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IN THIS ISSUE

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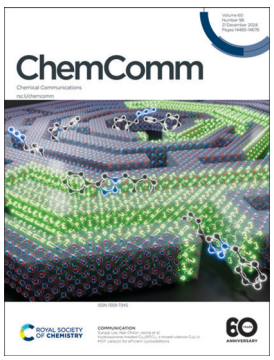
Cover
See Igor V. Alabugin, Dasan M. Thamattoor, David Lee Phillips *et al.*, pp. 14573–14576. Image reproduced by permission of Dasan M. Thamattoor from *Chem. Commun.*, 2024, **60**, 14573.



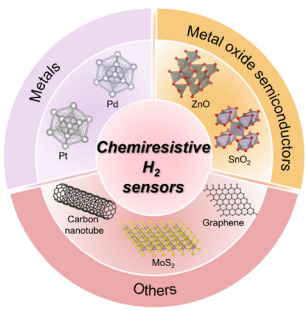
Inside cover
See Sunggi Lee, Nak Cheon Jeong *et al.*, pp. 14577–14580. Image reproduced by permission of Nak Cheon Jeong from *Chem. Commun.*, 2024, **60**, 14577.

HIGHLIGHT

14497

Recent advances in nanomaterial-enabled chemiresistive hydrogen sensors

Yao Yang Liu, Zhong Li,* Yi Liang, Tao Tang, Jing Hao Zhuang, Wen Ji Zhang, Bao Yue Zhang and Jian Zhen Ou*

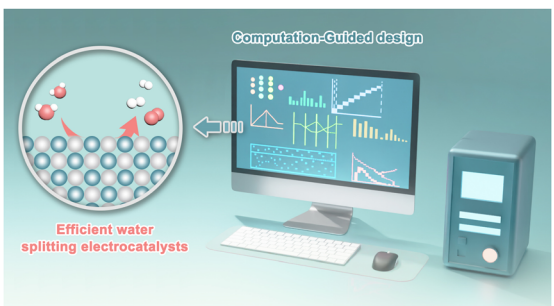


FEATURE ARTICLES

14521

Rational design of water splitting electrocatalysts through computational insights

Mingcheng Zhang, Yuchang Hou, Yuzhu Jiang, Xinyue Ni, Yanfei Wang* and Xiaoxin Zou*



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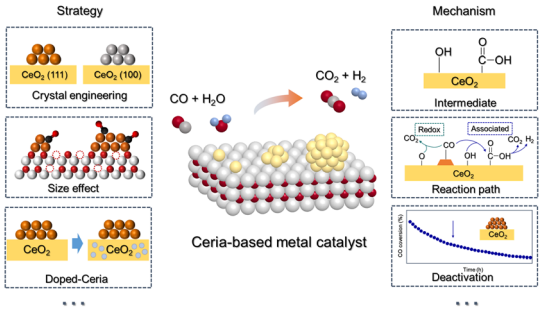
FEATURE ARTICLES

14537

Ceria-based supported metal catalysts for the low-temperature water–gas shift reaction

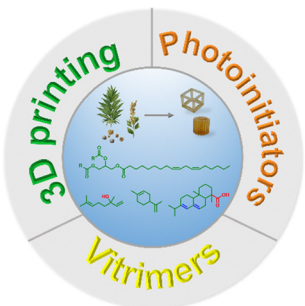
Xin-Pu Fu, Hui Zhao and Chun-Jiang Jia*



14557

Lipidic biomass as a renewable chemical building block for polymeric materials

Rafael Turra Alarcon,* Gabriel Iago dos Santos, Caroline Gaglieri, Aniele de Moura, Éder Tadeu Gomes Cavalheiro and Gilbert Bannach



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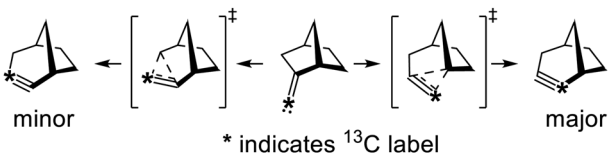
14573

Generation and interception of bicyclo[3.2.1]oct-2-yne: an experimental and theoretical mechanistic study

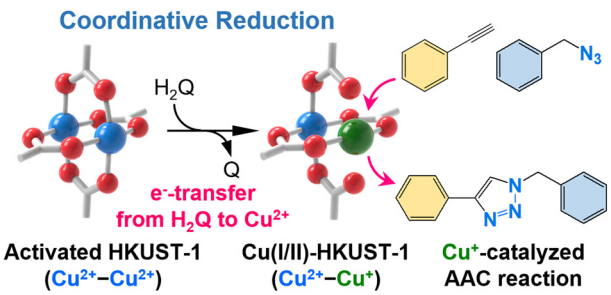
T. E. Anderson, Beauty K. Chabuka, Igor V. Alabugin,* Dasan M. Thamattoor* and David Lee Phillips*



