda, Kenji Sugiyama
- 1Pb008 Synthesis and properties of hyperbranched polymer and cyclic compound from AB<sub>2</sub>-type monomer using incompletely condensed POSS  
Naoki Yamaguchi, Cashew Nagashima, Hiroaki Imoto, Kensuke Naka
- 1Pa009 Graft Polymerization onto Polysilanes Using Vinyl Monomers  
Himi Okuda, Yukino Saiki, Kokoa Takai, Sanosuke Tanaka, Yuuta Nakamura, Yukihito Matsuura
- 1Pb010 Development of Graft Copolymers with a Cellulose-Based Backbone and Aliphatic Polycarbonate and Polyester Branches  
Kaito Shiobara, Ayano Iida, Koji Nakano
- 1Pa011 Relationship between the hydroxyl group protection ratio and the number of graft chains in graft polymerization using polyrotaxane with a constant number of cyclodextrin hydroxyl groups protected as an initiator.  
Megumi Akiyama, Takahiro Imai, Shota Ando, Kohzo Ito
- 1Pb012 Synthesis and ATRP behaviour of multivinyl polymers with various double bond distances  
Yoshinagi Otake, Kazuteru Kawanami, Moriya Kikuchi, Seigou Kawaguchi
- 1Pb014 Polymerization and copolymerization of norbornene using nickel complexes with mono- or bidentate benzimidazole ligands  
Kei Nishii, Kohei Uyama, Yusho Takashima, Keita Shimamura, Takehito Kato, Tomoyuki Toda, Tomoyuki Toda

- 1Pa015 Copolymerization of norbornene with  $\alpha$ -olefins using phosphinimide titanocene catalysts  
Taiki Inoko, Shin-ichi Matsuoka
- 1Pb016 Fast ring-opening polymerization of trimethylene carbonates with a highly active La catalyst and their properites  
Koki Taga, Naoto Hirano, Tsuyoshi Ando, Hiroharu Ajiro
- 1Pa017 Lewis-Acid Catalyzed Ring-Opening Polymerization of  $\epsilon$ -Caprolactam for Nylon-6 Derivatives  
Yinan Gao, Ryoga HIRATA, Yoji TANAKA, Hironobu WATANABE, Mineto UCHIYAMA, Masami KAMIGAITO
- 1Pb018 Synthesis of 3-methyl-1,4-dioxan-2-one and its polymer bearing high molecular weight  
Kohei Yamamoto, Tatsuya Masumoto, Nobuyoshi Nomura
- 1Pa019 Synthesis of Thiophene-Based Poly(arylenevinylene)s via Pyrazolonaphthyridine Ligated Pd-Catalyzed Direct Alkenylation  
Daichi Terauchi, Junpei Kuwabara, Takaki Kanbara
- 1Pb020 Synthesis of Bottlebrush Polymers containing Conjugated Polymer as the Side Chains  
Yusei Ishii, Daisuke Shimoyama, Hiroki Chino, Mikiko Kunisawa, Kotohiro Nomura

## B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES

- 1Pb024 Micellar Structures of Amphiphilic Branched polysaccharides in Aqueous Solution  
Hina Sugimura, Ken Terao, Rintaro Takahashi
- 1Pa025 Thermoresponsive Behavior of Glycogen-graft-poly(N-isopropylacrylamide) in Aqueous Solution  
Ken Terao, Rintaro Takahashi, Mayuko Kurata
- 1Pb026 Elucidation of Phase Separation Mechanism in Polyphenylene Sulfide (PPS)-NMP Solution System  
Keisuke Watanabe, Daichi Sakamoto
- 1Pa027 Unique morphological transition by polymerization-induced self-assembly of triblock terpolymers  
Ibuki Shibata, Ayae Sugawara-Narutaki, Rintaro Takahashi
- 1Pb028 Elucidation of origin of added-ion dependence of the aggregation behavior of polydiallyldimethylammonium chloride  
Sakino Endo, Mafumi Hishida
- 1Pa029 Effect of freezing thaw treatment of polysaccharide dispersion on convective self-assembly  
Haruka Tomojiri, Leijie WU, Kosuke Okeyoshi
- 1Pb030 Time-resolved measurements of the dissolution processes of water-soluble polysaccharides using turbidity and light scattering  
Kazuya Kodera, Rintaro Takahashi, Ken Terao
- 1Pa031 Effect of small molecules on the LCST behavior of hydroxypropyl cellulose  
Sohta Fukumoto, Mafumi Hishida
- 1Pb032 Determination of equilibrium constant in dynamic covalent polymers using light scattering  
Kyoka Into, Takashi Yasuda, Xiang Li
- 1Pa033 Universality in Molecular Size Limit in Osmotic Equation of State for Polymer Solutions  
Noriaki Mizumoto, Takashi Yasuda, Xiang Li

- 1Pb034 Relationship between Polyelectrolyte Charge Fraction and Solvent Dielectric Constant  
Marina Ikeda, Carlos Lopez, Watanabe Takaichi, Shinji Sugihara, Yasushi Maeda, Atsushi Matsumoto
- 1Pa035 Comparison of the Physical Properties of Poly(4-vinylpyridine) Before and After Quaternization Using Small-Angle X-ray and Light Scattering  
Momoko Hoki, Akiyuki Ryoki, Yo Nakamura
- 1Pb036 Aggregation Structure and Thermal Denaturation Behavior of Lysozyme in the Presence of Silica Nanoparticles  
Chikano Okamoto, Rintaro Takahashi, Ken Terao
- 1Pa037 Solubilization mechanism of phthalocyanine by polyvinylpyrrolidone  
Yuji Jinbo, Yui Tajima, Mao Takei

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 1Pb042 Preparation of thermosensitive hydrogel particles with catechol groups and adhesive properties  
Yu Tamura, Hidenobu Shimizu
- 1Pa043 Structural Characteristics of Dopamine Acrylamide Revealed by X-ray Crystal Structure Analysis and Its Adhesive behavior  
Ryoichi Akaishi, Masayoshi Matsuno, Yasushi Kawai
- 1Pb044 Particle Embedding into Human Hair: A Novel Approach for Surface Modification and Long-Lasting Hair Coloration  
Megumi Nishimura, Yuuka Fukui, Keiji Fujimoto
- 1Pa045 Evaluation of Strength and Disassemblability of Directly Bonded Al/PA6 Joints Using PA6 Oligomer-Modified Aluminum Surfaces  
Naohiro Hoshikawa, Kazuhiko Umemoto
- 1Pb046 Analysis of Initial Wear Process with Mesoscale Polymer using Smoothed Particle Hydrodynamics Method  
Akinori Fujita, Kaito Nomura, Yudai Uenosono, Natsuko Sugimura, Hitoshi Washizu
- 1Pa047 Adding effect of organic bases toward salts of 2-aminopyridyl groups in adhesive layers  
Hinata Okada, Masahiro Furutani
- 1Pb048 Photo-fabrication and evaluation of adhesive layers incorporating hydroxypyridyl groups  
Miku Matsui, Masahiro Furutani
- 1Pa049 Anti-icing effect of aluminum surface immobilized with anti-ice nucleation peptide-PMMA hybrids  
Kentaro Kurihara, Aoi Hayakawa, Riku Ogawa, Tatsuya Mizusawa, Yoshiaki HIRANO
- 1Pb050 Elucidation of the Adhesion Mechanism of Biomimetic Polymers to Various Materials  
Kazushi Yoshida, Masanobu Naito, Takayuki Miyamae
- 1Pa051 Development and Evaluation of Alginate Adhesives Bearing Galloyl Groups  
Gakuto Kitajima, Hiromitsu Sogawa, Fumio Sanda
- 1Pb052 Polymer Design around Diamine Moieties for Controlled CO<sub>2</sub>-responsive Behavior  
Hikaru Kiyohara, Kenichi Oyaizu, Takeo Suga

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 1Pa053 Wettability Switching of Crosslinked Anionic Polymer Coatings  
Homare Kuwahara, Kenichi Oyaizu, Takeo Suga
- 1Pb054 Dynamic wettability evaluation under water of biomimetic microstructured surfaces  
Miwa Hattori, Tomoki Tanaka, Daisuke Ishii
- 1Pa055 Evaluation of Adhesion Properties of Aliphatic Polyesters with Catechol Groups at the Interface of Dissimilar Materials.  
Kosuke Kumagai, Takumi Yoshida, Toru Hoshi
- 1Pb056 Synthesis of New Yellow Polymerizable Dyes and Development of High Performance Color Particles.  
Shuto Suzuki, Kaito Nishizima, Moriya Kikuchi, Seigou Kawaguchi
- 1Pa057 Surface Reinforcement and Adhesion Enhancement of PTFE Films via Atmospheric Pressure Plasma Treatment and Photo-grafting  
Shin-ichi Kuroda, Tamio Mori, Katsuhiko Hosoi, Yoshio Kijima, Norio Tanaka
- 1Pb058 Light Stimuli-Responsive Degradable and Tough Polymeric Materials with Movable Crosslinks  
Kenji Yamaoka, Yusei Matsumura, Ryohei Ikura, Yoshinori Takashima
- 1Pb060 Evaluation of monomer penetration characteristics in vapor deposition polymerization for conformal coating on complex-shaped materials  
Hironori Suzuki, ryō Tabata, Moeka Osumi, Ryosuke Matsubara, Atsushi Kubono
- 1Pa061 Characterization of ePTFE substrates co-immobilized with heparin and integrin ligand peptides using cross-linked LbL procedure  
Rikuto Uemura, Tumugi Kawaguchi, Yuki Matui, Sachiro Kakinoki
- 1Pb062 Preparation of a polyethylene tube with poly(N-isopropylacrylamide) grafted surface for control of protein adsorption on temperature change  
Kazuya Onohara, Toru Hoshi
- 1Pa063 Development of polymeric dispersants that emble nanodispersion and encapsulation of organic pigments  
Daishi Saito
- 1Pb064 Synthesis of polyurethanes with zwitterionic polyester structure and their interfacial properties  
Yuto Yakushiji, Akifumi Kamura

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### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 1Pb066 Synthesis of Novel Self-Doped PEDOT with Different Side Chain Structures  
Rui Horikirikawa, Daiki Ozawa, Daito Goto, Yuxin Jing, Hidenori Okuzaki
- 1Pa067 Higer-order Structure and Carrier Transport Properties of Highly Conductive n-type PBFDO  
Daiki Sera, Daito Goto, Yuxin Jing, Hidenori Okuzaki
- 1Pb068 Fabrication of Piezoionic Sensors by 3D Printing and Inkjet Printing  
Taiki Horiuchi, Tian Liang, Daito Goto, Hidenori Okuzaki
- 1Pa069 Synthesis and lithium-ion conductivity of polycarbonates derived from carbohydrate-based bicyclic ether derivatives and oligoethylene glycols  
Kenshi Yamada, Daiki Tanimoto, Keigo Aoi, Bharat Srimitra Mantripragada, Noriyoshi Matumi

- 1Pb070 Effect of alkyl chain length on the low dielectric properties of epoxidized 1,2-polybutadiene cured materials having trialkylsilyl groups  
Yuma Nakagawa, Tomoyuki Ariyoshi, Tatsuki Kamura, Naomi Sato, Yoshio Furusho
- 1Pa071 Creating and performance evaluation of conductive fibers using silver nanoparticles  
Atsushi Tashiro, Yuka Horiguchi, Hideyuki Nakanishi
- 1Pb072 Synthesis of resins based on bismaleimide using cyclic siloxane compounds as additives  
Takuro Kodama, Shusei Sato, Taiga Baba, Tsukasa Ichikawa, Nobukatsu Nemoto, Yuki Hakamata, Shoji Fukuyama
- 1Pa073 Fabrication of Polymeric Electret Nonwoven Fabrics and Evaluation of Their Energy Harvesting Performance  
Keita Suzuki, Rintaro Takahashi, Ayae Sugawara-Narutaki
- 1Pb074 Analysis of melting and recrystallization of gold nanocrystals in solvent and their application to polymeric materials  
Yume Munegami, Misawo Fuji, Hideyuki Nakanishi
- 1Pa075 Influence of Polyelectrolyte Networks on the Piezoionic Effect in Double Network Gel  
Hidetoshi Okuzaki, Tomoki Yasui, Yoshinori Katsuyama, Hidenori Okuzaki, Daito Goto, Takayuki Kurokawa
- 1Pb076 Synthesis and Electronic Properties of Sulfonate-Containing PEDOT Copolymers  
Tsubasa Higuchi, Kenji Komaguchi, Keiichi Imato, Yousuke Ooyama, Ichiro Imae
- 1Pa077 Investigation of Oxidative Polymerization Behavior of Troponoids toward Development of 7 $\pi$ -Electron Conjugated Polyenes  
Eiki Suzuki, Ryosuke Shinkon, Tomohiro Kigami, Akihiko Kanazawa
- 1Pb078 Effect of Mesh Ground Plane on the Electrical Characteristics of an Organic Interposer Targeted for Chiplet Applications  
Ying Ying Lim, Shunsuke Nemoto, Ken-ichi Nomura
- 1Pa079 Linear Polyglycerol-Based Hybrid Composite Binder for Si Anodes  
JaeYu Kim, Seonghyeon Jung, Jeonghun Kim, Byeong-Su Kim
- 1Pb080 Effect of Film Formation Kinetics on Charge Transport in Crystalline Conjugated Polymers Blended with Insulating Polymer  
Hinata Tamada, Hyung Do Kim, Shunsuke Yamamoto, Hideo Ohkita
- 1Pa081 Ferroelectric phase control in PVDF thin films: Effects of high-boiling amphiphilic solvents  
Yasuko Koshiba, Sakura Suga, Azumi Akiyama, Shohei Horike, Masahiro Funahashi, Kenji Ishida

## E. POLYMERS AND ENVIRONMENT

- 1Pa085 Complete sequence randomness of lactate-based copolymers (LAHBs) with varied lactate monomer fractions  
Sangho Koh, Shinji Tanaka, Shinji Tanaka, Yusuke Imai, Seiichi Taguchi
- 1Pb086 Mechanical properties and seawater biodegradability of  $\alpha$ -1,3-glucan-graft-poly(p-dioxanone) copolymers  
Zhengyu Su, Jin Ho Seok, Satoshi Kimura, Tadahisa Iwata
- 1Pa087 Evaluation of superabsorbent polymeric materials prepared directly from Poaceae weeds.  
Maiko Nishimura, Kenji Fukunaga, Masahiro Kanaoka, Mitsuru Aoyagi

1Pb088 Synthesis and characterization of lignophenols derived directly from unutilized weeds for utilization  
Yuka Sakaue, Mitsuru Aoyagi

1Pa089 Well-designed native lignin derivative macromolecules directly from various plants around us  
Mitsuru Aoyagi, Mohamad Sarbani Nur Maisarah, Nanami Kameda

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## **E. POLYMERS AND ENVIRONMENT**

1Pb090 Co-crystallization behavior of microbial polyesters with vinyl groups in their side chains and effects of post-extension thermal crosslinking  
Sumire Ogura, Taku Omura, Taizo Kabe, Yuki Miyahara, Takeharu Tsuge, Tadahisa Iwata

1Pa091 Analysis of initial step in biodegradation process of PHBH by QCM and electrochemistry.  
Momoko Kitamura, Tomohiro Hiraishi, Yasumasa Takenaka, Hideki Abe, Noriyuki Asakura

1Pb092 Manufacturing, structure analysis and enzymatic degradation of poly(ethylene succinate) high-strength fibers  
Kei Ishida, Taizo Kabe, Sumito Kumagai, Yasumasa Takenaka, Hideki Abe, Tadahisa Iwata

1Pa093 Environmentally benign five-membered cyclic carbonate resin synthesized from resveratrol and carbon dioxide  
Takeo Mitoma, Iku Yamashita, Tatsuki Watanabe, Kozo Matsumoto

1Pb094 Preparation and property evaluation of seaweed-derived films  
Kei Samuela Nishikawa, Teruyuki Seino

1Pa095 Development of high heat resistance and high thermal conductive insulating materials using biomass epoxy resin  
Yu Matsuo, Kenji Mimura, Kantaro Nishio, Miyuki Harada

1Pb096 Synthesis of bio-based polyimides using directly bio-produced pyrazinediamines.  
Suzune Miyamoto, Jiabei Zhou, Shunsuke Masuo, Kenji Takada

1Pa097 Synthesis of Bio-based polyesters Using Pyrazine Diesters for Biodegradable Plastics  
Ayaka Muratsubaki, Jiabei Zhou, shunsuke Masuo, Kenji Takada

1Pb098 Synthesis of low temperature curing benzoxazine using "glycol lignin", a new forest-derived material  
Tomohiro Shimokawaji, Morio Yonekawa, Hajime Kimura, Yasunori Ohashi, Yusuke Matsumoto, Laszlo Szabo, Nge Thi Thi, Tatsuhiko Yamada

1Pa099 Synthesis and properties of bio-based epoxy resins using crosslinkers with reversible reactivity  
Yohtaro Inoue

1Pb100 Synthesis and Degradation of Bio-based Polymers Derived from Acetal-containing Furan Monomer  
Aito Nakano, Hiromitsu Sogawa, Fumio Sanda

1Pa101 Formation of Hollow Biodegradable Polymer Particles by Anti-solvent Crystallization Using Fine Bubbles  
Ukyo Saito, Nozomu Yasui, Tsuyoshi Yamaguchi, Keiji Yasuda

1Pb102 Physical properties and degradability of branched L-lactide block copolymer

Chikara Tsutsumi, Yoshihiro Kagawa, Ruka Hirota, Sayo Tan, Misaki Shiraishi

- 1Pa103 Evaluation of biodegradation progress in surface of cellulose triacetate (TAC) films using energy-variable positron beam method  
Hiroyuki Hosomi
- 1Pb104 Effect of the contents of cellulose and poly(vinyl alcohol)-graft-poly(lactic acid) on poly(lactic acid)-cellulose composites  
Takuya Hamada, Yuushou Nakayama, Ryo Tanaka, Takeshi Shiono, Takashi Endo
- 1Pa105 Degradation of Dual-Stimuli Sensitive Polymers Generating Bubbles Containing Titanium Oxide and Photoacid Generators by Ultrasound Irradiation and Heating  
Keisuke Oshima, Kohji Ohno, Haruyuki Okamura
- 1Pb106 Photo-thermal Degradation of Stimuli-Sensitive Polymers with Epoxy and Tertiary Ester Moieties  
Keigo Matsuyama, Haruyuki Okamura
- 1Pa107 Development of Hydrogen-Responsive Self-Immolative Polyamides Incorporating a Ruthenium Complex  
Hiryu Takinami, Naoki Noto, Mineto Uchiyama, Masami Kamigaito, Susumu Saito

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Presentation Time  
<c = 13:20~14:00>  
<d = 14:00~14:40>

