
Original Papers

- O-1** Two-Step Degradable ABAC-Type Periodic Poly(Cyclic Acetal)s Synthesized by Sequence-Programmed Monomer Formation and Subsequent Polyaddition Based on Cyclotrimerization of One Vinyl Monomer and Two Aldehydes
Naito, T.; Kanazawa, A.; Aoshima, S.
Giant **2023**, *14*, 100159.
- O-2** Sequence-Controlled Polymer Synthesis Derived from Alcohols, Cyclic Enol Ethers, and Vinyl Ethers: Selective Generation of 2-Alkoxy Cyclic Ethers Followed by Living Cationic Alternating Copolymerization by the One-Pot Process
Maruyama, K.; Kanazawa, A.; Aoshima, S.
Macromolecules **2023**, *56*, 4190–4197.
- O-3** Alternating Cationic Copolymerization of Vinyl Ethers and Sequence-Programmed Cyclic Trimer Consisting of One Vinyl Ether and Two Aldehydes for ABCC-Type Periodic Terpolymer
Naito, T.; Kanazawa, A.; Aoshima, S.
Polym. Chem. **2023**, *14*, 2829–2837.
- O-4** 3-Alkoxyphthalides as Nonhomopolymerizable, Highly Reactive Comonomers for ABC Pseudo-Periodic Terpolymers and Degradable Polymers via Cationic Co- and Terpolymerizations with Oxiranes and/or Vinyl Ethers
Takahashi, Y.; Kanazawa, A.; Aoshima, S.
Macromolecules **2023**, *56*, 4198–4207.
- O-5** Cationic Ring-Opening Copolymerization of Cyclic Acetals and 1,3-Dioxolan-4-ones via the Activated Monomer Mechanism and Transacetalization Reaction
Takebayashi, K.; Kanazawa, A.; Aoshima, S.
Macromolecules **2023**, *56*, 5524–5533.
- O-6** Photoinduced Superacceleration of Metal-Free Living Cationic Polymerization Using Diaryliodonium Salts as Organic Lewis Acid Catalysts
Mishima, Y.; Kanazawa, A.; Aoshima, S.
Macromolecules **2023**, *56*, 6941–6950.
- O-7** Imidazolium-Based Polymeric Ionic Liquids with Diverse Carboxylates: Precision Synthesis and LCST- and UCST-Type Thermoresponsivity in Water
Matsuo, N.; Ueda, M.; Kanazawa, A.; Aoshima, S.
Polym. Chem. **2023**, *14*, 4804–4808.

