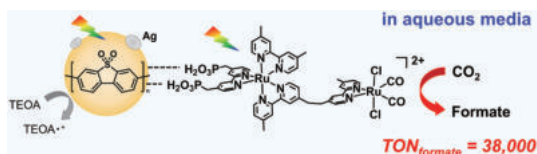


BCSJ Award Article Open Access

Keywords: CO₂ reduction | conjugated polymer | photocatalyst
Photocatalytic CO₂ reduction in aqueous media using a silver-loaded conjugated polymer and a Ru(II)-Ru(II) supramolecular photocatalyst

Noritaka Sakakibara,* Ewan McQueen, Reiner Sebastian Sprick,* and Osamu Ishitani*
Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf017 doi:10.1093/bulcsj/uoaf017



Keywords: intermolecular interaction | moment theory | reaction rate constant
Moment analysis of intermolecular interactions between plural solute molecules and one ligand molecule by means of high-performance liquid chromatography

Kanji Miyabe* and Kanoko Hiyama
Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf024 doi:10.1093/bulcsj/uoaf024

Keywords: ⁶Li/⁷Li isotopic substitution | Li⁺ solvation | neutron diffraction
Solvation structure of Li⁺ in highly concentrated LiTFSA–DMSO solutions studied by means of neutron diffraction with ⁶Li/⁷Li isotopic substitution method

Yasuo Kameda,* Yuko Amo, Takeshi Usuki, Yasuhiro Umebayashi, Hikari Watanabe, Kazuhide Ueno, Kazutaka Ikeda, Takashi Honda, and Toshiya Otomo
Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf020 doi:10.1093/bulcsj/uoaf020

Keywords: defect passivation engineering | InCl₃ | perovskite solar cells
Indium-assisted defect passivation engineering toward antisolvent-free high-performance and stable perovskite solar cells

Guijie Liang, Wanlei Zhang, Jiawei Song, Jiahao Cheng, Yuheng Deng, Kanghao Yan, Yichen Yang, Jun Yao, Wenjian Shen,* Xin Zhang, Bin Li, Ying Liang, Yong Peng, and Wangnan Li*
Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf018 doi:10.1093/bulcsj/uoaf018

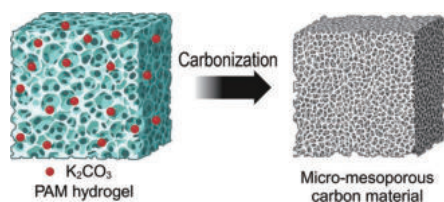
Keywords: material exploration methods | materials informatics | quantum-inspired technology
Material discovery using quantum-inspired technologies: validating a band gap engineering approach for inorganic materials

Kazuhiro Hashiguchi, Akito Maruo, Shinji Iwane, Hideyuki Jippo,* and Yoshinori Suga
Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf021 doi:10.1093/bulcsj/uoaf021

Selected Paper

Keywords: hierarchically porous carbon | polyacrylamide (PAM) hydrogel | supercapacitor
Nanoarchitectonics of hydrogel-derived ultrahigh surface area nanoporous carbon materials with enhanced supercapacitance performance

Nadiia Velychkivska,* Anna Golunova, Viktoria Oleksa, Jiří Brus, Pragati A. Shinde, Abin Sebastian, Renzhi Ma, Katsuhiko Ariga, Yusuke Yamauchi, Jonathan P. Hill,* Jan Labuta,* and Lok Kumar Shrestha*
Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf011 doi:10.1093/bulcsj/uoaf011



Keywords: coordination chemistry | iron mixed-valence complex | magnetism

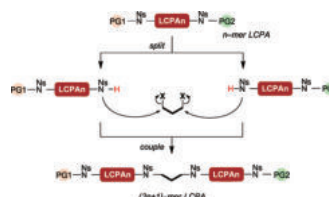
Effect of penetrating groups of cations on magnetic properties in layered mixed-valence iron(II,III) compounds

Tsubasa Endo, Takuya Kanetomo, and Masaya Enomoto*
Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf010 doi:10.1093/bulcsj/uoaf010

Selected Paper Open Access

Keywords: 1,3-propanediamine | convergent synthesis | long-chain polyamine
A practical and versatile synthetic strategy for homogeneous polymers of 1,3-propanediamine

