

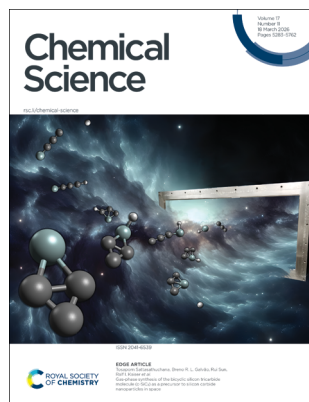
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IN THIS ISSUE

ISSN 2041-6539 CODEN CSHCBM 17(11) 5283–5762 (2026)



Cover
See Tosaporn Sattasathuchana, Breno R. L. Galvão, Rui Sun, Ralf I. Kaiser *et al.*, pp. 5367–5375. Image reproduced by permission of Shane J. Goettl from *Chem. Sci.*, 2026, 17, 5367. Image generated in part using Google Gemini Enterprise.



Inside cover
See Xiao Niu *et al.*, pp. 5376–5386. Image reproduced by permission of Xiao Niu, Jianwen Jiang from *Chem. Sci.*, 2026, 17, 5376.

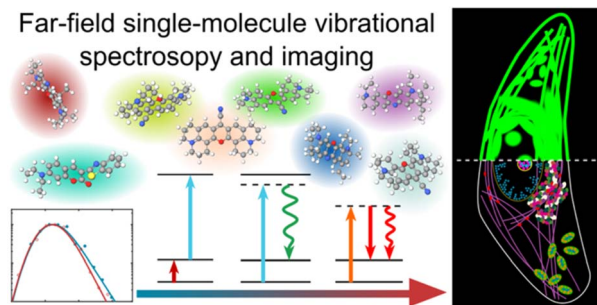
PERSPECTIVES

5297

Far-field single-molecule vibrational spectroscopy and imaging

Philip A. Kocheril, Haomin Wang, Ryan E. Leighton, Dongkwan Lee, Noor Najji, Wei Min and Lu Wei*

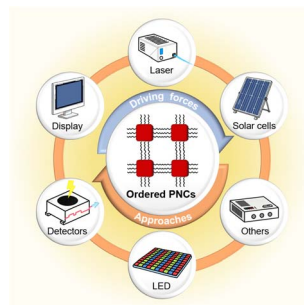
Far-field single-molecule vibrational spectroscopy and imaging



5317

Ordered perovskite nanocrystals: a transformative platform for optoelectronic applications

Lujun Zhai, Huifeng Li, Tom Wu* and Jianyu Yuan*



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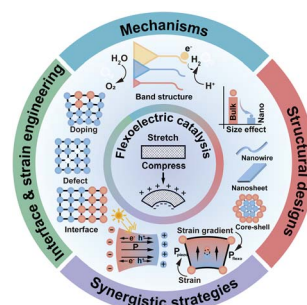
Fundamental questions
Elemental answers

REVIEWS

5331

Flexoelectric catalysis: mechanisms, material designs, and synergistic strategies

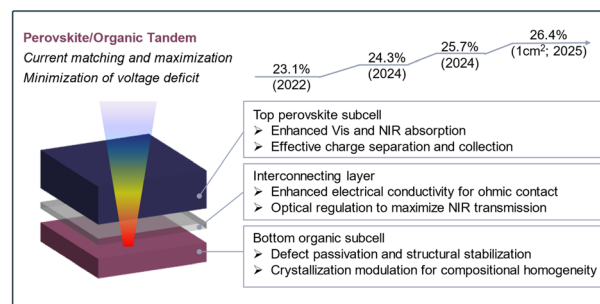
Yucheng Zhang, Tingfang Tian* and Linfeng Fei*



5351

Integrating efficient and tailored perovskite and organic solar cells into performance-improved tandem photovoltaics

Lu Liu, Xiaofeng Huang* and Alex K.-Y. Jen*

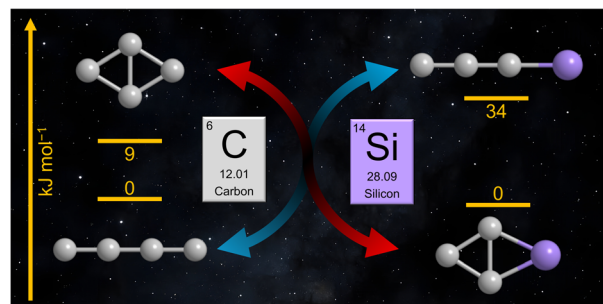


EDGE ARTICLES

5367

Gas-phase synthesis of the bicyclic silicon tricarbid molecule (c-SiC₃) as a precursor to silicon carbide nanoparticles in space

