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See Chinmay Chowdhury *et al.*, pp. 7427–7430. Image reproduced by permission of Chinmay Chowdhury from *Chem. Commun.*, 2024, 60, 7427.



Inside cover

See Jinhye Bae *et al.*, pp. 7414–7426. Image reproduced by permission of Jinhye Bae from *Chem. Commun.*, 2024, 60, 7414.

PROFILE

7391

Contributors to the Emerging Investigators collection 2024: Part 1

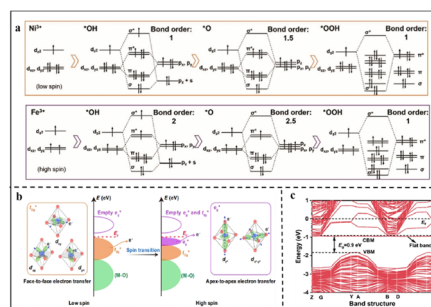


HIGHLIGHT

7397

The spin polarization strategy regulates heterogeneous catalytic activity performance: from fundamentals to applications

Yan Wang, Junkang Sun, Ning Sun, Mengyang Zhang, Xianya Liu, Anlei Zhang* and Longlu Wang*



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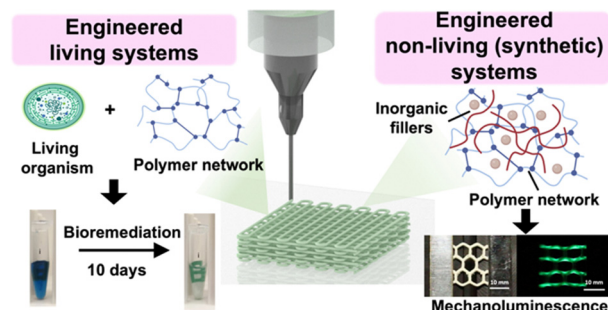


FEATURE ARTICLE

7414

Extrusion-based 3D printing of soft active materials

Jiayu Zhao, Xiao Li, Donghwan Ji and Jinhye Bae*

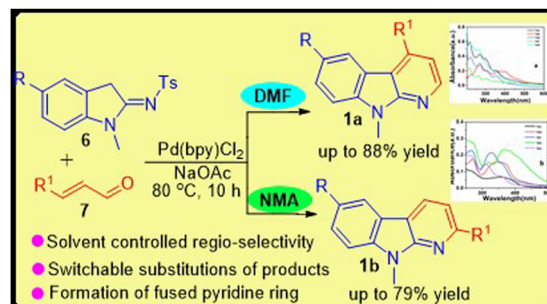


COMMUNICATIONS

7427

A solvent controlled regioselective synthesis of 2- and 4-substituted α -carbolines under palladium catalysis

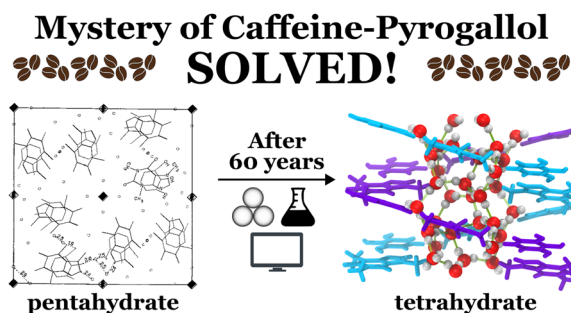
Sarat Chatterjee, Rousunara Khatun, Mahammad Ali and Chinmay Chowdhury*



7431

Structure of the caffeine–pyrogallol complex: revisiting a pioneering structural analysis of a model pharmaceutical cocrystal

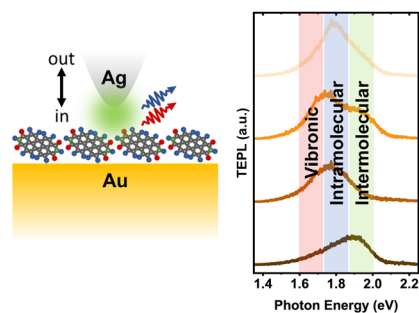
Okba Al Rahal, Michael Ferguson, Cameron B. Lennox, Louise Male and Tomislav Friščić*



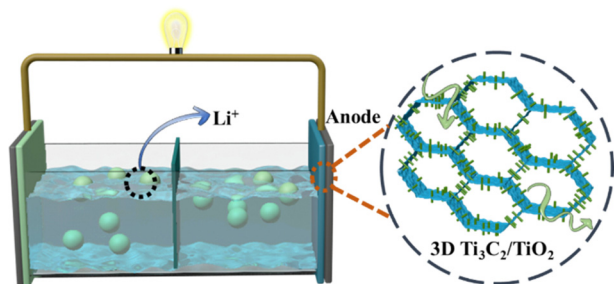
7435

Visualizing nanoscale heterogeneity in perylene thin films via tip-enhanced photoluminescence with unsupervised machine learning

