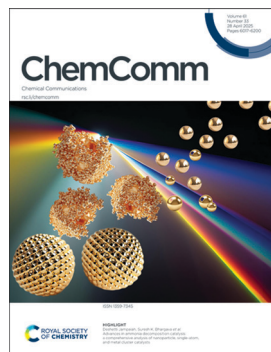


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ISSN 1359-7345 CODEN CHCOFS 61(33) 6017-6200 (2025)



Cover

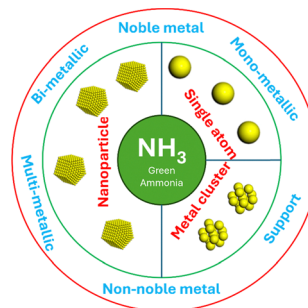
See Deshetti Jampaiah, Suresh K. Bhargava *et al.*, pp. 6027–6054. Image reproduced by permission of Suresh K. Bhargava from *Chem. Commun.*, 2025, **61**, 6027. Created with Canva.com.

HIGHLIGHT

6027

Advances in ammonia decomposition catalysis: a comprehensive analysis of nanoparticle, single-atom, and metal cluster catalysts

Pallavi Saini, Deshetti Jampaiah,* Selvakannan Periasamy, Aniruddha P. Kulkarni and Suresh K. Bhargava*

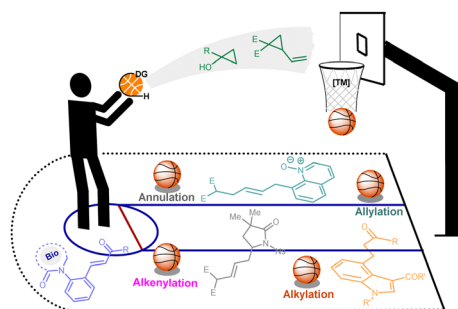


FEATURE ARTICLES

6055

Transition-metal-catalyzed auxiliary-assisted C–H functionalization using vinylcyclopropanes and cyclopropanols

Shubhajit Basak, Tripti Paul, Santu Mandal, Madhab Barman, Maniya V Nanjegowda and Tharmalingam Punniyamurthy*



Environmental Science: Atmospheres

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Fundamental questions
Elemental answers

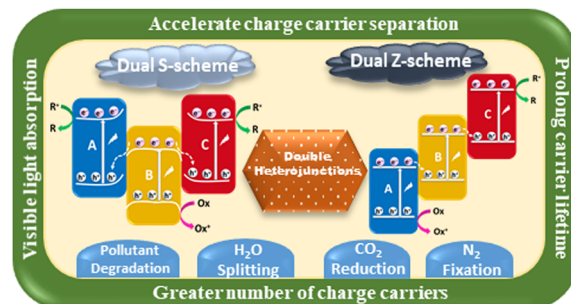


FEATURE ARTICLES

6069

Double heterojunction photocatalysts: strategic fabrication and mechanistic insights towards sustainable fuel production

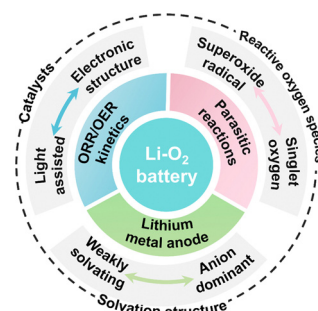
Soumita Samajdar, Maitrayee Biswas, Dipendu Sarkar, Jishu Pramanik, Jayanta Mukhopadhyay and Srabanti Ghosh*



6095

Recent advances and perspectives of Li–O₂ batteries

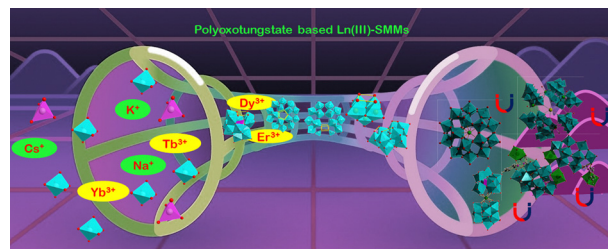
Bo Wen, Lang Zhou, Yuzhe Wang and Fujun Li*