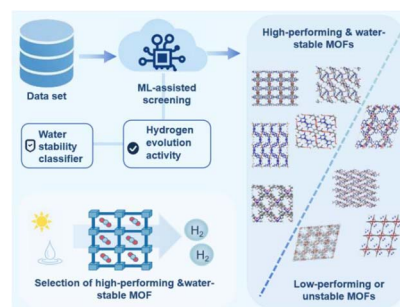
Shane J. Goettl, Kazuumi Fujioka, Márcio O. Alves, Mateus X. Silva, Zhenghai Yang, Surajit Metya, Iakov A. Medvedkov, Tosaporn Sattasathuchana,* Breno R. L. Galvão,* Rui Sun* and Ralf I. Kaiser*



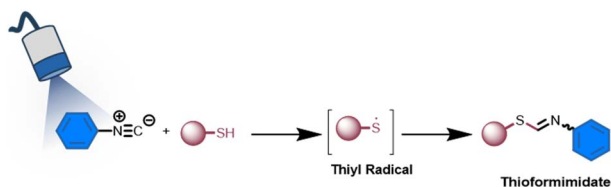
5376

Machine learning guided discovery of water stable metal-organic frameworks for photocatalytic hydrogen production

Xiao Niu, Zhiming Zhang, Xiaoyu Wu, Yan Liu, Yong Cui* and Jianwen Jiang*



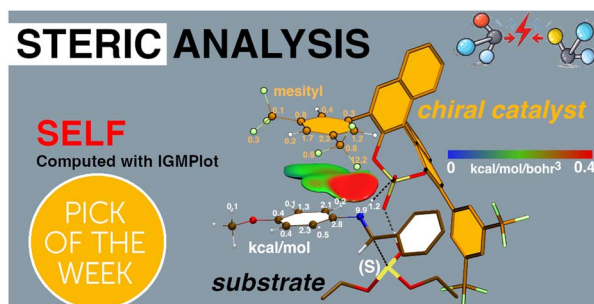
5387



Non-innocent behaviour of aromatic isocyanides under visible light: a pathway to thioformimidates and dehydroalanine

Minghui Wu, Jay Hanssens, Camilla Russo, Rajat Walia, Mariateresa Giustiniano,* Ludovic Troian-Gautier, Jordy M. Saya, Romano Orru* and Prabhat Ranjan*

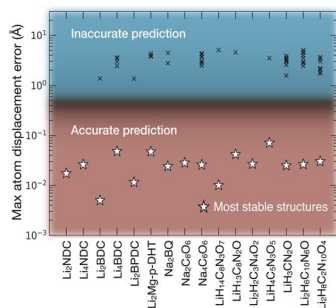
5394



A visualizable and widely applicable steric repulsion descriptor for guiding experimental chemistry

Guillaume Hénon Just, Corentin Lefebvre, Akilan Rajamani, Hassan Khartabil, Julien Pilmé and Éric Hénon*

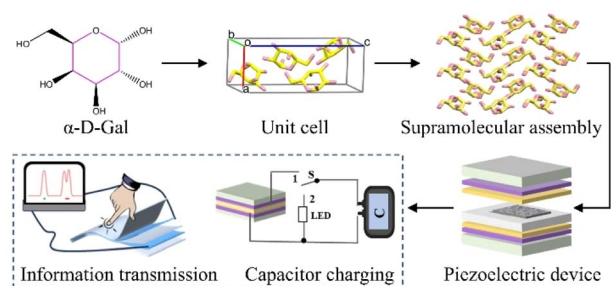
5404



Search for active and inactive ion insertion sites in organic crystalline materials

Harshan Reddy Gopidi, Alae Eddine Lakraychi, Abhishek A. Panchal, Yiming Chen, Venkata Surya Chaitanya Kolluru, Jiaqi Wang, Ying Chen, Jue Liu, Kamila Wiaderek, Maria K. Y. Chan, Yan Yao* and Pieremanuele Canepa*