Taiga Ohnishi, Raku Irie,* Makoto Inai, Toshiyuki Kan, and Masato Oikawa*
Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf014 doi:10.1093/bulcsj/uoaf014



Keywords: degradation of 4-NP | MOFs | ultrafine platinum nanoparticles
Photoinduced synthesis of ultrafine Pt nanoparticles loaded on the surface of metal-organic frameworks-modified carbon materials for efficient catalytic reduction reactions

Liang Xian,* Xiaoxia Tian, Zhaomin Liu, Shuxin Liu, and Jiuzhou Zhao
Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf009 doi:10.1093/bulcsj/uoaf009

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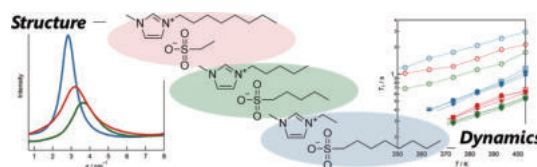
Keywords: alectinib | process development | sustainability
A facile, scalable, and sustainable approach to the preparation of the indole-core of alectinib

Tomohiro Oki,* Hiroki Serizawa, Akira Kawase, Hiroshi Fukuda, Naoto Hama, Shoichiro Sano, Mami Yamaguchi, Kota Tanaka, Hajime Motoyoshi, Yohei Morimasa, Masahiro Kimura, Satoshi Niizuma, Masao Tsukazaki, Hiroshi Iwamura, and Kenji Maeda
Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf019 doi:10.1093/bulcsj/uoaf019

Selected Paper

Keywords: alkyl chain | heterogeneous structure | ionic liquid
Nanostructure and local dynamics of 1-alkyl-3-methylimidazolium alkyl-sulfonates

Takatsugu Endo,* Hiroki Sumida, Takumi Nakamura, Hiroaki Sugihara, and Yoshifumi Kimura
Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf016 doi:10.1093/bulcsj/uoaf016



Keywords: imidazole | organic photovoltaic cells | semiconducting polymers
Dithienobenzimidazole-based semiconducting polymer for nonfullerene organic photovoltaics

Tsubasa Mikie,* Shohei Ono, Momoka Hada, and Itaru Osaka*
Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf015 doi:10.1093/bulcsj/uoaf015

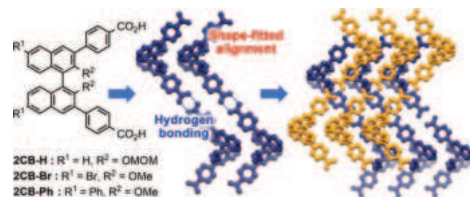
Selected Paper **Free Access**

Keywords: binaphthyl | hydrogen bond | supramolecular synthon
A robust layer-motif composed of binaphthyl dibenzoic acid derivatives in inclusion crystals

Ayano Fujiwara, Ryusei Oketani, and Ichiro Hisaki*

Bull. Chem. Soc. Jpn. 2025, 98, No. 3, uoaf013

doi:10.1093/bulcsj/uoaf013



Keywords: isosorbide | polycarbonate | solid-state polymerization
Formation of biobased-polycarbonates via amorphous solid-state polymerization of isosorbide/isomannide with fluorinated carbonate

Taihei Taniguchi,* Takashi Okazoe, Shin-ichi Matsuoka, and Masato Suzuki

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doi:10.1093/bulcsj/uoaf012

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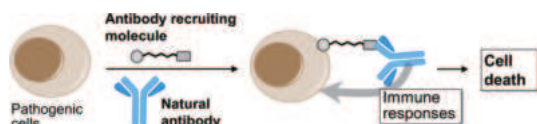
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Keywords: antibody | glycan | immune therapy
Novel immune therapy: antibody-recruiting strategy

Yoshiyuki Manabe* and Koichi Fukase*

Chem. Lett. 2025, 54, No. 3, upaf035

doi:10.1093/chemle/upaf035



Keywords: organic peroxides | photocatalytic ethanol conversion | TiO₂/WO₃ composite
Formation of organic peroxides on TiO₂/WO₃ photocatalyst in ethanol