Pavel Valencia-Acuna, Kushal Rijal, Chih-Feng Wang, Maxim Ziatdinov, Wai-Lun Chan* and Patrick Z. El-Khoury*



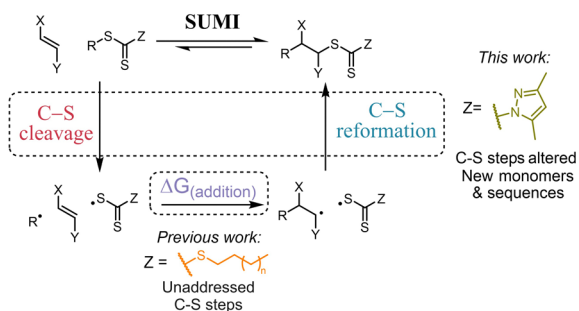
7439



3D hierarchical Ti₃C₂/TiO₂ composite *via in situ* oxidation for improved lithium-ion storage

Jianlin Zhang, Shan Wei, Qingyun Miao, Huihui Yue, Xiuxia Meng, Fei Wang* and Naitao Yang*

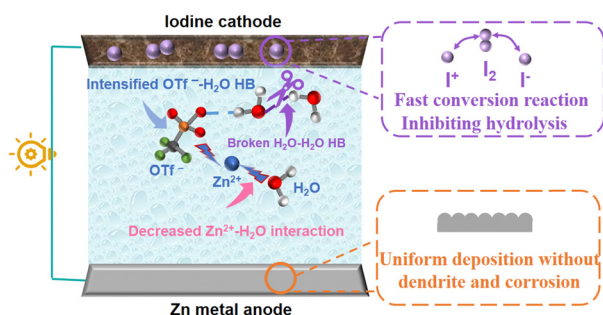
7443



Pyrazole carbodithiolate-driven iterative RAFT single-additions

Karen Hakobyan, Benjamin Noble and Jiangtao Xu*

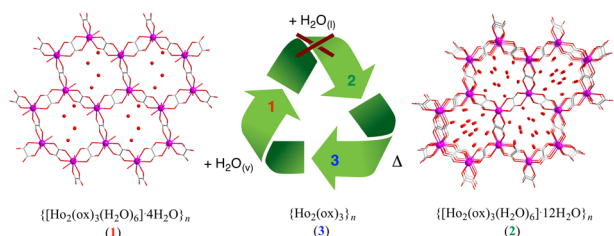
7447



Triflate anion chemistry for enhanced four-electron zinc-iodine aqueous batteries

Tingting Liu, Chengjun Lei, Huijian Wang, Wei Yang, Xin He and Xiao Liang*

7451



Magnetocaloric efficiency tuning through solvent-triggered 3D to 2D interconversion in holmium(III)-based dynamic MOFs

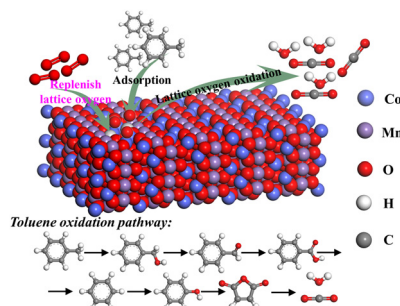
Nadia El Alouani Dahmouni, Marta Orts-Arroyo, Adrián Sanchis-Perucho, Nicolás Moliner, Júlia Mayans, Mario Pacheco, Isabel Castro,* Giovanni De Munno, Nadia Marino,* Rafael Ruiz-García and José Martínez-Lillo*



7455

A bimetallic MOF-derived MnCo spinel oxide catalyst to enhance toluene catalytic degradation

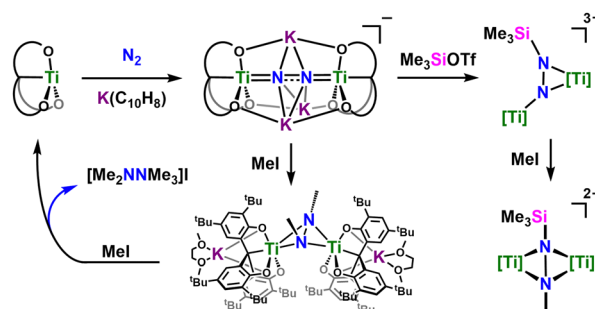
Bin Gao, Fukun Bi, Zhuoxuan Zhou, Yaofei Zhang, Jiafeng Wei, Xutian Lv, Baolin Liu, Yuandong Huang and Xiaodong Zhang*