5416



Natural monosaccharide-based piezoelectric supramolecular materials for energy harvesting and information transmission

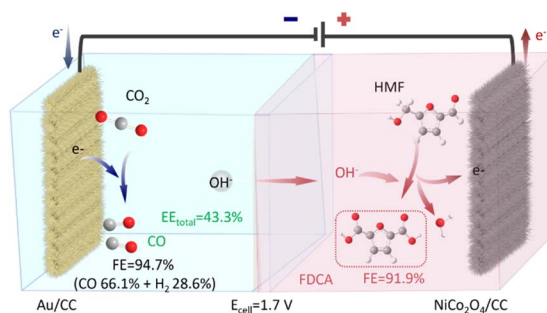
Siyong Chen, Junli Yang, Shuaijie Liu, Yehong Huo, Xin Cheng, Lingling Li and Wei Ji*



5430

Engineering the electronic structure of Ni–Co bimetallic sites toward efficient electrochemical biomass upgrading and CO₂ reduction

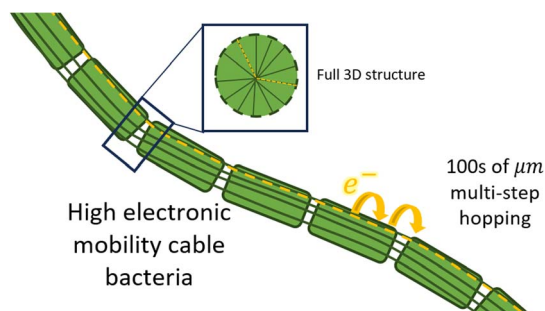
Qing-Lian Yan, Xun-Bin Lin, Ji-dan Liu, Ting Ouyang* and Zhao-Qing Liu*



5442

A theoretical framework to understand high electron mobilities in cable bacteria

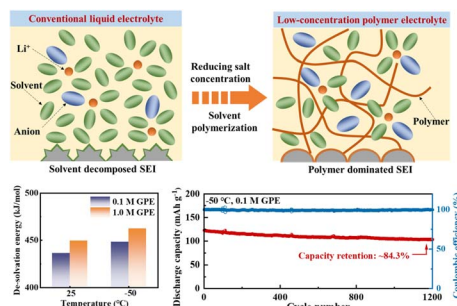
Andrew J. Smith and David N. Beratan*



5451

Ultra-low concentration gel polymer electrolytes realize stable and low-temperature lithium–organic batteries

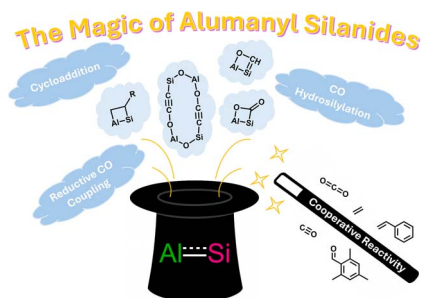
Mengjie Li, Hang Liu, Hai Su, Zehui Fan, Yuansheng Liu, Jixing Yang,* Wei Zhu, Qinghao Chen and Yunhua Xu*



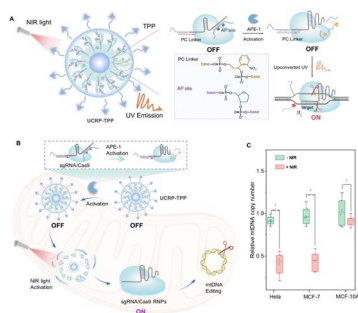
5463

Alumanyl silanides as multifunctional reagents for olefin cycloaddition, CO hydrosilylation, and reductive CO coupling

Moritz Ludwig, Johannes Voigtland, Petra Vasko, Sebastian Stigler and Shigeyoshi Inoue*



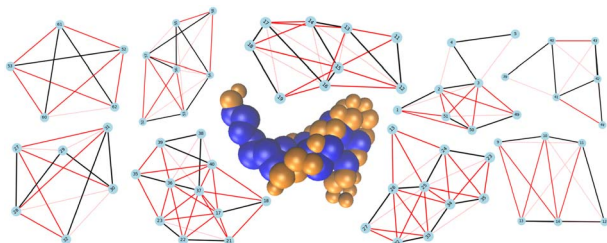
5474



Spatiotemporally regulated mitochondrial genome editing *via* enzyme and NIR-activated CRISPR/Cas9 nanoplatfom

