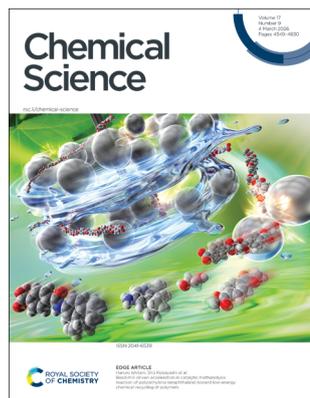


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ISSN 2041-6539 CODEN CSHCBM 17(9) 4349–4830 (2026)



Cover
See Haruro Ishitani, Shū Kobayashi *et al.*, pp. 4456–4469. Image reproduced by permission of Shū Kobayashi from *Chem. Sci.*, 2026, 17, 4456.



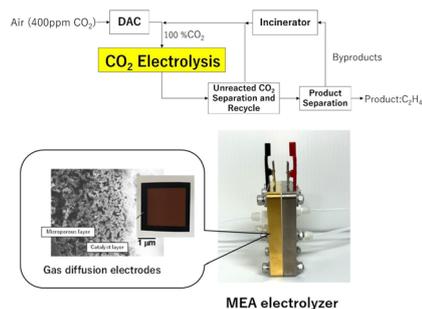
Inside cover
See Kazuhide Kamiya, Sho Kataoka *et al.*, pp. 4363–4374. Image reproduced by permission of Kazuhide Kamiya from *Chem. Sci.*, 2026, 17, 4363.

PERSPECTIVE

4363

Gaseous CO₂ electrolysis: latest advances in electrode and electrolyzer technologies toward abating CO₂ emissions

Kazuhide Kamiya,* Sora Nakasone, Ryo Kurihara, Asato Inoue, Hazuki Irie, Shoko Nakahata, Yuta Nishina, Satoshi Taniguchi, Thuy T. H. Nguyen and Sho Kataoka*

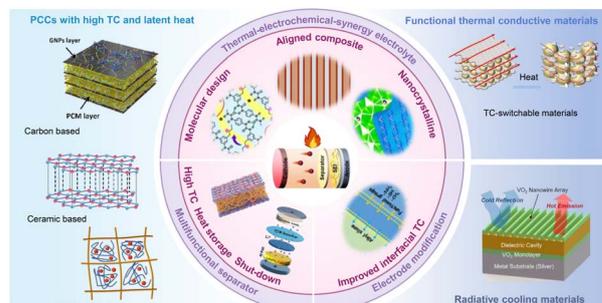


REVIEWS

4375

Materials design for thermally improved safety in lithium-ion batteries

Songpei Nan, Guoxin Gao, Wei Yu, Shujiang Ding* and Dawei Ding*



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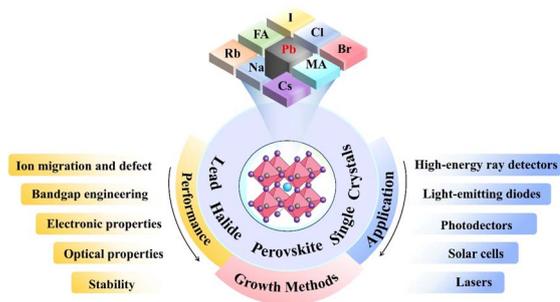
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REVIEWS

4395

Recent advances in lead halide perovskite single crystals for optoelectronic devices

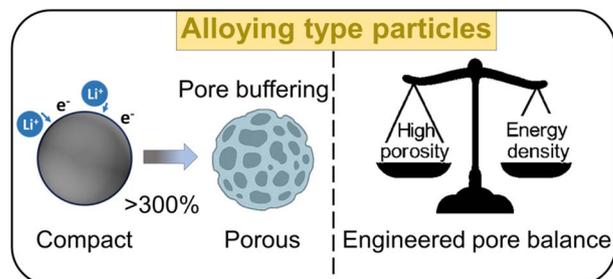
Lu Zi,* Ximan Fan, Le Liu, Shuna Guan, Hongxian Wei, Jiaqi Chen, Xiaojuan Zhuang* and Wen Xu*