7459

Hydrazido complexes prepared by methylation of an anionic end-on bridging dinitrogen dititanium complex

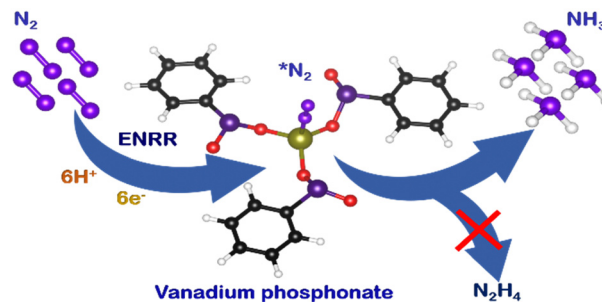
Yutaka Ishida, Yusuke Nakanishi, Takuma Hiratsuka and Hiroyuki Kawaguchi*



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Selective electrochemical nitrogen fixation to ammonia catalyzed by a novel microporous vanadium phosphonate *via* the distal pathway

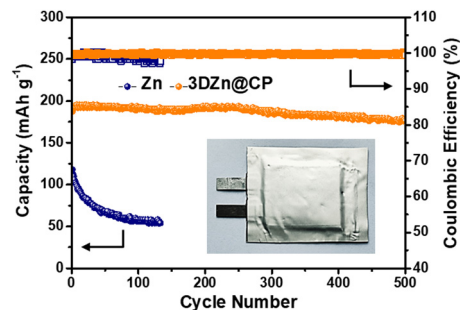
Smruti Vardhan Purohit, Rupali Ipsita Mohanty, Bibek Dash, Piyali Bhanja* and Bikash Kumar Jena*



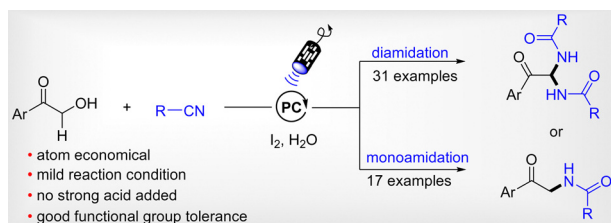
7467

Fast-charging aqueous batteries enabled by a three-dimensional ordered Zn anode at deliberate concentration polarization

Jinze Li, Eryang Mao, Xiaozhou Ye, Tian Xu, Jie Zheng, Kaiwen Xiao, Bingbing Sun, Ming Ge, Xiaolei Yuan and Zhao Cai*



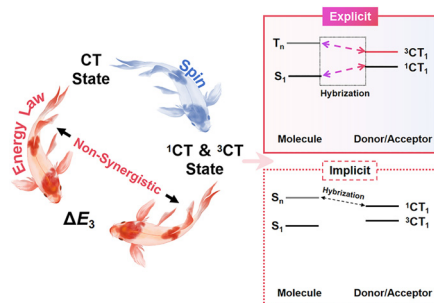
7471



Visible-light-induced Ritter-type amidation of α -hydroxy ketones in the selective synthesis of α,α -diamido and monoamido ketones

Enrong Tang, Quan-Quan Zhou* and Jie-Ping Wan*

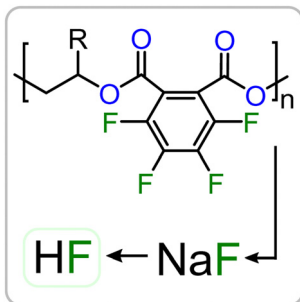
7475



A hybridization-induced charge-transfer state energy arrangement reduces nonradiative energy loss in organic solar cells

Yue Ren, Ming-Yue Sui, Li-Yuan Peng, Ming-Yang Li,* Guang-Yan Sun* and Zhong-Min Su*

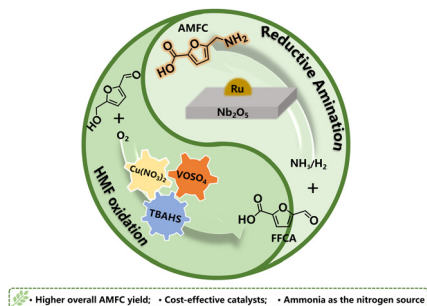
7479



Fluoride recovery in degradable fluorinated polyesters

Christoph Fornacon-Wood, Merlin R. Stühler, Alexandre Millanvois, Luca Steiner, Christiane Weimann, Dorothee Silbernagl, Heinz Sturm, Beate Paulus and Alex J. Plajer*

7483



Hybrid homogeneous/heterogeneous relay catalysis for efficient synthesis of 5-aminomethyl-2-furancarboxylic acid from HMF