- O-8** Cascade Ring Strain Release Polymerization of Cyclohexene Oxide and Derivatives Using a Mono(μ -Alkoxo)bis(alkylaluminum) Initiator
Pedretti, B. J.; Zhu, C.; Watanabe, H.; Aoshima, S.; Lynd, N. A.
Macromolecules **2023**, *56*, 4884–4894.
- O-9** In Situ and Ex Situ Studies of Ring-Like Assembly of Silica Nanoparticles in the Presence of Poly(propylene oxide)–Poly(ethylene oxide) Block Copolymers
Takahashi, R.; Yamamoto, K.; Sugahara, R.; Otake, R.; Hayashi, K.; Nakamura, J.; Ohtsuki, C.; Aoshima, S.; Sugawara-Narutaki, A.
Langmuir **2023**, *39*, 11379–11387.
- O-10** Synthesis of Helically π -Stacked Poly(quinolylene-2,3-methylene)s with Anthracene Derivatives at the Chain End: Intramolecular Energy Transfer Based on the π -Stacked Architecture
Kanbayashi, N.; Nishio, M.; Okamura, T.; Onitsuka, K.
Polym. Chem. **2023**, *14*, 412–420.
- O-11** Syntheses and Structures of Arenethiolato Cobalt(II) Complexes Containing Acylamino Groups: Steric Effects of Bulky Ligands on Coordination and Geometry
Tomita, Y.; Okamura, T.; Umeda, Y.; Nishimoto, K.; Yamashita, S.; Onitsuka, K.
Inorg. Chem. **2023**, *62*, 8678–8691.
- O-12** Facile End-Functionalization of Poly(quinolylene-2,3-methylene) Using the Terminal Palladium Complex: Thiocarbonylation through Formation of an Acyl Palladium Complex at the Polymer Terminal
Kanbayashi, N.; Narukawa, M.; Onitsuka, K.
Macromol. Rapid. Commun. **2023**, *44*, 2300251.
- O-13** Living Cyclocopolymerization via Alternating Insertion of Alkyl Isocyanide and Allene to the Organonickel Complex
Kanbayashi, N.; Yamamoto, R.; Okamura, T.; Onitsuka, K.
Macromolecules **2023**, *56*, 8658–8665.
- O-14** マイクロレオロジーの測定技術
杉森 建哉; 浦川 理; 井上 正志
オレオサイエンス **2023**, *23*, 477–482.
- O-15** Time-Temperature and Time-Electric Field Correlation for Integrated Currents in XLPE
Sekiguchi, Y.; Urakawa, O.; Inoue, T.
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- O-16** Dielectric Relaxation Behavior of Halobenzene Confined in the δ -Phase of Syndiotactic Polystyrene
Urakawa, O.; Kobayashi, H.; Inoue, R.; Kaneko, F.; Inoue, T.
Macromol. Symp. **2023**, *408*, 2200103(1–5).
- O-17** Solvent effects of N, N-dimethylformamide and methanol on mass spectrometry imaging by tapping-mode scanning probe electrospray ionization
Otsuka, Y.; Ote, N.; Sun, M.; Shimma, S.; Urakawa, O.; Yamaguchi, S.; Kudo, T.; Toyoda, M.
Analyst **2023**, *148*, 1275–1284.
- O-18** Synthesis of Stereoregular Uniform Oligomers Possessing a Dense 1,2,3-Triazole Backbone
Kamon, Y.; Miura, J.; Okuno, K.; Yamasaki, S.; Nakahata, M.; Hashidzume, A.
Macromolecules **2023**, *56*, 292–304.
- O-19** Preferential Formation of Specific Hexose and Heptose in the Formose Reaction under Microwave Irradiation
Hashidzume, A.; Imai, T.; Deguchi, N.; Tanibayashi, T.; Ikeda, T.; Michitaka, T.; Kuwahara, S.; Nakahata, M.; Kamon, Y.; Todokoro, Y.
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- O-20** Contrasting Thermoresponsiveness of Stereoisomers of a Dense 1,2,3-Triazole Polymer Carrying Amide Side Chains
Okuno, K.; Miura, J.; Yamasaki, S.; Nakahata, M.; Kamon, Y.; Hashidzume, A.
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- O-21** Synthesis of Dense 1,2,3-Triazole Oligomers Consisting Preferentially of 1,5-Disubstituted Units via Ruthenium(II)-Catalyzed Azide–Alkyne Cycloaddition
Taguchi, R.; Nakahata, M.; Kamon, Y.; Hashidzume, A.
Polymers **2023**, *15*, 2199.
- O-22** Interactions of Mono- and Divalent Host Molecules with Multi- and Divalent Guest Molecules
Ishitsuka, K.; Nakahata, M.; Kamon, Y.; Hashidzume, A.
Chem. Lett. **2023**, *52*, 752–756.
- O-23** Water Fraction Dependence of the Aggregation Behavior of Hydrophobic Fluorescent Solutes in Water–Tetrahydrofuran

Tsuji, H.; Nakahata, M.; Hishida, M.; Seto, H.; Motokawa, R.; Inoue, T.; Egawa, Y.
J. Phys. Chem. Lett. **2023**, *14*, 11235–11241.