6105

Epitome of polyoxotungstate-coordinated lanthanide-based single-molecule magnets

Pradip Kumar Sahu, Sandhya Kapurwan and Sanjit Konar*

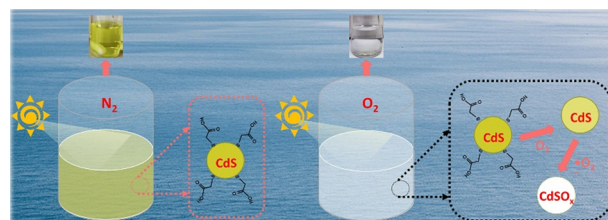


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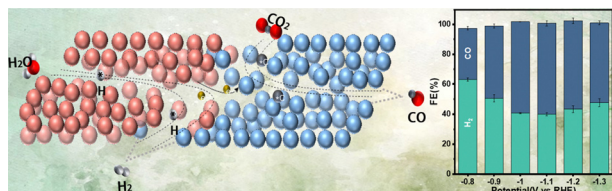
6118

Unraveling the role of superoxide radicals in CdS quantum dot instability

Miaoli Gu, Xianglin Xiang, Bei Cheng, Jiaguo Yu* and Liuyang Zhang*



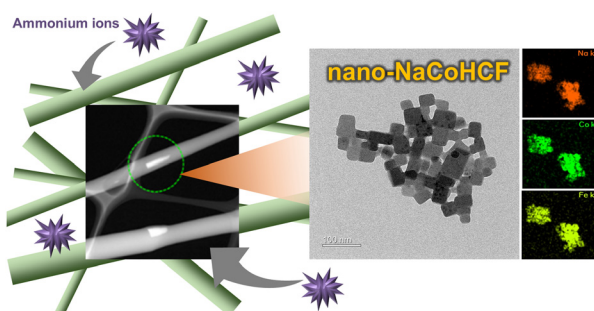
6122



In situ construction of a built-in electric field for efficient CO₂ electroreduction

Zikang Qiao, Xiang Han, Tingjie Mao, Zhenrui Yang, Jinglian Huang, Shun Wang, Ping Yu,* Juan Wang* and Huile Jin*

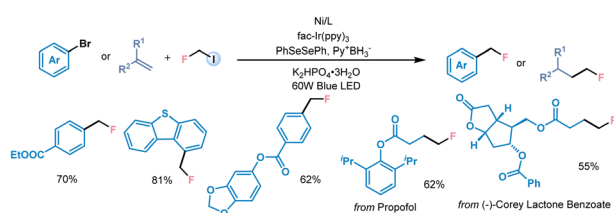
6126



Effect of nanosizing on sodium cobalt(II) hexacyanoferrate(II) nanoparticles in nanofibers for enhanced ammonium adsorption capacity

Makoto Sasaki and Mitsuhiro Ebara*

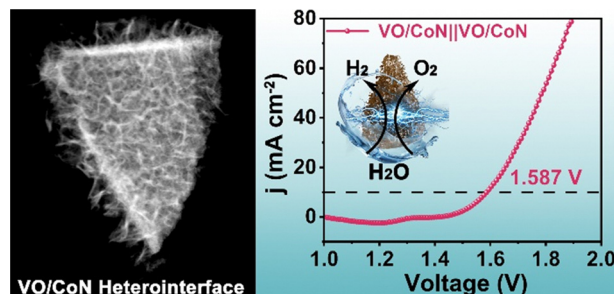
6130



Halogen-atom transfer of fluoroiodomethane for photoredox-catalyzed fluoromethylation

