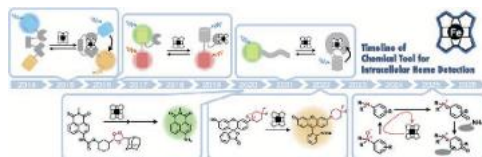


Accounts and Reviews | BCSJ 100th Anniversary Collection

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Keywords: fluorescent probe | labile heme | live-cell imaging
Recent advances in molecular strategies and applications of heme sensors and probes

Kanta Kawai and Tasuku Hirayama*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag020 doi:10.1093/bulcsj/uoag020

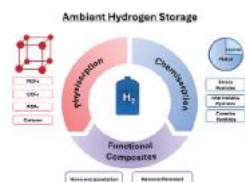


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Keywords: ambient hydrogen storage | chemisorption materials | physisorption materials
Hydrogen storage under ambient conditions: a mini-review

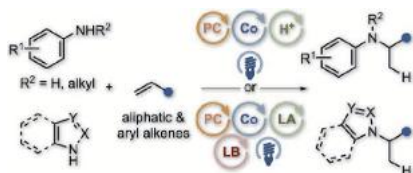
Dohyun Ahn, Junhua Kong, and Dan Zhao*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag011 doi:10.1093/bulcsj/uoag011



BCSJ Award Article | Free Access

Keywords: multiple catalysis | hydroamination | photoredox catalysis
Markovnikov-selective hydroamination of aliphatic alkenes with anilines and azoles through light-driven multiple catalysis

Naoto Kishida, Rino Kobayashi, Masanari Nakagawa, Kazunori Nagao,* and Hirohisa Ohmiya*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag021 doi:10.1093/bulcsj/uoag021



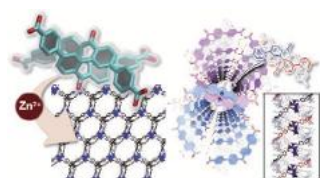
Keywords: Cu(I) complex | host-guest chemistry | quasiracemate
A quasiracemate strategy for controlling the guest-inclusion capability of metal-organic structures

Yongjin Zhao and Suguru Ito*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag025 doi:10.1093/bulcsj/uoag025

Selected Paper | Open Access

Keywords: figure-eight | helical assembly | metal-organic framework
A homochiral metal-organic framework with interconnected double-helical channels constructed by figure-eight ligands

Daisuke Owase, Shinpei Kusaka, Yuh Hijikata, Jenny Pirillo, Ryotaro Matsuda,* Fumitaka Ishiwari, Akinori Sasaki, Tomoyuki Ikai,* Hiroshi Shinokubo, and Norihito Fukui*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag029 doi:10.1093/bulcsj/uoag029



Open Access

Keywords: C-Glycosyltransferase | enzymatic reaction | ONIOM method

Mechanistic origin of C- over O-glycosylation in glycosyltransferase GgCGT: a QM/MM study

Daisuke Terada, Taichi Inagaki, and Miho Hatanaka*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag026 doi:10.1093/bulcsj/uoag026

Selected Paper | Open Access

Keywords: artificial metalloenzyme | directed evolution | hemoprotein

Directed evolution enhances the peroxidation activity of myoglobin reconstituted with an iron corrole complex

Koki Takeuchi, Shunsuke Kato,* Rina Ueshima, and Takashi Hayashi*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag024 doi:10.1093/bulcsj/uoag024



Keywords: carboxymethyl cellulose nanofiber | hydrogels | water
Pore-size-dependent structure of intermediate water in hydrogels of cellulose and agarose

Yusuke Beni, Yurina Sekine,* Takuya Nankawa, Yuta Takahara, and Tomoko Ikeda-Fukazawa*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag017 doi:10.1093/bulcsj/uoag017

Keywords: lead complex | radical complex | redox-active ligand
Redox characteristics of a lead(II) complex supported by a o-phenylenediamido ligand

Genta Hasegawa, Mayuka Yano, Mayuko Miyanishi, Yoshihito Shiota, Kazunari Yoshizawa,* Shinobu Itoh,* and Hideki Sugimoto*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag018 doi:10.1093/bulcsj/uoag018

Keywords: blue copper protein | entatic state | redox potential
Effects of side-loop flexibility on the redox potential and stability of the blue copper protein, pseudoazurin

Aozora Sugai, Takahide Yamaguchi,* and Takamitsu Kohzuma
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag023 doi:10.1093/bulcsj/uoag023