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

- 1Pc001 Free Radical Copolymerization of Cyclic Acrylimides Bearing Isopropyl Group at The Allyl Position  
Risa Takata, Ryo Kawatani, Tomohiro Hirano
- 1Pd002 Analysis of <sup>1</sup>H NMR Spectra of alkyl chain-end Polystyrene Using a Chain Transfer Agent to Analyze the Chain-end Structure  
Yuta Tsukaguchi, Ryo Kawatani, Kohei Torii, Ken Yoshida, Hitoshi Mizuguchi, Tomohiro Hirano
- 1Pc003 Phase transition behavior of poly(N-vinyl-ε-caprolactam) prepared by low-temperature radical polymerization  
Sora Ogawa, Ryo Kawatani, Tomohiro Hirano
- 1Pd004 Radical copolymerization of ethyl 2-(hydroxymethyl)acrylate with Li salts  
Eito Takemura, Ryo Kawatani, Tomohiro Hirano
- 1Pc005 Radical polymerization of cyclic acrylate from itaconyl dichloride and 1,4-butanediol  
Ryoga Yamano, Ryo Kawatani, Tomohiro Hirano
- 1Pd006 Synthesis and Polymerization of N-Vinylcinnamicamide Derived from Cinnamoyl Chloride  
Retsu Wakai, Ryo Kawatani, Tomohiro Hirano
- 1Pc007 Controlled synthesis of liquid-crystalline polymers under ambient conditions by red-light-driven atom transfer radical polymerization  
Kaito Takahashi, Xiaolei Hu, Krzysztof Matyjaszewski, Shoichi Kubo, Atsushi Shishido
- 1Pd008 Radical homopolymerization of N,N- disubstituted methacrylamides  
Ryu Tada, Yoshio Furusho

- 1Pc009 Creation of high refractive index materials by photocopolymerization of heteroaromatic ring-containing monomers  
Rikuto Ito, Yuji Tuhara, Satoru Ozeki, Hideharu Mori
- 1Pd010 Influence of penultimate unit effect on chain transfer reaction in radical copolymerization  
Rikuta Otomo, Moriya Kikuchi, Seigou Kawaguchi
- 1Pc011 Stereoregularity Control of Amphiphilic Poly( $\alpha$ -dodecyloxymethylacrylic acid)  
Kazuki Nagasaka, Kazuki Kawai, Masataka Kubo, Takahiro Uno
- 1Pd014 Synthesis of Poly(carbon sulfide) Particles by Electroreductive Polymerization of CS<sub>2</sub>  
Taiki Yamada, Jun Yamaguchi, Yuya Atsuta, Atsushi Ohtaka, Osamu Shimomura, Syuji Fujii, Yoshimasa Matsumura
- 1Pc015 Synthesis of Side-Chain Functionalized Reductively Degradable Poly(disulfide)s by Domino Polymerization  
Taiga Takiuchi, Yukiya Kitayama, Atsushi Harada
- 1Pd016 Development of new polymerization approach for synthesizing poly(thioacetal) possessing ROS-induced degradability.  
Hikaru Nakaichi, Yukiya Kitayama, Atsushi Harada
- 1Pc017 Controlled/Living Click Polymerization of Conjugated AB Monomers with chirality in the side chain  
Seiichiro Uchida, Tomohiro Kubo, Kotaro Satoh
- 1Pd018 Synthesis of High Refractive Index Polymer Films by Radical Polymerization of Bismuth-Dithiocarbamate Derivatives  
Tomoaki Tanaka, Atsushi Ohtaka, Osamu Shimomura, Yoshimasa Matsumura
- 1Pc019 Synthesis of various polybenzothiazoles by oxidative cyclopolymerization of aromatic diamines and aliphatic dialdehydes using element sulfur  
Masaru Yoneyama, Ryu Minei, Atsuki Ise, Yuito Koganezawa, Takeshi Yamanobe

## B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES

- 1Pc023 Self-Assembly Behavior and Thin-Film Properties of Hydrogen-Bonding  $\pi$ -Extended Perylene Diimides  
Aoi Yamamoto, Keisuke Fujimoto, Hiroto Iwasaki, Seiichiro Izawa, Yuhei Yamada, Shiki Yagai, Taketoshi Minato, Masaki Takahashi
- 1Pd024 Surface modification of polymer particles by betainization of polymer brushes for suppression of non-specific protein adsorption  
Masahiko Yamamoto, Ryota Niwa, Daisuke Aoki, Tatsuo Taniguchi
- 1Pc025 Co-deposition of Polydopamine with Polyethyleneimine on Polyethylene Naphthalate Substrates for Its Application in Electroless Metal Deposition  
Toshiyuki Tamai, Mitsuru Watanabe, Yasuyuki Kobayashi, Junpei Kobata, Yoshio Nakahara, Setsuko Yajima
- 1Pd026 Synthesis of polymer particles with selective adsorption properties for bisphenol A and their application as column packing materials  
Masayuki Yokoyama, Haruki Hoshino, Daisuke Aoki, Tatsuo Taniguchi
- 1Pc027 High functionality by surface modification of living polymer particles synthesized by RAFT precipitation polymerization  
Sota Kayama, Daisuke Aoki, Tatsuo Taniguchi, Yasuyuki Yamada, Takeshi Wakiya
- 1Pd028 Preparation of grooved cylindrical particles



- Tomoki Nakagami, Mayuka Mishima, Asuka Ishii, Akihide Arima, Makusu Tsutsui, Toyoko Suzuki, Hideto Minami, Nozomu Suzuki
- 1Pc029 pH and magnetic field responsive gas marbles  
Takahiro Kadono, Takanori Yasui, Tomoyasu Hirai, Yoshinobu Nakamura, Syuji Fujii
- 1Pd030 Stability of polycyclic aromatic hydrocarbons adsorbed on a graphite surface  
Yoshihiro Kikkawa, Seiji Tsuzuki
- 1Pc031 Simple formation of bicontinuous structures using Janus particles as building blocks  
Taichi Umeno, Reina Nakamoto, Honoka Kondo, Nozomu Suzuki, Toyoko Suzuki, Hideto Minami
- 1Pd032 Synthesis of semi-aromatic polyimide microparticles via precipitation polymerization  
Moe Onoda, Yuqian Chen, Teruaki Hayakawa, Yuta Nabae
- 1Pc033 Preparation of uniform main-chain azobenzene polymer particles  
Shoma Yamamoto, Yuito Takechi, Hiroaki Shimomoto, Eiji Ihara, Tomomichi Itoh
- 1Pd034 Redox Responsive Polymer Capsules Prepared by Interfacial Photocrosslinking.  
Yuki Miyaji, Yukiya Kitayama, Atsushi Harada
- 1Pc035 Fabrication of helically oriented polymer thin films by polarized UV-assisted vapor deposition polymerization  
Hiroki Minakuchi, Seika Murashita, Yan Tan, Ryosuke Matsubara, Atsushi Kubono
- 1Pd036 Substrate temperature dependence of out-of-plane dipole orientation in polyurea thin films prepared by vapor deposition polymerization  
Tatsumi Kitamura, Syusaku Nandate, Atsushi Sugita, Ryosuke Matsubara, Atsushi Kubono
- 1Pc037 Investigation of chemically modified triazine-based covalent organic structures in organic solutions  
Kazuhiro Oboshi, Ming Cheng, Shinobu Uemura
- 1Pd038 Effect of ionic strengths on the compression behavior of microgel arrays at the air-water interface  
Kotomi Hibi, Takahisa Kawamoto, Haruka Minato, Daisuke Suzuki
- 1Pc039 Modification and Investigation of the supporting membrane surface for the preparation of nanosheets-based nanofiltration membranes  
Yuto Katsuda, Zhaojun Fan, Akimitsu Ichimori, Takeru Nitta, Shouma Soeki, Shinobu Uemura
- 1Pd040 Anchoring Control and Liquid Crystal Device Characteristics with Bottle Brush LB Films  
Toshiya Yoshigai, Yuji Kinose, Osamu Sato, Yoshinobu Tsujii

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

- 1Pc043 Synthesis and the curing kinetics study of high refractive index organic-inorganic nanocomposite materials  
Yinglu Liu, Yukikazu Takeoka
- 1Pd044 Morphological control and 3D networking of PLA hybrids using photosensitive TiO<sub>2</sub> nanoparticles  
Keiya Kawamura, Shuta Hara, Shigeru Shimizu, Hiroki Ikake
- 1Pc045 Particle size dependence of activation energy required for melting and recrystallization of silver nanocrystals in water

Takeru Kitao, Yume Munegami, Hideyuki Nakanishi

- 1Pd046 Preparation of Polyimide Composite Particles by Precipitation Polymerization in the presence of Mica  
Akiko Nakahashi, Hideki Tachi
- 1Pc047 Creation of Perovskite-Containing Water-Based Ink  
Yoshiki Kageyama, Moriya Kikuchi, Kazushi Enomoto, Shigeki Takahashi, Seigou Kawaguchi
- 1Pd048 Design of silica particle composite elastomer with unique reinforcement mechanism  
Moeka Higuchi, Moe Sakamoto, Karin Ito, Yukikazu Takeoka
- 1Pc049 Preparation of BN@Al<sub>2</sub>O<sub>3</sub> composite particles and their high dispersion in polyimide matrix  
Ritsuki Wada, Keiya Kawamura, Shuta Hara, Shigeru Shimizu, Hiroki Ikake
- 1Pd050 Fabrication and characterization of organic-inorganic composite hydrogels for application to multifunctional smart gels  
Kazuto Tanigawa, Kazuki Murai
- 1Pc051 Structure and mechanical properties of polymer nanocomposites with chain-like silica nanoparticles  
Tatsuki Oishi, Ayae Sugawara-Narutaki, Rintaro Takahashi
- 1Pd052 Synthesis and hybridization of polymer-inorganic composite particles  
Yayoi Yoshioka

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

- 1Pc053 Synthesis and properties of a composite composed of self-doped polythiophene and magnetic nanoparticle  
Sosuke Abe, Koichiro Tanaka, Takahiro Uno, Masataka Kubo
- 1Pd054 Preparation of High Water-resistance Flaky Aluminum Pigments Coated with Hydrophobic and Application to Water-based Ink  
Takeru Miyauchi, Moriya Kikuchi, Seigou Kawaguchi
- 1Pc055 Preparation and Properties of Self-Doped Polycyclopentadithiophene Composite with Inorganic Oxides  
Toshiki Itakura, Kiho Asari, Takahiro Uno, Masataka Kubo
- 1Pd056 Surface modification of polymer using various octaalkoxy-substituted POSSs as surface segregants  
Nanami Okamura, Jinshiro Takeuchi, Hiroaki Imoto, Kensuke Naka
- 1Pc057 Fabrication of organic-inorganic hybrid capsule for immobilization of formate dehydrogenase  
Miyuki Ishii, Fumio Kurayama, Sora Imanishi, Tatsushi Matsuyama, Junichi Ida
- 1Pd058 Polymerization behavior of methacrylate monomers from the surface of ZnO nanorods by photoinduced atom transfer radical polymerization  
Kaho Nakano, Hironobu Murata, Krzysztof Matyjaszewski, Shoichi Kubo, Atsushi Shishido
- 1Pc059 Synthesis of Gold Nanoparticles with Uniform Particle Size Using a Nearly Homogenous Polymer Hydrogel Network Composed of Temperature-Responsive Star-Shaped Polymers as a Template  
Yian Wang, Taiki Hoshino, Yukikazu Takeoka
- 1Pd060 Hybridization of PIM-1 and PIM-2 with inorganic nanoparticles and their film properties  
Kenichi Chiba, Tadashi Tsukamoto, Yuji Shibasaki

- 1Pc061 Alignment behavior of liquid-crystalline polymer films containing ZnO nanorods by scanning wave photopolymerization  
Hikaru Nakoshi, Kaito Takahashi, Kaho Nakano, Shoichi Kubo, Atsushi Shishido
- 1Pd062 Preparation and properties of transparent thiourethane acrylate/alumina composite materials  
joya ikoma, hideki sugimoto
- 1Pc063 Preparation of Acrylic/Alumina Composites Containing Coumarin Moieties  
Daisuke Itakura, Hideki Sugimoto
- 1Pd064 Preparation of polyvinyl butyral/alumina nanofiber composites  
Koki Ino, Hideki Sugimoto
- 1Pc065 Impregnation Condition Dependence of Repairing Behavior of Fatigued Epoxy/Silica Nanocomposites with Impregnation into Monomer  
Yukiya Uda, Takuya Matsumoto, Takashi Nishino

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### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 1Pc067 Study on the properties of aliphatic polyamide containing ether bonds in the backbone  
Chen Gu, Shintaro Nakagawa, Naoko Yoshie
- 1Pd068 Fabrication of poly(vinyl alcohol)-based hydrogels with various interactions  
Asahi Inoue, Yohei Kotsuchibashi
- 1Pc069 Preparation of vitrimer with crosslinker bearing carbonate backbone and polyalcohol  
Issa Tanaka, Kanako Okuda, Hiroharu Ajiro
- 1Pd070 Strategy for higher elasticity of gels by using side-chain terminal functional groups  
Yuka Wakayama, Takuma Kureha
- 1Pc071 Evaluation of Anisotropic Physical Properties of Thermal-Compressed Wood under Different Heat Pressing Conditions  
Koki Hayashi, Daisuke Ishii
- 1Pd072 Polybenzoxazoles with Low Coefficient of Thermal Expansion (23). Modification Effects of ester- containing Monomers  
Sara Tanaka, Juan Nakazono, Junichi Ishii, Masatoshi Hasegawa
- 1Pc073 Organo-Soluble Low CTE Polyimides (25).  
Kouichi Ohta, Masaki Hayashi, Humiya Hayashi, Junichi Ishii, Masatoshi Hasegawa
- 1Pd074 Transparent Thermoplastic Polyimides (14). Thermal and UV-stability  
Yuno Tomita, Hiroto Kawamorita, Naomi Shindo, Junichi Ishii, Masatoshi Hasegawa
- 1Pc075 Development of Low-CTE Polyimides for Flexible Printed Circuit Boards (7). Study on Low Dielectric Dissipation Factor Enhancement.  
Junichi Ishii, Naoto Goto, Naoya Nakano, Masatoshi Hasegawa
- 1Pd076 Poly(ester imide)s with Low CTE and Low Water Uptake (49). Effect of novel 8-ring-type ester-containing diamine structure on high-frequency dielectric properties  
Kotoha Sato, Junichi Ishii, Masatoshi Hasegawa
- 1Pc077 UV-light Lift Off of Polyimide Films (7)

- Yui Miura, Natsumi Takagi, Yuta Shimode, Junichi Ishii, Masatoshi Hasegawa, Kazuya Ebara
- 1Pd078 Novel bio-solvents alternative to NMP for polyimide film manufacturing.  
Mana Hashimoto, Junichi Ishii, Takao Miwa, Masatoshi Hasegawa
- 1Pc079 Poly(ester imide)s with Low CTE and Low Water Uptake (50). Effect of novel 8-ring-type ester-containing tetracarboxylic dianhydride structure on high-frequency dielectric properties  
Sebun Matsunaga, Junichi Ishii, Masatoshi Hasegawa
- 1Pd080 Colorless Polyimides Derived from Novel Spiro-type Monomers (13). Strategies to Overcome the Trade-off between Low CTE and Low Birefringence  
Masatoshi Hasegawa, Ko Nagahaba, Hikaru Sugihara, Junichi Ishii
- 1Pc081 Effect of the spacer structure of bifunctional (meth)acrylate on the properties of photocured film  
Risako Kobayashi, Tomoya Mizumori, Masayoshi Matsuno, Kouki Tsubaki
- 1Pd082 Thermoplastic and self-healing behavior of elastomers containing halogen atoms  
Kanji Niimi, Yuya Oyama, Atsushi Hotta
- 1Pc083 High mechanical properties and thermal resistance of high-concentration agarose hydrogels  
Haruna Oshita, Kenji Urayama, Jun-ichi Horinaka

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

- 1Pd086 Environmental biodegradation of photo-switching biodegradable polymer  
Akihiko Masui, Yuzuko Toyoshima, Satoshi Ikawa, Akiko Nakahashi, Hideo Okamura, Atsuyoshi Nakayama
- 1Pc087 Relationship between the repeating units of P3HA biosynthesized by *R. eutropha* with pentanoic acid and 1,6-hexanediol as mixed carbon sources and preferentially metabolized carbon sources  
Mayu Hirota, Takahiko Nakaoki
- 1Pd088 Relation between the fraction of varelate units and B-oxidation using odd-numbered fatty acids as carbon sources by *R. eutropha*  
Meguno Tsunekawa, Takahiko Nakaoki
- 1Pc089 Physical Properties and decreasing and increasing rates of Molecular Weight of each Block for P(3HB-b-3HBV) by *R. eutropha*  
Ren Yashita, Takahiko Nakaoki

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

- 1Pd090 Discovery of the marine biodegradability of fishing lines made mainly of nylon 6 and nylon 66  
Shota Ando, Daisuke Kasai, Eri Ueno, Megumi Akiyama, Namiko Gibu, Yingjun An, Takako Kikuchi, Maina Yonemura, Dai-ichiro Kato, Hirofumi Hinata, Atsushi Takahara, Kohzo Ito
- 1Pc091 Comparative Study of Poly(ethylene succinate) Biodegradation in Freshwater and Seawater using Raman mapping  
Miyu Ogawa, Harumi Sato
- 1Pd092 Development of aspartic acid based superabsorbent polymers with spontaneous degradation.