14577

Hydroquinone-treated $Cu_3(BTC)_2$: a mixed-valence Cu(I/II) MOF catalyst for efficient cycloadditions

Sun Ho Park, Hye Mi Kim, Mariana L. Díaz-Ramírez, Sunggi Lee* and Nak Cheon Jeong*



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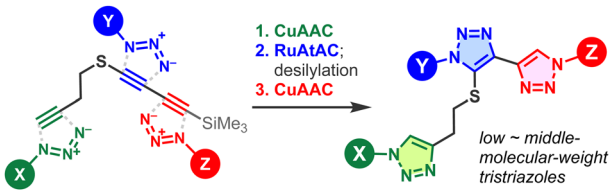
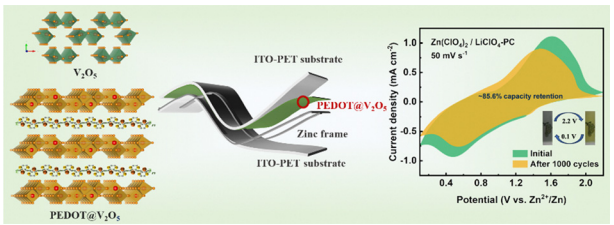


1,3-Butadiynyl sulfide-based compact trialkyne platform molecule for sequential assembly of three azides

Jumpei Taguchi, Kento Tokunaga, Hitomi Tabuchi, Takashi Nishiyama, Isao Kii and Takamitsu Hosoya*

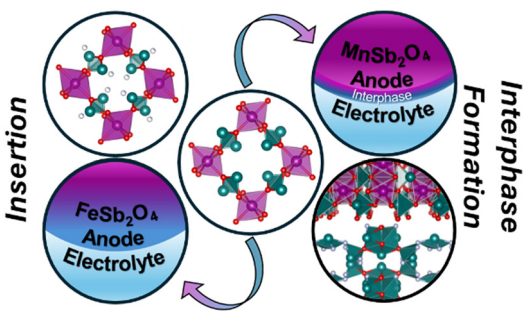
14585



Interlayer spacing expansion for V_2O_5 towards ultra-stable zinc anode-based flexible electrochromic displays in Zn^{2+}/Li^{+}-PC organic electrolyte

Zhe Li, Zhaoyang Song, Linhua Liu, William W. Yu, Jingwei Chen,* Qianqian Zhu and Haizeng Li*

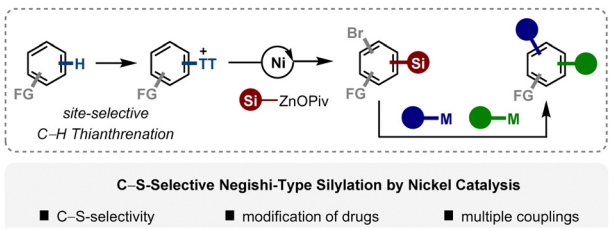
14589



Interphase formation *versus* fluoride-ion insertion in tunnel-structured transition metal antimonites

Alice R. Giem, Jaime R. Ayala, Jingxiang Cheng, Conan Weiland, Cherno Jaye, Daniel A. Fischer and Sarbajit Banerjee*

14593



Nickel-catalyzed silylation of aryl thianthrenium salts with silylzinc pivalates

Zhenfeng Tian, Zhili Cui, Ying Hu, Jiabin Zhang, Liangjie Ruan and Jie Li*

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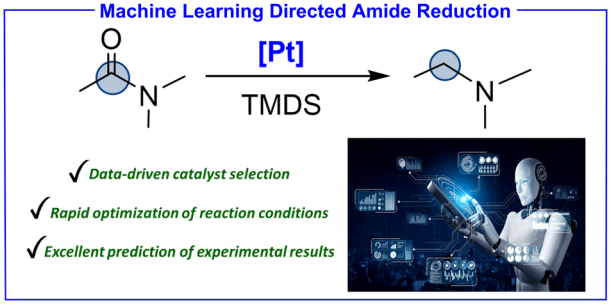
14597

Machine learning directed discovery and optimisation of a platinum-catalysed amide reduction