Fei Yang, Qianqin Ran, Jiahui Chen, Guochen Bao, Yuezhong Xian* and Cuiling Zhang*

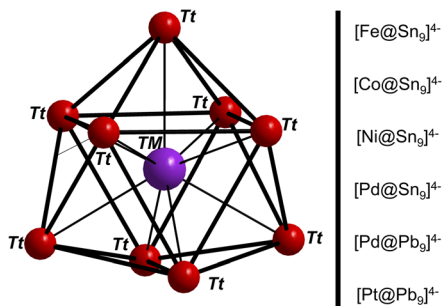
5482



Local entropy in proteins

Patrick Senet,* Adrien Guzzo, Patrice Delarue, Christophe Laforge, Gia G. Maisuradze, Jean-Marie Heydel, Fabrice Neiers and Adrien Nicolai

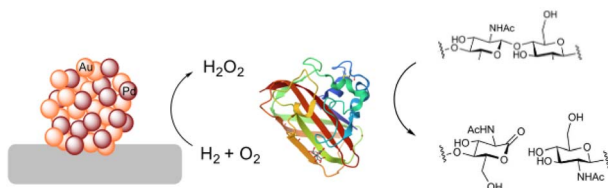
5498



Endohedral anionic nine-atom Zintl clusters of the elements tin and lead with lithium counterions

C. E. Fajman, D. M. Dankert, P. Coburger, W. Klein and T. F. Fässler*

5510



Chemo-enzymatic one-pot depolymerization of β -chitin

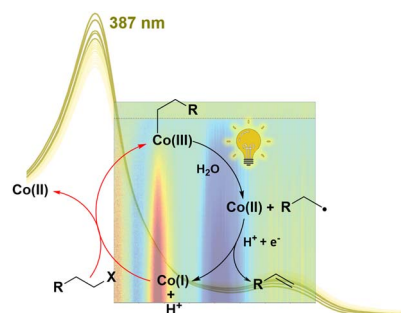
Joseph Brehm, Richard J. Lewis, Alan F. Scott, David J. Morgan, Thomas E. Davies, Nigel G. J. Richards* and Graham J. Hutchings*



5518

Shining light on the mechanism of photochemical alkene formation in vitamin B₁₂

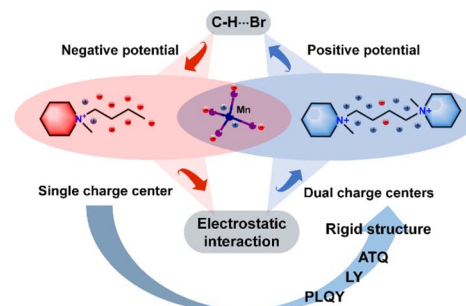
Alivia Mukherjee, Summer Y. Wu, David J. Cooper, Rachel Hendrickson, Roseanne J. Senson, Nicolai Lehnert* and James E. Penner-Hahn*



5532

A dicationic ionic liquid strategy to enhance the thermal stability of manganese bromide scintillators

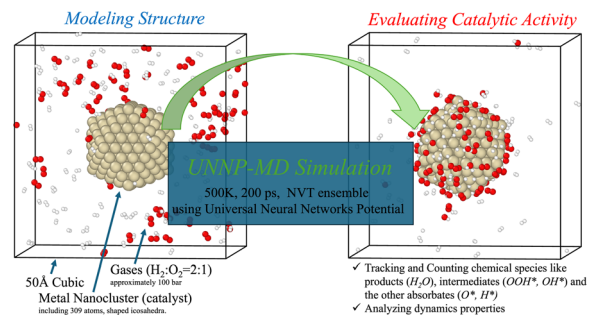
Guo-Yang Chen, Hao-Wei Lin, Abdusalam Ablez, Xin-Pin Guo, Yu-Wei Ren, Jia-Hua Luo, Qing-Hua Zou, Ke-Zhao Du,* Ze-Ping Wang* and Xiao-Ying Huang*



5542

Molecular dynamics study of catalytic H₂/O₂ recombination on Pd, Pt, Cu, Ag, and Au nanoclusters using the universal neural network potential