- Daichi Yasutake, Naoki Yamada, Mitsuru Naito, Kanjiro Miyata, Takeshi Mori
- 1Pc093 Synthesis of aromatic polyethers aimed at biodegradability  
Daiki Morimoto, Akihide Sugawara, Hiroshi Uyama
- 1Pd094 Optical Fiber Fabrication from Water-Soluble Polysaccharides via a Novel Gel Spinning Approach  
Yuya Fukata, Aayush Jaiswal, Ari Hokkanen, Hannes Orelma, Tadahisa Iwata
- 1Pc095 Enhancement method of the paper strengths by cellulose nanofiber composite photocurable resin [2] Surface properties  
Takeshi Onji, Kazuaki Katagiri, Naoya Harada, Sonomi Kawakita
- 1Pd096 Development of Porous Materials Using Polysaccharide Polyion Complexes and Evaluation of Their Oil/Water Separation Ability  
Misaki Hayashi, Takuya Sagawa, Mineo Hashizume
- 1Pc097 Development of high-strength film by cross-linking reaction of carboxyl-modified starch and oxazoline group-containing polymer  
Yuta Okuda, Yu-I Hsu, Hiroshi Uyama
- 1Pd098 Synthesis of Surface-Functionalized Zinc Oxide Nanoparticles and Their Application in PLA Composite  
Haruka Nakagawa, Kohei Iritani
- 1Pc099 Bestowing novel functionalities to cellulose/chitin nanowhiskers by surface modifications and applications of them to functional materials  
Jun Araki, Akari Iizuka, Toshiko Amemiya, Hitomi Hamada, Takaomi Nomura, Yoshitake Akiyama
- 1Pd100 Exploring interactions between cellulose fatty acids  
Takeru Tanaka, Yoshito Ando
- 1Pc101 Development of microbeads from Sterile Silk Material - Spherical Particle Formation from Aqueous Fibroin Solutions and their Morphological Regulation  
Shoji Nagaoka, Kazumi Masuda, Kyohei Yoshida, Maki Horikawa, Tomohiro Shirosaki, Hirotaka Fuchigami, Makoto Sasaki
- 1Pd102 Synthesis of the selectively degradable peptide cross-linker and its application to cross-linked natural rubber  
Sekiguchi Satsuki, Kousuke Tsuchiya, Takamasa Sakai
- 1Pc103 Synthesis and Properties of Biobased Polyesters from Cinnamoyl Dimers Having Fused Ring Skeleton  
Takumi Noda, Yasuhiro Kohsaka
- 1Pd104 Synthesis and modification of bio-based water-soluble polyimides  
Haru Kawano, Yoichiro Sawada, Noriyoshi Matsumi, Kenji Takada
- 1Pc105 Improving mechanical properties and changing the crystal structure through solvent vapor annealing with paramylon triacetate fibers  
Shungo Noguchi, Taizo Kabe, Tadahisa Iwata
- 1Pd106 Synthesis and properties of novel sequence-controlled copolyesters containing 5-hydroxypentanoic acid and 6-hydroxyhexanoic acid  
Yudai Shuto, Yuushou Nakayama, Ryo Tanaka, Takeshi Shiono, Shodai Hino, Norioki Kawasaki, Naoko Yamano, Atsuyoshi Nakayama
- 1Pc107 Fabrication and Characterization of Synthetic Rubber Latex/Sodium Alginate Composites  
Kazuki Nishidoi, Hiromitsu Sogawa, Fumio Sanda

<f = 16:00~16:40>

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

- 1Pe001 Radical Copolymerization of Formaldehyde: Synthesis and Properties of Novel Copolymers with Oxygen Atoms in the Main Chains  
Ryogo MURAKAMI, Hironobu WATANABE, Mineto UCHIYAMA, Masami KAMIGAITO
- 1Pf002 Precision Polymer Synthesis by Cascade Process from Controlled Radical Polymerization to Reduction of Pendant Groups Using (PNNP)Mt Complexes for Various Acrylic Monomers  
Ryoga HIRATA, Chihaya MURATA, Hironobu WATANABE, Mineto UCHIYAMA, Naoki NOTO, Susumu SAITO, Masami KAMIGAITO
- 1Pe003 Synthesis and Functionalization of Itaconic Acid-Derived Poly(*N*-vinylpyrrolidone) Derivatives with Various Functional Groups in the Side Chains  
Shione KURITA, Hironobu WATANABE, Mineto UCHIYAMA, Masami KAMIGAITO
- 1Pf004 Precision Synthesis of Monodisperse Vinyl Oligomers by Living Polymerization and Chromatographic Separation  
Shokei OKAMOTO, Shione KURITA, Hironobu WATANABE, Mineto UCHIYAMA, Masami KAMIGAITO
- 1Pe005 Synthesis of block copolymer with isoprene and *N*-vinylpentaneamide mimicing the structure of natural rubber  
Sho Sugimoto, Tsuyoshi Ando, Hiroharu Ajiro
- 1Pf006 Initiator-free photopolymerization of *N*-substituted acrylamides using LED  
Yu Zhang, Sena Hashimoto, Atsushi Kameyama
- 1Pe007 Synthesis of cyclic polymethacrylates via a novel photoinduced ring-expansion polymerization using various aromatic heterocycles as cyclic initiators  
Ryo Inomata, Sena Hashimoto, Atsushi Kameyama
- 1Pf008 Sulfur-Free Photo-Iniferter RAFT Polymerization Using Non Benzenoid Aromatic Tropolone  
Yuri MATSUBA, Eisuke HIRANO, Ayari NISHIO, Akitsugu SHIBATA, Atsushi MATSUMOTO, Yasushi MAEDA, Shinji SUGIHARA
- 1Pe009 Dispersion polymerization using polyamide acid a steric stabilizer in ethylene glycol  
Kosuke Yamamoto, Chika Kudou, Takeshi Namikoshi, Shinji Watanabe
- 1Pf010 Effect of Amine Catalysts on Polymerization Control in Reversible Complex Mediated Polymerization in Miniemulsion systems.  
Yuma Kobayashi, Yukiya Kitayama, Atsushi Harada
- 1Pe013 Double-Ring Nanostructures Formed by Scissor-Shaped Naphthalene Dyads  
Kintaro Miyamoto, Sota Mihara, Hiroki Itabashi, Hiroki Hanayama, Shiki Yagai
- 1Pf014 Zinc-Porphyrin Dyads Self-Assemble into Curved supramolecular polymer  
Ryuichi Kawai, Soichiro Ogi, Hiroki Hanayama, Shiki Yagai
- 1Pe015 Self-assembly and emission properties of scissor-shaped dyad with a heterocyclic  $\pi$ -conjugated systems  
Hina Ochiai, Hiroki Hanayama, Shiki Yagai
- 1Pf016 Supramolecular co-polymerization of water-soluble porphyrins in a microflow catalysis  
Riku Ito, Haruna Takemori, Chisako Kanzaki, Shouta Nomura, Takato Maeda, Munenori Numata

- 1Pe017 Development of self-healing hybrids based on boronic acid esters/silsesquioxane/titanium oxide  
Masanari Oba, Kohei Yamanaka, Hideharu Mori
- 1Pf018 Two-dimensional structural ordering of stimuli-responsive molecular units using triptycene-based supramolecular scaffold  
Jiatong Yu, Tomoya Fukui, Takanori Fukushima
- 1Pe019 Controlling the structure and polarity of hydrogen-bonded urea molecular assemblies through side chain engineering  
Azumi Akiyama, Yoshiki Ogura, Yasuko Koshiba, Shohei Horike, Masahiro Funahashi, Keiki Kishikawa

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

- 1Pe023 Stretch-induced structural transition mechanism from alpha-helices to highly oriented beta-sheet of silk having polyalanine sequences  
Taiyo Yoshioka, Tsunenori Kameda
- 1Pf024 Swelling Behavior and Molecular Dynamics of Graft Copolymers with Thermoresponsive Poly(N-isopropylacrylamide)  
Hikaru Nagata, Hisashi Honda
- 1Pe025 Synthesis of T-shaped copolymers consisting of amorphous main chain/crystalline side chains and crystallization behavior of the side chains  
RYOSUKE NISHI, SHUTA HARA, TAKAYUKI IKEHATRA
- 1Pf026 Investigation of solvent effects on crystallization and melting of PEG by DSC  
Daisuke Kobayashi, Hiroki Yabada, Go Matsuba, Yuya Doi
- 1Pe027 Relationship between Hierarchical Structure and Additive Bleeding Behavior of Polyethylene Film with Different Stretching Ratios  
Masashi Ikehira, Ryu Miyajima, Nana Tsuji, Hiroyasu Masunaga, Sono Sasaki
- 1Pf028 Structural characterization of high-concentration hydrogels of kappa-carrageenan by small-angle X-ray scattering  
Koshiro Hara, Urayama Kenji, Horinaka Jun-ichi
- 1Pe029 Anomalous expansion during annealing of poly(lactic acid) containing poly(tetrafluoroethylene) fibers  
Dai Hoang Giang Vo, Masayuki Yamaguchi
- 1Pf030 Relationship between Molecular Morphology and bound Solvent of Poly(3-hydroxybutyrate-co-3-hydroxyhexanoate) Gel  
Takuya Kitamura, Takahiko Nakaoki
- 1Pe031 Molecular Structure and Preparation of porous particle from Poly(3-hydroxybutyrate)/o-dichlorobenzene Gel  
Ryouta Arai, Takahiko Nakaoki
- 1Pf032 Preparation of porous particle of Poly (L-lactide) Oligomer and the Molecular Morphology.  
Kota Tsuchiya, Takahiko Nakaoki
- 1Pe033 Incorporation of Ethanol in nanoporous Syndiotactic Polystyrene from Ethanol/acetone mixed Solution  
Shogo Watanabe, Takahiko Nakaoki
- 1Pf034 Incorporation of propanol from 1 and 2-propanol aqueous solutions using nanoporous syndiotactic polystyrene.  
Taiki Fujiwara, Takahiko Nakaoki
- 1Pe035 Improvement of Mechanical Properties for Poly(vinyl alcohol) and its Blend Films

Aino Shirai,Takahiko Nakaoki

- 1Pf036 Enhanced Cold Crystallization of Cellulose Acetate Membranes by Supercritical CO<sub>2</sub>  
Nobuhiro Nambu,Shinji Kanehashi
- 1Pe037 Structural Analysis of Fluorinated Polymer Electrolytes by Neutron and X-ray Small-Angle Scattering under Controlled Humidity  
Shigeki Uzuki,Shinichi Takata
- 1Pf038 Molecular dynamics simulation of chirality selection in crystallization of isotactic polypropylene (iPP)  
Takashi Yamamoto
- 1Pe039 Structural Evaluation of Water in (Meth)acrylate Polymers and Elucidation of the Recrystallization Mechanism  
Ao Hishida,Ryuto Ohkubo,Yuri Kishimoto,Makoto Gemmei-Ide,Shigehiro Kagaya
- 1Pf040 A study of intermolecular hydrogen bonding in cellulose acetate using low-frequency Raman spectroscopy  
Ritsuki Matsuoka,Harumi Sato,Mitsuru Aoyagi
- 1Pe041 Analysis of cyclic bending fatigue behavior of PET films using X-ray scattering  
Yusho Kishimoto,Jiayi Yu,Kyohei Hisano,Atsushi Shishido
- 1Pf042 Controlling the orientation and structure of a new thermally conductive polymer  
Jonathon Tanks,Kenji Tamura,Kimiyoshi Naito
- 1Pe043 The Effect of Crystallization on the Internal Stress of Poly(ether ether ketone)  
Takeshi Horie,Takuya Matsumoto,Takashi Nishino
- 1Pf044 Effect of Low-Molecular-Weight PEG on the Crystallization Kinetics of Poly(lactic acid)  
Masaki Tanizaki,Akihiko Toda,Ken Taguchi
- 1Pe045 Fast Field Cycling NMR Relaxometry of PTFE and PCTFE  
Makoto Yamaguchi,Seichi Kuroda,Kiyoshi Inokuma,Natsuki Fukuta

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

- 1Pf048 Synthesis and physical properties evaluation of discontinuous conjugate polymers with tunable energy levels for applications in solar cells  
Hiroto Miyatake,Haoxuan Guo,Hiroyuki Aota
- 1Pe049 Exploration of Highly Conductive and Durable Anion Exchange Membranes by Combining Literature Data and Quantum Chemical Calculations  
Nana Terasoba,Yuri Nara,Yin Kan Phua,Koichiro Kato,Tsuyohiko Fujigaya,Hiroyoshi Kawakami,Manabu Tanaka
- 1Pf050 Ternary Organic Thin-Film Solar Cells with Two Acceptors  
Himawari Kojima,Athushi Aoki
- 1Pe051 Fabrication and Ion Diffusivity Evaluation of Network Polymer Membranes Bearing Cationic Crosslinking Points  
Ryodai Fujihashi,Yasutaka Kuwahara,Hiroyoshi Kawakami,Manabu Tanaka
- 1Pf052 Effect of Donor Unit Side-Chain Chirality on A-D-A'-D-A Type Non-Fullerene Acceptors for Polymer Solar Cell Applications  
Kenta Yamada,Wataru Suzuki,Jun-ichi Nishida,Tomokazu Umeyama



### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 1Pe053 Synthesis of Non-Fullerene Acceptor Based on Thioalkylated Thienoazacoronene Unit and Its Application in Polymer Solar Cells  
Ryogo Hara, Wataru Suzuki, Tomokazu Umeyama
- 1Pf054 Fabrication and Proton Conductivity Evaluation of Nanofiber-Containing Hydrocarbon-Based Polymer Electrolyte Membranes  
Hiroki Mizuta, Akari Tatsukawa, Yasuyo Ogino, Masahumi Yamato, Kazuya Matsumoto, Mitsutoshi Jikei, Hiroyoshi Kawakami
- 1Pe055 Effect of polymer matrix structure on Li-ion conductivity of nanofiber-containing electrolyte membranes  
Rintaro Omichi, Yasuyo Ogino, Masahumi Yamato, Hiroyoshi Kawakami
- 1Pf056 Fabrication of polymer nanofiber-incorporated electrolyte ultrathin membranes and evaluation of their Li-ion battery characteristics  
Rintaro Omichi, Yosuke Saito, Yasuyo Ogino, Masahumi Yamato, Hiroyoshi Kawakami
- 1Pe057 Synthesis and properties of composite materials using poly siloxane derivatives with imidazolium salts  
Taishi Yoshida, Takeru Ito, Tsukasa Ichikawa, Nobukatsu Nemoto
- 1Pf058 Evaluation of structural changes and catalytic performance of metal phthalocyanine complexes induced by baking  
Yuta Nakazato, Ayato Sasaki, Tsukasa Ichikawa, Izuru Kobayashi, Nobukatsu Nemoto, Kotaro Yoshioka, Shota Tanaka, Yuki Sakamoto, Masaji Akimoto
- 1Pe059 Quasi-elastic neutron scattering study on water dynamics in Nafion using Si311 analyzer  
Takeshi Yamada
- 1Pf060 Synthesis of PEO Networks Using Thermal Azide-Alkyne Cycloaddition Reaction and Their Application to Solid Electrolytes  
Ryodai Kagami, Hiroto Sanji, Takahiro Uno, Masataka Kubo
- 1Pe061 Preparation and Ion Conductivity of Comb-Shaped Polyether Electrolyte Composed of PDMS and PEG Side Chains  
Ai Sugimoto, Ryuta Kosono, Tomoya Enoki, Takahiro Uno, Masataka Kubo
- 1Pf062 Synthesis of Four-Branched PEO Network Using Click Reaction and Its Application to Solid Electrolyte  
Soma Ishimoto, Hiroto Sanji, Takahiro Uno, Masataka Kubo
- 1Pe063 Recovery of All-inorganic Perovskite Layers and Effect of Surface Modification by Ink Additives.  
Rio Shimizu, Kenichi Oyaizu, Hiroyuki Nishide, Takeo Suga
- 1Pf064 Preparation of Organic Thin Films with Anthraquinone Derivatives and Application to Organic Secondary Batteries.  
Satoshi Adachi, Akinari Chiba, Kenichi Oyaizu
- 1Pe065 MXene-CNH Composites Engineered for High-Performance Metal Ion Battery Anodes with Superior Fast-Charging Properties  
Mukul Swain, Punyasloka Saibrata, Ghoroi Chinmay, Noriyoshi Matsumi

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### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 1Pf066 [Choline][Pectate] as a High-Performing Bio-based Anodic Binder for Lithium-Ion Batteries

Ze Li, Mantripragada Bharat Srimitra, Noriyoshi Matsumi

- 1Pe067 Rheological evaluations of electrode slurries containing poly(ethylene oxide) electrolytes as binder  
Kento Kimura, Mana Suzuki, Masayoshi Takano, Ryuta X Suzuki, Yuichiro Nagatsu, Yoichi Tominaga
- 1Pf068 Synthesis of Fluorine-free Anion Conductive Polymer Electrolyte Membranes  
Ryuto Horiuchi, Kenji Miyatake
- 1Pe069 Analysis of Nafion Aggregate Formation in Fuel Cell Catalyst Ink via Coarse-Grained Simulations  
Rei Shibata, Tsuyohiko Fujigaya, Koichiro Kato
- 1Pf070 Fast-Charging Lithium-Ion Batteries Enabled by a Poly(lithium borate ester) Binder with Functionalized Solid Electrolyte Interphase  
Pavithra Kasthurirangan, Bharat Srimitra Mantripragada, Noriyoshi Matsumi
- 1Pe071 Synthesis of Soluble  $\pi$ -Conjugated Poly(carbon monosulfide)s by Electropolymerization of Carbon Disulfide and Investigation of Its Reaction Mechanism  
Kousei TAKAZAWA, Hiroki NUMAZAWA, Yuta YASAKA, Akihiko KANAZAWA
- 1Pf072 Stabilization of Li ion secondary battery cathode using diborylbenzene type additive  
Uday Sai Reddi, Bharat Srimitra Mantripragada, Noriyoshi Matsumi
- 1Pe073 Preparation and Evaluation of Solid Electrolytes Using End-capped Poly(Ethylene Carbonate)  
Xiaodong Huo, Kento Kimura, Yoichi Tominaga
- 1Pf074 Development and Electrochemical Evaluation of TEMPO-oxidized Cellulose Nanofiber Hydrogel Electrolytes for Rechargeable Zinc-ion Batteries  
Thanigan Nakkhong, Nantapat Soontornnon, Kento Kimura, Jusef Hassoun, Yoichi Tominaga
- 1Pf076 Evaluation of hydrogel binders containing Nafion for use in electrochemical capacitors  
Mai Hirukawa, Yutaka Ohseido
- 1Pe077 Evaluation of electrochemical properties of gel-like conductive polymer thin films  
Yume Fushimi, Yutaka Ohseido
- 1Pf078 Automation Technology for Polymer Material Development Experiments Using Robotic Arms  
Kohei Hashimoto, Yuki Asano, Keiichiro Nomura, Iasmu Shigemoto, Junichiro Shiomi
- 1Pe079 Creation of conductive polymer thin film hydrogel electrode materials  
Natsuki Tsukumo, Yutaka Ohseido

## **E. POLYMERS AND ENVIRONMENT**

- 1Pf086 Accumulation of formaldehyde using basic protein protamine  
Momoka Uchida, Masanori Yamada
- 1Pe087 Preparation and Characterization of Rhamnan Sulfate / Crosslinked-Poly(Acrylic Acid) Composite Hydrogels by Pre-ionic Crosslinking Method  
Motoki Kitagawa, Yosuke Niko, Shigeru Watanabe, Shingo Hadano
- 1Pf088 Development of an Iridium-Catalyzed Method for the Hydrogenative Depolymerization and Upcycling of Polyesters

Chihaya Murata, Arash Ghaderi, Naoki Noto, Mineto Uchiyama, Masami Kamigaito, Susumu Saito

- 1Pe089 Synthesis of Chitouronic Acid by TEMPO Oxidation of Chitin and Its Application to Polysaccharide Composite Films  
Sho Yatabe, Takuya Sagawa, Mineo Hashizume

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## **E. POLYMERS AND ENVIRONMENT**

- 1Pf090 Surface modification of CNF by physical adsorption with water-soluble tamarind esters  
Yasutaka Uchijima, Ryoya Kihara, Shinji Utsunomiya, Naoki Wada, Kenji Takahashi
- 1Pe091 Recycling of fibers from FRP waste through metal-oxide catalyzed low temperature combustion  
MANIKANDAN ILANGO VAN, TAKESHI KONDO
- 1Pf092 Hybridization of inorganic crystals and wood treated with deep eutectic solvents consisting of citric acid for the development of tough biomass structural materials  
Yui Okuda, Go Matsuba, Hiroshi Kamitakahara, Eiichi Kido, Tadashi Mizutani
- 1Pe095 The Change in Molecular Aggregation States and Thermo-Oxidative Degradation Behaviors of Polyamide 6 Press Films Based on Thermal Treatment  
Sota Wachi, Shotaro Nishitsuji, Yutaka Kobayashi, Yasuhiko Otsuki, Hiroshi Ito, Hisao Matsuno
- 1Pf096 Analysis of environmental factors influencing the biodegradation rate of biodegradable plastics in marine  
Hironori TAGUCHI, Nao OSAKA, Takako KIKUCHI, Hiroshi MORITA, Yoshifumi AMAMOTO, Keiji TANAKA
- 1Pe097 Surface Aggregation Structures and Thermo-oxidative Degradation Behaviors of Polypropylene Hot-pressing Films  
Yuto Tsuruya, Shotaro Nishitsuji, Yutaka Kobayashi, Yasuhiko Otsurki, Hiroshi Ito, Hisao Matsuno
- 1Pf098 Physical properties and biodegradation of phosphorylated ethylene vinyl alcohol copolymer  
Takumi OKIHARA, Muneharu KUROSAKI, Yukihiro KISHIMOTO
- 1Pe099 Circulatory Utilization of Woody Biomass by Superworms  
Souwalauk Na Khampol, Yoshito Ando
- 1Pf100 Synthesis of polyurethanes using sulfur-containing diol monomers and evaluation of their mechanical properties and degradability.  
Ririko Fujiwara, Yuichiro Kobayashi, Hiroyasu Yamaguchi
- 1Pe101 Polymer chromism with heptamethinenorcyanine dye  
Mahiro Kukita, Arina Watanabe, Syouta Mizuno, Yasuhiro Kubota, Toshiyasu Inuduka, Kazumasa Funabiki
- 1Pf102 Analysis of the enzymatic degradability and rapid depolymerization of block copolymer containing high molecular weight poly(D-lactate)  
Kyogo Iseki, Shin-ichi Hachisuka, Hiroshi Kikukawa, Ken'ichiro Matsumoto
- 1Pe103 Evaluation of the surface structure of plate and fibrous PMMA monoliths  
Tomoko SHIRAHASE, Fumitake TAKAHASHI
- 1Pf104 Development of environmentally friendly high-solids urethane paints that reduce both VOC and CO2 emissions

