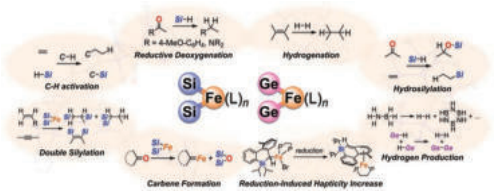
Accounts and Reviews | BCSJ 100th Anniversary Collection | Open Access

Keywords: catalyst | group 14 element-based ligands | iron complexes

Organosilicon- and organogermanium-based ligands as key components of iron complexes with characteristic reactivity patterns

Yuto Suga and Yusuke Sunada*

Bull. Chem. Soc. Jpn. 2025, 98, No. 10, uoaf092 doi:10.1093/bulcsj/uoaf092



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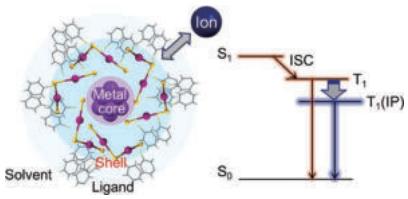
Keywords: dynamic ion association | excited-state dynamics | metal nanoclusters

Insights into the excited-state behavior of metal nanoclusters: from structure-based properties to dynamic control via ionic association

Wataru Ishii and Takuya Nakashima*

Bull. Chem. Soc. Jpn. 2025, 98, No. 10, uoaf090 doi:10.1093/bulcsj/uoaf090



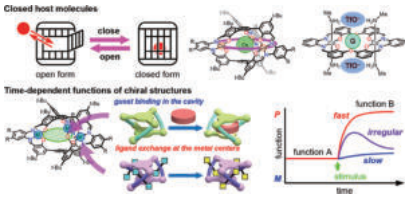
Award Accounts | BCSJ 100th Anniversary Collection | The Chemical Society of Japan Award for Creative Work for 2024 | Free Access

Keywords: chirality inversion kinetics | host–guest binding kinetics | ligand exchange

Structural conversions of host–guest systems and dynamic metal complexes for development of time-dependent functions

Shigehisa Akine*

Bull. Chem. Soc. Jpn. 2025, 98, No. 10, uoaf084 doi:10.1093/bulcsj/uoaf084



Keywords: crystal structural transformation | lithium tetrabenzoporphyrin radical | polymorph

A new polymorph of lithium tetrabenzoporphyrin radical

Ryutaro Tokunaga, Kiyonori Takahashi, and Masaki Matsuda*

Bull. Chem. Soc. Jpn. 2025, 98, No. 10, uoaf087 doi:10.1093/bulcsj/uoaf087

Open Access

Keywords: 18-crown-6 ether | potassium ion | tannic acid

Potassium ion-induced complexation of tannic acid and 18-crown-6 enables BSA encapsulation and pH-triggered disassembly

Mahiro Sarai, Junji Ueyama, Takuya Sagawa,* Kento Inaba, Mineo Hashizume, Akihiko Hatano, Manabu Suzuki, and Kenichi Niikura*

Bull. Chem. Soc. Jpn. 2025, 98, No. 10, uoaf086 doi:10.1093/bulcsj/uoaf086

Keywords: alkaline and earth-alkaline elements determination | crude oil digestion | MA-WD-PDC

Feasibility of medium and extra-heavy crude oil digestion using MA-WD-PDC: alkaline and earth-alkaline elements determination at ppb level by ICP OES

Mariele Samuel Nascimento, Gabriel Toneto Druzian, Rochele Sogari Picoloto, Fabio Andrei Duarte, Paola Azevedo Mello, Marcia Foster Mesko, and Erico Marlon Moraes Flores*

Bull. Chem. Soc. Jpn. 2025, 98, No. 10, uoaf081 doi:10.1093/bulcsj/uoaf081

Open Access

Keywords: ultrahigh temperature metal oxides | XAFS | XRD

Combined in situ quick X-ray absorption fine structure and X-ray diffraction systems for ultra-high temperature metal oxides

Hajime Tanida,* Tohru Kobayashi, Tsuyoshi Yaita, Masaaki Kobata, Tatsuo Fukuda, Ayumi Itoh, Kenji Konashi, and Yuji Arita