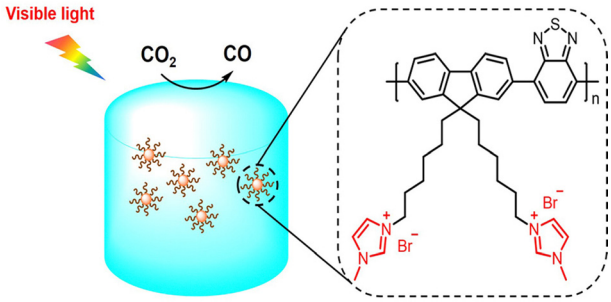
Eleonora Casillo, Benon P. Maliszewski, César A. Urbina-Blanco, Thomas Scattolin, Catherine S. J. Cazin* and Steven P. Nolan*



14601

Efficient CO_2 photoreduction using a water-soluble conjugated polyelectrolyte grafted imidazolium-functionalized side chain

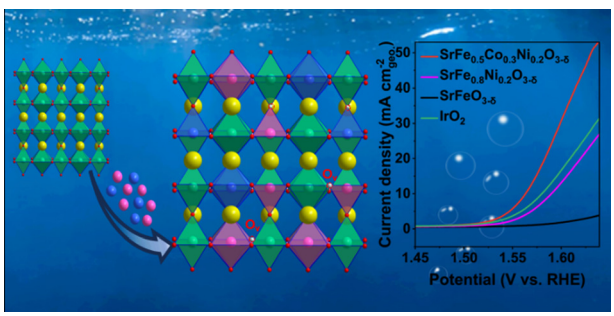
Mantao Chen, Waner Li, Tingting Zhang, Tianjing Xu, Bo Wang, Chao Zeng, Fei Li* and Chunhui Dai*



14605

Unveiling the effect of codoping in strontium ferrite for oxygen evolution in alkaline media

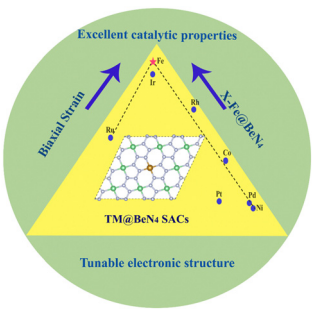
Shuangshuang Zhu, Mingyuan Wang, Yuguang Mao, Jiayuan Wang, Jiabao Ding,* Guiwu Liu and Weifeng Zhang*



14609

Tunable electronic structure and excellent catalytic properties of transition-metal-doped BeN_4 monolayer

Wen-Hui Zhao, Dong-Yin Sun, Zi-Qiang Deng, Shi-Yao Liu, Lie-Mao Cao, Xiao-Hui Deng, Wen-Jin Yin and Zhen-Kun Tang*



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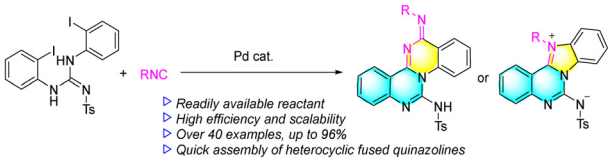
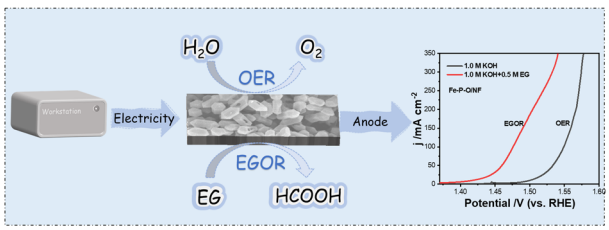


Palladium-catalyzed cascade cyclization of isocyanides with di-(*o*-iodophenyl)sulfonylguanidines: access to heterocyclic fused quinazolines

Shen Ge, Yi-Ming Zhu, Xiao-Ping Xu,* You Zi* and Shun-Jun Ji*

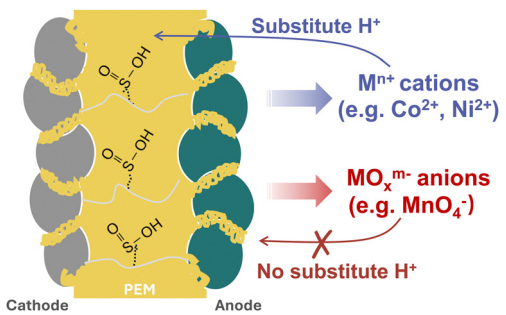
14617



Amorphous Fe–O–P electro(pre)catalysts for energy-efficient H_2 production coupled with ethylene glycol oxidation

Feifei Yuan, Xiaoli Chen, Wenhui Yang, Wanting Wu, Manjie Zheng, Jun Xu,* Nan Yu* and Liyong Chen*