- O-24** Efficient Synthesis of Cyclic Poly(ethylene glycol)s under High Concentration Conditions by the Assistance of Pseudopolyrotaxane with Cyclodextrin Derivatives
Xiao, C.-L.; Kobayashi, Y.; Tsuji, Y.; Harada, A.; Yamaguchi, H.
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- O-25** Supramolecular polysulfide polymers cross-linked by metal-ligand interactions
Kobayashi, Y.; Kitano, D.; Nishimura, R.; Yamagishi, Y.; Horiguchi, A.; Yamaguchi, H.
Polym. Chem. **2023**, *14*, 2577–2580.
- O-26** Supramolecular sulfur-containing polymers with hydrogen bonding
Kobayashi, Y.; Yamagishi, Y.; Nishimura, R.; Xiao, C. L.; Kitano, D.; Horiguchi, A.; Hashimoto, S.; Yamaguchi, H.
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- O-27** Efficient cyclization of linear polymer with pseudopolyrotaxane assistance
Tsuji, Y.; Kobayashi, Y.; Xiao, C. L.; Harada, A.; Yamaguchi, H.
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- O-28** Leaf-Inspired Host-Guest Complexation-Dictating Supramolecular Gas Sensors
Park, J.; Sasaki, Y.; Ishii, Y.; Murayama, S.; Ohshiro, K.; Nishiura, K.; Ikura, R.; Yamaguchi, H.; Harada, A.; Matsuba, G.; Washizu, H.; Minami, T.; Takashima, Y.
ACS Appl. Mater. Interfaces **2023**, *15*, 39777–39785.
- O-29** Self-Healable Poly(dimethyl siloxane) Elastomers Based on Host-Guest Complexation between Methylated β -Cyclodextrin and Adamantane
Yoshida, D.; Park, J.; Ikura, R.; Yamashita, N.; Yamaguchi, H.; Takashima, Y.
Chem. Lett. **2023**, *53*, 93–96.
- O-30** Self-Healable and Conductive Hydrogel Coatings Based on Host-Guest Complexation between β -Cyclodextrin and Adamantane
Park, J.; Tamura, H.; Nakahata, M.; Kobayashi, Y.; Yamaguchi, H.; Nakajima, K.; Takahashi, H.; Takata, S.; Kayano, K.; Harada, A.; Hatano, K.; Takashima, Y.
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- O-31** Composite Hydrogels with Host-Guest Using Cellulose Nanocrystal as Supramolecular Interaction Filler
Noe, M. M.; Sugawara, A.; Asoh T.; Takashima, Y.; Harada, A.; Uyama, H.
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- O-32** Fiber Morphology Design of Cellulose Composites Through Multiscale Simulation
Uetsuji, Y.; Hamamoto, R.; Chao, L.; Tsuyuki, Y.; Tsuchiya, K.; Ikura, R.; Takashima, Y.
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- O-33** A Transformable and Bulky Methacrylate Monomer That Enables the Synthesis of an MMA-nBA Alternating Copolymer: Sequence-Dependent Self-Healing Properties
Lai, H.; Jin, C.; Park, J.; Ikura, R.; Takashima, Y.; Ouchi, M.
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- O-34** Cyclic Polyphenylene Sulfide as Additive to Improve the Mechanical Properties of Polystyrene-based Materials
Ding, Y.; Park, J.; Ikura, R.; Nara, S.; Toda, K.; Takashima Y.
Macromolecules **2023**, *56*, 3132–3140.
- O-35** Hybridizing A Dual-Cross Network and A Linear Glassy Polymer for Dynamic Contributions to High Mechanical Toughness Based on Phase-Separated Structures
Kawai, Y.; Park, J.; Murayama, S.; Ikura, R.; Osaki, M.; Konishi, T.; Matsuba, G.; Takashima, Y.
Macromolecules **2023**, *56*, 4503–4512.
- O-36** Preparation of Mechanically Tough Poly(dimethyl siloxane) through the Incorporation of Acetylated Cyclodextrin-Based Topologically Movable Cross-links
Yoshida, D. ;Park, J.; Yamashita, N.; Ikura, R.; Kato, N.; Kamei, M.; Ogura, K.; Igarashi, M.; Nakagawa, H.; Takashima, Y.
Polym. Chem. **2023**, *14*, 3277–3285.
- O-37** Tough Citric Acid-Modified Cellulose-Containing Polymer Composites with Three Components Consisting of Movable Cross-Links and Hydrogen Bonds
Park, J.; Asaki, Y.;Fujiwara, Y.;Wada, T.;Ikura, R.; Sugawara, A.; Konishi, T.; Matsuba, G. Uetsuji, Y.; Uyama, H.; Takashima, Y.
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- O-38** Water Content-Dependent Switching of the Bending Behavior of Photoresponsive Hydrogels Composed of Hydrophilic Acrylamide-Based Main Chains and Hydrophobic Azobenzenes
Park, J.; Shimizu, Y.; Zhou, X.; Ikura, R.; Matsuba, G.; Takashima, Y.