Nobuhito Katsumura, Yasuko Yamada, Yoshinori Hirono

- 1Pe105 Decomposition of poly(vinyl alcohol)-based films and the shapes of generated microplastics with equiangular polygon by an oxidizing environment  
Daigo Sawayanagi, Yohei Kotsuchibashi

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**Wed. Sep 17**

Presentation Time

<a = 10:20~11:00>

<b = 11:00~11:40>

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

- 2Pa001 Development of triepoxides with a rigid ortho-ester skeleton derived from myo-inositol  
Saki Igashira, Atsushi Sudo
- 2Pb002 Development of Multifunctional Epoxides Derived from Trehalose  
Satoshi Hazama, Atsushi Sudo
- 2Pa003 Synthesis of a Tetraol via Visible-Light-Driven Reductive Coupling of 5-Hydroxymethylfurfural and Its Application to Polymer Synthesis  
Misaki Yamaguchi, Atsushi Sudo
- 2Pb004 Anionic polymerization of maleimides using amines as initiators  
Yutaka Yamamoto, Atsushi Sudo
- 2Pa005 Analysis of reaction and structural effects of PVP-assisted dispersion polymerization on sulfur-containing epoxy polymers.  
Takumi Hashimoto, Yuichiro Kobayashi, Hiroyasu Yamaguchi
- 2Pb006 Synthesis and Dielectric Properties of Tetramethyl-substituted Poly(phenylene sulfide)  
Yuki Yoshida, Seigo Watanabe, Kenichi Oyaizu
- 2Pa007 Synthesis and Optical Properties of Cross-linked Poly(dithioacetal)s  
Tomoya Yano, Seigo Watanabe, Kenichi Oyaizu
- 2Pb008 Adjusting Thermostability and Refractive Index of Aromatic Poly(dithioacetal)s via Side-chain Design  
Hana Matsunaga, Tomoya Yano, Seigo Watanabe, Kenichi Oyaizu
- 2Pa009 Chain-growth condensation polymerization of sulfonate monomer immobilized on metal-organic framework  
Chika YASUMURO, Yoshihiro OHTA, Ami NISHIZIMA, Takashi UEMURA, Tsutomu YOKOZAWA
- 2Pb010 Synthesis of Bio-Based Polyamides with Hydroxycinnamic Acid Derivatives  
Haruto Konno, Takumi Sato, Takumi Noda, Kenji Takada
- 2Pa011 Synthesis and biodegradability of new poly(ester-ether)s by the hydroxyl-yne click reaction  
Yune Yokoi, Akinori Takasu
- 2Pb012 Construction of a Hydrolyzable Carbon Backbone via Condensation of Meldrum's Acid with Carboxylic Acid chlorides  
Yota Chiba, Yasuhiro Kohsaka
- 2Pa013 Synthesis and degradability evaluation of polyesters obtained by dimerization of coumarin derivatives and condensation reaction with dicarboxylic acids  
Konoka Kayatani, Miyuki Oshimura

- 2Pb014 Synthesis of boron cross-linked polymers by polycondensation of tetrahydroxydiboron with tetraols  
Akane Ohno, Shotaro Hayashi
- 2Pa015 Direct arylation polycondensation of click-induced monomers with dibromoarenes  
Yuki Kitagawa, Shotaro Hayashi
- 2Pb016 Preparation of amphiphilic poly( $\beta$ -amino ester)  
Koki Hisatomi, Shin-ichi Yusa, Kokoro Tsusho
- 2Pa017 Synthesis of Amphiphilic Alternating Copolymers of the Dense Triazole Backbone with Controlled Stereochemistry and Degree of Polymerization  
Zijun Yan, Misaki Nakahata, Yuri Kamon, Akihito Hashidzume
- 2Pb018 Synthesis of structure-defined polyimines from two diamines with different functions  
Reika Miseki, Masaru Yoneyama

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

- 2Pa021 Annealing effect on the crystal structure of nascent polypropylene granule  
Yutaka Kobayashi, Yasuhiko Otsuki, Hiroshi Ito
- 2Pb022 Effect of Mechanical Properties of Rubber Materials on Self-sealing Mechanism  
Yoichiro Manabe, Shin Nishimura
- 2Pa023 Verification of measurement principles and equipment for low-temperature properties of rubber  
Jinwoo Lee, Hiroaki Ono, Shin Nishimura
- 2Pb024 Nano-void Generation in Epoxy Resins by Exposure to High-Pressure Hydrogen  
Tatsuru Nishikawa, Shin Nishimura
- 2Pa025 Spatial distribution of rapid decompression failure in transparent plastics  
Hiroaki Ono, Masahiro Kasai, shin Nishimura
- 2Pb026 Influence of high-pressure hydrogen on polymer materials  
Fumitoshi Kaneko, Keiko Ohyama, Hiroaki Ono, Shin Nishimura
- 2Pa027 Structural Changes in Crystalline Polymer Materials Induced by Exposure to High-Pressure Hydrogen Gas: Effects of Temperature and Pressure Cycling  
Keiko Ohyama, Fumitoshi Kaneko, Hiroaki Ono, Shin Nishimura
- 2Pa029 Functionalization and Emission Property Control of Luminescent Sulfonic Acid Polymers  
Kanta Kimura, Shunsuke Ohtani, Kenichi Kato, Tomoki Ogoshi
- 2Pb030 Molecular Dynamics Simulation Study of Correlation Between Polymer Chain Orientation and Thermal Conductivity  
Tetsuya Kobayashi, Norie Matsubara, Shosei Kubo
- 2Pa031 Modification of Mechanical Properties of PMMA Matrix Based on Control of Arm Chain and Core Structure of Star polymer Additives with Flexible Segments  
Kumpei Yoshida, Shohei Ida, Shokyoku Kanaoka
- 2Pb032 Hyperpolarized Xe-129 and Solid-State C-13 NMR Study of Silk Fibroin Materials. Detection of Very Broad and Weak Signals by Hyper-CEST Spectroscopy  
Hideaki Fujiwara, Akira Naito, Tetsuo Asakura, Atsuomi Kimura
- 2Pa033 Evaluation of Absorption Properties of Various Polyimides in the 1–10 THz Band by Terahertz Spectroscopy

- Haonan Liu, Ririka Sawada, Hiromichi Hoshina, Shinji Ando
- 2Pb034 Viscoelastic Properties of Composites of Cyclic [n] Phenylene Sulfide and Polystyrene  
Koki Nishida, Ryohei Ikura, Kenji Yamaoka, Yoshinori Takashima
- 2Pa035 Effect of adhesive interlayer on bending strain behavior in multilayer PET films  
Hinako Yamashita, Jiayi Yu, Yusho Kishimoto, Miho Aizawa, Kyohei Hisano, Atsushi Shishido
- 2Pb036 Multifaceted quantitative measurement of mechanical properties under tensile and bending deformations and its application to compressive behavior analysis of polymer films  
Jiayi Yu, Yusho Kishimoto, Kyohei Hisano, Atsushi Shishido
- 2Pa037 Asymmetry in mechanical and optical responses between inner and outer surfaces of crystalline polymer films under bending deformation  
Yuki Otani, Jiayi Yu, Kyohei Hisano, Atsushi Shishido

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

- 2Pb042 Development of L-threonine-immobilized gels and their catalytic properties for asymmetric aldol reaction  
Hideaki Tokuyama, Yuto Ishida, Taichi Kano
- 2Pa043 Fabrication and thermomechanical properties of EPDM:CB fibers  
Yuma Furuya, Shuki Toyoshima, Hidenori Okuzaki
- 2Pb044 Mechanoresponsive luminescence exhibited by a shape-memory polyurethane containing rotaxane-based supramolecular mechanophores  
Ayane Mori, Riku Yamamoto, Yoshimitsu Sagara
- 2Pa045 Functionalization of Gels with Crosslinked Nanodomain Structures: Thermoresponsive Simultaneous Changes in Photoluminescence and Mechanical properties and Mechanical Toughening  
Hayato Wakuda, Shohei Ida, Masatoshi Oyama, Keiji Nakajima, Hiroki Takeshita, Takeshi Ueki, Shokyoku Kanaoka
- 2Pb046 Design of hydrogels hybridized with solvatochromic dyes visualizing the polarity of the internal environment and their temperature/pH-responsive luminescence properties  
Taisuke Okada, Shohei Ida, Shin-ichiro Kato, shokyoku kanaoka
- 2Pa047 Design and Synthesis of a Self-Healing Slide-Ring Hydrogel Cross-Linked via the Diels-Alder Reaction  
Keiya Takahashi, Masatoshi Kidowaki
- 2Pb048 Stimuli-responsive polymer micelles triggered by pH or light  
Sari Usuda, Rintaro Takahashi, Shin-ichi Yusa
- 2Pa049 Effects of steric hindrance and density of ionic functional groups on self-assembly in linear polysiloxanes  
Fuya Matsunami, Yukikazu Takeoka, Mitsuo Hara
- 2Pb050 Thermosensitive properties of PAMAM dendrimers having precision amide dimer at the surface.  
Minamo Nishikawa, Kai Ota, Keigo Aoi
- 2Pa051 Circular dichroism measurements of the st-PMMA inclusion complex gels prepared with various guest molecules in a mixture of toluene and a chiral compound  
Ryunosuke Yamamoto, Takehiro Kawauchi
- 2Pb052 Synthesis of Biodegradable Polyrotaxanes Using Intramolecular Photocyclization as an End Capping Method  
Nanako Noda, Masatoshi Kidowaki

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 2Pa053    Mechanochromic fluorescent supramolecular nanorings consisting of hetero-dumbbell-shaped molecules  
Shunsuke Imaoka, Yoshimitsu Sagara
- 2Pb054    Study of temperature-responsive gels using polysaccharides  
Koumei Harajiri
- 2Pa055    Synthesis and photo-responsivity of  $\pi$ -conjugated polymer bearing 8,8'-biscoumarin in the main chain  
Naoyuki Kishida, Aohan Wang
- 2Pb056    Development of a Polymer Thin-Film Tactile Sensor that Responds to Skin Deformation  
Takahiro Aihara, Shinji Takeoka
- 2Pa057    Simultaneous synthesis and properties of poly(N-isopropylacrylamide)/polyethylene glycol IPN gels using various crosslinking agents  
Hikaru Katou, Shigeki HABAUE
- 2Pb058    Synthesis and properties of IPN gel using maleic anhydride copolymer  
Teruyoshi FURUHASHI, Shigeki HABAUE
- 2Pa059    Impact of EG chain length and monomer content on the thermoresponsive behavior of POEGMA-zwitterionic copolymers  
Mayuko Kira, Daniel Citterio, Yuki Hiruta
- 2Pb060    Development of high-strength gel material with bone-like remodeling properties  
Riku Fukuoka, Takuma Kureha
- 2Pa061    Self-association behavior of hydrophilic polymers bearing a terminal hydrophobic dodecyl group in water  
Ngan Thi Vu, Shinichi Yusa
- 2Pb062    Development of ion gel cell scaffold materials exhibiting photo-induced phase transition in non-cytotoxic ionic liquids.  
Tsubasa Naka, Takeshi Ueki
- 2Pa063    Mechanical Properties of Highly Stretchable Hydrogels with Hydrophobic Aggregation  
Noriko Kurihara, Ryouhei Ikura, Hiroaki Yoshida, Hiroharu Ajiro
- 2Pb064    Synthesis of silk fibroin composite polymer gels using various diglycidyl ethers  
Jieyu ZHANG, Zhi-Qing WANG, Shigeki HABAUE
- 2Pa065    Irreversible fluorescence change exhibited by rotaxane-based supramolecular mechanophores with short axles  
Naoki Shimada, Yoshimitsu Sagara

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 2Pb066    Synthesis of temperature-responsive polymer gels with dangling chains  
Honami Itakura, Kai Kawabata, Taiki Hoshino, Yukikazu Takeoka
- 2Pa067    Spatial Control of Selective Reflection Color Based on Chiral-Nematic Liquid Crystals Using Photogradient Polymerization

Keishiro Uehara, Tatsuya Ishibe, Yuki Shikata, Kohsuke Matsumoto, Osamu Tsutsumi

2Pb068 Optical Properties of Core-Shell Chiral-Nematic Liquid-Crystalline Polymer Particles with Radial Alignment Gradients  
Rina Tanigawa, Tomoki Shigeyama, Kohsuke Matsumoto, Osamu Tsutsumi

2Pa069 Synthesis of Refractive Index-Tunable Methacrylate Copolymers and Development of a Novel Thermochromic Polymer Blend  
Konomi Yamashita, Takayuki Hirai, Norihiro Mizoshita

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

2Pa073 Preparation of self-healing microgels and the application to biomolecule sustained release matrix  
Kasumi Ariake, Yuta Yoshizaki, Tomohiro Konno

2Pb074 Temperature-responsive antibacterial properties of cicada-wing-inspired nanopillar hydrogel films.  
Rui Ikeda, Yohei Kotsuchibashi

2Pa075 Effect of molecular crowding on sol-gel transition and mechanical strength of gelatin  
Gaku Yazawa, Shigehito Osawa

2Pb076 Self-assembling behavior of diblock copolymers composed of pH-responsive peptide and thermo-responsive vinyl polymers.  
Taisei Kawai, Shin-nosuke Nishimura, Tomoyuki Koga

2Pa077 Design of Stimuli-Responsive Polymeric Materials Responding to Denatured Proteins and Their Recognition Behavior  
Yuto Murashima, Akifumi Kawamura, Takashi Miyata

2Pb078 Controlled formation of inorganic nanomaterials based on anion valence of the constituents and the encapsulation behavior of biomacromolecules  
Sachi Ibuki, Tomohiro Umeno, Tomonori Waku, Tetsuya Kambe, Makoto Oba, Hiroyasu Takemoto

2Pa079 Secondary Template effect accompanying progressing of HAp mineralization-Correlation between the structural transition of templates and crystal growth processes-  
Yusuke Hattori, Shogo Matsubara, Masahiro Higuchi

2Pb080 Effect of Oxygen Addition on Microstructure Formation to Commercial Acrylic Plate Surface Using Atmospheric Pressure Low-Temperature Plasma  
Ayumu Takada, Motoki Tanaka, Atsushi Sekiguchi, Masashi Yamamoto

2Pa081 Edible gas marbles  
Takuto Yagishita, Fameau Anne-Laure, Syuji Fujii

2Pb082 Development of a synthesis method for DNA-encoded oligomer libraries  
Tomohiro Yamanaka, Hayato Tada, Honoka Moriguchi, Sotaro Tsuji, Yukiko Nagai, Yu Hoshino

2Pb084 The atelocollagen fiber reinforced with slide-ring polymer for artificial tendon/ligament applications  
Riku Kubota, Ichiro Fujimoto

2Pa085 Application of stiffness-tunable magnetic nanoparticle cross-linked PEG gel scaffolds for myoblast differentiation  
Rion Takada, Ayano Ogawa, Nanami Kuwahara, Masao Kamimura

2Pb086 Observation of cell behavior using stiffness-tunable magnetic nanoparticle cross-linked PEG gel scaffolds  
Ayano Ogawa, Nanami Kuwahara, Rion Takada, Yutaro Arai, Ryo Inoue, Masao Kamimura



- 2Pa087 Mechanobiological application of near-infrared light-responsive polymeric micelle cross-linked gels  
Yuto Chiba, Yu Ochiai, Tomoki Iwashita, Nanami Kuwahara, Masao Kamimura
- 2Pb088 Preparation of Cell-Transplantable Gel Beads Encapsulating Bone-Like Components and Osteoinductive Factors  
Shota TSUKADA, Syuuhei KOMATSU, Shohei SHIOMOTO, Tatsuya NISHINO, Akihiko KIKUCHI
- 2Pa089 Impact of hydrogel charge density and stiffness on cancer stemness induction  
Wakana Komamura, Yanpeng Sun, Yoshinori Katsuyama, Tomoki Yasui, Takayuki Kurokawa

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

- 2Pb090 Lowest gelation concentration of injectable polymers with different molecular architecture  
Hiroyuki Imai, Yusuke Taoka, Yuichi Ohya
- 2Pa091 Development of  $\beta$ -tricalcium phosphate dispersion injectable gel formulations for alveolar bone regeneration.  
Momoka Tokuoka, Seigo Ohba, Yo Shibata, Yasutaka Sugamori, Keijiro Kojima, Arina Takada, Yusuke Taoka, Yuichi Ohya
- 2Pb092 Development of Light-Induced Rapidly Gelating Natural Polymers and Their Application to 3D Cell Culture Systems  
Masaaki Okihara, Ayaka Tomoda, Toshiyuki Takagi, Kimio sSumaru
- 2Pa093 Engineering Cell-Compatible Click-Gels via Strain-Promoted Crosslinking of Azide-Modified Hyaluronic acid  
Kazuya Shimada, Taichi Ito, Natsuko Inagaki, Masayuki Tera
- 2Pb094 Development of Photo-responsive Cell Culture Scaffolds Using Shellac Modified with Coumarin Derivatives.  
Kouki Ando, Toshihisa Mizuno
- 2Pa095 Structure and function analysis of cell aggregate inducing peptides incorporating nonnatural amino acids  
Ami Tsuboi, Hiroaki Kadobayashi, Takuya Sugiyama, Masaki Iwamoto, Yoshiaki Hirano
- 2Pb096 Design of injectable polymer systems that aim to achieve high levels of tissue adhesion, mechanical properties, and degradability  
Yuki Miyaji, Yusuke Taoka, Yuichi Ohya
- 2Pa097 Electrospinning of Photo-responsive Cell Culture Scaffold, DEAC-Shellac, and Evaluation of Light-irradiation Effects on its Cell Adhesion Properties  
Ritsuho Ono, Ando Koki, Toshihisa Mizuno
- 2Pb098 Development of a Fiber-mat-type Immobilized Enzymes, in which Enzyme Molecules were Encapsulated within Fiber-mat Nanofibers, made of Network Polymers via in situ Huisgen Cycloaddition of Post-Crosslinkable Polymer and Cross-Linker.  
Hikaru Sugiura, Toshihisa Mizuno