Chunyu Chen, Weigang Zhang, Xiaochen Wang, Yi Pan, Yu Mao* and Yi Wang*

6134



Heterointerface engineering of vanadium oxide/cobalt nitride as efficient electrocatalysts for alkaline overall water splitting

Tengfei Xu, Zhaohui Lu, Lan Yu, Wen Xin, Jie Sun, Haoze Zhou, Yanqing Jiao, Xiuwen Wang* and Chunmei Lv*

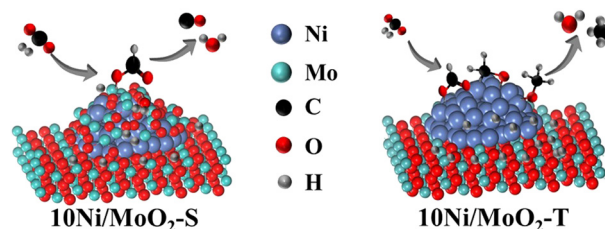


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A heat treatment method-induced product selectivity switch for CO₂ reduction over Ni/MoO₂

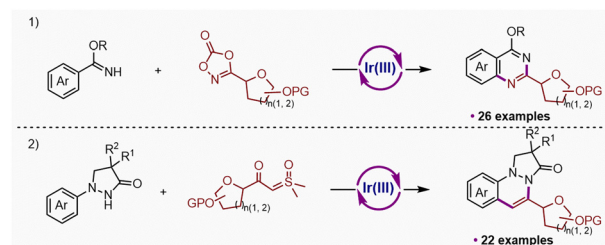
Jie Zhao,* Tao Zhang, Xiaolong Zhang, Ruixue Bao, Ruru Sun and Chuanyi Wang



6142

Synthesis of 2-glycosyl-quinazolines and 5-glycosyl-pyrazolo[1,2-a]cinnolines by Cp*Ir(III)-catalyzed C–H activation/cyclization

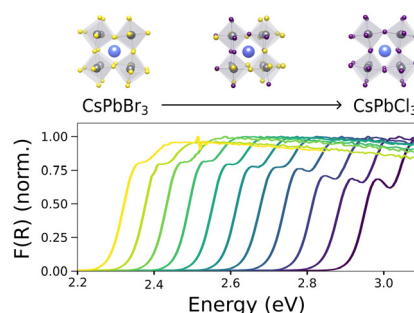
Xin-Yue Hu, Deng-Yin Liu, Cong-Zhen Zhang, Miao-Miao Wen, Xiao-Xi Ren, Shang-Shi Zhang* and Xu-Ge Liu*



6146

An experimental data library for the full CsPb(Cl_xBr_{1-x})₃ compositional series

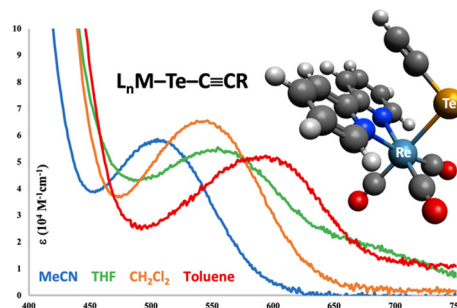
Kinga O. Mastej, Bodo Batnaran, Antti-Pekka M. Reponen, Zachary A. VanOrman, Kal Banger, Michael A. Hayward, Volker L. Deringer* and Sascha Feldmann*