4428

Porous alloying-type particles for practical lithium-ion battery anodes

Yiteng Luo, Sai Ho Pun, He Yan* and Wei Liu*

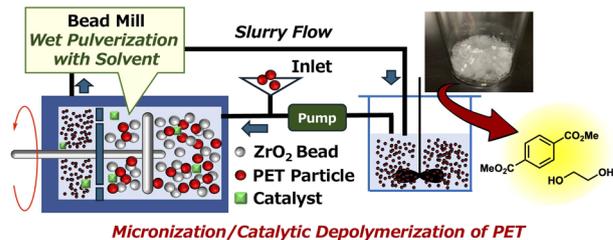


EDGE ARTICLES

4456

Bead mill-driven acceleration in catalytic methanolysis reaction of poly(ethylene terephthalate) toward low-energy chemical recycling of polymers

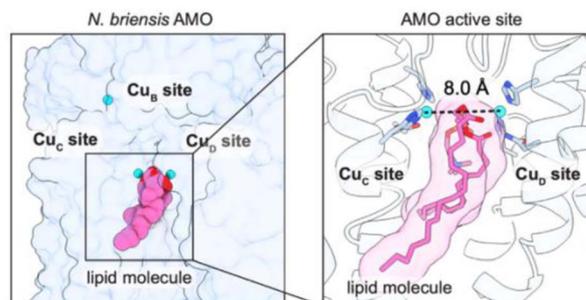
Tomoya Kawase, Haruro Ishitani* and Shū Kobayashi*



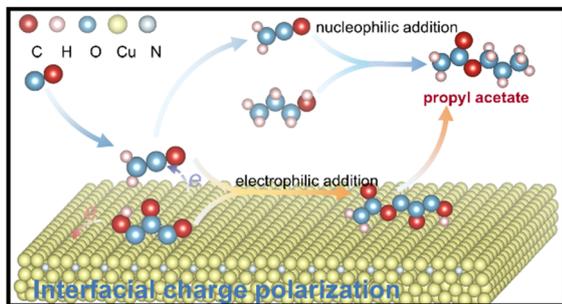
4470

Simultaneous occupancy of Cu_C and Cu_D in the ammonia monooxygenase active site

Frank J. Tucci, Madeline B. Ho, Aaron A. B. Turner, Lisa Y. Stein, Brian M. Hoffman and Amy C. Rosenzweig*



4478



Interfacial polarization enables dual pathways for electrocatalytic synthesis of propyl acetate

Xichang Liu, Yimin Jiang, Wei Chen, Jixiang Wu, Yongmin He, Yu-Cheng Huang, Ying-Rui Lu, Yansong Zhou* and Shuangyin Wang*

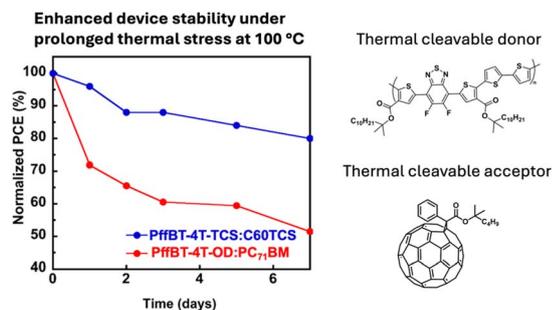
4487



Selective photocatalytic oxidative cleavage of terminal alkynes to carboxylic acids within a water-soluble Pd₆ nanocage

Pranay Kumar Maitra, Valiyakath Abdul Rinshad, Neal Hickey and Partha Sarathi Mukherjee*

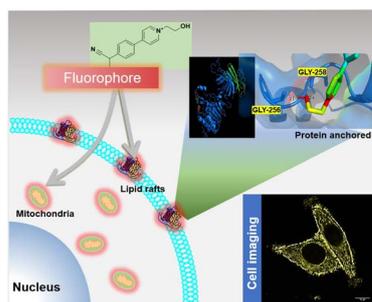
4496



Enhancing long-term morphological stability in BHJ organic solar cells through thermocleavable sidechains under continuous thermal stress

Haoyu Zhao, Jordan Shanahan, Jiyeon Oh, Saroj Upreti, Guorong Ma, Wei You* and Xiaodan Gu*

4507



A molecular scaffold for concurrent targeting of plasma and mitochondrial membranes