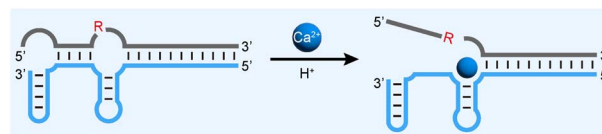
Yusuke Tateishi, Louise M. Botha, Alina E. Kozhukhova, Manabu Sugimoto,* Ken-ichi Aika and Dmitri G. Bessarabov*



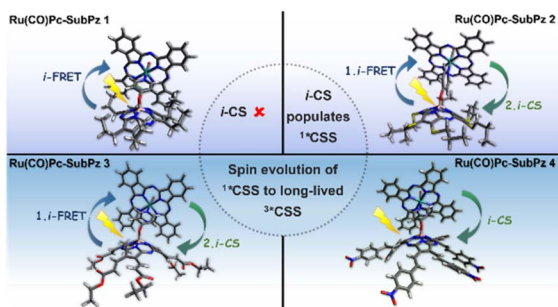
5554

Acidic *in vitro* selection of metal-specific deoxyribozymes

Pan Jia, Yangyang Chang,* Shen Li, Wei Xue, Shusen Xiao, Qiang Zhang, Jiuxing Li, Ying Wang, Zijie Zhang* and Meng Liu*



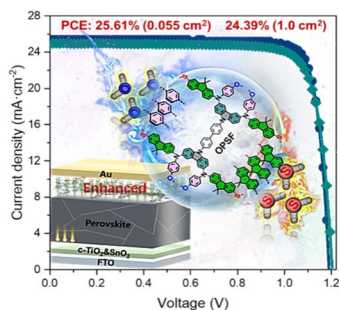
5563



Subporphyrzine scaffolds as emerging electron acceptors for long-lived charge separation

Swathi Krishna, Elena Cañizares-Espada, David Guzmán, Yifan Bo, Timothy Clark, Tomás Torres,* Dirk M. Guldi* and M. Salomé Rodríguez-Morgade*

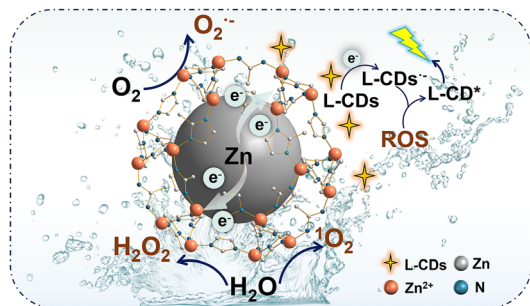
5576



Micro-changes, macro-impact: enhancing hole transfer by tailoring peripheral substituents of hole transport materials for efficient perovskite solar cells

Ziyang Xia, Xuezhen Feng, Cheng Chen,* Bin Cai, Linqin Wang, Mengde Zhai, Xue Lou, Sang Il Seok* and Ming Cheng*

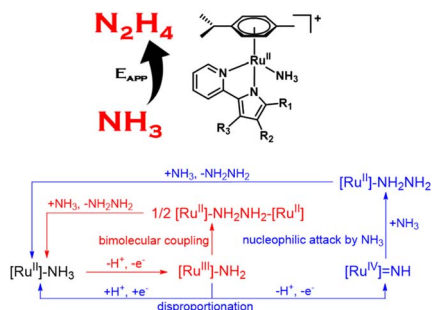
5585



Self-releasing reactive oxygen species based on the metal-to-MOF charge transfer effect boost electrochemiluminescence

Xuena Mei, Shuang Zhou,* Jing Zhang,* Mei Yan, Jinghua Yu and Yan Zhang*

5595



Selective NH₃-to-N₂H₄ conversion electrocatalysed by ruthenium(II)-cymene complexes

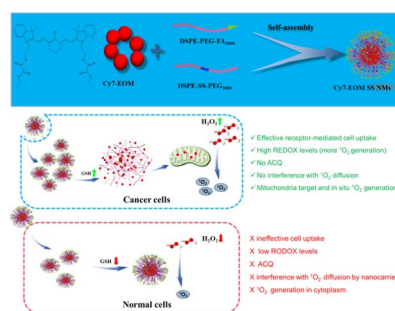
Xi Zhang, Shan Zhao, Chen Zhou, Guo Chen, Liru Cao, Jian Lin, Chen Tang, Zhi-Yan Liu, Piao He and Xiao-Yi Yi*