Open Access

Keywords: aza-18-crown-6 ether | supramolecular complexation | tannic acid

pH-responsive anionic protein complexation with stable tannic acid-Aza18C6 supramolecular networks under physiological Mg²⁺ concentration

Chisaki Nakaji, Takuya Sagawa,* Mineo Hashizume, Akihiko Hatano, Manabu Suzuki, and Kenichi Niikura*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag015 doi:10.1093/bulcsj/uoag015

Keywords: crown ether | liquid crystal | perylene bisimide
Nanostructures of liquid crystalline thin films of perylene bisimide derivatives bearing a 12-crown-4 ring complexing with lithium triflate

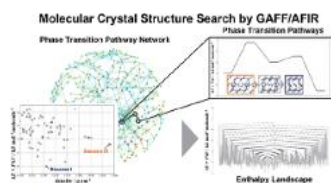
Tatsuaki Kajiwara, Taiki Taga, Azumi Akiyama, Yasuko Koshiba, Shohei Horike, Kanta Kirikawa, Shinobu Uemura, and Masahiro Funahashi*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag016 doi:10.1093/bulcsj/uoag016

Selected Paper

Keywords: artificial force induced reaction method | benzene crystal | phase transition pathway exploration

Exploring phase transition pathways in benzene crystals using the artificial force-induced reaction method with general AMBER force fields

Shoya Kondo, Taisuke Hasegawa, and Satoshi Maeda*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag012 doi:10.1093/bulcsj/uoag012

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Keywords: crown ether complexes | molecular conductors | supramolecular dynamics

Fluctuation-driven switching of magnetic exchange and charge transport in Ni(dmit)₂ salts with [24]crown-8-based supramolecular cations

Daisuke Ishikawa, Masato Haneda, Jun Manabe, Daisuke Shimoyama, Takeharu Haino, Kiyonori Takahashi, Takayoshi Nakamura,* and Sadafumi Nishihara*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag022 doi:10.1093/bulcsj/uoag022

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Keywords: hydrogen bond | liquid alcohol | x-ray diffraction

X-ray diffraction study of intermolecular hydrogen-bonded structure in liquid alcohols, C_nH_{2n+1}OH (n = 1~9)

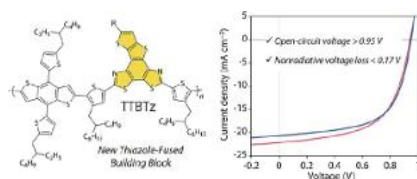
Yasuo Kameda,* Koshi Ozama, Yuko Amo, and Takeshi Usuki
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag008 doi:10.1093/bulcsj/uoag008

Selected Paper

Keywords: conjugated polymers | organic photovoltaics | thiazole

A novel thiazole-fused building block for π-conjugated polymers enabling low voltage loss in organic photovoltaics

Mayu Tomita, Kodai Yamanaka, Yuki Sato, Tsubasa Mikie, Hideo Ohkita, and Itaru Osaka*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag019 doi:10.1093/bulcsj/uoag019



Keywords: aggregation-induced emission enhancement | diarylethene | ethylene glycol

Phototriggered aggregation-induced emission enhancement with color modulation in N-substituted diarylmaimide-S,S,S',S'-tetraoxide derivatives

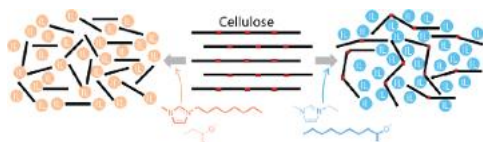
Kai Nishikawa, Hayato Tsuzuki, and Takashi Ubukata*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag007 doi:10.1093/bulcsj/uoag007

Selected Paper

Keywords: alkyl chain | cellulose | ionic liquid

Dissolution of cellulose in imidazolium carboxylate with long alkyl chain

Takatsugu Endo,* Kaho Hamada, Motoki Kawahara, Rikuto Kihara, Hiroaki Sugihara, Sawaya Suzuki, Hiroko Kobayashi, and Yoshifumi Kimura
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag010 doi:10.1093/bulcsj/uoag010



Keywords: acid catalysis | ionones | solid acids

Effect of pressure on product selectivity in an acid-catalyzed reaction: enhancement of β-ionone selectivity during the cyclization of pseudoionone on a solid Brønsted acid catalyst