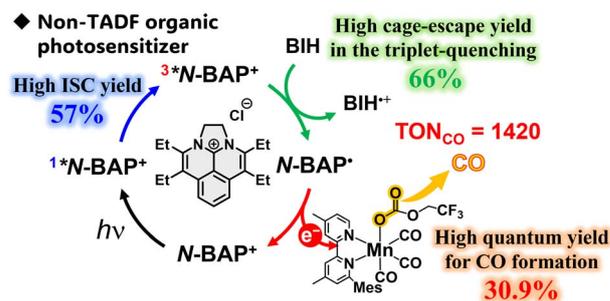
Youbo Lai, Yi Yang, Yuping Zhao, Tony D. James* and Weiyang Lin*



4518

Photocatalytic CO₂ reduction using a diazabenzacenaphthenium photosensitizer and a Mn catalyst

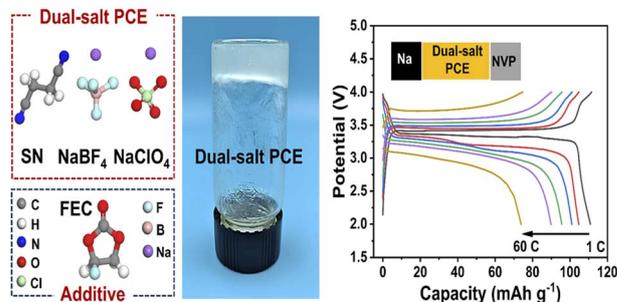
Kei Kamogawa,* Shintaro Okumura* and Osamu Ishitani*



4529

A solid dual-salt plastic crystal electrolyte enabling rapid ion transfer and stable interphases for high-performance solid-state sodium ion batteries

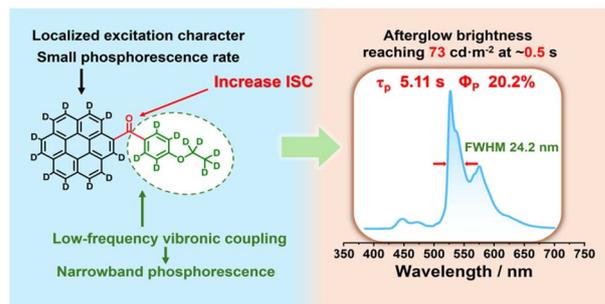
Yang Jiang, Rui Wang, Peng Xiong, Yangyang Liu, Hongbao Li, Longhai Zhang,* Ya You and Chaofeng Zhang*



4538

Ultrabright and narrowband organic afterglow achieved by molecular engineering of coronene

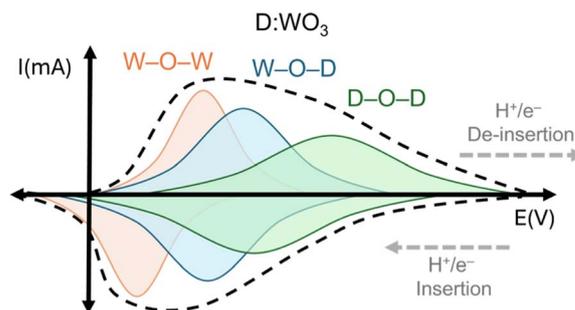
Yuanyuan Chen, Yue Zhang, Guoyi Wu, Ting Luo, Jialiang Jiang, Tengyue Wang, Xiaoya Guo* and Kaka Zhang*



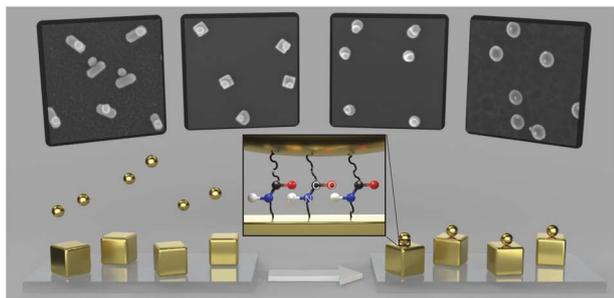
4548

Effects of heteroatom doping on hydrogen uptake in tungsten oxide

Noah P. Holzapfel, Nikolaos Effraim Papamatthaiakis, Jay R. Paudel, Giannis Mpourmpakis, Ethan J. Crumlin and Veronica Augustyn*