5604

A highly effective self-supplying photosensitizer drug for the treatment of deep-tissue metastatic tumors

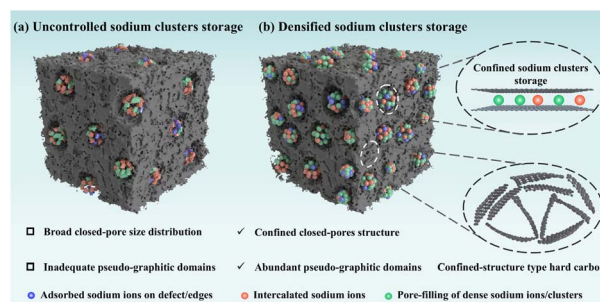
Hao Zhang, Hanxiang Li, Mingchao Xia, Yuhang Wang, Jingyu Zhou, Yue Tang,* Hongyu Wang,* Zhengze Yu* and Bo Tang*



5616

Nanoconfinement-induced high-rate performance of hard carbon for densified sodium cluster storage

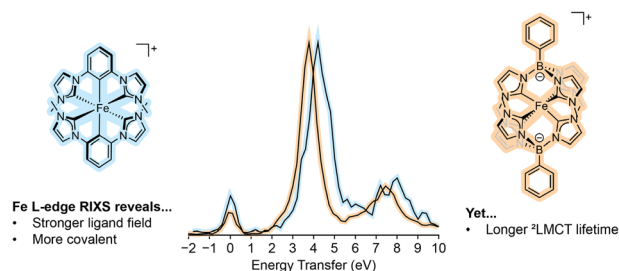
Lian Chen, Fan Li, Kaiyang Liu, Feng Wang, Zhengshuai Bai,* Yanyan Zhang and Yuxin Tang*



5627

Highly-destabilized ligand field excited states of iron carbene complexes and their relation to charge transfer state lifetimes

Reagan X. Hooper, Benjamin I. Poulter, Jesper Schwarz, Mariam Barakat, Kristjan Kunnus, Kacie J. Nelson, Aleksandra Ilic, Clara García-Mateos, Rajdip Chowdhury, Jens Uhlig, Kenneth Wärnmark, Elena Jakubikova, Amy A. Cordones and Kelly J. Gaffney*

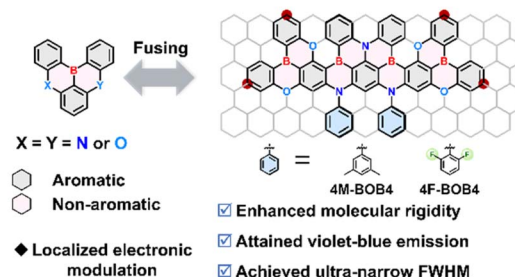


5638

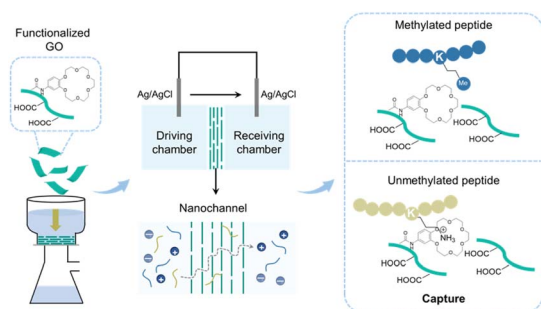
Ladder-type π -conjugated frameworks with multi-heteroatom modulation for narrowband violet-blue multiple-resonance emitters with a low CIE_y of 0.03

Jian-Rong Wu, Yue-Jian Yang, Hai-Tian Yuan, Shi-Jie Ge, Yang-Kun Qu, Hai-Xiao Jiang, Yin Liu, Dong-Ying Zhou, Liang-Sheng Liao and Zuo-Quan Jiang*

Ladder-type π -conjugated frameworks with multi-heteroatom modulation



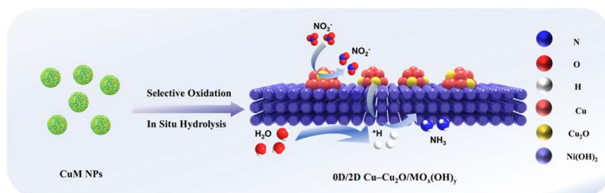
5648



Functionalized two-dimensional nanochannel membranes to distinguish methylated/unmethylated peptides for sensing cellular G9a protein