Abhay M. Agola and Manish Kumar Mishra*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag014 doi:10.1093/bulcsj/uoag014

Open Access

Keywords: anisotropic nanocrystal | gold | nanoflower

Preparation and catalytic performance of supported gold hemi-nanoflowers for alcohol oxidation

Yuta Jino, Yusuke Kurihara, Shinji Saito, Riko Kawahara, Ryota Akiyama, Clara Morita-Imura, Takeshi Kawai,* and Yoshiro Imura*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag013 doi:10.1093/bulcsj/uoag013

Keywords: drug-resistant mutant | SARS-CoV-2 main protease | virtual alanine scan

Virtual alanine scan for an entire sequence of SARS-CoV-2 main protease complexed with ensitrelvir to detect drug resistance

Ayato Mizuno, Tomoki Nakayoshi, Eiji Kurimoto, Koichi Kato, and Akifumi Oda*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag005 doi:10.1093/bulcsj/uoag005

Keywords: agricultural waste | dye adsorption | phosphoric acid activation

Nanoporous activated carbon materials from pomelo peel for efficient adsorption of anionic and cationic dyes

Mandira Pradhananga Adhikari,* Pushpa Regmi, Sabina Shahi, Katsuhiko Ariga, and Lok Kumar Shrestha*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag006 doi:10.1093/bulcsj/uoag006

Keywords: Au cluster catalyst | DFT calculation | pretreatment conditions

Theoretical investigation of the variations in CO oxidation activity of Au/ZnO catalysts under different pretreatment conditions

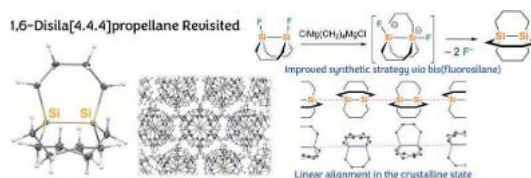
Tomohisa Yonemori,* Yasutaka Hamada, Yuhki Ishimaru, Tamao Ishida, Toru Murayama, Takashi Kawakami, Shusuke Yamanaka, and Mitsutaka Okumura
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoag002 doi:10.1093/bulcsj/uoag002

Selected Paper **Open Access**

Keywords: 1,6-disila[4.4.4]propellane | fluorosilane | linear stacking

1,6-Disila[4.4.4]propellane revisited part 1: improved synthesis by a mechanistically logical fluorosilane route and its structural aspects including linear stacking along the Si-Si bond in the crystalline state

Suguru Kobayashi, Takahiro Sasamori,* Yumiko Nakajima, Yasunori Minami, Kosuke Iizuka, Tomoyuki Saeki, Akio Toshimitsu, Hayato Tsuji, Shigehiro Yamaguchi, Aiko Fukazawa, Tomokatsu Kushida, Daisuke Hashizume, and Kohei Tamao*
Bull. Chem. Soc. Jpn. 2026, 99, No. 2, uoaf119 doi:10.1093/bulcsj/uoaf119



Highlight Review | Open Access

Keywords: **macrocycles** | **quinazoline** | **quinoline**
Insights into coordination and (semi-)rigidity in the molecular design of bicyclic heterocycle frameworks

Toi Kobayashi, Takuya Sakurai, and Naoya Kumagai*
Chem. Lett. 2026, 55, No. 2, upag020 doi:10.1093/chemle/upag020



Highlight Review | Free Access

Keywords: **construction of fused cycles** | **C–H bond functionalization** | **redox process**
Recent advances in sequential hydride shift-mediated double C(sp³)–H bond functionalization

Sosuke Ando, Tomoko Kawasaki-Takasuka, and Keiji Mori*
Chem. Lett. 2026, 55, No. 2, upag011 doi:10.1093/chemle/upag011



Keywords: **ionic liquids** | **mRNA delivery** | **transfection efficiency**
Lipid-based ionic liquids enable efficient messenger RNA intracellular delivery

Keisuke Tanaka, Yoshirou Kawaguchi, Rie Wakabayashi, Noriho Kamiya, and Masahiro Goto*
Chem. Lett. 2026, 55, No. 2, upag025 doi:10.1093/chemle/upag025

Keywords: **molecular beacon** | **oligodeoxynucleotides** | **singlet oxygen**
Molecular beacon strategies that control the generation of singlet oxygen via intramolecular energy transfer between a ruthenium photosensitizer and COT quencher on oligodeoxynucleotides