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Presentation Time

<c = 13:20~14:00>

<d = 14:00~14:40>

## A. POLYMER CHEMISTRY: SYNTHESIS AND REACTIONS

- 2Pc001 Synthesis of block copolymers from monomer mixtures composed of acrylates and methyl crotonate using Lewis pair catalysts  
Huma Yamamoto, Shin-ichi Matsuoka
- 2Pd002 Aluminum-transfer polymerization of (meth)acrylates  
Mei Ueno, Shin-ichi Matsuoka
- 2Pc003 Synthesis of Block and Graft Copolymers using Lewis Pair Polymerization of Acrylamides  
Osuke Ishihara, Shin-ichi Matsuoka
- 2Pd004 Synthesis and properties of hyperbranched poly(1,1-ditolylethylene)  
Tamami Kondo, Honoka Matsumoto, Kaoru Adachi
- 2Pc005 Control of the anionic polymerization mechanism of p-methylstyrene using various bases  
Yu Hui LIM, Kaoru ADACHI
- 2Pd006 Anionic polycondensation of benzyltrimethylsilanes via desilylation with fluoride ions  
Taishi Nakatani, Kuruto Mae, Kaoru Adachi
- 2Pc007 N-Heterocyclic Carbene-catalyzed anionic polymerization of trityl methacrylate  
Soma Sugimoto, akinori Takasu
- 2Pd008 Anionic Ring-Opening Polymerization of Cyclic Trisiloxane Monomers Catalyzed by an Organic Base Using Polystyrene as a Macroinitiator  
Haku Saito, Ryota Uehara, Riku Takahashi, Shinsuke Maekawa, Takehiro Seshimo, Naohiro Dazai, Kan Hatakeyama, Yuta Nabae, Teruaki Hayakawa
- 2Pc009 1,4-Selective Anionic Polymerization of Bio-Based 1-Phenyl-1,3-Butadiene Derivatives  
Yasunobu Isobe, Tomohiro Kubo, Kotaro Satoh
- 2Pd010 Preparation and Polymerization of 7-Aryl-3,4-methylenedioxy-orthoquinone Methides with Substituted Phenyl Groups  
Atsushi Sugiura, Ryosuke Shigemori, Masataka Kubo, Takahiro Uno
- 2Pc011 Development of Photoinduced Cationic RAFT Polymerization by Non-Ionic Photoredox Organocatalysts  
Akiho SHIMADA, Hironobu WATANABE, Mineto UCHIYAMA, Masami KAMIGAITO
- 2Pd012 Cationic terpolymerization of vinyl ethers, styrene derivatives, and conjugated aldehydes: Monomer sequence control and synthesis of polymers with two-step acid degradability  
Kaoru Sugai, Sadahito Aoshima, Arihiro Kanazawa
- 2Pc013 Cationic Copolymerization of Spiroorthoesters and Vinyl Monomers  
Kota Yamamoto, Sadahito Aoshima, Arihiro Kanazawa
- 2Pd014 Cationic copolymerization of 2,3-dimethyl-1,3-butadiene or myrcene with cyclic acetals  
Sentaro Okami, Arihiro Kanazawa
- 2Pc015 Ring-Opening Polymerization of Trimethylene Dithiocarbonates  
Kota Mita, Koji Nakano

## B. POLYMER PHYSICS: STRUCTURE AND PROPERTIES

- 2Pc021 Effect of Number Fluctuation on Dynamic Light Scattering  
Toramasa Uematsu, Takashi Hiroi

- 2Pd022 Structural analysis of gels prepared by radical copolymerization of styrene and diacrylate using a combination of polymer reaction and multivariate analysis of  $^1\text{H}$  NMR spectra  
Reina Tamakoshi, Hitoshi Nishimura, Ryo Kawatani, Kohei Torii, Ken Yoshida, Hitoshi Mizuguchi, Tomohiro Hirano
- 2Pc023 Quantitative analysis of Poly(vinyl acetate) contained in paper  
Hayato Watanabe, Shinsuke Sato, Michiko Kuroda
- 2Pd024 Sequence Analysis of Siloxane Octamers by Mass Spectrometry and Their Application to Molecular Tagging  
Shotaro Ito, Kazuhiro Matsumoto, Hiroaki Sato
- 2Pc025 Effect of mobile phase polarity on GPEC separation behavior  
Chika Nogami, Atsuko Naito
- 2Pd026 Theory of the Racemization Kinetics of Helical Foldamers  
Nozomu Suzuki, Toyoko Suzuki, Hideto Minami
- 2Pd028 Effect of Salt and Sugar on Viscosity and Drug Release Behavior of Mixed solution of Xanthan gum and Xyloglucan  
Kunihiko Itoh, Fumiya Chikushi, Tetsuya Shimoyama, Akira Tabuchi, Yumeo Suzuki, Kazuhiko Yamatoya, Michiya Kobayashi
- 2Pc029 Elucidation of Mechanism of Liquid-Liquid Phase Separation in Transient Networks through Control of Network Functionality  
Shota Michida, Mitsuru Naito, Ung-il Chung, Takuya Katahima
- 2Pd030 Relation between the changes in viscosity and hydration state of aqueous PEO solutions by addition of salts or small organic molecules  
Wakaba Sakamoto, Mafumi Hishida
- 2Pc031 Thermal Analysis of Mullins Effect in Filled Elastomers  
Koshi Shimazaki, Kakeru Obayashi, Katsuhiko Tsunoda, Kenji Urayama
- 2Pd032 Relationships between rheology of Ni paste and solution/adsorption behaviors of ethyl-cellulose  
Kenji Fukuda, Moriya Kikuchi, Yuya Doi, Seigou Kawaguchi
- 2Pc033 Molecular dynamics simulation on the effect of side chain length in acrylate polymer systems  
Shuuhou Nakashima, Tatsuya Ishiyama, Makoto Gemmei
- 2Pd034 Molecular Interpretation of Thermoresponsive Behavior of Amide-based Polymers using All-atom Molecular Dynamics  
Kotaro Fujii, Takuro Tsutsumi, Kazuki Sada
- 2Pc035 Elucidation of the Viscosity Inversion Between Microscale and Macroscale in a Deep Eutectic Solvent  
Koichi Murakami, Soh Kushida, Shunichiro Noguchi, Hiroshi Masai, Jun Terao, Yohei Yamamoto
- 2Pc037 Peculiar Deformation of Circular Vacancy Defect in Liquid Crystal Elastomer  
Takumi Kato, Yasushi Okumura, Hirotsugu Kikuchi, Urayama Kenji
- 2Pd038 Molecular Design and Synthesis of Liquid Crystalline Polybenzoxazoles toward Enhanced Thermal Conductivity  
Taisei Sakurai, Hayato Maeda, Yuqian Chen, Kan Hatakeyama, Yuta Nabae, Teruaki Hayakawa
- 2Pc039 Effect of Terminal Groups on Mesogenic Side Chains on the Liquid Crystalline Behavior of Side-Chain Liquid Crystal Polymers with Long Spacer  
Satoshi Tanaka, Seiji Ujiie
- 2Pd040 Preparation and structural evaluation of oriented films of PBO using water-based lyotropic liquid crystal precursors  
Aogi Amada, Ryohei Ishige

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 2Pd042 Material Reservoirs of Self-Doped Polythiophene Nanofilms Using Mixed Ion-Electron Conduction  
Yuya Ishizaki, Motoaki Onishi, Hirokazu Yano, Shusaku Nagano
- 2Pc043 Development of Astaxanthin-containing Segmented Polyurethanes Showing Antioxidant and Antibacterial Activity  
Maki Kanda, Hiromitsu Sogawa, Fumio Sanda
- 2Pd044 Functional evaluation of hydrogels formed from water-soluble phospholipid polymers with controlled dissolved state  
Temma Takamisawa, Yuta Yoshizaki, Tomohiro Konno
- 2Pc045 Effect of the freezing process on properties of self-oscillating gels  
Hikaru Amano, Takahumi Enomoto, Ryo Yoshida
- 2Pd046 Circularly Polarized Reflection in Layered Chiral-Nematic Liquid-Crystalline Elastomers Incorporating an Auxetic Structure  
Mengqi Li, Yudai Fuwa, Kohsuke Matsumoto, Osamu Tsutsumi
- 2Pc047 Development of a hinge-like mechanophore that changes red fluorescence intensity  
Kota Masuda, Shohei Shimizu, Yoshimitsu Sagara
- 2Pd048 Development of Mechano-Responsive Photoluminescent Polyurethane Elastomers  
Tetsuma Inaoka, Hiromitsu Sogawa, Fumio Sanda
- 2Pc049 Design and characterization of sustained drug release hydrogels using kinetically-controlled cleavability of dioxazaborocane  
Daichi Yamawaki, Wenbo Wang, Keiichiro Yaginuma, Kevin Barthelmes, Mao Hori, Takao Aoyagi, Toru Hoshi, Akira Matsumoto
- 2Pd050 Rotaxane-based supramolecular mechanophore featuring a platinum complex  
Yuto Yoshida, Yoshimitsu Sagara
- 2Pc051 Phase separation behavior by design of polymer-solvent hydrogen bonding  
Shu Takeuchi, Koki Takasu, Natsuki Inaba, Keitaro Matsuoka, Kazuki Sada
- 2Pd052 Effect of Halogenations on Pressure-Induced Phase Transitions in Pressure-Responsive Polymers  
Sota Kakesu, Takaya Okazaki, Fanny Moses Gladys, Ikuo Taniguchi

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### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 2Pc053 Activation of the Surface Proton Hopping Conduction Mechanism via Dense Alignment of Sulfonate Groups and Elucidation of Water Molecule Dynamics on the Surface  
Mina Nakazawa, Takeshi Yamada, Tang Yumin, Zeng Xiangbing, Takahiro Ichikawa
- 2Pd054 Study on the mechanism of the luminescence phenomenon of external stimulus response liquid materials  
Hibiki Oota, Kyoichi Tsurusaki, Rika Takeda, Takumi Oomura, Shougo Morisako, Kyosuke Isoda, Ryo Takahashi
- 2Pc055 In-Plane Uniaxial Alignment of Helical Axis in Chiral Liquid Crystalline Polymer Self-Assembled via Photo-Gradient Polymerization  
Yuki Shikata, Kohsuke Matsumoto, Osamu Tsutsumi

- 2Pd056 Orientation control of liquid crystalline block copolymer thin films with supramolecular side chains  
Yuki Machida, Yuya Ishizaki, Takahiro Seki, Shusaku Nagano
- 2Pc057 Evaluation of Phosphate Ion Adsorption Capacity of Hollow-type Spherical Bacterial Cellulose Gels Encapsulating Anion Exchange Resin  
Yuito Ito, Toru Hoshi
- 2Pd058 Fluorescence Properties of Gels Cross-Linked with Aggregation-Induced Emission Luminogens  
Yuki Ayuzawa, Takashi Miyata
- 2Pc059 Surface Modification of Sharp-Memory Aliphatic polyester with Zwitterionic Polymers  
Koshi Ota, Takumi Yoshida, Toru Hoshi
- 2Pd060 Synthesis and Characterization of Slide-Ring Hydrogels Incorporating Styryl pyridinium Derivatives with Photo-crosslinking and Self-healing Properties  
Seiya Otani, Masatoshi Kidowaki
- 2Pc061 Development of Functional Rheological Fluids Using Thermo-Responsive Polymer Electrolytes with Liquid-Crystalline Properties  
Nozomi Matsuo, Ryosuke Shinkon, Akihiko Kanazawa
- 2Pd062 Higher-Order Structure and Enantioselective Adsorption Ability of Chiral Supramolecules Constructed by Carbamoylated Riboflavins bearing Azobenzene Moiety  
Nico Ishige, Cheng-Wei Huang, Hiroki Iida
- 2Pc063 Encapsulation of Activated Carbon with Cellulose Gel and Evaluation of Its Glucose Adsorption Capacity  
Yusuke Yamamoto, Toru Hoshi
- 2Pd064 Fabrication of crosslinked liquid-crystalline polymer films by dual wavelength photopolymerization: effect of crosslinker concentration on thermal deformation behavior  
Kotaro Shinmura, Kaito Takahashi, Miho Aizawa, Kyohei Hisano, Shoichi Kubo, Atsushi Shishido
- 2Pc065 Synthesis and physical properties evaluation of conductive polymer hydrogels using PEDOT:NBP  
Mina Matsumoto, Kouken Kaku, Hiroyuki Aota

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

- 2Pd066 Correlation between Dynamic Mechanical Properties of polymers and Structural Flexibility of Hydrogen Bonds  
Rena Tajima, Shintaro Nakagawa, Naoko Yoshie
- 2Pc067 Mainchain structure and hybrid LC phases in side-chain LC polymer blends with binary heterogeneous mesogens  
Shoichi KANAI, Shion DAIKUHARA, Yuno YOKOTA, Yuya ISHIZAKI, Shusaku NAGANO
- 2Pd068 Development of Injectable Hydrogels with Tunable Gelation Time via Multi-Substituted Dioxazaborocane Structures  
Yingfu Zhao, Barthelmes Kevin, Debabrata Palai, Mao Hori, Takuya Katashima, Akira Matsumoto
- 2Pc069 Main Chain Orientation and Current-Voltage Characteristics of Self-Doped Conducting Polymer Monolayers  
Kentaro SUZUKI, Yuya ISHIZAKI, Hirokazu YANO, Shusaku NAGANO

#### D. BIOPOLYMERS AND BIORELATED POLYMERS

- 2Pc073 Synthesis of amphiphilic block copolymers having FRET dye and their application to polymeric micelle characterization  
Genki Murofushi, Makoto Obata
- 2Pd074 Introduction of FRET dye into block copolymers via post-polymerization modification and stability evaluation of their polymer micelles  
Kotomi Umehara, Makoto Obata
- 2Pc075 Synthesis of amphiphilic block copolymers bearing AIEgen and characterization of the resulting polymeric micelles  
Daiki Sakajiri, Makoto Obata
- 2Pd076 Encapsulation of benzoxaborole-based drugs by polymeric carriers having diol groups via a dynamic covalent bonding  
Ryo Chiba, Daigo Sawayanagi, Yohei Kotsuchibashi
- 2Pc077 Functional Evaluation of CaCO<sub>3</sub>-coated Vesicles for DDS Carriers having Targeting Ability using Tissue Model Gels  
Wakana Nishiyama, Masahiro Higuchi, Shogo Matsubara
- 2Pd078 Evaluation of photophysical properties of up-conversion in dye-encapsulated cationic liposomes  
Yuna Imagawa, Hideki Kawai
- 2Pc079 Effect of cholesterol on upconversion in dye-encapsulated liposomes  
Tomohito Nakayama, Hideki Kawai
- 2Pd080 Encapsulation of Phosphorylated Chitosan into Ceramide-Containing Giant Liposomes  
Kiho Umezu, Yuuka Fukui, Keiji Fujimoto
- 2Pc081 Preparation of Fe ion-Incorporated Oil Droplets by S/O/W Emulsification for Induction of Ferroptosis  
Mai Shiraki, Yuka Fukui, Keiji Fujimoto
- 2Pd082 Preparation of polymer nanoparticles with phenylboronic acid-functionalized solid-fluid interface and post-loading of drug  
Kazuma Seo, Yuta Yoshizaki, Tomohiro Konno
- 2Pc083 Isolation and Characterization of Lipid Nanoparticles derived from the Apoplastic Fluid of Fresh Flowers  
Ayaka Sato, Mizuki Yoshihara, nana Nakabayashi, Chisato Nishitani, Hruka Takai, Kurumi Watanabe, Pirika Chiba, Shinka Dejima, Mayuka Higo, Kenichi Nonaka, Ryosuke Mizuta, Masanao Yoshimoto, Yoshihiro Sasaki, Hikaru Takaya
- 2Pd084 Generation of Lipo-Nanocapsule Co-immobilized with Ligands and Initiators for Amplification of Affinity Detection  
Yukina Ashida, Yuuka Fukui, Keiji Fujimoto
- 2Pc085 Preparation of PIC micelles responsive to weakly acidic environments using autolysis-controlled protease  
Aoi Kanatsu, Remi Yumiyama, Yukiya Kitayama, Atsushi Harada
- 2Pd086 Nanodiscs with hyaluronic acid derivatives and their functionality  
Yusuke Masuda, Toshihiro Mori, Kazuma Yasuhara
- 2Pc087 Vesicle shapes adsorbed on the flat substrate by the attractive and depletion interactions  
Rikano Yanai, Naohito Urakami
- 2Pd088 Amyloid Fibrillation of  $\beta$ -lactoglobulin in Aqueous Multi-Phase Systems  
Miyuka Tateyama, Yuji Higaki
- 2Pc089 Phase Separation Behavior of Polymer Droplets Induced by Electrostatic Interactions of Zwitterions  
Haruna Shiroy, Yuji Higaki

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

- 2Pd090 Electrolyte Concentration Dependence in Microphase Separation of Double Zwitterionic Block Copolymer Aqueous Solutions  
Yuri Mitsunobu, Yasuhiro Eguchi, Michiaki Ito, Yuji Higaki
- 2Pc091 Synthesis of Polymer-Based Tubular Micromotors Detecting Biotinylated Protein  
Yuki Kiuchi, Yuma Sakai, Teruyuki Komatsu
- 2Pd092 Preparation of reductively responsive nanocapsules using triblock copolymers with pyridyl disulfide groups  
Yuki Sawa, Takashi Miyata, Akifumi Kawamura
- 2Pc093 Viscoelastic properties of elastin-like polypeptide hydrogels  
Kensuke Kawasaki, Ayae Sugawara-Narutaki
- 2Pd094 Bottom-up reconstruction of adhesion-related proteins and their bio-applications  
Yusuke Tani, Eisuke Kanao, Yasushi Ishihama, Ryosuke Miuta, Kazunari Akiyoshi, Yoshihiro Sasaki
- 2Pc095 Preparation of biodegradable particles with multi-branching structure of the core having melting temperature near body temperature  
Yaeki TACHIOKA, Syuuhei KOMATSU, Shohei SHIOMOTO, Akihiko KIKUCHI
- 2Pd096 Nanocarrier design to impart anti-immunoresponsive and cancer cell-targeting properties to polymerized copper complexes that can enhance anticancer activity  
Masatomo Kohro, Masaru Mukai, Hidenori Otsuka
- 2Pc097 Photocontrol of higher-order structures of DNA by thermally bistable molecular photoswitches  
Sota Tsuruda, Keiichi Imato, Hiroto Okuda, Naoki Kaneda, Keiji Murayama, Yousuke Ooyama
- 2Pd098 Antiparallel structure of G-quadruplex induced by PVA  
Natsuki Yanagida, Takahiro Nakamura, Ryoko Uda
- 2Pc099 Application of DNA Oligo Pool to AI Technology  
Asuka TATEDORI, Qing LIU, Yuya SHIGEHARI, Kyou SONODA, Akinori KUZUYA