Jing-Jing Hu, Niya Lin, Wenlian Jiang, Rui Liu, Xiaoding Lou* and Fan Xia*

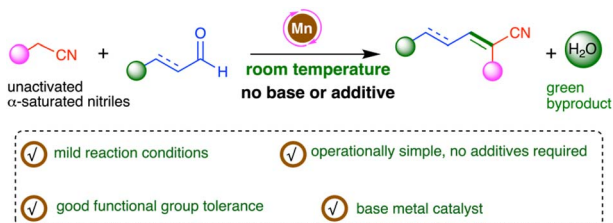
5661



Atomic-scale redox-potential-mediated engineering of 0D/2D Cu-Cu₂O/MO_x(OH)_y heterojunctions for efficient nitrate electroreduction to ammonia

Tuo Zhang, Tianzhi Hao, Xiangyang Hou, Yuhui Yin, Guowen Hu, Genping Meng, Shihao Sun, Hua Li* and Baodui Wang*

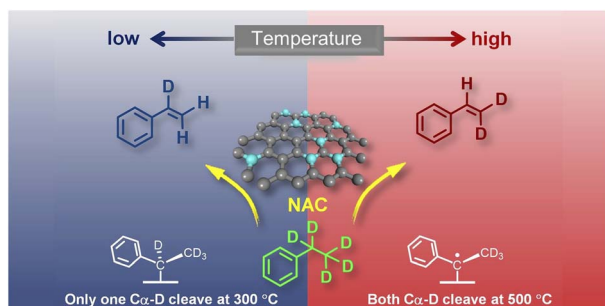
5673



Room temperature synthesis of α,β -unsaturated nitriles by manganese-catalysed base-free coupling of α -saturated nitriles with aldehydes

Subramanian Thiyagarajan, Jie Luo, Yaoyu Liang, Irena Efremenko, Michael Montag and David Milstein*

5684



Temperature-driven reaction pathways in alkane direct dehydrogenation over metal-free nitrogen doped carbocatalysts

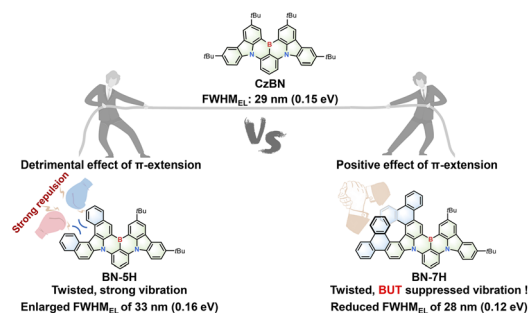
Jie Zhang, Ranjan K. Behera, Vy T. Nguyen, Zhenhao Liu, Juan D. Jimenez, Kasala Prabhakar Reddy, Jorge Moncada, Chernoy Jaye, Jinsu Oh, Chao Meng, Lin Zhou, Sanjaya D. Senanayake, Bin Wang,* Long Qi* and Wenyu Huang*



5694

Unraveling the positive effect of twisted helicene structure on narrowband electroluminescence

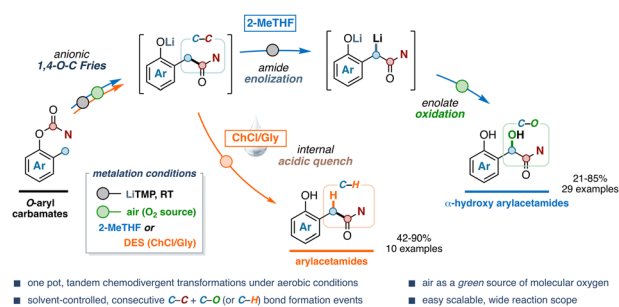
Cheng-Zhuo Du, Mingqiang Mai, Pei-Han Gao, Yi-Chao Zhao, Xiang-Yu Gao, Dongdong Zhang,* Lian Duan,* Chunming Cui and Xiao-Ye Wang*



5701

Solvent-controlled, chemodivergent oxidative anionic Fries rearrangement of *O*-aryl carbamates under aerobic conditions