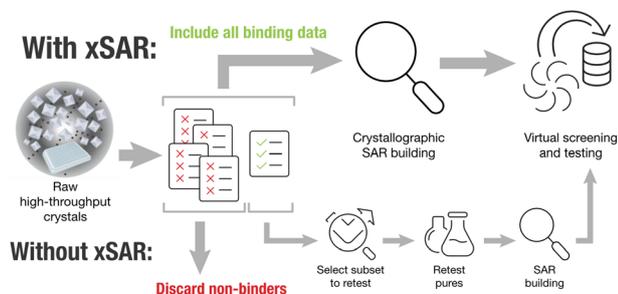
4562



Controlled high-yield assembly of gold nanoparticles *via* amide bond formation

Seoyoung Hwang, Yeonsoo Lim, Sunbum Kwon* and Sangwoon Yoon*

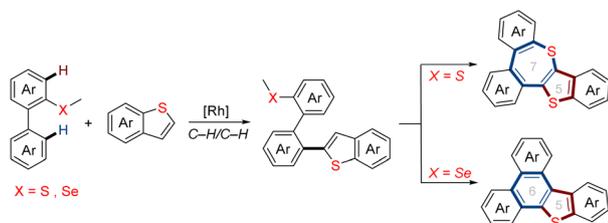
4571



Structure–activity relationships can be directly extracted from high-throughput crystallographic evaluation of fragment elaborations in crude reaction mixtures

Harold Grosjean, Kate K. Fieseler, Rubén Sanchez-Garcia, Warren Thompson, Charlotte M. Deane, Frank von Delft and Philip C. Biggin*

4594

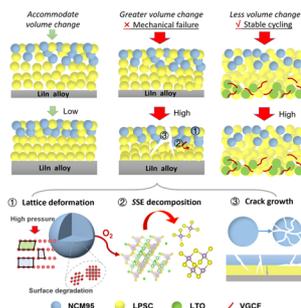


Rh(III)-catalyzed heteroannular-selective heteroarylation of biaryls: facile access to heteroacenes with sulfur-embedded 5–7 ring topology

Zhanhui He, Li Yang, Menghang Zhou, Yue Zhong, Zheng Liu,* Ziao Zhang, Feiyang Xia, Xuezhe Deng, Shuang Yan, Cheng Xu, Cheng Zhang* and Guodong Yin*

- Heteroannular C–H/C–H oxidative coupling
- Selective cyclization via C–S/Se bond cleavage
- Heteroacenes with sulfur-embedded 5–7 ring topology
- Good functional group tolerance
- Scale-up synthesis

4601



Exploring stacking pressure-induced mechanical failure of a Ni-rich cathode in sulfide solid-state batteries

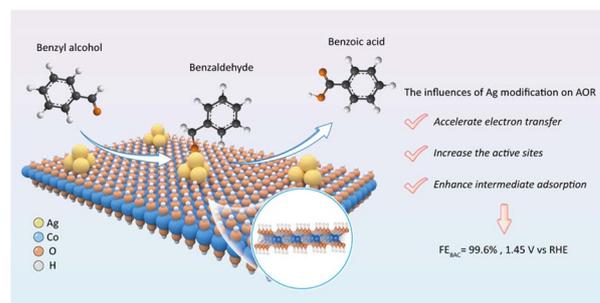
Yiman Feng, Zhixing Wang, Gui Luo, Duo Deng, Wenjie Peng, Wenchao Zhang, Hui Duan, Feixiang Wu, Xing Ou, Junchao Zheng and Jiexi Wang*



4612

Ag-triggered Co^{4+} active sites enable OH^* nucleophilic attack for efficient electrocatalytic oxidation of alcohols to acids

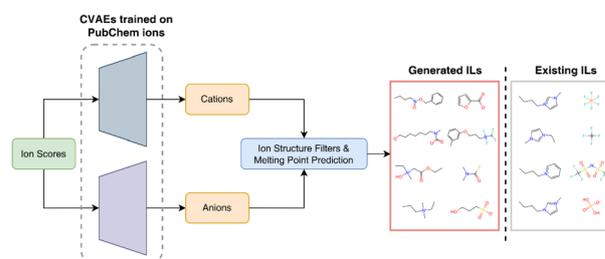
Yu-Wei Du, Jian-Yu Zhang, Hao-Jun Luo, You Zhang, Xi-Ting Zhang, Ting Ouyang* and Zhao-Qing Liu*