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Presentation Time

<e = 15:20~16:00>

<f = 16:00~16:40>

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

- 2Pe001 Synthesis of 3,5-Hydantoins by isocyanate-free method and their Thermal Properties  
tomoya hayashi, haruto minami, yuji kosugi, takehiro kawauchi, yoshio furusho
- 2Pf002 Effect of Diamine's Backbone on the Intramolecular Cyclization of Ureas to 3,5-Hydantoins  
Takuya Okuda, Haruto Minami, Tomoya Hayashi, Fumiyuki Toshimitsu, Yuji Kosugi, Takehiro Kawauchi, Yoshio Furusho

- 2Pe003 Introduction of Reversible Cross-linking into Epoxidized Natural Rubber via Pyridine Functionalization  
Hiromu Hosoya, Toshikazu Takata, Toshio Tada
- 2Pf004 Synthesis, reactivity and properties of reactive poly vinylpyridinium salts with polyiodide anion  
Keigo Hata, Isao Yamaguchi
- 2Pe005 Development of Waterborne Polymers That Show Water Solubility Based on Lewis Adduct Formation Only Under Concentrated Conditions  
Shio Uebo, Akira Takahashi, Hideyuki Otsuka
- 2Pf006 Construction of interpenetrating polymer networks using structural transformation of cross-linked polymers with dynamic hindered disulfide linkages  
Keigo Oka, Fuga Sawakawa, Akira Takahashi, Hideyuki Otsuka
- 2Pe007 Properties and reactivity of epoxy resins incorporating aromatic disulfide bond and triethanolamine structure  
Yue Wu, Akira Kodaka, Akira Takahashi, Hideyuki Otsuka
- 2Pf008 Structure-Property Relationship of Triethanolamine-containing Polymers with Variable Main Chain Rigidity of Based on Boration  
Nobuho Kobayashi, Shio Uebo, Akira Takahashi, Hideyuki Otsuka
- 2Pe009 Synthesis and Mechanochromism of Cross Linked Polyolefins Incorporating Mechanochromophores  
Masahiro Fukuhara, Akira Takahashi, Hideyuki Otsuka
- 2Pf010 Mechanoresponsive behavior of polymers incorporating fluorescent and thermostable non-symmetric mechanophores  
Kaito Hosono, Akira Takahashi, Hideyuki Otsuka
- 2Pe011 Transformation of polymeric mechanoradicals into stable carbon-centered radicals using a benzoquinone skeleton  
Akira Kodaka, Hajime Sugita, Akira Takahashi, Hideyuki Otsuka
- 2Pf012 Investigation of thermal and mechanochemical reactivity of diaryltetracyanoethane derivatives with different substituents and its application to polymer reaction  
Masashi Yamauchi, Akira Takahashi, Hideyuki Otsuka
- 2Pe013 Development of site-specific post-polymerization modification of acrylamide polymers via intramolecular reactions  
Konosuke Wada, Hayato Tada, Honoka Moriguchi, Masaya Ifuku, Sotaro Tsuji, Yukiko Nagai, Yu Hoshino
- 2Pf014 Dynamic Properties of Acylal Bonds and Application to Cross-linked Acryl Polymers with Processability  
Sumire Hayakawa, Yasuhiro Kohsaka
- 2Pe015 Main-Chain Scission of Poly(conjugated ester)s via Conjugate Substitution Reaction by Intramolecular Catalyst  
Kanta Suzuki, Yasuhiro Kohsaka
- 2Pf016 Evaluation of Synthetic Feasibility of Virtual Polymers: Theoretical Investigation of Radical Polymerization of Amide-Based Polymers  
Kotaro Onishi, Takuro Tsutsumi, Gikyo Usuki, Kazuki Sada
- 2Pe017 Evaluation of Synthetic Feasibility of Virtual Polymers: Construction of a Machine Learning-Based Screening Scheme  
Takuro Tsutsumi, Gikyo Usuki, Kazuki Sada
- 2Pf018 Development and applications of new acid degradation methods of various heat-resistant polymers containing aryl-heteroatom linkages  
Tsuyoshi Takano, Ryoyu Hifumi, Ikuyoshi Tomita
- 2Pe019 Post-functionalization and applications of polyphenylene ether  
Tsuyoshi Takano, Ryoyu Hifumi, Ikuyoshi Tomita



- 2Pf020 Radical Analysis of Thermo-oxidative Degradation Reactions of Polymer Materials by Simultaneous Chemiluminescence-ESR Measurement  
Wataru Sakai
- 2Pe021 Conversion of aromatic polyimines to polybenzothiazoles by sulfur  
Masaru Yoneyama, Sakurako Hoshino
- 2Pf022 End-selective transcarbamoylation to sequence-defined polyurethanes  
Mao Tsukamoto, Shotaro Hayashi

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

- 2Pe025 structural assessment of fine particle film by AFM with a uniaxial stretching device  
Natsuki Watanabe, Takayuki Uchihashi, Feng-Yueh Chan, Daisuke Suzuki, Yuichiro Nishizawa
- 2Pf026 Elucidating adhesion mechanisms of cyanoacrylate-based instant adhesives by first-principle density functional theory calculations  
Yosuke Sumiya, Koki Kubo
- 2Pe027 Spectroscopic Investigation of Water Structure on Silanol Surfaces under Three-Phase and Continuous-Phase Conditions  
Yuri Kishimoto, Shigehiro Kagaya, Makoto Gemmei-Ide
- 2Pf028 Evaluation of adsorption-desorption dynamics at the interfaces of polymer liquids via chip nanocalorimetry  
Kyoji Ozaki, Miina Mori, Takashi Sasaki
- 2Pf030 Microstructure Analysis for Polystyrene Spheres and EUV Resist Thin Films by Resonant Soft X-ray Scattering  
Shinji Yamakawa, Yuri Ebuchi, Naoki Hayase, Toshio Akai, Tetsuo Harada
- 2Pe031 Update of Sample Environment Equipment for Neutron Reflectivity Measurement for Structural Characterization of Polymer Thin Films  
Noboru Miyata, Hiroshi Kira, Kazuki Mita, Hiroyuki Aoki
- 2Pf032 Analysis of viscoelasticity of a single polymer chain using atomic force microscopy  
Takumi Hirose, Xiaobin Liang, Ken Nakajima
- 2Pe033 Viscoelastic Analysis of the Velocity Dependence of Adhesion Energy Measured by Atomic Force Microscopy  
Kanon Hasegawa, Makiko Ito, Xiaobin Liang, Ken Nakajima
- 2Pf034 Preparation of Flexible Polymer Films Focusing on Glass Transition Temperature and Evaluation of Their Properties  
Rene Nishikubo, Yuta Yoshizaki, Tomohiro Konno
- 2Pe035 Influence of Reversible Bonds on Interfacial Diffusion Behavior of Polymers  
Iori Ogasa, Kenji Yamaoka, Yoshinori Takashima
- 2Pf036 Atomic Force Microscopy Study on Nano-Viscoelasticity of Filler-Filled Rubber  
Yuji Funado, Makiko Ito, Xiaobin Liang, Ken Nakajima
- 2Pe037 Development of a Novel Methods for Analyzing Polymer Surface Properties via Wettability: Selection of Probe Liquids and Causal Analysis Using Machine Learning"  
Ryo Taguchi, Koga Kenhi, Kazuki Tajima

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

- 2Pf042 Photoconversion of Polymer Properties Based on Reversible Cycloaddition of Coumarin Groups in the Side-Chains  
Arato Ishida, Thi Trang Ngo, Takeshi Miyagawa, Masaya Moriyama
- 2Pe043 Relationships between Crystal Structure and Photoisomerization Ratio in Photoresponsive MOFs with Azobenzene Groups  
Takashi Yoneda, Shizuka Anan, Kenta Kokado
- 2Pf044 Design of amphiphilic liquid crystalline polymers that undergo phase transition near body temperature and formation of their self-assemblies  
Ryoki Kamei, Akifumi Kawamura, Takashi Miyata
- 2Pe045 Adsorption of Uremic Toxin Precursors by Cellulose Gel Capsules Encapsulating Activated Carbon  
Ayu Tatsumi, Toru Hoshi
- 2Pf046 Photoinduced solid-to-liquid and glass-to-liquid transitions of polymers with thermally bistable molecular photoswitches in side chains  
Ryuma Inami, Keiichi Imato, Naoki Kaneda, Yousuke Ooyama
- 2Pe047 Preparation of soft cross-linked temperature-responsive topological gels using localization of hydrophobic monomers in the molecular nets  
Koya Ichikawa, Yamato Fujita, Kenichiro Mizuguchi, Yusuke Taoka, Yuichi Ohya
- 2Pf048 Novel library of degradable hydrophilic homopolymer N-alkylated nylons  
Keitaro Matsuoka, Akari Sugano, Kazuki Sada
- 2Pe049 Investigation of multi-degradability and thermo-responsiveness in sulfur-containing N-alkylated Nylon  
Shintaro Tsuchisaki, Masanori Miyoshi, Akari Sugano, Keitaro Matsuoka, Kazuki Sada
- 2Pf050 The effect of the monomer chemical species on the structure of nanocomposite microgels in seeded emulsion polymerization  
Hayato Setoguchi, Haruka Minato, Daisuke Suzuki
- 2Pe051 The myosin-acrylamide double-network gel swells at high ionic strength.  
Lishuang Xia, Tasuku Nakajima, Yoshihito Osada, Ken-Ichi Sano
- 2Pf052 Polymerization Using Radical-Initiators Containing Photoresponsive Moieties and Evaluation of Photochemical Properties  
Akihiro Sumi, Arato Ishida, Masaya Moriyama

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### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 2Pe053 Preparation of material reservoirs using doped P3HT monolayer networks  
Naoki Hara, Yuya Ishizaki, Shusaku Nagano
- 2Pf054 Synthesis and properties of hydrophilic polymers with bifunctional urethane methacrylate cross-linkers derived from hydroxyurethanes  
Tatsuki Morita, Yoshiaki Yoshida
- 2Pe055 Development of photo-responsive soft materials by stable hybridization of liquid crystals and photo-thermal nanoparticles  
Takumi Mihara, Sumiri Kinoshita, Koki Sano
- 2Pf056 Preparation of poly(lipoic acid) hydrogels and gel particles with reductively cleavable main chain  
Ryoma Kotani, Takashi Miyata, Akifumi Kawamura
- 2Pe057 Preparation and physical properties of shape-memory materials using photodimerization reaction of coumarine moieties  
Taiga Sakata, Hideki Sugimoto

- 2Pf058 Development of topological supramolecular gels in which the three-dimensional mesh-like molecular net itself acts as both a crosslinker and a stopper for the topological structure through physical constraints  
Gen Kosaka,Takahiko Yasui,Yusuke Taoka,Yuichi Ohya
- 2Pe059 Loading and release behavior of water-insoluble drugs on activated carbon encapsulated in HSBC gel  
Yuma Tanaka,Toru Hoshi
- 2Pf060 Ordered Structure of Polyimides Prepared from Novel Necklace-like Lyotropic Liquid Crystalline Polymers as Precursors  
Takuya Sato,Ryohei Ishige
- 2Pe061 Thermal Conductivities of Highly Ordered Smectic Phases in Binary Hetero-Mesogen Copolymers with Varied Spacer Lengths and Main Chains  
Wakana UCHIYAMA,Yuya ISHIZAKI,Shusaku NAGANO
- 2Pf062 Microstructured surface formation by patterned photopolymerization: real-time monitoring of contact angle  
Yasuto Sasaki,Kotaro Shinmura,Kaito Takahashi,Miho Aizawa,Kyohei Hisano,Atsushi Shishido
- 2Pe063 Design of poly(ionic liquid)s showing LCST-type phase transition behavior and control of their phase transition temperature using host-guest chemistry  
Saori Yamaguchi,Nobuhumi Nakamura,Hiroyuki Ohno,Takahiro Ichikawa
- 2Pf064 Geometric opening and closing behavior and motility of octahedral structure with fin structure  
Shunya Kinoshita,Koya Takahashi,Hiroshi Endo
- 2Pe065 Reversible Switching of Oil Droplet Motion Modes Using pH-Responsive Polymers  
Shunsuke Nakaya,Kouichi Asakura,Taisuke Banno

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

- 2Pf066 Modulation of Selective Molecular Uptake in Complex Coacervates via Tannic Acid Addition  
Nanami Inamoto,Kouichi Asakura,Taisuke Banno
- 2Pe067 Orientation and Thermal Conductivity of Side-Chain Smectic Liquid Crystalline Copolymers in Thin-Films  
Kanna KOBAYASHI,Yuya ISHIZAKI,Takahiro SEKI,Shusaku NAGANO
- 2Pf068 Effect of Temperature and pH on CO<sub>2</sub> Absorption Capacity of Polyethyleneimine/Ethyloxazoline Hydrolysates  
Yuta Wakabayashi,Daisuke Takahashi
- 2Pe069 Design of UCST-type thermo-responsive sol-gel transition polymer with reactive polymer zwitterion  
Hideto Ikezawa,Todd Emrick,Takashi Miyata,Akifumi Kawamura

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

- 2Pe073 Design, synthesis and structure study of unusual amino acid-containing helical peptide bearing a hydrophilic group at its terminus  
Fumiya Kitagaki,Yoshihito Inai

- 2Pf074 Synthesis and structure analysis of peptides incorporating chiral chemical species into their terminal positions, and induction of helicity through chiral domino effect  
Toshikatsu Nagai, Yoshihito Inai
- 2Pe075 Synthesis of and structure properties of chiral molecular backbone composed of two peptide chains bearing unusual amino acid  
Kenta Oikawa, Yoshihito Inai
- 2Pf076 Synthesis of aromatic multi-functional peptide molecules and investigation of their structure features and supramolecular forms  
Tsubasa Miyawaki, Yoshihito Inai
- 2Pe077 Degradation of amide bonds using histidine-containing compounds  
Haruka Yokota, Gaku Hirata, Toshihisa Kimura, Kenta Morita, Tatsuo Maruyama
- 2Pf078 Development of an electron staining agent for TEM that specifically visualizes cell organelles  
Eiichiro Matsuoka, Kanoko Ichiki, Kenta Morita, Tatsuo Maruyama
- 2Pe079 Molecular introduction into the inside of microtubules by tubulin N-terminal modification  
Shogo Shimizu, Soei Watari, Hiroshi Inaba, Akira Onoda, Akira Kakugo, Kazunori Matsuura
- 2Pf080 Construction of Tau-derived peptide dimers directed toward microtubule stabilization  
Yui Hayakawa, Hiroshi Inaba, Akira Kakugo, Kazunori Matsuura
- 2Pe081 Functionalization of Single Enzyme Encapsulated with Zwitterionic Polymer Hydrogel  
Yinan LUAN, Jincal LI, Madoka TAKAI
- 2Pf082 Evaluation of energy transfer in the fusion of light-harvesting complex 2 and red fluorescent protein  
Kazusa Sugimori, Sorato Matumoto, Takehisa Dewa, Masaharu Kondo
- 2Pf084 The preparation of bacterial cellulose films supported with silver nanoparticles  
Keigo Yanagino, Tomoki Okada, Tetsuya Furuike
- 2Pe085 Preparation of chitosan derivatives grafted with polymer chains  
Hiroki Nagasawa, Tetsuya Furuike
- 2Pf086 Development of Levulinoylated Chitosan-Based Hydrogels  
Takumi Ishida, Tetsuya Furuike
- 2Pe087 Synthesis and Biological Properties of Glycoclustered Cyclodextrins  
Yuto Imaeda, Yuta Takami, Tetsuya Furuike
- 2Pf088 Preparation of Chitosan/Chondroitin Sulfate Composite Hydrogel  
Yutori Katayama, Tetsuya Furuike
- 2Pe089 Preparation and functional evaluation of chitosan-coated gellan gum fibers  
Yuji Tokunaga, Yuhi Aoki, Tetsuya Furuike

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

- 2Pf090 Improvement of Mechanical Properties of Swollen Polysaccharide Composite Films Using Epoxidized Soybean Oil  
Yui Sakai, Takuya Sagawa, Mineo Hashizume

- 2Pe091 Preparation of chitosan beads blended with nonionic polysaccharides and investigation as pH-responsive protein carriers  
Takumi Morita, Shoma Hayashi, Shokyoku Kanaoka, Satoshi Tanimoto
- 2Pf092 Development of cellulose/alginate hydrogel capsules via ionic liquid processing for pH-responsive drug delivery  
Sora Imanishi, Fumio Kurayama, Tatsushi Matsuyama, Junichi Ida
- 2Pe093 Synthesis and characterization of sodium alginate-graft-PEG for cell preservation  
Minami Endo, Akinori Takasu, Shuji Yamada
- 2Pf094 Elucidation of the In Vitro Antioxidant Mechanism of Polysaccharides Using Electron Spin Resonance Spectroscopy  
Kotaro Nishimaki, Koharu Sasa, Hiroyuki Kono
- 2Pe095 The activation of glycosyltransferase LARGE by poorly water-soluble polycyclic basic compounds.  
Haruka Shikii, Shuji Mizumoto, Mariko Ikeda, Kenta Morita, Tatsuo Maruyama
- 2Pe097 Effect of oxidation degree in Aged-nanoplastic models on protein corona formation  
Saul Perez Arana, Naoto Washihira, Mako Kobayashi, Atsushi Hirano, Masaya Yamamoto
- 2Pf098 Quantum chemical calculation of hydrogen abstraction reaction from DNA by OH radical  
Takumi Iida, Susumu Fujiwara, Yoshiteru Yonetani, Tsukasa Aso, Hiroaki Nakamura, Yoshiyuki Hirano, Takao Otsuka, Masanori Hara

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**Thu. Sep 18**

Presentation Time

<a = 10:20~11:00>

<b = 11:00~11:40>

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

- 3Pa001 Synthesis of photoluminescent polymers bearing ketocoumarin moieties  
Hirotaka Kato, Taichi Sotani, Hiromitsu Sogawa, Fumio Sanda
- 3Pb002 Synthesis and characterization of highly soluble conjugated compounds containing pincer-type multinuclear platinum complexes  
Mare Kobayashi, Hiromitsu Sogawa, Fumio Sanda
- 3Pa003 Library Synthesis and Post-Polymerization Modification of Carbon-Chain Polymers Featuring gem-bis Side Chains  
Taichi Meno, Tatsuma Aiuchi, Shunsuke Tsuchiya, Keitaro Matsuoka, Kazuki Sada
- 3Pb004 Development of Novel Amphiphilic Polymers with Controlled Spacing between gem-bis PEG side chains  
Tatsuma Aiuchi, Taichi Meno, Keitaro Matsuoka, Kazuki Sada
- 3Pa005 Preparation of Conductive  $\pi$ -Conjugated Polymer Thin Films Using Vapor Deposition Polymerization of Heterophanes  
Yuto Kuroda, Tomoya Enoki, Takahiro Uno, Masataka Kubo
- 3Pb006 Simple Preparation of Movable Crosslinked PEO Network using Thiol-Ene Reaction  
Fumiya Nomura, Seung Min Hong, Masataka Kubo, Takahiro Uno
- 3Pa007 Synthesis and Photo Polymerization of Diacetylenes Containing Platinum Complex Moiety  
Ryota Shimoda, Humio Sanda, Hiromitsu Sogawa