Bull. Chem. Soc. Jpn. 2025, 98, No. 10, uoaf088 doi:10.1093/bulcsj/uoaf088

Selected Paper | Open Access

Keywords: azobenzene | coacervates | phase transition

Light-triggered coacervation of low-molecular-weight amphiphiles for tunable chemical reactivity

Daichi Sawada, Tomoya Kojima, Kouichi Asakura, and Taisuke Banno*

Bull. Chem. Soc. Jpn. 2025, 98, No. 10, uoaf091 doi:10.1093/bulcsj/uoaf091

Keywords: high-entropy alloys | mesoporous metals | soft-chemistry synthesis

Mesoporous high-entropy PtPdRhCuIrSe particles via a soft-chemical approach using a reducing agent

Kotaro Yagi, Yunqing Kang,* Lei Fu, Miharu Eguchi, Tokihiko Yokoshima, Yusuke Asakura, and Yusuke Yamauchi*

Bull. Chem. Soc. Jpn. 2025, 98, No. 10, uoaf089 doi:10.1093/bulcsj/uoaf089

Keywords: BiOCl | capacitive deionization | 2D materials

Precise engineering of bismuth oxychloride for enhanced anion sequestration in capacitive deionization

Peisen Huang, Yunyong She,* Yun Chen, Wenjie Wu,* Yiming Yang, Jiarui Fan, Lijie Zhang, Yue Liu, Azhar Alowasheeir, Haiyan Hu,* Yusuke Yamauchi, and Xingtao Xu

Bull. Chem. Soc. Jpn. 2025, 98, No. 10, uoaf067 doi:10.1093/bulcsj/uoaf067

Keywords: cage silsesquioxane | surface modification | surface segregation

Surface segregation behavior of octaalkoxy-substituted cage octasilsesquioxanes in poly(methyl methacrylate)

Nanami Okamura, Jinshiro Takeuchi, Takahiro Iwamoto, Hiroaki Imoto, and Kensuke Naka*

Bull. Chem. Soc. Jpn. 2025, 98, No. 10, uoaf094 doi:10.1093/bulcsj/uoaf094

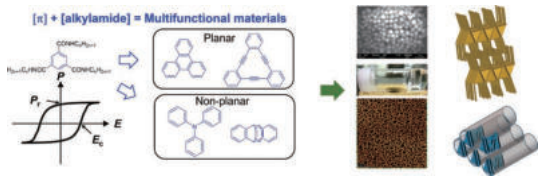
Highlight Review | Free Access

Keywords: C_3-symmetrical molecules | ferroelectricity | molecular assembly

Molecular design and physical properties of alkylamide-substituted 3-fold symmetric molecules

Yotaro Kasahara, Takashi Takeda, and Tomoyuki Akutagawa*

Chem. Lett. 2025, 54, No. 10, upaf184 doi:10.1093/chemle/upaf184



Keywords: aldehydes | condensation | sulfoximines

An improved method for condensation between alkyl sulfoximines and aldehydes enabled by carbonyl imidazolyl protecting group

Kosuke Yasui,* Yuichiro Tomishima, Taiga Sakimori, Masayuki Miyaoka, Hina Nishimura, and Koji Hirano*

Chem. Lett. 2025, 54, No. 10, upaf183 doi:10.1093/chemle/upaf183

Keywords: $LaCoO_3$/g-C_3N_4 | oxygen evolution reaction | oxygen reduction reaction

One-step calcination synthesis of $LaCoO_3$/g-C_3N_4 boosts ORR/OER activities

Feiyan Zhang, Haosheng Zhu, Bingxin Liu, Yongcheng Li, Peng Zhang, and Yunsi Wang*

Chem. Lett. 2025, 54, No. 10, upaf185 doi:10.1093/chemle/upaf185

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Keywords: coordination | phenanthroline | porphyrin

Coordination-induced cofacial dimer formation of a phenanthroline-tethered porphyrin

Joe Otsuki,* Ken Sato, Yuto Nakaie, Yosuke Hosoya, and Kosuke Sugawa

Chem. Lett. 2025, 54, No. 10, upaf182 doi:10.1093/chemle/upaf182

Keywords: anticorrosion | Fe_3O_4 nano-oil | slippery liquid-infused porous surface