4621

Expanding the chemical space of ionic liquids using conditional variational autoencoders

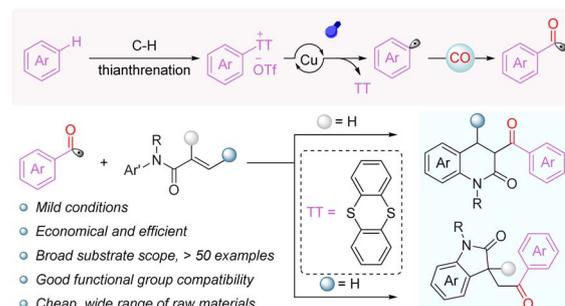
Gaopeng Ren, Austin M. Mroz, Frederik Philippi, Tom Welton and Kim E. Jelfs*



4632

Controllable copper-catalysed photo-induced carbonylative cyclization to access dihydroquinolinones and oxindoles

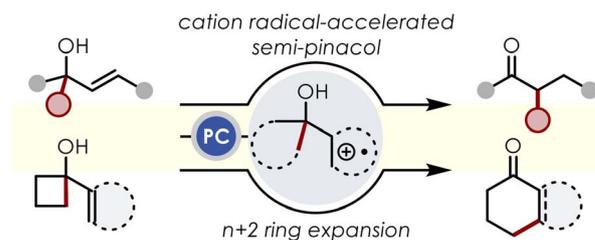
Yan-Hua Zhao, Le-Cheng Wang and Xiao-Feng Wu*



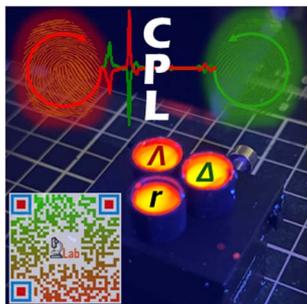
4640

Cation radical-mediated semi-pinacol and $n+2$ ring expansions via organic photoredox catalysis

Brandon B. Fulton, Connor T. Owen and David A. Nicewicz*



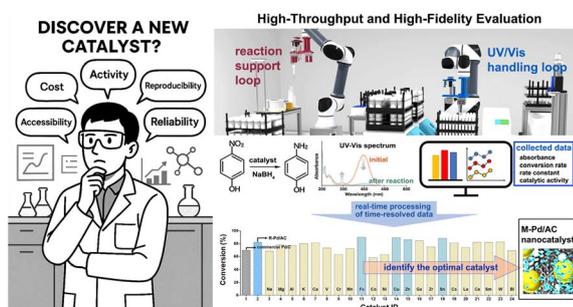
4649



Complete stereochemical control to unlock monosign circularly polarised luminescence with superior circularly polarised brightness for chameleon security inks

Artemijs Krimovs, Dominic J. Black, Aileen Congreve and Robert Pat*

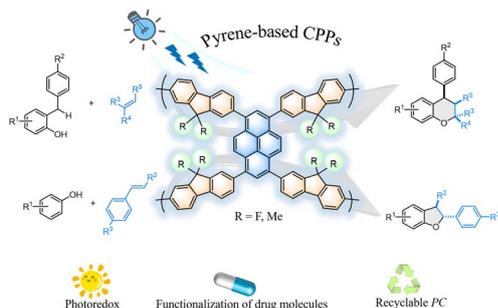
4659



Fully automated and high-fidelity robotic platform enabling accelerated discovery of nanocatalysts

Shin Wook Kang, Kyung Hee Oh, Kanghoon Yim, Sanha Jang, Jin Gyu Lee, Jung-Il Yang and Ji Chan Park*