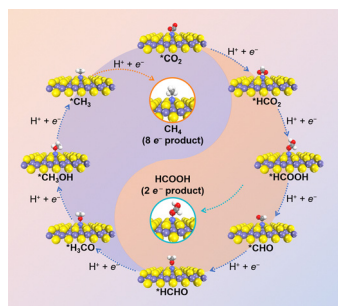
6150

Alkynyltellurolato ligands including a solvatochromic rhenium(I) complex

Liam K. Burt, Ryan M. Kirk and Anthony F. Hill*



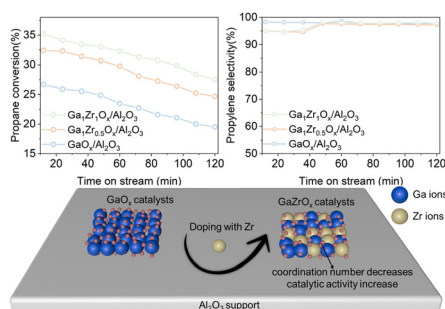
6154



Boosting CO₂ reduction catalyzed by tetragonal metal chalcogenides: a DFT study

Fei Yang, Xu Huang, Chengfang Yang, Chao Su and Beibei Xiao*

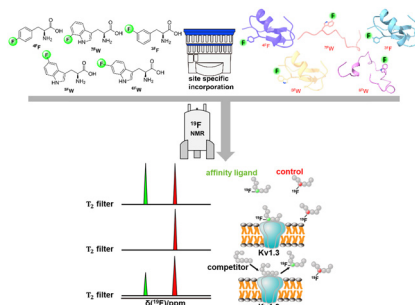
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Zr element promotes gallium oxide-based catalyst activity for direct dehydrogenation of propane

Mingxin Lv, Qiang Li,* Yue Zhu, Jianrong Zeng, Qiheng Li, Xin Chen, Kun Lin, Jinxia Deng and Xianran Xing*

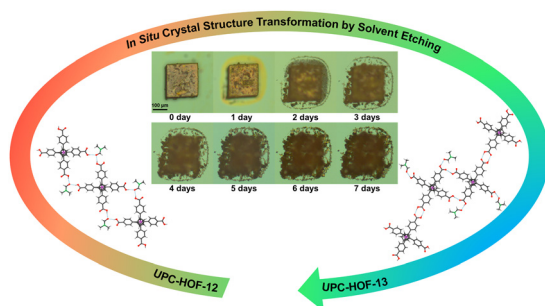
6162



¹⁹F NMR chemical shift encoded peptide screening targeting the potassium channel Kv1.3

Yong Zhang, Yongjie Zhu, Yi Zhang, Chaowei Shi, Longhua Zhang, Jun Liang,* Changlin Tian* and Pan Shi*

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Solvent-etching-induced *in situ* crystal structure transformation in hydrogen-bonded organic frameworks

Xiaokang Wang, Hongyan Liu, Meng Sun, Fei Gao, Xueying Feng, Mingming Xu, Yutong Wang, Weidong Fan* and Daofeng Sun*

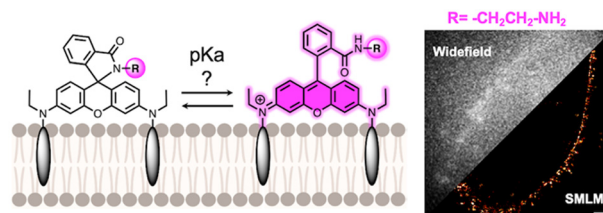


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Spontaneously blinking spiroamide rhodamines for live SMLM imaging of the plasma membrane

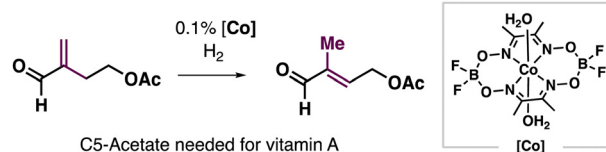
Sonia Pfister, Sophie Walter, Aurélie Perrier and Mayeul Collot*



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Co(II)-catalyzed isomerization of enals using hydrogen atom transfer

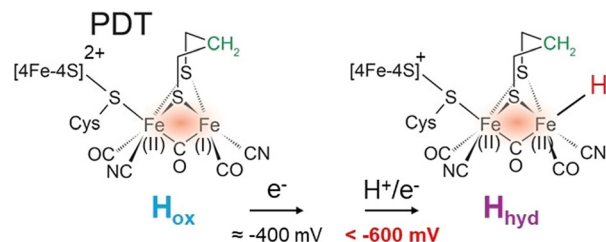
Qiqige Qiqige, Edward Richmond,* Rocco Paciello, Mathias Schelwies and Rylan J. Lundgren*