Tiangao Jiang, Mana Akita, Kio Kawakatsu, Naoko Taki, Yuma Uesaka, Haru Togawa, Shanhu Liu, Sho Usuki,* and Kazuya Nakata*

Chem. Lett. 2025, 54, No. 3, upaf055

doi:10.1093/chemle/upaf055

Keywords: a-SiO₂/TiO₂ passive films | friction | reactive molecular dynamics

Reactive molecular dynamics simulation study of wear mechanism of SiO₂ and TiO₂ passive films on MoSiB/TiC alloy in high-temperature humid environment

Keaki Watanabe, Mizuho Yokoi, Masayuki Kawaura, Shogo Fukushima, Yixin Su, Yusuke Ootani, Nobuki Ozawa, and Momoji Kubo*

Chem. Lett. 2025, 54, No. 3, upaf049

doi:10.1093/chemle/upaf049

Keywords: carbodisulfane | conversion of CO₂ | urea derivatives
Synthesis of CO₂ adduct of seven-membered cyclic carbodisulfane and its conversion of CO₂ to urea derivatives

Keiko Noguchi, Mai Umeoka, and Takayoshi Fujii*

Chem. Lett. 2025, 54, No. 3, upaf052

doi:10.1093/chemle/upaf052

Keywords: chemical communication | chemical ecology | cheminformatics

Machine learning classification of semiochemicals using structural and complexity features

Kris Lord T. Santos and Jose Isagani B. Janaíro*

Chem. Lett. 2025, 54, No. 3, upaf045

doi:10.1093/chemle/upaf045

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Keywords: chemical bonding | graph neural network | overlap population

Prediction of the overlap population diagram of organic molecules based on a graph neural network

Riuki Nakagawa, Izumi Takahara, Kiyuu Shibata, and Teruyasu Mizoguchi*

Chem. Lett. 2025, 54, No. 3, upaf038

doi:10.1093/chemle/upaf038

Keywords: ClO⁻ | coumarin derivative | fluorescent probe
A coumarin derivative for the efficient and sensitive detection of hypochlorite and imaging in living cells

Ziyu Huang, Yunlu Chen, Bingbing Luo, Ting Shi, Lian Duan,* Yue Sun,* and Yun Zhao*

Chem. Lett. 2025, 54, No. 3, upaf047

doi:10.1093/chemle/upaf047

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Keywords: in situ TEM | ordered mesoporous carbon | PEFC electrocatalyst

Application of in situ TEM observation in the development of electrocatalysts for PEFCs: Pt/ordered mesoporous carbon with network structure

Hanako Nishino, Satoko Sato, Hiroko Yamazaki, Takeo Kamino, Makoto Uchida, Akihiro Iiyama, and Toshihiro Miyao*

Chem. Lett. 2025, 54, No. 3, upaf044

doi:10.1093/chemle/upaf044

Keywords: CON-type zeolite | MTO reaction | seed-assisted synthesis
Seed-assisted rapid crystallization of CON-type zeolite catalyst for the methanol-to-olefin reaction

Masato Sawada, Kaito Sonoda, Hiroto Toyoda, Samya Bekhti, Hiroaki Onozuka, Susumu Tsutsuminai, Junko N. Kondo, Hermann Gies, and Toshiyuki Yokoi*

Chem. Lett. 2025, 54, No. 3, upaf051

doi:10.1093/chemle/upaf051

Keywords: PS-*b*-PMMA | SAXS | solid NMR
Magnetic ionic liquid-assisted alignment: morphology and orientation control in amorphous-amorphous diblock copolymer

Masafumi Yamato* and Kohki Takahashi

Chem. Lett. 2025, 54, No. 3, upaf050

doi:10.1093/chemle/upaf050

Keywords: nanomaterials | synthesis | ternary solid-solution nanoparticles

The syntheses of immiscible CuRuPt ternary solid solutions

Ying Qin and Bo Huang*

Chem. Lett. 2025, 54, No. 3, upaf041

doi:10.1093/chemle/upaf041

Keywords: copper NCs | hydride | palladium
Shell engineering of an atomically precise PdH-doped Cu nanocluster