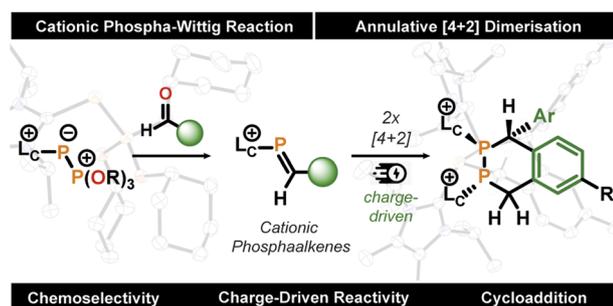
4669



Pyrene-based conjugated porous polymers as photocatalysts for oxidative cycloaddition of phenols

Shuili Liu, Xingji Liu, Xiu Gu, Shicheng Dong, Nan Huang,* Lei Shi* and Jun Jiang*

4678



Chemoselectivity in the cationic Phospha-Wittig reaction: accessing phosphorus heterocycles, phosphaalkenes, and their annulated [4 + 2] dimers

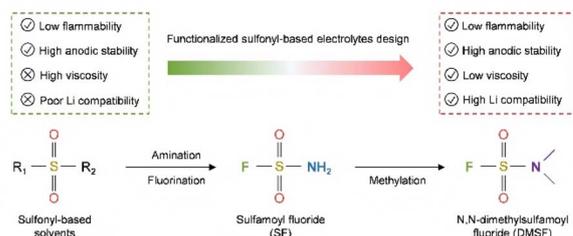
Philipp Royle, Kai Schwedtmann, Rosa M. Gomila, Antonio Frontera and Jan J. Weigand*



4688

Tailoring terminal groups in sulfonyl solvents to boost compatibility with lithium metal anodes

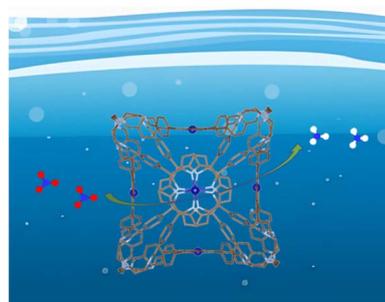
Jinmin Wang, Shuang Wei, Mingming Fang,* Angye Li, Qian Zheng, Xubing Dong, Yuanmao Chen, Kang Yuan, Xinyang Yue* and Zheng Liang*



4697

Strong d–p orbital hybridization in cobalt porphyrin cages promotes electrochemical nitrate reduction to ammonia

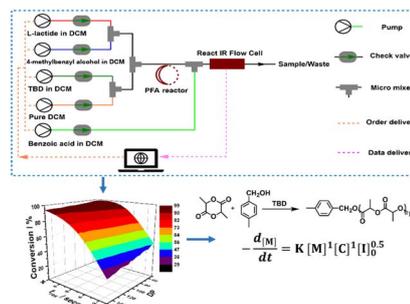
You Wu, Yangpeng Zhang, Hao Zhao, Yang Peng, Hailing Ma, Fangyuan Kang, Zhonghua Li,* Yang Liu* and Qichun Zhang*



4706

Multidimensional kinetic study on the organocatalyzed ring-opening polymerization (ROP) of L-lactide *via* a robotic high-throughput flow platform

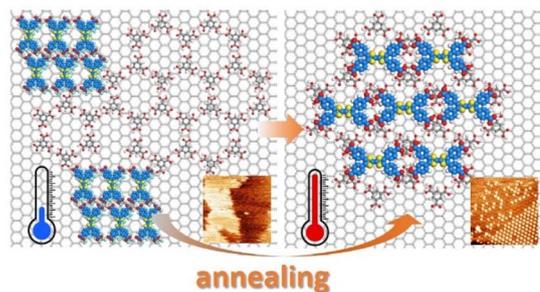
Bo Zhang and Tanja Junkers*



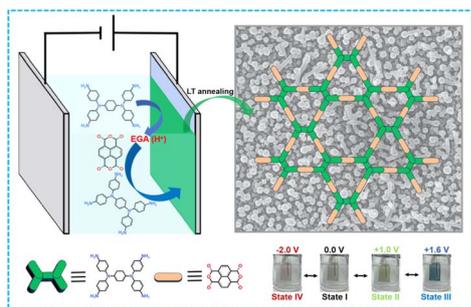
4715

Thermal-mediated modulation of binary supramolecular self-assembly from phase separation to co-crystallization at the liquid–solid surface