Sae Harada, Daisuke Mochizuki, Kazuki Iwasawa, Tatsuya Nishihara, Kiyohiko Kawai, Yasuko Osakada, Mamoru Fujitsuka, and Kazuhito Tanabe*
Chem. Lett. 2026, 55, No. 2, upag024 doi:10.1093/chemle/upag024

Free Access

Keywords: **enzymatic degradation** | **language models** | **machine learning**
Accurate prediction of enzymatic degradation of plastics by language models

Shijie Xu, Ke Xu, and Akira Onoda*
Chem. Lett. 2026, 55, No. 2, upag022 doi:10.1093/chemle/upag022

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Keywords: **C–S bond scission** | **double cross-coupling** | **polyphenylene sulfide**
Nickel-catalyzed efficient double cross-coupling of diaryl sulfides applicable to polyphenylene sulfide depolymerization to *p*-terphenyls

Ikuya Sugimoto, Takehiro Matsuyama, So Hiramoto, Takafumi Yatabe,* and Kazuya Yamaguchi*
Chem. Lett. 2026, 55, No. 2, upag021 doi:10.1093/chemle/upag021

Open Access

Keywords: **deep-sea-inspired chemistry** | **flow reactor** | **radical polymerization**
Deep-sea-inspired compact flow reactor for dynamic high-temperature chemistry

Keigo Kinoshita, Hirofumi Nakano, Hiroshi Negishi, and Shigeru Deguchi*
Chem. Lett. 2026, 55, No. 2, upag003 doi:10.1093/chemle/upag003

Open Access

Keywords: **ammonia decomposition** | **catalysis** | **electric field**
Effect of hetero-cation doping on Ru/CeO₂ for ammonia decomposition at low temperature in an electric field

Mio Hayashi, Hibiki Orii, Yukino Ofuchi, Kenta Mitarai, Takuma Higo, and Yasushi Sekine*
Chem. Lett. 2026, 55, No. 2, upag016 doi:10.1093/chemle/upag016

Keywords: **continuous flow** | **Diels–Alder** | **polymeric catalyst**
Ionically polymer-immobilized MacMillan catalysts in continuous-flow asymmetric Diels–Alder reaction

Md. Azgar Ali, Joh Yamada, and Naoki Haraguchi*
Chem. Lett. 2026, 55, No. 2, upag007 doi:10.1093/chemle/upag007

Open Access

Keywords: **β -Nitrostyrene** | **palladium catalysis** | **transfer nitration**
Palladium-catalyzed transfer nitration using β -nitrostyrenes as organic nitro reagents

Masayuki Kubo and Junichiro Yamaguchi*
Chem. Lett. 2026, 55, No. 2, upag023 doi:10.1093/chemle/upag023

Keywords: **enantioselectivity** | **hydrogen-bonded frameworks** | **multinuclear complexes**
Drastic change in incorporation of multinuclear complexations into hydrogen-bonded metallosupramolecular frameworks consisting of chiral Au^I₃Co^{III}₂ complex-anions

Supattra Somsri, Naoto Kuwamura, Nobuto Yoshinari,* Sreenart Surinwong Sakai, Way-Zen Lee, and Takumi Konno*
Chem. Lett. 2026, 55, No. 2, upag013 doi:10.1093/chemle/upag013

Keywords: **polymethacrylate** | **polystyrene** | **silsesquioxane**
Homo- and co-polymers of cage silsesquioxane-tethered methacrylate and styryl monomers: effects of linker length and rigidity on film transparency

Cashew Nagashima, Takahiro Iwamoto, Kensuke Naka, and Hiroaki Imoto*
Chem. Lett. 2026, 55, No. 2, upag018 doi:10.1093/chemle/upag018

Keywords: **chemodivergent synthesis** | **C–H bond activation** | **rhodium catalyst**

Rh(III)-catalyzed chemodivergent synthesis of isocoumarins and isoquinolones from *N*-methoxybenzamides and cyclic α -diazo-1,3-diketones

Dong Young Kim, Yu Kimura, Risako Miura, and Teruyuki Kondo*
Chem. Lett. 2026, 55, No. 2, upag017 doi:10.1093/chemle/upag017

Keywords: **amorphous** | **confined water** | **high pressure**
Suppressive crystallization of water confined in hydrophobic sub-nanometer pores under multi-GPa-range high pressures