- 3Pb008 Optical Properties and High-Density Excited States of Conjugated Polymers Based on Boron Tropolonate Complexes  
Hikari Ogoshi, Shunichiro Ito, Kazuo Tanaka
- 3Pa009 Solution property of double-stimuli polymer end-functionalized with fluorenyl group  
Aika Mori, Kenji Sugiyama
- 3Pb010 Surface characterization of poly(alkyl methacrylate) copolymers bearing both perfluorobutyl groups and nonaethylene glycol chains  
Rie Shimano, Kenji Sugiyama
- 3Pa011 Surface reconstruction of amphiphilic copolymers containing poly(2-perfluorobutyl ethyl methacrylate) segments under environmental changes  
Sei Omori, Kenji Sugiyama
- 3Pb012 Surface properties of poly (alkyl methacrylate) copolymers containing both perfluorobutyl groups and diethylene glycol chains  
Yiwen Mao, Kenji Sugiyama
- 3Pa013 Controlling Over Helical Domain of Micro Phase Separation in Organic-Inorganic Block Copolymer  
Towa Shinoda, Shunseke Morii, Yoshinobu Nakamura, Syuji Fujii, Tomoyasu Hirai
- 3Pb014 Synthesis and Development of Functions of Cyclic Carbonate-Substituted Polyacetylenes  
ko watanabe, Fumio Sanda, Hiromitsu Sogawa

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

- 3Pa021 A theoretical investigation into the anomalous glass transition temperature of polyurea-phenolic resin composite  
Fumiyuki Toshimitsu, Yuji Kosugi, Yoshio Furusho
- 3Pb022 Analysis of Internal Mechanical Damage for CNT-Based Soft Nanocomposites  
Kenji Urayama, Thanh Tam Mai, Ken Ma
- 3Pa023 Investigation of the Correlation Between Nanoscale and Macroscale Mechanical Properties in Polymer Alloys via AFM Nanomechanics.  
Kenta Wakabayashi, Makiko Ito, Xiaobin Liang, Ken Nakajima
- 3Pb024 Investigation of Multiscale Structures and Relaxation Behavior in Ionic Liquid Composites  
Hiroaki Nobuoka, Tobias Schwan, Manfred Wilhelm, Osamu Urakawa, Tadashi Inoue
- 3Pa025 Investigation of the Reinforcement Mechanism and Viscoelastic Analysis of SWCNT Composite Films  
Hiroaki Nobuoka, Osamu Urakawa, Tadashi Inoue
- 3Pb026 Structure Generation of Polymers by Genetic Algorithm  
Yudai Kashiwa, Tsuyoshi Koga
- 3Pa027 Influence of Cellulose Nanofibers on the Crystallization and Mechanical Behavior of Polyvinyl Alcohol Nanocomposites  
Farjana Shahrin Prova, Akihiko Toda, Ken Taguchi
- 3Pb028 PP/SEBS blends under elongation studied by atomic force microscopy.  
Kota Tamura, Ken Nakajima, Xiaobin Liang
- 3Pa031 Precise synthesis of macromolecular divinyl crosslinkers: Effects on gelation process and mechanical properties  
Yuma Murabayashi, Shohei Ida, Masatoshi Oyama, Keiji Nakajima, Takeshi Ueki, Shokyoku Kanaoka

- 3Pb032 All-Atom Molecular Dynamics Simulation for Comparing the Mechanical Properties of SBR and Hydrogenated SBR  
Kazuyoshi Kaneko
- 3Pa033 Effect of Carbon Black Characteristics on Plasticizer Migration in Rubber Vulcanizates  
Jun Sawada, Satoshi Kawasaki, Toshio Tada, Masayuki Yamaguchi
- 3Pb034 Experimental Investigation of Mixed-Mode Crack Propagation Criterion in Elastomers  
Tomoki Mishima, Thanh-Tam Mai, katsuhiko Tsunoda, Kenji Urayama
- 3Pa035 Estimation of shear modulus during the gelation process via dynamic light scattering  
Natsumi Kato, Haruki Takarai, Xiang Li, Naoyuki Sakumichi, Takamasa Sakai
- 3Pb036 Viscoelastic properties of polydimethylsiloxane with reversible cross-links  
Naoki Yamashita, Kenji Yamaoka, Nobu Kato, Masanao Kamei, Kentaro Ogura, Minoru Igarashi, Hideo Nakagawa, Yoshinori Takashima
- 3Pa037 Formation behavior and functional exploration of bisurea supramolecular polymer materials based on cage-shaped silsesquioxanes  
Jinshiro Takeuchi, Hiroaki Imoto, Kensuke Naka
- 3Pb038 Effect of Recombination Behavior of Reversible Cross-Linking Points on Polymer Viscoelasticity  
Hosei Kinoshita, Yuko Nishimatsu, Kenji Yamaoka, Yoshinori Takashima

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 3Pb042 Photophysical Properties of Near-Infrared Up-conversion in Dye-Encapsulated Liposomes  
Ryosuke Kamimura, Hideki Kawai
- 3Pa043 Creation of Chiral Amorphous Molecular Materials and Their Circular Dichroism  
Daiki Arata, Oki Takesita, Yen Fu Teoh, Hideyuki Nakano
- 3Pb044 Synthesis of DA Conjugated Polymers composed of Propylenedioxythiophene and Various Acceptors and their EC Properties  
Rika Adachi, Atsushi Aoki
- 3Pa045 Transparency of wood using plant-derived materials and evaluation of its optical properties  
Ryota Minakatsu, Norihisa Tanio
- 3Pb046 Fine pattern formation of polyetherimide utilizing consecutive nucleophilic acyl substitution reaction during developing process.  
Mizuho Matsuda, Hiroyuki Maekawa, Toshiyuki Oyama
- 3Pa047 Refractive index and molecular chain packing state of plant-derived transparent polymers  
Yuya Yoshinari, Norihisa Tanio
- 3Pb048 Transparent bulk preparation of plant-derived materials and evaluation of their optical properties  
Shogo Horiuchi, Norihisa Tanio
- 3Pa049 Acid-Response Behaviors of Tetraphenylethylene Derivatives Bearing Polymerizable Cyclosiloxane Terminals  
Atsushi Seki, Shoya Yamada, Yukinori Kokubo, Ken'ichi Aoki
- 3Pb050 Photoinduced surface relief formation using bisanthracenes with different connecting groups  
Rie Momomoto, Yuya Miyoshi, Shu Aoki, Kota Marumoto, Taishi Sonoda, Takashi Ubukata

- 3Pa051 Improvement in the upconversion quantum efficiency of an alternating multilayer structure based on 9,10-bis(4-methylphenyl)anthracene and platinum octaethylporphyrin vacuum deposited on an in-plane oriented polythiophene film  
Toshiko MIZOKURO, Yoshihiro KIKKAWA, Hirokazu OHSAWA, Kenji KOBAYASHI, Kenji KAMADA
- 3Pb052 Photoexcitation dynamics and photon upconversion characteristics of organic chromophores in stretched poly(vinyl alcohol)  
Takeshi Mori, Tomohiro Mori, Takumi Kinoshita, Hitoshi Saomoto

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### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 3Pa053 Synthesis and Properties of Polymers Controlled Binding Distance between Tetraphenylethene Units  
Takeru KATO, Takahiro KAKUTA, Tada-aki YAMAGISHI
- 3Pb054 Step- $\pi$ -conjugated polymers (241) Study of energy transfer mechanism using macro-molecular-wire  
Saori Ichino, Haoxuan GUO, Hiroyuki Aota
- 3Pa055 Step- $\pi$ -conjugated polymers (242) Multi-photon harvesting for porphyrin  
Kanta Kawahara, Shunta Nakamura, Haoxuan Guo, Hiroyuki Aota
- 3Pb056 Step- $\pi$ -conjugated polymers (243) Multi-photon harvesting for perylene  
Shunta Nakamura, Haoxuan Guo, Hiroyuki Aota
- 3Pa057 Step- $\pi$ -conjugated polymers (244) Study of electron transfer mechanism using macro-molecular-wire  
Kazuki Takeuchi, Daisuke Kitayama, Haoxuan Guo, Hiroyuki Aota
- 3Pb058 Stepping- $\pi$ -conjugated polymers(245)Controlling the directionality of electron transfer using macromolecular wires  
Yusuke Otaki, Daisuke Morinaka, Kota Tanaka, Haoxuan GUO, Hiroyuki Aota
- 3Pa059 Step- $\pi$ -conjugated polymers (246) Electron transfer using amphiphilic macromolecular wires  
Mika Tonoike, Haoxuan Guo, Hiroyuki Aota
- 3Pb060 Step- $\pi$ -conjugated polymers (247) Synthesis of macromolecular wires bonded to colloidal metal  
Soshiro Numata, Haoxuan GUO, Hiroyuki Aota
- 3Pa061 Step- $\pi$ -conjugated polymers (248) Study of bonding between colloidal metal and macromolecular-wire  
Shota Hatamoto, Haoxuan Guo, Hiroyuki Aota
- 3Pb062 Step- $\pi$ -conjugated polymers (249) Ultrafast Spectroscopic Insights into Photoinduced Electron Transfer in Macromolecular Wire  
Daisuke KITAYAMA, Haoxuan GUO, Hiroyuki AOTA
- 3Pa063 Influence of Resonance Effects in Acetal Termini of Dissolution Inhibitors on Resist Sensitivity of Chemically Amplified Three-Component Novolac Resists  
Katsuaki Takashima, Hideo Horibe
- 3Pb064 Self-aggregation Behavior and Chiroptical Properties of Biaryl Molecules with Chiral Hydrogen-Bonding Moieties  
Rikako Sugiyama, Junpei Mitsuzuka, Nozomi Sugiura, Takunori Harada, Masaya Moriyama
- 3Pa065 Synthesis of dialkyloxythiophene-phenyl conjugated polymers with various sidechain lengths and their EC properties



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

- 3Pa067 Encapsulation of poorly water-soluble natural substances into core-shell particles and generation of colloidal sponges  
Nene Sakata, Yuuka Fukui, Keiji Fujimoto
- 3Pb068 Preparation and complexation of microparticles by stereocomplexation of sugar-based star-shaped poly (lactic acid)  
Ayane Kawamura, Tadashi Tsukamoto, Yuji Shibasaki
- 3Pa069 Influence of synthesis temperature on the interaction between silver nanocrystals and organic molecules  
Honoka Mizuguchi, Ryo Iba, Hideyuki Nakanishi
- 3Pb070 Stereoregular Polymerization of Methyl Methacrylate in the Channel Cavity of Supramolecular  $\gamma$ -Cyclodextrin Structures  
Shunsuke Kishi, Hajime Shigemitsu, Toshiyuki Kida
- 3Pa071 Patterning of catalysts via inhomogeneous polymerization  
Koki Ito, Kazuto Uchida, Hideyuki Nakanishi
- 3Pb072 Electrospinning-Based Control of Nanostructures on PTFE Film Surface.  
Chisa Hasegawa, Tadakazu Tsukamoto, Susumu Kawado, Satoshi Fujita, Hiroki Miyajima
- 3Pa073 Preparation and Application of Supramolecular Cyclodextrin Structures Utilizing Cononsolvency of Water/HFIP Mixtures  
Haruya Ishida, Noa Fujiwara, Sachikumo Kurosawa, Hajime Shigemitsu, Masahiro Muraoka, Toshiyuki Kida
- 3Pb074 Detailed Analysis of the Linear Viscoelasticity of Cellulose Nanofiber Dispersions  
Himari Taniguchi, Reina Tanaka, Tadashi Inoue, Shinji Sugihara, Yasushi Maeda, Atsushi Matsumoto
- 3Pa075 Core anisotropy in core-shell nanoparticles and their self-assembly behavior  
Sumiri Kinoshita, Takumi Mihara, Koki Sano
- 3Pb076 Development of toughened particle films using supramolecular bonding between particles  
Ryota Sakaguchi, Yuma Sasaki, Kazuko Nakazono, Daisuke Suzuki
- 3Pa077 Optically-controlled gelation based on aggregation of titanium dioxide nanocrystals  
Yuki Nakai, Yuki Nagai, Yoichi Kobayashi
- 3Pb078 Molecular arrangement in composite particles of chiral conjugated polymers  
Hayato Sakai, Souta Nakayama, Hiroshi Yamagishi, Soh Kushida, Yohei Yamamoto
- 3Pa079 Investigation of the Molecular Loading Capacity of Pseudo-Polyrotaxane Nanosheets (PPRNS)  
Di Liu, Shuntaro Uenuma, Tomoya Iizuka, Tsuyoshi Takeshita, Kohzo Ito

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

- 3Pb084 Size-dependent biomembrane permeation of phospholipid-mimetic polymers conjugated with hydrophilic model drugs  
Kazutoshi Yokoo, Tatsuro Goda

- 3Pa085 Development of polymer biodistribution prediction model using experiment-oriented materials informatics  
Mayu Masuda, Kohei Sano, Noa Kamatani, Haruka Tobita, Toshihide Yamasaki, Takahiro Mukai, Yasuhiko Igarashi, Daniel Citterio, Yuya Oaki, Yuki Hiruta
- 3Pb086 Size-tunable polymeric nanoruler for targeting of malignant brain tumors  
Yukine Ishibashi, Mitsuru Naito, Yusuke Watanuki, Masaru Cho, Naoki Yamada, Kanjiro Miyata
- 3Pa087 Naturally Occurring DNA-Based Hydrogels Combining Controlled Drug Release and Bioadhesion for Medical Applications  
Shunsuke Fuwa, Arisa Fukatsu, Kenji Okada, Takeaki Ishizawa, Masahide Takahashi
- 3Pb088 Preparation of hyaluronan-antigen protein conjugates for antigenic modification of cancer cells  
Momona Ota, Shinichi Mochizuki
- 3Pa089 Cell manipulation via localized heating of mitochondria based on near-infrared photothermal polymer micelles  
Tomoki Iwashita, Yu Ochiai, Hiroki Yamaguchi, Yutaro Matsushita, Masao Kamimura

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

- 3Pb090 Non-invasive remote manipulation of collective cell migration based on PEGylated magnetic nanoparticles  
Hirotaka Yamaguchi, Yukino Nishikata, Kazuki Hasegawa, Ryuto Yamanaka, Masao Kamimura
- 3Pa091 Remote manipulation of mechano-sensitive channels using cell membrane anchored polymer-modified magnetic nanoparticles  
Yukino Nishikata, Yu Ochiai, Ryuto Yamanaka, Masakazu Kubota, Masao Kamimura
- 3Pb092 Manipulation of cell migration behavior based on near-infrared responsive photothermal polymeric micelles  
Nana Watabe, Tomoki Iwashita, Yu Ochiai, Masao Kamimura
- 3Pa093 Intracellular delivery of substances using near-infrared light responsive photothermal polymer micelles  
Ken Tsuchihashi, Yuto Chiba, Tomoki Iwashita, Masao Kamimura
- 3Pb094 Development of a Synthetic Polymer Library for Therapeutic Neutralization of Bacteria Toxins  
Masayuki Ota, Masanori Nagao, Hikaru Matsumoto, Yoshiko Miura, Takeshi Yamamoto, Yoshitoshi Ogura
- 3Pa095 Preparation of 4-armed star-shaped phospholipid polymers for poorly water-soluble drug carrier  
Riku Hirasawa, Yuta Yoshizaki, Tomohiro Konno
- 3Pb096 Potential of a novel extracellular vesicle-based therapy independent of genetic mutations in cancer  
Hikaru Hatano, Hiyori Iitsuka, Kiyoshi Sato, Hiroyoshi Kawakami
- 3Pa097 Development of disulfide-introduced peptide nanofibers for an antigen delivery system  
Kotone Minato, Kazuya Matsuo, Tomonori Waku, Akio Kobori
- 3Pb098 Evaluation of intracellular delivery and cell migration inhibition effects of VHH antibody using cell membrane permeable carrier cpPG  
Ryunosuke Suzuki, Toshihisa Mizuno

- 3Pa099 Fabrication and Characterization of Disc-shaped Carriers for Drug Delivery Using Solvent Swelling and Magnetic Stirring Processes  
Yuma Sudo, Hayato Yokose, Sadako Hukuda, Yosuke Okamura
- 3Pb100 Evaluation of sulfobetaine polymer conjugates for cancer cryotherapy  
Takuto Toriumi, Nobuyuki Morimoto
- 3Pa101 Intracellular Delivery of Cargo Proteins into Cancer Cells via Encapsulation in OLE-ZIP Protein Capsules, Displaying Anti-HER2 Antibodies  
Ryuki Hosoda, Kosuke Takahashi, Toshihisa Mizuno
- 3Pb102 Cytoplasmic delivery of anticancer active peptides using peptide nanofibers.  
Seigo Aoki, Kazuya Matsuo, Tomonori Waku, Akio Kobori
- 3Pa103 Synthesis of Cisplatin-loaded Poly(NIPAm-Carboxylated NIPAm) Gel Particles for Cancer Chemotherapy  
Yoshiki Tajima, Yukiya Kitayama, Atsushi Harada
- 3Pb104 Rational design and preparation of carrier-free nanostructures densely functionalized with nucleic acid therapeutics and a small molecule drugs.  
Mito Hashimoto, Sota Wada, Masao Kamimura, Yoshitsugu Akiyama
- 3Pa105 Enabling Cytoplasmic Delivery of Protein Drugs via Nanofiber-Induced Endosomal Membrane Destabilization  
Tomoki Matsuda, Kazuya Matsuo, Tomonori Waku, Akio Kobori

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Presentation Time  
<c = 13:20~14:00>  
<d = 14:00~14:40>

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

- 3Pc001 Preparation of Giant Molecules with Polyhedral Oligomeric Silsesquioxane and Evaluation of Its Molecular Aggregation State  
Yasumasa Miyoshi, Yoshinobu Nakamura, Syuji Fujii, Tomoyasu Hirai
- 3Pd002 Preparation of Polymer with Maleimide Derivative Side Chains and Development for Circularly Polarized Luminescence Materials  
Kai Terami, Yoshinobu Nakamura, Syuji Fujii, Tomoyasu Hirai
- 3Pc003 Detailed Analysis of the Luminescence Mechanism of  $\pi$ -Conjugated 12-vertex ortho-Carborane  
Takumi Yanagihara, Kazuo Tanaka
- 3Pd004 Synthesis of Thiophene-modified Polymers Based on Quinacridone Framework  
Ren Gotou, Atsushi Kimoto
- 3Pc005 Synthesis of Poly(2,6-anthraquinone) Using Soluble Aromatic Imine Precursors  
Misaki Morishita, Atsushi Kimoto
- 3Pd006 Synthesis of new aggregation-inhibiting POSS polymers by molecular design with urea or urethane bonds in the side chains  
Cashew Nagashima, Hiroaki Imoto, Kensuke Naka
- 3Pc007 Synthesis, structures, and properties of polyrotaxanes with helical  $\pi$ -conjugated polymers as an axle  
Fuuka Sugimoto, Isao Yamaguchi
- 3Pd008 Synthesis and Properties of Sequence-regulated Glycopolymer using ADMET Polymerization