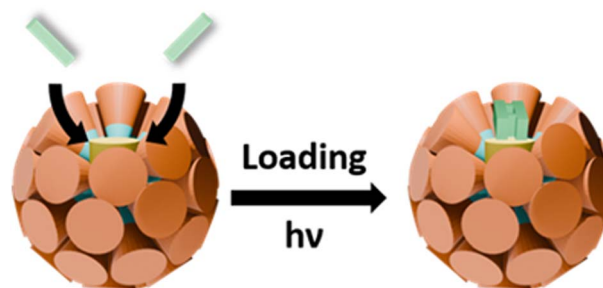
Riccardo Gnani, Federica De Nardi, Carolina Meazzo, Simone Ghinato, Ettore Grimaldi, Andrea Maranzana, Cristina Prandi and Marco Blangetti*



5712

Toward functional and structurally complex Frank-Kasper phases via creating concavities on supramolecular micelles

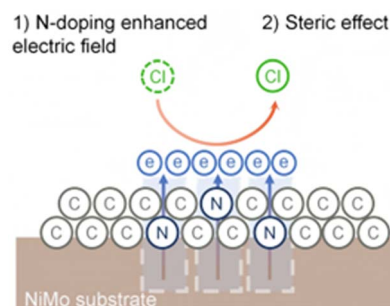
Yong-Rui Wang, Jui-Heng Weng, Shing-Jong Huang, Chun-Jen Su, U-Ser Jeng, Po-Ya Chang, Wei-Tsung Chuang* and Chien-Lung Wang*



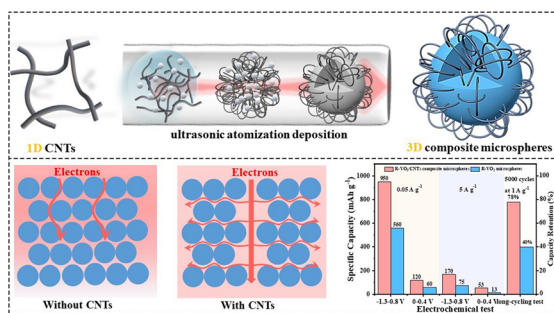
5720

Constructing a dual-protection heterointerface for durable anion exchange membrane seawater electrolysis at ampere-level current density

Yue Xu, Yingjian He, Shuaidong Li, Shanling Li, Junqin Shi,* Zeyun Cai,* Xi Lin* and Kailong Hu*



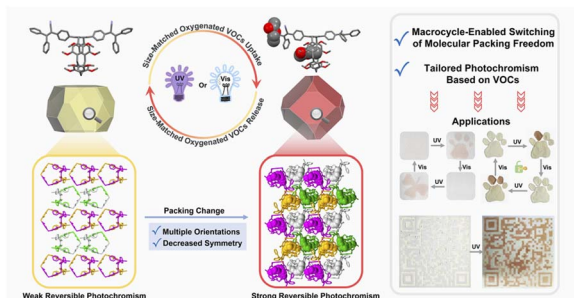
5731



Coupling abundant active sites and an ultra-short ion diffusion path: R-VO₂/carbon nanotube composite microspheres boosted the performance of aqueous ammonium-ion batteries

Lin-bo Tang, Xian-kai Fan, Kai-xiong Xiang, Wei Zhou, Wei-na Deng, Hai Zhu, Liang Chen, Jun-chao Zheng* and Han Chen*

5745



Superstructure-induced enhancement of solid-state triphenylacrylonitrile photochromism via a macrocycle-mediated blocking strategy

Meng-Hao Li, Hui Hui, Yan Wang and Ying-Wei Yang*

CORRECTIONS

5758

Correction: Ultra-low concentration gel polymer electrolytes realize stable and low-temperature lithium-organic batteries

Mengjie Li, Hang Liu, Hai Su, Zehui Fan, Yuansheng Liu, Jixing Yang,* Wei Zhu, Qinghao Chen and Yunhua Xu*

5759

Correction: Gas-phase synthesis of the bicyclic silicon tricarbid molecule (c-SiC₃) as a precursor to silicon carbide nanoparticles in space

Shane J. Goettl, Kazuomi Fujioka, Márcio O. Alves, Mateus X. Silva, Zhenghai Yang, Surajit Metya, Iakov A. Medvedkov, Tosaporn Sattasathuchana,* Breno R. L. Galvão,* Rui Sun* and Ralf I. Kaiser*