Yasuhiro Sugiyama, Taku Iiyama, Yuki Shibasaki, Daisuke Wakabayashi, Tomoko Sato, Nobumasa Funamori, Masao Sunahara, Hirokazu Shimizu, and Ryusuke Futamura*
Chem. Lett. 2026, 55, No. 2, upag014 doi:10.1093/chemle/upag014

Keywords: microhoneycomb | sacrificial template | stereolithography
A proposal of sub-mm channel-sized honeycomb-shaped zeolite monolith conception following a sacrificial 3D-print templating method

Seiji B. Miyoshi R., Shintaroh Nagaishi, Yuta Nakasaka, and Shin R. Mukai*
Chem. Lett. 2026, 55, No. 2, upag004 doi:10.1093/chemle/upag004

Keywords: amyloid- β | D-amino acid | molecular dynamics simulation
Computational analysis of structural features in tetrameric amyloid β_{1-42} peptides containing D-Asp1, 7, and 23 residues

Ayato Mizuno, Tomoki Nakayoshi, Kenju Inaoka, Ayumi Shingaki, Koichi Kato, and Akifumi Oda*
Chem. Lett. 2026, 55, No. 2, upag015 doi:10.1093/chemle/upag015

Keywords: Michael addition | non-ionic cellulose derivative | water-solubility

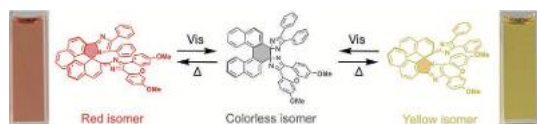
Synthesis of non-ionic water-soluble cellulose derivatives with low degrees of substitution via the Michael addition reaction

Masayasu Totani, Mimi Tokunaga, Hiroyuki Nagaishi, and Jun-ichi Kadokawa*
Chem. Lett. 2026, 55, No. 2, upag002 doi:10.1093/chemle/upag002

Editor's Choice **Free Access**

Keywords: biradical | imidazole dimer | negative photochromism
Negative photochromism of asymmetric binaphthyl-bridged imidazole dimers

Shiori Yagi, Takumi Aizawa, and Jiro Abe*
Chem. Lett. 2026, 55, No. 2, upag012 doi:10.1093/chemle/upag012



Open Access

Keywords: cyclobisbiphenylenecarbonyl | nonplanar π -systems | postfunctionalization
Nucleophilic addition to cyclobisbiphenylenecarbonyl

Taito Moribe, Hiyori Idei, Hiroshi Shinokubo, and Norihito Fukui*
Chem. Lett. 2026, 55, No. 2, upag010 doi:10.1093/chemle/upag010

Keywords: collagen model peptides | sol-gel transition | triple helix
Triple-helix crosslinked hydrogels with sol-gel transition in response to collagen model peptides

Kazuki Yoshida and Michiya Matsusaki*
Chem. Lett. 2026, 55, No. 2, upag009 doi:10.1093/chemle/upag009

Keywords: exciton binding energy | organic photocatalyst
Effect of terminal groups on exciton binding energy in tetraphenylethylene-based π -conjugated molecules

Hiroki Mori, Seihou Jinnai,* Yasushi Hosoda, Kai Wang, and Yutaka Ie*
Chem. Lett. 2026, 55, No. 2, upag008 doi:10.1093/chemle/upag008

Open Access

Keywords: electric field | perovskite | surface oxygen species
Low-temperature oxidative coupling of methane in an electric field over alkaline-earth-doped LaAlO₃ perovskite catalysts

Harunobu Tedzuka, Shuhei Ogo, Takuma Higo, and Yasushi Sekine*
Chem. Lett. 2026, 55, No. 2, upag005 doi:10.1093/chemle/upag005

Open Access

Keywords: alkane solvents | chlorosomal J-aggregates | POSS
Self-aggregation of synthetic bacteriochlorophyll-*d* analogs with a heptaisobutylated pentacyclooctasiloxane moiety in single-alkane solvents

Sunao Shoji,* Hiyori Idei, Takeo Nakano, and Hitoshi Tamiaki*
Chem. Lett. 2026, 55, No. 2, upag001 doi:10.1093/chemle/upag001

Open Access

Keywords: coffee-ring | evaporative self-organization | marangoni effects

Control of coffee-ring formation by vertical thermal gradients in confined droplets

Naruki Takada and Hideki Nabika*
Chem. Lett. 2026, 55, No. 2, upag006 doi:10.1093/chemle/upag006