Suzuka Oda,Mako Yunbe,Noriyuki Nakajima,Masahiro Hamada,Yasuhito Koyama

- 3Pc009 Efficient Catenation Enabled by a High-Density Self-Assembled Toroid Environment  
Daiki Tagooka,Hiroki Itabashi,Sougata Datta,Hiroki Hanayama,Shiki Yagai
- 3Pd010 Synthesis of Helically  $\pi$ -Stacked Poly(quinolylene-2,3-methylene)s with Bearing Perylene diimide at the Chain Ends  
Tomoki Uchida,Naoya Kanbayashi,Taka-aki Okamura,Kiyotaka Onitsuka
- 3Pc011 Synthesis and functionalization of macrocyclic compound composed of aspartic acid-containing peptide and oligo ethylene glycol  
Daisuke Okazaki,Kousuke Tsuchiya,Takamasa Sakai
- 3Pd012 Synthesis of Block Copolymers of Poly(propylene carbonate) and Poly(methyl methacrylate) and Their Application to Polymer Blends  
Manami Toi,Koji Nakano,Mai Nakamura
- 3Pc013 Tröger's base-forming reaction of diazacyclooctane derivatives bearing a N-carboxymethyl group and application to ladder polymers  
Kenta Hiraki,Fumitaka Ishiwari,Akinori Saeki
- 3Pc015 Synthesis of Polymer-Type Benzoxazines via Copolymerization of Aminophenols and Properties of Their Thermosets  
Kazunari Kuroda,Takehiro Kawauchi
- 3Pd016 Synthesis and Properties of Polybenzoxazines Containing Alicyclic Structures  
Keiyo Chou,Noe Tokukawa,takehiro Kawauchi
- 3Pc017 Optimization of Copolymerization Conditions for Novel Copolymers Using Existing Polymerization Data and Physical Information  
Hiromu Yamada,Shogo Takasuka,Shunto Oikawa,Yosuke Harashima,Tomoaki Takayama,Aniruddha Nag,Araki Wakiuchi,Tsuyoshi Ando,Tetsunori Sugawara,Miho Hatanaka,Tomoyuki Miyao,Takamitsu Matsubara,Yu-ya Ohnishi,Hiroharu Ajiro,Mikiya Fujii
- 3Pd018 Synthesis of polyamide-imide/silica gel hybrids using in-situ polymerization method  
Takeru Iwamura,Shion Nonaka,Keisuke Urushibata,Kazuhide Matsumura
- 3Pc019 Silyl ether-modified polyalkylene glycols having high viscosity index  
Fuyuki Aida,Kazuo Tagawa

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

- 3Pd022 Relationship between Microcluster Structure and Macroscopic Mechanical Response of polyethyleneglycol/polydimethylacrylamide Hydrogels Utilizing Different Network Formation Mechanisms  
Masato Ishimoto,Tomoki Yasui,Masahiro Yoshida,Takayuki Kurokawa
- 3Pc023 Self-growing of DN gels with Glucose Oxidase in the Presence of Oxygen  
Tianze Shao,Kotaro Hata,Masahiro Yoshida,Zhijian Wang,Tasuku Nakajima,Jianping Gong
- 3Pd024 Fabrication of Artificial Skin Exhibiting a J-Shaped Mechanical Curve Using Particle-DN Gels  
Yutaro Ueno,Tomoki Yasui,Takayuki Nonoyama
- 3Pc025 Effects of temperature and solvent composition on physicochemical properties during preparation of cellulose hydrogels using Ionic Liquid / Dimethyl sulfoxide solution  
Kazumi Moriyasu,Kodai Kikuchi,Tatsushi Matsuyama,Akio Shimizu,Junichi Ida

- 3Pd026 Preparation of topological gels with temperature-responsive elastic modulus change using molecular nets of poly(N-isopropylacrylamide).  
Yamato Fujita, Kenichiro Mizuguchi, Yusuke Taoka, Yuichi Ohya
- 3Pc027 Investigation of a drying-reswelling process using polyhydric alcohols for preserving the microstructure of bacterial cellulose gels  
Mirei Kobayashi, Toru Hoshi
- 3Pd028 Mechanical Properties of Gels with Different Dynamic Cross-links and Entanglement-Cross-links.  
Saki Hatanaka, Takashi Miyata
- 3Pc029 Evaluation of soft material texture using nonlinear viscoelasticity  
Rika Takeda, Koki Ogata, Kyoichi Tsurusaki
- 3Pd030 Antibacterial Activity and Properties of PVA/Chitosan Films  
Risei WADA, Jun SAWAI, Hidenobu SHIMIZU
- 3Pc031 Study on polymerization methods to control the distribution of charge groups within polymer particles and the mechanical properties of particle films  
Yusuke Shinozaki, Yuma Sasaki, Haruka Minato, Daisuke Suzuki
- 3Pd032 Theoretical model for predicting mechanical properties of self-growing gel  
Tatsunari Masumi, Tsutomu Indei
- 3Pc033 Synthesis of amide phosphate-type thermal latent curing agents and their application to thermal curing of epoxy resins  
Yushiro Yamauchi, Daisuke Aoki, Koji Arimitsu
- 3Pd034 Preparation for the regenerated samples in the freeze/thaw polyacrylonitrile gels and the elastic properties  
Hiroki Asada, Yutaka Tanaka
- 3Pc035 Controlling nanoparticle dynamics in crowded gel environments  
Keita Namba, Yuka Wakayama, Mitsuhiro Shibayama, Takuma Kureha
- 3Pd036 Evaluation of the Hydration State in Calcium Alginate Hydrogels for Understanding the Water Holding Ability  
Akinori Iwashiro, Mizuki Yamamoto, Takumi Bessho, Shinichiro Kuroki, Keiichi Shiraga
- 3Pc037 Synthesis of Monodisperse Star Polymers toward Construction of a Polymer Network without Strand Length Distribution  
Shunya Sugawara, Yamato Watanabe, Shotaro Hayashi, Naoko Yoshie, Shintaro Nakagawa
- 3Pd038 Structural development of Ca<sup>2+</sup>-pectin gel beads prepared from pectin chains with various charge numbers  
Yuji Jinbo, Sumire Kouhara

### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 3Pd042 Hydrophilic carbazole-based dendrimers for light-emitting electrochemical cells  
Yuki Akanuma, Alamelu, Kosuke Anraku, Keiko Yamaoka, Ruben D. Costa, Ken Albrecht
- 3Pc043 Elastomers that enhance fluorescent intensity upon CO<sub>2</sub> exposure  
Takumi Hayashi, Kei Hashimoto, Shoichi Kutsumizu, Yohei Miwa
- 3Pd044 Nonlinear optical response of dye-doped liquid crystals in the polymer wall structure designed by photopolymerization  
Junki Yokota, Miho Aizawa, Kyohei Hisano, Shoichi Kubo, Atsushi Shishido
- 3Pc045 Synthesis and properties of novel chemically amplified dendritic resists: Improvement of resist properties through terminal modification

- Shunta Hirado, Haruto Goto, Taketo Matsumaru, Takeo Watanabe, Shinji Yamakawa, Humihiro Kawagoe, Atsushi Seki, Ken'ichi Aoki
- 3Pd046 Water-solubilization of photobase generators using cyclodextrin and their applications  
Chiharu Fukayama, Kazuya Koizumi, Daisuke Aoki, Koji Arimitsu
- 3Pc047 Anionic UV Curing of Epoxy/Thiol-Based Black Resin at Room Temperature and Its Application to Adhesion  
Misuzu Manaka, Yuya Tanaka, Daisuke Aoki, Koji Arimitsu
- 3Pd048 Development of one component adhesives composed of polysilane derivatives and evaluation of their adhesive properties on polypropylene substrates  
Kohei Ota, Daisuke Aoki, Koji Arimitsu
- 3Pc049 Photoinduced molecular reorientation and absorption modulation of dye-doped liquid crystals toward near-infrared light dimming  
Yuya Nakata, Junki Yokota, Miho Aizawa, Kyohei Hisano, Soichi Yokoyama, Yutaka Ie, Atsushi Shishido
- 3Pd050 Realizing light-matter strong coupling with high organic dye concentrated WGM resonator  
Shoma Hino, Soh Kushida, Takuji Hatakeyama, Yohei Yamamoto
- 3Pc051 Influence of the chemical structures of diacetylenediamides on the thermal activation of photopolymerization  
Yusei Nanri, Saya Kato, Yuya Kondo, Nobuyuki Tamaoki, Fumihiro Kawagoe, Atsushi Seki, Ken'ichi Aoki
- 3Pd052 Synthesis and stereocomplex of a novel polylactide with fluorescent initiator based on benzoxazine derivatives  
Mitsuki Oka, Nalinthip CHANTHASET, Worawat Wattanathana, Hiroharu Ajiro

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

- 3Pc053 Synthesis and properties of novel chemically amplified dendritic resists: Terminal binding of a nonionic photoacid generator on dendrimer surfaces  
Haruto Goto, Shunta Hirado, Taketo Matsumaru, Takeo Watanabe, Shinji Yamakawa, Fumihiro Kawagoe, Atsushi Seki, Ken'ichi Aoki
- 3Pc055 Synthesis of a reactive polymer with selective adsorption properties for rare metals  
Hiroki Akiba, Daisuke Aoki, Tatsuo Taniguchi, Takeshi Ogata, Hirokazu Narita
- 3Pd056 Investigation of a separation method for different particles with same size and zeta potential: Application of non-additive Asakura-Oosawa theory  
Ikuma Ogasawara, Ken-ichi Amano
- 3Pc057 Adsorption and desorption properties of Cr(VI) ions on porous silica beads modified with amine-based polymers.  
kota Morioka, Hiroaki Minamisawa, Hiromichi Asamoto, Kazunori Saito, Kazunori Yamada
- 3Pd058 Network Polymer Membranes Containing Diacetylene Groups for Hydrogen Separation Membrane Applications  
Shiro Yamakawa, Kazukiyo Nagai
- 3Pc059 Gas Barrier Properties and Their Mechanism of Poly(lactic-co-glycolic acid) Membranes  
Soma Onodera, Kazukiyo Nagai

- 3Pd060 Effects of Counter Anions on Water Vapor Barrier Properties of Chitosan Salt Membranes  
Airi Kobayashi, Ryuhei Nagashima, Rei Onishi, Kosai Furukawa, Yuka Uchida, Katsuki Yajima, Kazukiyo Nagai
- 3Pc061 Relative Pressure Dependence of Water Vapor Sorption Properties in Chitosan Salt Membranes  
Kousai Furukawa, Yuka Uchida, Ryuhei Nagashima, Rei Onishi, Airi Kobayashi, Katsuki Yajima, Kazukiyo Nagai
- 3Pd062 Temperature Dependence of Dissolved Oxygen Permeability in Compostable Poly(lactic acid) Hybrid Membranes  
Masahiro Yoneda, Toranosuke Saito, Rei Onishi, Kosai Furukawa, Kazukiyo Nagai
- 3Pc063 Gas Permeability and Selectivity in ABA-type Triblock Copolymer Membranes Synthesized from Polyimide and HEMA  
Haruto Suzuki, Ryota Nambu, Kento Iwama, Akihiro Yoshida, Kaede Okuma, Kyohei Maki, Kazukiyo Nagai
- 3Pd064 Synthesis of One-handed Helical Poly(diphenylacetylene)s Bearing Dinuclear Rhodium Complex using Bio-Based Chiral Oils and Their Application to Asymmetric Catalysts  
Yanchen Hong, Yuki Nishikawa, Daisuke Hirose, Katsuhiro Maeda
- 3Pc065 Effects of Ester Additives on Dissolved Carbon Dioxide Permeability in Poly(lactic acid) Membranes  
Toranosuke Saito, Masahiro Yoneda, Rei Onishi, Kosai Furukawa, Kazukiyo Nagai

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### C. FUNCTIONAL POLYMERS AND POLYMER FUNCTIONS

- 3Pd066 Synthesis, properties, and functionalities of polyfluorenes with phenylenediamine units.  
Masahiro Tomita, Isao Yamaguchi
- 3Pc067 Preparation of Composite Membranes of Poly(lactic acid) and Compostable Compounds  
Rei Onishi, Kosai Furukawa, Kazukiyo Nagai
- 3Pd068 Synthesis of novel adsorbent carrying polymer graft chains for selective adsorption of heavy rare earth elements  
Hiromasa Okawara, Kohei Watanabe, Azumi Akiyama, Daisuke Aoki, Tatsuo Taniguchi, Tsuyoshi Ogata, Kazuhiro Narita
- 3Pc069 Water vapor sorption properties of chitosan salt/amino acid hybrid membranes  
Kosai Furukawa, Yuka Uchida, Airi Kobayashi, Kazukiyo Nagai
- 3Pd070 Gas Separation Performance of Zeolite/Pebax Composite Membranes Modified under Magnetic Field  
Chenyi Zhang, Hiroyoshi Kawakami, Masafumi Yamato
- 3Pc071 Water Vapor Barrier Properties of Chitosan Salt/Starch Blend Membranes  
Ryuhei Nagashima, Rei Onishi, Airi Kobayashi, Kazukiyo Nagai
- 3Pd072 Investigation of nanosheets-composite PVDF crosslinked membranes for seawater desalination: Membrane morphophology depending on the nanosheet-composite ratio  
ZHAOJUN FAN, Akimitsu Ichimori, Takeru Nitta, Shinobu Uemura
- 3Pc073 Design of a Resin Catalyst for Selective Epoxidation of Structurally Diverse Alkenes Bearing Ionic Functional Groups  
Yusuke Kuroda, Yusei Fujii, Kiyosei Takasu

- 3Pd074 Structural Stabilization of Vertically Aligned Nanocylinder Thin Films via Charge-Transfer Crosslinking between Stilbene and Fumarate and Their Application in Permeable Membranes  
Fumika Ota, Sayaka Taie, Sadayuki Asaoka
- 3Pc075 Selective adsorption of indole by molecular imprinting polymers encapsulated hollow-type spherical bacterial cellulose gels  
Souta Yamaguchi, Toru Hoshi
- 3Pd076 Development of Enzymatic Reaction Gels  
Yoshiyuki Sato, Tomoki Yasui, Takuya Nishimura, Yoshinori Katsuyama, Takayuki Kurokawa
- 3Pc077 Creation of energy conversion and substance transport systems with supramolecular materials self-assembled by molecular recognition  
Yilin Cao, Xue Li, Yuichiro Kobayashi, Akira Harada, Hiroyasu Yamaguchi
- 3Pd078 Immobilization of OAA1 Lectin on Cellulose Filter Paper and Optimization of Nonspecific Adsorption Suppression for Blood microRNA Diagnostics  
Ai Miyagi, Tadashi Tsukamoto, Yuji Shibasaki, Yoshihiro Taguchi
- 3Pc079 Investigation on providing molecular recognition ability to a polypeptide gel by dynamic exchange of its side chains in the presence of a target molecule  
Yoshiki Omata, Hiroyuki Maekawa, Toshiyuki Oyama
- 3Pd080 Photosensitized Reduction in Vertically Aligned Nanocylinder Thin Films with a High-Density Metal Complex Assembly at Phase-Separated Interfaces  
Hiroya Oeda, Kazuki Fukata, Sadayuki Asaoka
- 3Pc081 Theoretical Design of High-Efficiency CO<sub>2</sub> Separation Polyimide Membranes Using a Hierarchical Generative Model  
Koshiro Miyatake, Hayato Higuchi, Masaya Miyagawa, Hiromitsu Takaba

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

- 3Pd084 Synthesis and O<sub>2</sub> Binding Ability of Universal Red Blood Cells Covered with PEG to Mask Blood Type Antigens  
Yuri Ishibashi, Mayuka Fujita, Teruyuki Komatsu
- 3Pc085 Controlled release of boronic acid derivatives in response to pH and reactive oxygen species with catechol-functionalized polymers.  
Ryosuke Nakatsukasa, Yuta Yoshizaki, Tomohiro Konno
- 3Pd086 Design of phospholipid polymer nanomaterials for deep tissue penetration and their evaluation using three-dimensional cell culture models  
Yo Tanaka, Yuta Yoshizaki, Tomohiro Konno
- 3Pc087 Synthesis of Anti-inflammatory Drug-Conjugated poly(L-lysine) derivatives and evaluation of their penetration behaviors into platelets  
Takashi Ohara, Haruka Kitai, Rina Yokoi, Takuya Kotani, Takayasu Suzuka, Tohru Takeuchi, Sachiro Kakinoki
- 3Pd088 Synthesis of photocleavable antineoplastic drug-amphiphilic polymer conjugates and evaluation of their interaction with platelets  
Chisato Onoe, Tsuyoshi Doko, Sachiro Kakinoki
- 3Pc089 Silica-Enhanced Polyion Complex Nanogels for Tough Injectable Hydrogels in Biomedical Applications  
Yuta Koda, Shou Sakaue, Yukio Nagasaki

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



- 3Pd090 Nucleic acid delivery to cells by polymeric micelles coated with polysaccharides by polyion complex formation  
Yuichi Kuwano, Yusuke Taoka, Akira Asai, Yuichi Ohya
- 3Pc091 Study on spacer length of transporter recognition polymers  
Naoki Yamada, Kanjiro Miyata
- 3Pd092 Intranasal powder formulation for efficient drug delivery from nose to brain  
Daisuke Inoue, Yoshihiro Seto, Hideto To
- 3Pc095 Acute blood response to peptide-modified surface of freeze-dried vascular graft  
Yuta Fujimaru, Yuji Yasui, Sachiro Kakinoki, Yasuhiko Iwasaki, Tetsuji Yamaoka, Atsushi Mahara
- 3Pd096 Simple modification of antibacterial polymers on fibers and the antibacterial properties  
Riku Suzuki, Akihiro Saito, Masato Mutsuga, Aika Yamawaki-Ogata, Yuji Narita, Yohei Kotsuchibashi
- 3Pc097 Biomaterial fabrication by Langmuir-Blodgett technique using block copolymer  
Yuta Nakao, Masaru Tanaka, Daiki Murakami
- 3Pd098 Extracellular Matrix Hydrogel derived from Decellularized Cartilage  
Mia Morimoto, Chisato Oishi, Sachiro Kakinoki, Takahiko Nakaoki, Atushi Mahara
- 3Pc099 Quantification of biomarkers using latex agglutination and image analysis  
Atsuhiro Yamaguchi, Kohei Toda, Keitaro Sou, Shinji Takeoka
- 3Pd100 Modification of cationic copolymers on artificial blood vessels by an electrostatic interaction and the antibacterial properties  
Takato Miyashta, Akihiro Saito, Masato Mutsuga, Aika Yamawaki-Ogata, Yuji Narita, Yohei Kotsuchibashi
- 3Pc101 Structural and physical properties of supramolecular structure formed by fluorescent labeled polyethylene glycol.  
Sara Yano, Kinari Saitoh, Takahiko Nakaoki, Atsushi Mahara
- 3Pd102 Design of Apoptotic Cell Membrane-Mimicking Polymer-Antibody Complexes  
Taiki Goto, Kosuke Sato, Ahmed Nabil, Mitsuhiro Ebara
- 3Pc103 In Situ Detection of Potassium Ion Secretion from Mammalian Cells Using a fluorescent Potassium Ion Sensor Fibermats  
Azumi Sako, Toshihisa Mizuno
- 3Pd104 Development of temperature-responsive injectable polymer forming covalent cross-linked hydrogel upon mixing with blood  
Hiromi Goto, Yuki Miyaji, Yusuke Taoka, Yuichi Ohya
- 3Pc105 Selective label-free separation technology for tumor cells using PMEAs derivatives  
Kaito Hatate, Shingo Kobayashi, Masaru Tanaka
- 3Pd106 Synthesis and Characterization of Gelatin-conjugated Polyester Bioelastomers  
Yuki Okubo, Tatsuya Kawakubo, Sachiro Kakinoki