Rhone P. Brocha Silalahi, Tzu-Hao Chiu, and C. W. Liu*

Chem. Lett. 2025, 54, No. 3, upaf046

doi:10.1093/chemle/upaf046

Open Access

Keywords: aerobic dehydrogenative aromatization | primary anilines | supported nanoparticle catalyst

Selective aerobic dehydrogenative aromatization to primary anilines catalyzed by palladium-based nanoparticles

Wei-Chen Lin, Takafumi Yatabe,* and Kazuya Yamaguchi*

Chem. Lett. 2025, 54, No. 3, upaf043

doi:10.1093/chemle/upaf043

Keywords: extra-large-pore zeolite | interzeolite conversion | SFH-type structure

Synthesis of Al-containing zeolite having extra-large pore via the interzeolite conversion method

Yibing Cai, Masato Sawada, Yong Wang, Yao Lu, Peipei Xiao, Junko N. Kondo, Hermann Gies, and Toshiyuki Yokoi*
Chem. Lett. 2025, 54, No. 3, upaf036 doi:10.1093/chemle/upaf036

Keywords: multibranched polymer | surface modification | wettability

Surface wettability control by multibranched polymer architectures

Chiho Utaki, Hideki Nishimura, Takeshi Shiono, Takeru Iwamura, and Kaoru Adachi*
Chem. Lett. 2025, 54, No. 3, upaf039 doi:10.1093/chemle/upaf039

Keywords: Au nanowires | chiral thiol compounds | chiroptical property

Imparting chiral optical properties to Au nanowires via growth in the presence of chiral thiol compounds

Lisa Tanaka, Makoto Nakagawa, and Takeshi Kawai*
Chem. Lett. 2025, 54, No. 3, upaf025 doi:10.1093/chemle/upaf025

Keywords: amorphous molecular fluorophore | mechanochromic emission | polymorphism

Polymorphism and memory mechanochromic emission of a novel molecular fluorophore, 1-cyano-1-(2-naphthyl)-2-[4-(diphenylamino)phenyl]ethylene

Yuito Shimazaki, Rikuya Kurita, and Hideyuki Nakano*
Chem. Lett. 2025, 54, No. 3, upaf024 doi:10.1093/chemle/upaf024

Keywords: cyclophane | water-soluble host

Branching and guanidinylation of side chains of cyclophanes bearing fluorescent pyrene as a water-soluble host

Osamu Hayashida,* Haruna Okuma, and Takaaki Miyazaki
Chem. Lett. 2025, 54, No. 3, upaf029 doi:10.1093/chemle/upaf029

Keywords: adhesive | low-cross-linking density cured epoxy resin | network structure

A network structure and adhesive properties of low-cross-linking density cured epoxy resins

Kakeru Obayashi and Ken Kojio*
Chem. Lett. 2025, 54, No. 3, upaf001 doi:10.1093/chemle/upaf001

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Keywords: azaylide | click chemistry | fluorescence
Conditional fluorescent changes of azaylides with fluorescent chromophores

Mayo Hamada and Suguru Yoshida*
Chem. Lett. 2025, 54, No. 3, upaf033 doi:10.1093/chemle/upaf033

Keywords: deep learning | intracellular temperature | Raman imaging

Label-free intracellular temperature measurement by integrating Raman imaging and deep learning

Hiroaki Takahashi, Shinji Kajimoto, Ohsuke Irikura, and Takakazu Nakabayashi*
Chem. Lett. 2025, 54, No. 3, upaf032 doi:10.1093/chemle/upaf032

Keywords: multivariate curve resolution | number of vicinal water molecules | poly(*N*-isopropylacrylamide)

Analysis of hydration states of thermo-responsive poly(*N*-isopropylacrylamide) by the combination of infrared absorption spectroscopy and multivariate curve resolution

Haruki Harimoto, Shunta Chikami, Shoichi Maeda, Glenn Villena Latag, Art Wei Yao Ang, and Tomohiro Hayashi*
Chem. Lett. 2025, 54, No. 3, upaf028 doi:10.1093/chemle/upaf028

Keywords: free energy | hydrogen bond | rotational relaxation
Dynamic properties of confined water inside hydrophilic surfaces

One-Sun Lee* and Sung Haeng Lee*
Chem. Lett. 2025, 54, No. 3, upaf022 doi:10.1093/chemle/upaf022



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