- O-39** Highly Stretchable Stress-Strain Sensor from Elastomer Nanocomposites with Movable Cross-links and Ketjenblack
Ikura, R.; Kajimoto, K.; Park, J.; Murayama, S.; Fujiwara, Y.; Osaki, M.; Suzuki, T.; Shirakawa, H.; Kitamura, Y.; Takahashi, H.; Ohashi, Y.; Obata, S.; Harada, A.; Ikemoto, Y.; Nishina, Y.; Uetsuji, Y.; Matsuba, G.; Takashima, Y.
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- O-40** Supramolecular Photoresponsive Polyurethane with Movable Crosslinks Based on Photoisomerization of Azobenzene
Zhou, X.; Ikura, R.; Jin, C; Yamaoka, K.; Park, J.; Takashima, Y.
Aggregate **2023**, e457.
- O-41** Enhancement of the Mechanical Properties of Organic-Inorganic Hybrid Elastomers by Introducing Movable and Reversible Crosslinks
Yamashita, N.; Yamaoka, K.; Ikura, R.; Yoshida, D.; Park, J.; Kato, N.; Kamei, M.; Ogura, K.; Igarashi, M.; Nakagawa, H.; Takashima, Y.
Soft Matter **2023**, *19*, 9074–9081.
- O-42** Material Design of Citric Acid-Modified Cellulose Composite Polymeric Materials with Both Tough and Sustainable Enhancement by Multiple Noncovalent Bonds
Wada, T.; Park, J.; Yamaoka, K.; Asaki, Y.; Sugawara, A.; Ikura, R.; Takahashi, Y.; Takenaka, N.; Uetsuji, Y.; Uyama, H.; Takashima, Y.
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- O-43** Red fluorescent proteins engineered from green fluorescent proteins.
Imamura, H.; Otsubo, S.; Nishida, M.; Takekawa, N.; Imada, K.
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- O-44** Polymorphism of Cis-Unsaturated Fatty Acid Amide: Oleamide
Tanaka, T.; Takechi, C.; Kaneko, F.; Suzuki, M.
Crystal Growth and Design **2023**, *23*, 3084–3090.
- O-45** Simultaneous SANS/FTIR measurement system incorporating the ATR sampling method
Kaneko, F.; Radulescu, A.; Nakagawa, H.
Journal of Applied Crystallography **2023**, *56*, 1522–1527.
- O-46** Complex Formation Behavior of Silica Nanoparticles and Xanthan
Tomofuji, Y.; Terao, K.
Macromol. Symp. **2023**, *408*, 2200025.

- O-47** Temperature Induced Nanostructure Formation Behavior of Core Cross-Linked Star-Shaped Poly(*N*-isopropylacrylamide) in Water
Terao, K.; Abe, M.; Nagase, M.; Takeshima, S.; Ida, S.; Kanaoka, S.
Macromolecules **2023**, *56*, 5635–5641.
- O-48** Correlation between Conformational Feature in Solution and Chiral Separation Ability of Linear and Nonlinear Amylose Tris(alkylcarbamate)s
Kishimoto, A.; Ryoki, A.; Kitamura, S.; Terao, K.
Polymer **2023**, *284*, 126303.
- O-49** Solution Characterization of a Hyperbranched Polysaccharide Carbamate Derivative and Specific Phase Separation Behavior Due to Chain Branching
Mizuguchi, M.; Umeda, K.; Mizumoto, H.; Terao, K.
Soft Matter **2023**, *19*, 7781–7786.

