

Accounts and Reviews BCSJ 100th Anniversary Collection

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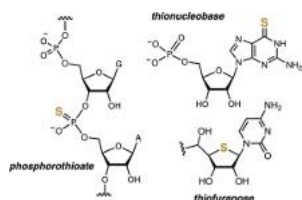
Keywords: biosynthesis | oxygen-to-sulfur substitution | sulfur-containing natural products

Enzymatic machinery for oxygen-to-sulfur substitutions in nucleotides and nucleic acids

Richiro Ushimaru*

Bull. Chem. Soc. Jpn. 2026, 99, No. 4, uoag046

doi:10.1093/bulcsj/uoag046



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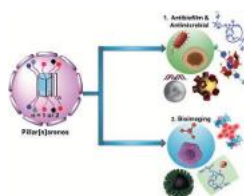
Keywords: antibiofilm and antimicrobial agents | bioimaging agents | pillar[n]arene

Pillar[n]arenes: applications as antibiofilm, antimicrobial, and bioimaging agents

Gangadhara Angajala, Tamar Evan-Salem, and Yoram Cohen*

Bull. Chem. Soc. Jpn. 2026, 99, No. 4, uoag034

doi:10.1093/bulcsj/uoag034



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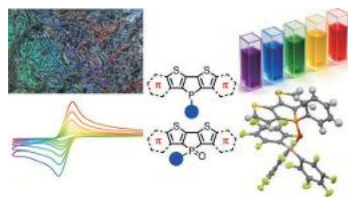
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Keywords: conjugated materials | phospholes | self-assembly
Dithieno[3,2-b:2',3'-d]phospholes—recent advances

Avik Bhattacharjee* and Thomas Baumgartner*

Bull. Chem. Soc. Jpn. 2026, 99, No. 4, uoag049

doi:10.1093/bulcsj/uoag049



Award Accounts BCSJ 100th Anniversary Collection

The Chemical Society of Japan Award for Creative Work for 2020

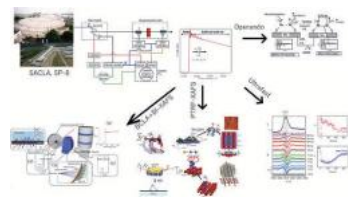
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Operando X-ray absorption fine structure spectroscopy and its applications to catalysts

Kiyotaka Asakura*

Bull. Chem. Soc. Jpn. 2026, 99, No. 4, uoag043

doi:10.1093/bulcsj/uoag043



Award Accounts BCSJ 100th Anniversary Collection

The Chemical Society of Japan Award for Creative Work for 2024

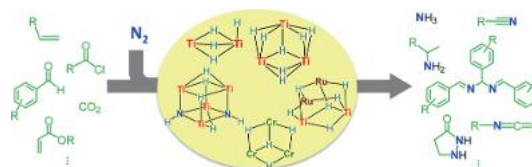
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Keywords: dinitrogen | functionalization | hydride clusters
Dinitrogen activation and functionalization by multimetallic hydride clusters

Takanori Shima*

Bull. Chem. Soc. Jpn. 2026, 99, No. 4, uoag042

doi:10.1093/bulcsj/uoag042



BCSJ Award Article Free Access

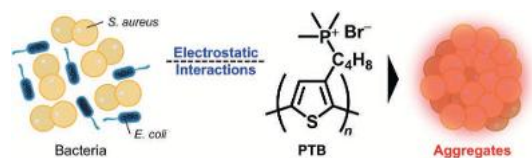
Keywords: bacterial recognition | cationic π-conjugated polymer | polythiophene

Tuning self-organization of phosphonium-functionalized polythiophenes for selective recognition and separation of gram-positive and gram-negative bacteria

Hibiki Ogura, Rui Kuroda, Nobuyuki Kanzawa, Takashi Hayashita, Masahiro Yoshizawa-Fujita, Masahiro Rikukawa, and Yuko Takeoka*

Bull. Chem. Soc. Jpn. 2026, 99, No. 4, uoag050

doi:10.1093/bulcsj/uoag050



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Keywords: boron-doped diamond | CO₂ reduction | ion-independent operation

Ion-independent CO₂ reduction with boron-doped diamond electrodes for sustained formic acid production and in situ concentration

Sari Araki and Yasuaki Einaga*

Bull. Chem. Soc. Jpn. 2026, 99, No. 4, uoag048

doi:10.1093/bulcsj/uoag048

Keywords: layered positive electrode materials | lithium-ion battery recycling | lithium-proton exchange reaction

Kinetic analysis of lithium-proton exchange reaction of LiNi_{0.88}Co_{0.09}Al_{0.03}O₂ positive electrode materials for lithium-ion battery recycling

Hana Inoue, Chisa Matsushita, and Kingo Ariyoshi*

Bull. Chem. Soc. Jpn. 2026, 99, No. 4, uoag041

doi:10.1093/bulcsj/uoag041

Selected Paper

Keywords: amination | chemodivergence | sulfones

Chemodivergent ring annulation of ortho-bromophenyl sulfones: synthesis of π-expanded carbazoles and acridines via five- and six-membered cyclic sulfones