Magneto-responsive nano-oil coating for anticorrosion, anti-biofouling, and drag reduction

Yang Ge, Wei Geng,* Wei-Hong Zheng, Yao-Qi Huang, Wei Zhou, Zi-Qian Yi, Yi Lu, Ling Shen, Luís D. Carlos, Kenneth I. Ozoemena, Zhuo-Ran Zhang, Xiao-Di Zhu, and Xiao-Yu Yang*

Chem. Lett. 2025, 54, No. 10, upaf176 doi:10.1093/chemle/upaf176

Keywords: aluminum conductor | anti-icing | superhydrophobic surface

Durable superhydrophobic surfaces with ultralow ice adhesion for anti-icing applications on transmission lines

Kangwei Xu, Jiqiu Liu, Yaxia Qiao,* Shaoheng Sun,* Dejun Tu, Hao Zhang, Feng Liu, Baoshuai Du, Gengzeng Zhu, and Yongming Zhang*

Chem. Lett. 2025, 54, No. 10, upaf178 doi:10.1093/chemle/upaf178

Open Access

Keywords: catalyst | downsizing | nanoparticles

Pd/ZrO_2-catalyzed benzonitriles hydrogenation to primary amines under ambient conditions

Yoshihide Nishida,* Masaaki Kishimoto, Takaaki Toriyama, Tomokazu Yamamoto, and Masaaki Haneda

Chem. Lett. 2025, 54, No. 10, upaf179 doi:10.1093/chemle/upaf179

Keywords: dihydrohexaazatrinaphthylene | donor/acceptor | long-wavelength absorption

One-step synthesis of a triangular donor/acceptor-accumulated compound with long-wavelength absorption

Takahiro Oshima, Akiyuki Nakano, Kentaro Ikeda, Kan Wakamatsu,* Tetsuo Iwanaga, Kiyoshi Fujisawa,* and Hideyuki Higashimura*

Chem. Lett. 2025, 54, No. 10, upaf173 doi:10.1093/chemle/upaf173

Keywords: poly(vinyl alcohol) | triplet | upconversion

Visible-to-ultraviolet photon upconversion in poly(vinyl alcohol) films and unusual quenching by boric acid treatment

Akane Saito, Tomohiro Mori, Hitoshi Saomoto, Tsuyoshi Masuda, Masafumi Takagaki, and Takeshi Mori*

Chem. Lett. 2025, 54, No. 10, upaf171 doi:10.1093/chemle/upaf171

Open Access

Keywords: graphite oxide | interlayer distance | PFAS

Understanding carbon properties on the adsorption of C6-perfluoroalkyl substance

Daisuke Takimoto,* Miu Tolaro, and Shino Toma*

Chem. Lett. 2025, 54, No. 10, upaf181 doi:10.1093/chemle/upaf181

Keywords: apatite-type gadolinium silicate | catalytic combustion-type methane sensor | specific heat capacity

Catalytic combustion-type methane gas sensor with tungsten-doped apatite-type gadolinium silicate

Wonjoon Lee, Shinji Tamura,* and Nobuhito Imanaka

Chem. Lett. 2025, 54, No. 10, upaf177 doi:10.1093/chemle/upaf177

Open Access

Keywords: circularly polarized luminescence (CPL) | hydrostatic pressure | pyrene

Circularly polarized luminescence from bipyrenyl peptides under high pressure

Jungo Ono, Haruka Sako, Nodoka Fujisawa, Mizuki Kitamatsu, Satoko Suzuki, and Yoshitane Imai*

Chem. Lett. 2025, 54, No. 10, upaf170 doi:10.1093/chemle/upaf170

Keywords: $Li_{6.4}La_3Zr_{1.4}Ta_{0.6}O_{12}$ | lithium-rich manganese-based cathode materials | surface modification

Solid state electrolyte $Li_{6.4}La_3Zr_{1.4}Ta_{0.6}O_{12}$ as a coating enhances the electrochemical performance of lithium-rich manganese-based cathode materials

Guohui Kang, Xinxiang Liu, Haiqing Zhan, Jiahong Pan, Huacheng Li, Yong Yang, Chunxia Li, Qingmeng Wei, and Feng Zhan*

Chem. Lett. 2025, 54, No. 10, upaf155 doi:10.1093/chemle/upaf155