Review Articles

- R-1** 精密重合反応を基盤とした新しい π スタック高分子の構築
神林直哉
未来社会共創を目指す研究シーズ集 2023 **2023**, 56.
- R-2** どこからが高分子？ — 均一オリゴマー合成の最近の展開
中畑 雅樹
化学と工業 **2023**, 10, 706–707.
- R-3** Molecular Conformation and Intermolecular Interactions of Linear and Cyclic Amylose Derivatives in Solution
Terao, K.; Ryoki, A.; Kitamura, S.; Sato, T.
Macromol. Symp. **2023**, 408, 2200024.
- R-4** Regulation of motor activity of ciliary outer-arm dynein by the light chain 1; Implication from the structure of the light chain bound to the microtubule-binding domain of the heavy chain
Yagi, T.; Toda, A.; Ichikawa, M.; Kurisu, G.
Biophys. Physicobiol. **2023**, 20, e200008

Books

- B-1** 複合架橋エラストマー
以倉 峻平、朴 峻秀、高島 義徳
持続可能な社会を支えるゴム・エラストマー (CSJカレントレビュー: 46) 新素材・自己修復・強靱化と最先端評価技術(化学同人出版) **2023**, 46, Chapter 7, 74-79.
- B-2** シクロデキストリンを用いた自己修復ポリマーの開発
金 昌明、高島 義徳、原田 明
月刊ファインケミカル 2023年9月号特集『自己修復ポリマーの最新研究開発動向』(株式会社シーエムシー出版) **2023**, 52.
- B-3** 可逆性結合・可動性架橋を用いた自己修復性接着システムの構築
山岡 賢司、以倉 峻平、銭 韵鵬、高島 義徳
接着と剥離のための高分子設計と応用, 第3編 第4章, シーエムシー出版 **2023**.
- B-4** In Vitro Flagellar Type III Protein Transport Assay Using Inverted Membrane Vesicles
Imada, K.; Terashima, H.
Methods. Mol. Biol. 2646 - Bacterial and Archaeal Motility, Chapter 2, 17–26, Humana Press (**2023**)
- B-5** 5.1 直鎖ホモポリマーの分子形態
佐藤 尚弘, 寺尾 憲
基礎高分子科学 演習編 第2版, pp. 92-97, 東京化学同人 (2023).
- B-6** 5.2 剛直性高分子と屈曲性高分子
佐藤 尚弘, 寺尾 憲, 井田 大地
基礎高分子科学 演習編 第2版, pp. 98-103, 東京化学同人 (2023).
- B-7** 5.4 分岐・環状高分子
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Miscellaneous Publications

- M-1** チオエポキシ硬化物を用いたリチウム硫黄電池
小林裕一郎、橋本駿、堀口顕義、西村龍人、山口浩靖
特願 2023-171267 (出願日：2023 年 10 月 2 日)
- M-2** 硫黄含有化合物及び高分子材料
小林裕一郎、山岸佑輝、堀口顕義、北野大輝、山口浩靖
特願 2023-521210 (出願日：2023 年 9 月 11 日)
- M-3** 樹脂組成物及びその製造方法
高島 義徳、宇山 浩、朴 峻秀、朝木 佑貴、和田 拓真、麻生 隆彬、
竹中 直巳、久禮 文章、高橋 佑弥
特願 2023-001809 (出願日：2023 年 1 月 10 日)
- M-4** 高分子材料およびその製造並びに高分子材料の分解方法
高島 義徳、朴 峻秀、以倉 峻平、松村 優成
特許公開 2023-050042 (出願日：2023 年 3 月 27 日)
- M-5** 接着剤組成物
高島 義徳、宇山 浩、菅原 章秀、朴 峻秀、以倉 峻平、竹中 直巳、
久禮 文章、高橋 佑弥
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- M-6** Kinetics of Denaturation and Renaturation Processes of Double-stranded Helical Polysaccharide, Xanthan in Aqueous Sodium Chloride
Terao, K.; Tomofuji, Y.
Spring-8/SACLA Research Frontiers 2022 **2023**, 78-79.
- M-7** 多重らせん高分子のコンホメーション変化の動力学
寺尾 憲
研究シーズ集 2023(未来社会共創を目指す), 28, 大阪大学共創機構 (2023).