Fang Chen, Jun He, Attia Shaheen, Yi Hu* and Shern-Long Lee*



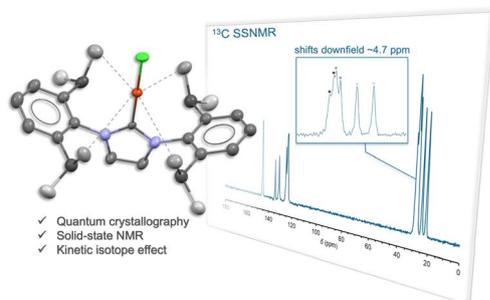
4722



Rapid preparation of imide-based COF films through electropolymerization integrated with low-temperature annealing for high-performance electrochromic energy storage

Jinming Zeng,* Huiling Hou, Lei Huang, Zheng Xie, Qingqing Qiu, Huan Li, Dongfa Liu, Putrakumar Balla, Tongxiang Liang and Ping Liu*

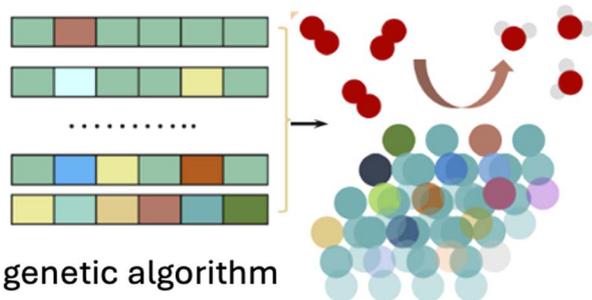
4734



Hidden in plain sight: commonly used copper N-heterocyclic carbene catalysts gain stabilization from anagostic Cu...H-C interactions

Connly Yan, Tiejian Chang, Yu-Sheng Chen, Alexander L. Paterson, Dan McElheny and Neal P. Mankad*

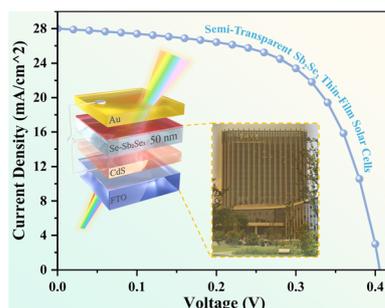
4744



Finding the Pareto front for high-entropy-alloy catalysts

Chengyi Zhang, Ruihu Lu, Qi Sun, Yu Mao, Tilo Söhnel, Yan Zhao,* Donald G. Truhlar* and Ziyun Wang*

4753



Active selenium-driven confined crystallization and carrier dynamics in high-efficiency ultrathin semi-transparent Sb₂Se₃ solar cells

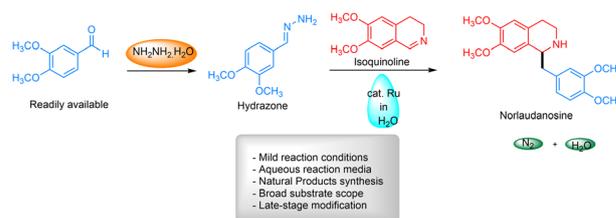
Huafei Guo,* Bangzhi Shen, Xing Wang, Jiayu Xiao, Wenyun Deng, Sai Jiang,* Lei Xu, Xu Dong,* Lvzhou Li, Shuai Zhang, Jianhua Qiu,* Ningyi Yuan and Jianning Ding



4765

A general aqueous synthetic strategy towards 1-benzylTHIQs enabled by umpolung hydrazone

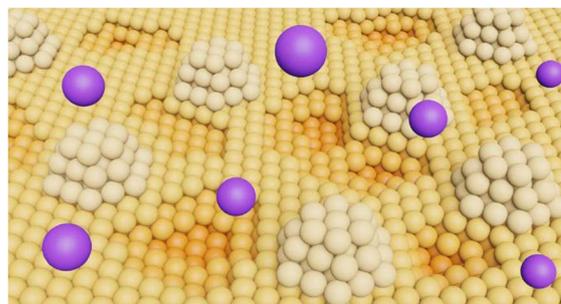
Manpreet Kaur, Evan F. W. Chen, Jan Michael Salgado, Ruofei Cheng and Chao-Jun Li*