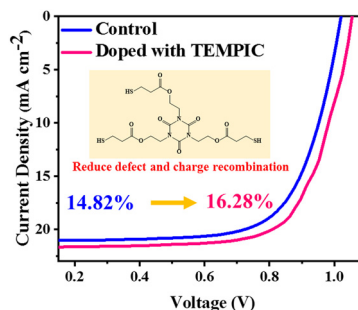
Conglin Zhu, Kaizhi Wang, Feifan Gao, Zehui Sun, Mugeng Chen, Jiachen Fei, Chen Chen, Heyong He, Yongmei Liu* and Yong Cao*



7487

Additive engineering via multiple-anchoring enhances 2D perovskite solar cells' performance

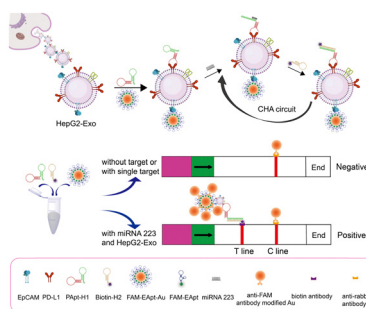
Liangding Zheng, Yuanju Zhao, Rongjun Zhao,* Lin Xie* and Yong Hua*



7491

A lateral flow assay strip for simultaneous detection of miRNA and exosomes in liver cancer

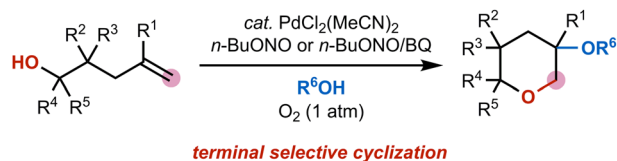
Ruyue Wei, Dawei Wang, Ping Zhou, Yingbo Pan, Xiuyan Wan, Wei Pan, Na Li* and Bo Tang*



7495

Alkyl nitrite-enabled palladium-catalyzed terminal selective oxidative cyclization of 4-penten-1-ols

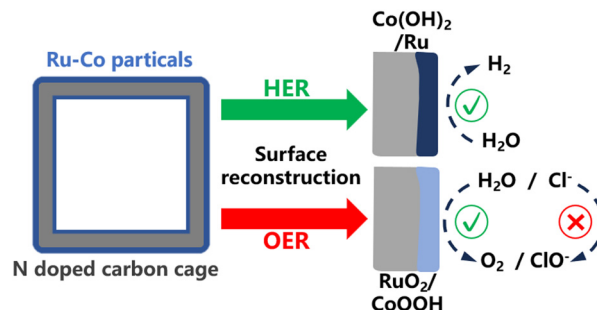
Ayaka Iwanami, Saki Komori and Yasuyuki Ura*



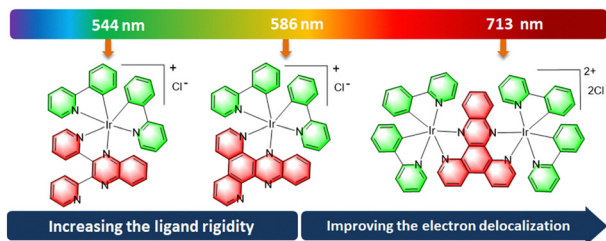
7499

A N-doped carbon substrate makes the Ru-Co alloy an efficient electrocatalyst for pH-universal seawater splitting

Kang-Yi Xiong, Le-Wei Shen, Yong Wang, Yu Liu, Ming-Xia Hu, Jie Ying, Yu-Xuan Xiao, Ling Shen,* Ge Tian* and Xiao-Yu Yang*



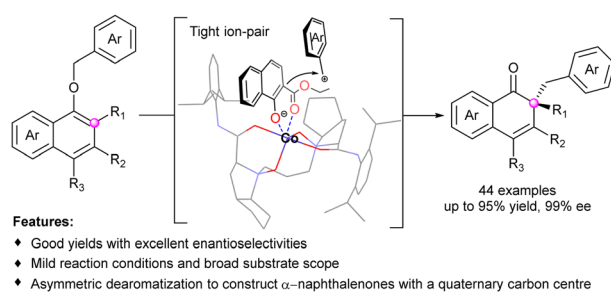
7503



Molecular engineering of metal-based photosensitizers with narrow band gap for efficient photodynamic therapy

Pengmin Shi, Wenqi Gong, Jian Zhao,* Yubo Jiao, Yanyan Sun, Lei Fang* and Shaohua Gou*

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Asymmetric dearomatization of benzyl 1-naphthyl ethers via [1,3] O-to-C rearrangement

Hongkun Zeng, Gang Wen, Lili Lin* and Xiaoming Feng*