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Terminal hydride formation in [FeFe] hydrogenase: understanding the role of the dithiolate bridgehead

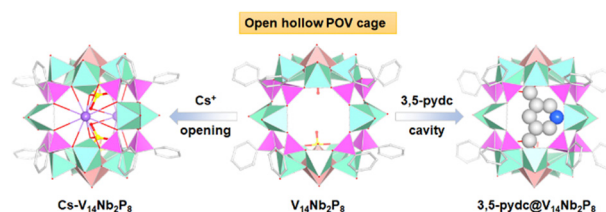
Anjali Depala, Manon T. Lachmann, Simone Morra, James A. Birrell* and Patricia Rodríguez-Maciá*



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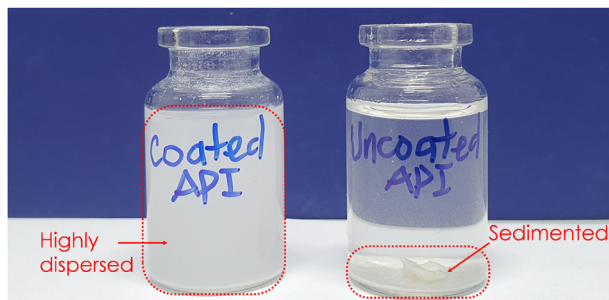
An open hollow polyoxovanadate cage based on $\{Nb(V_5)\}$ pentagons with size-selective encapsulation properties

Renbo Fang, Di Zhang, Jing Dong,* Yeqin Feng, Chengpeng Liu, Liaoyuan Yao, Yingnan Chi* and Changwen Hu



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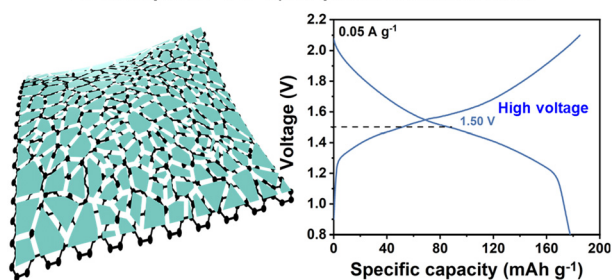


Stable dispersion and prolonged dissolution of hydrophilic pharmaceutical achieved by room-temperature atmospheric pressure atomic layer deposition

Viet Phuong Cao, Kim-Hue Thi Dinh, Truong Duc Dinh, Phi Huu Bui, Tuan Hiep Tran and Hao Van Bui*

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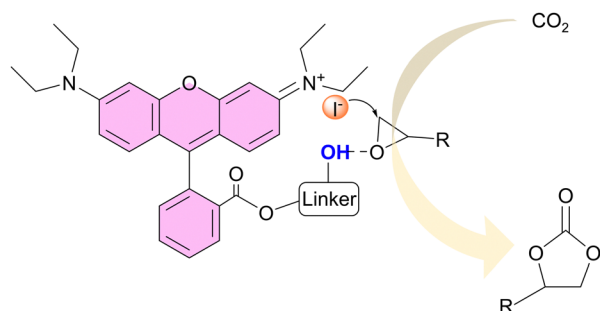
2D Amorphous VOPO₄/Graphene Heterostructure



A two-dimensional amorphous VOPO₄/graphene heterostructure for high-voltage aqueous Zn-ion batteries

Jinxing Jiang, Yihong Huang, Zhigang Fan,* Yaqin Cui, Xianyu Liu* and Xinyu Wang*

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Bifunctional dye-based organocatalysts with enhanced activity in the conversion of CO₂ into cyclic carbonates

Jing Chen and Paolo P. Pescarmona*