4771

Electrolyte concentration modulates the surface structure evolution of Au(111) cathodes

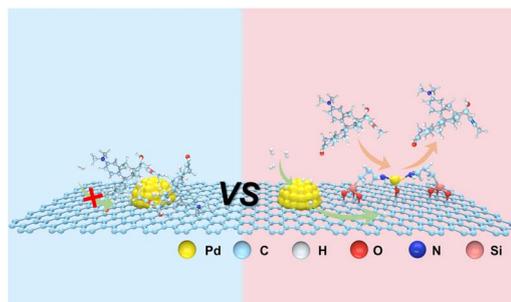
Yue Feng, Yu-Qi Wang,* Jiaju Fu, Zi-Cong Wang, Dong Wang* and Li-Jun Wan*



4780

Beyond the Lindlar catalyst: highly-oxidized Pd single atoms as promoters for alkyne semi-hydrogenation

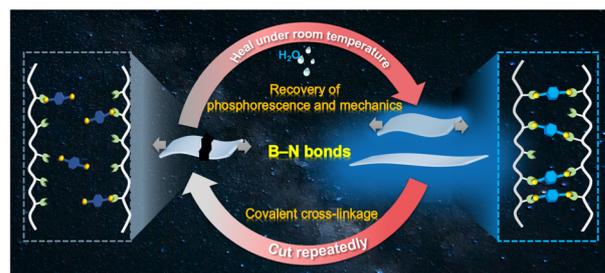
Ming Jiang, Yao Lv, Zhongzhe Wei,* Xu Liu, Zhixiang Yang, Chuanming Chen, Yiming Hu, Fangjun Shao, Xiaonian Li, Jiaying Hu,* Sheng Dai* and Jianguo Wang*



4794

Breaking the paradox: simultaneous recovery of phosphorescence and mechanical properties in polymeric films

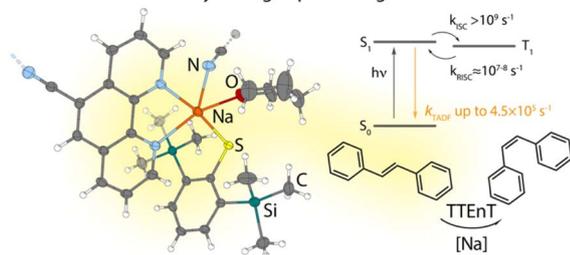
Yan Wang, Kaitao Li, Yongpeng Yang, Rui Tian* and Chao Lu*



EDGE ARTICLES

4803

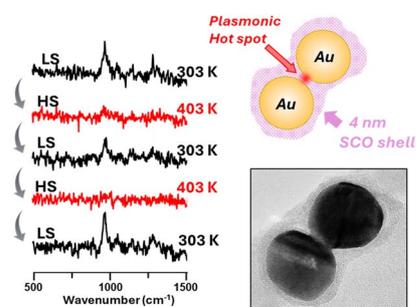
Efficient TADF with sodium-based luminophores enabled by through-space charge transfer



Sodium-based donor–acceptor assemblies featuring thermally activated delayed fluorescence enabled by highly efficient through-space charge transfer

Ondřej Mrózek,^{*} Tabea Heil, Lukáš Hanzl, Andrey Belyaev, Indranil Sen, Patrick Pilch, Zhe Wang and Andreas Steffen^{*}

4814



Plasmonically enhanced Fe(II) coordination complexes allow SERS readout of spin state switching below the optical diffraction limit

Yingrui Zhang, Zoi G. Lada, Wafaa Aljuhani, Yijun Lu, Chunchun Li, Yikai Xu, Grace G. Morgan and Steven E. J. Bell^{*}

CORRECTIONS

4825

Further correction: Reductive annulations of arylidene malonates with unsaturated electrophiles using photoredox/Lewis acid cooperative catalysis

Rick C. Betori, Benjamin R. McDonald and Karl A. Scheidt^{*}

4827

Correction: NeoMProbe: a new class of fluorescent cellular and tissue membrane probe

Saurabh Anand, Preeti Ravindra Bhoge, Rakesh Raigawali, Srinivas Vinod Saladi^{*} and Raghavendra Kikkeri^{*}