Toshiki Sakami, Hikaru Watanabe, Akira Iwakura, Saeko Inohara, Toshiyuki Tsukida, Yasuhiro Okuda, Haruo Akashi, and Akihiro Orita*

Bull. Chem. Soc. Jpn. 2026, 99, No. 4, uoag044

doi:10.1093/bulcsj/uoag044



Keywords: aggregation | organic-inorganic hybrid | silsesquioxane

Study on the aggregation behavior of polyhedral oligomeric silsesquioxane compounds in solution

Naoki Watanabe, Takahiro Iwamoto, Hiroaki Imoto, and Kensuke Naka*

Bull. Chem. Soc. Jpn. 2026, 99, No. 4, uoag045

doi:10.1093/bulcsj/uoag045

Keywords: but-2-ene-1,4-diol | palladium catalysis | quinoxaline derivatives

Direct palladium/carboxylic acid-catalyzed tandem allylation of *o*-phenylenediamines with but-2-ene-1,4-diol in water

Kuang-Feng Chu and Shyh-Chyun Yang*
Chem. Lett. 2026, 55, No. 4, upag047 doi:10.1093/chemle/upag047

Keywords: aggregation | cyclophane | pyrene
Aggregation and monomeric dispersion of pyrene-appended cyclophanes bearing oligo (ethylene glycol)-amido linkers by modulating side-chain polarity

Osamu Hayashida,* Haruto Kawachi, and Takaaki Miyazaki
Chem. Lett. 2026, 55, No. 4, upag057 doi:10.1093/chemle/upag057

Keywords: chlorine | hypochlorous acid | molecular dynamics simulations
Force field for biomolecular simulations of chlorine and hypochlorous acid with accurate solvation energies

Rodrigo M. Cordeiro*
Chem. Lett. 2026, 55, No. 4, upag055 doi:10.1093/chemle/upag055

Keywords: hierarchically mesoporous metal-organic frameworks | template strategy | TPGS
Hierarchically mesoporous MOFs templated by a low-molecular-weight copolymer surfactant

Ximeng Liu, Fan Xia, Dongxue Feng, Jian Yang, Chun Feng, and Jinlou Gu*
Chem. Lett. 2026, 55, No. 4, upag053 doi:10.1093/chemle/upag053

Keywords: liquid crystals | reentrant phase | troponoid
Synthesis and mesomorphic properties of liquid crystals with a 5-(arylethynyl)troponone core

Kanji Kubo,* Daiki Kuribayashi, Seiji Ujiie, and Akira Mori
Chem. Lett. 2026, 55, No. 4, upag050 doi:10.1093/chemle/upag050

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Keywords: porous polymer monolith | wettability
One-pot in situ hydrophobic modification of porous polymer monoliths for selective oil absorption

Tomohiro Shimpō and Hiroyuki Kai*
Chem. Lett. 2026, 55, No. 4, upag046 doi:10.1093/chemle/upag046

Open Access

Keywords: catalysis | electric field | NO_x reduction
Electrically assisted NO_x storage-reduction catalytic processes enable efficient NO_x purification at low temperatures

Yuki Inoda, Takuma Higo, Kana Adachi, Ayaka Shigemoto, and Yasushi Sekine*
Chem. Lett. 2026, 55, No. 4, upag042 doi:10.1093/chemle/upag042

Keywords: partial oxidation of methane | transition-metal-free zeolite | ZSM-5 zeolite
Partial oxidation of methane to syngas over transition-metal-free ZSM-5 zeolite

Natnicha Yotpanya, Kengo Nakamura, Ryo Manabe, Kazumasa Murata, Peipei Xiao, Junko N. Kondo, and Toshiyuki Yokoi*
Chem. Lett. 2026, 55, No. 4, upag043 doi:10.1093/chemle/upag043

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Keywords: Ba_{0.5}Ca_{0.5}F₂ | fluoride-ion conductor | X-ray absorption fine structure
XAFS studies on the Ba_{1-x}Ca_xF₂ fluoride ion conductor

Toyonari Yaji, Kazuyuki Sato, Daiki Kido, Daisuke Shibata, Hirokazu Kitazawa, Masao Kimura, Takeshi Abe, and Kiyotaka Asakura*
Chem. Lett. 2026, 55, No. 4, upag041 doi:10.1093/chemle/upag041

Free Access

Keywords: dynamic nuclear polarization | magnetic orientation | NMR
Three-dimensional magnetic alignment of a host matrix containing a polarizing agent for dissolution DNP

Ryosuke Kusumi,* Tatsuhiko Konishi, Kayoko Kobayashi, Masahisa Wada, Yuko Hatanaka, Wakana Matsuda, Akinori Kagawa, and Makoto Negoro
Chem. Lett. 2026, 55, No. 4, upag040 doi:10.1093/chemle/upag040

Keywords: carborane anion | DFT calculation | phenyl cation
Designing a stable singlet phenyl cation via *ortho*-disubstitution with carborane anions

Yu Kitazawa,* Yuhi Ito, Masanobu Uchiyama,* and Mutsumi Kimura*
Chem. Lett. 2026, 55, No. 4, upaf228 doi:10.1093/chemle/upaf228