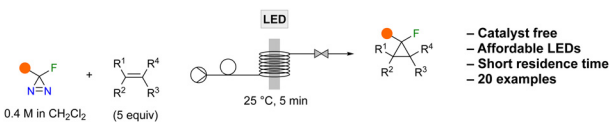
14621



Effects of dissolved 3d-block metal ions on PEM water electrolysis performance

Shuang Kong,* Kazuna Fushimi, Ailong Li and Ryuhei Nakamura*

14625



Synthesis of aryl fluorocyclopropanes from aryl fluorodiazirines and alkenes in continuous flow

Hoang-Minh To, Shima Mirakhorli and Thierry Ollevier*

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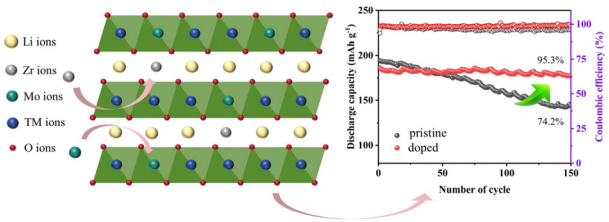
Boosting the electrochemical performance of the Ni-rich $LiNi_{0.96}Co_{0.02}Mn_{0.02}O_2$ cathode by high-valence Zr/Mo dual-doping

Hongmei Cao, Yudong Zhang,* Xunzhu Zhou, Jie Yu, Xiang Chen and Lin Li*



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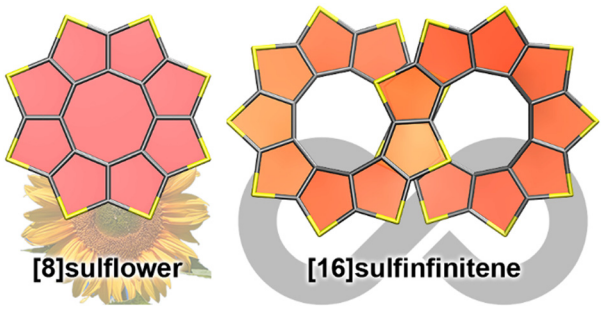
Sulfinfinitenes: infinitenes of fused thiophene rings

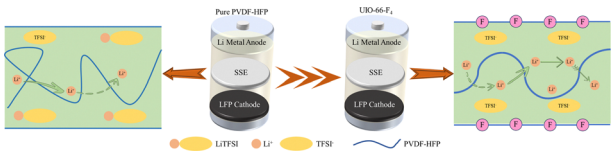
Peter B. Karadakov* and Edward Cummings



14637

The effects of fluorinated metal–organic frameworks as additives in polymer-based electrolytes for all-solid-state lithium batteries

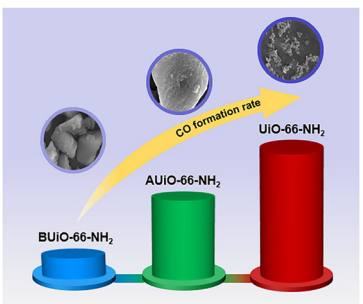
Liang He, Zexi Di, Jiaxing Li, Sijia Wang, Wei Kong, Ruiqi Li, Arkadii Proskurin, Changzhu Lv* and Tao Wei*



14641

Varied CO_2 photoreduction activities of UiO-66-NH_2 MOFs with different aggregation morphologies

Shu-Ran Zhang, Yan-Hong Zou, Hai-Ning Wang,* Guang-Juan Xu, Wei Xie, Na Xu, Yan-Hong Xu* and Ya-Qian Lan*



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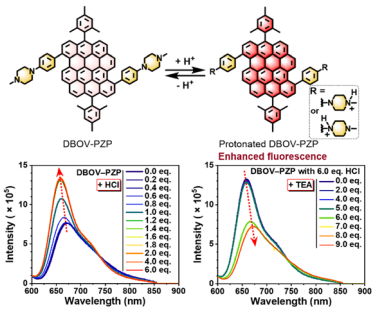
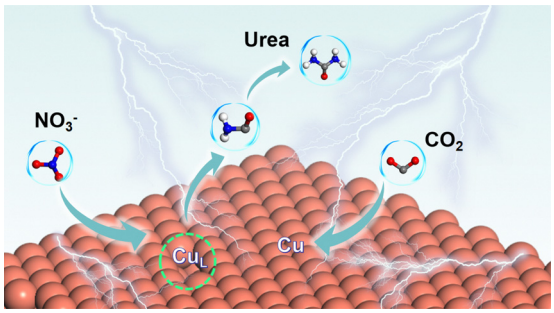


Acid-induced fluorescence enhancement of piperazinylphenyl-substituted nanographene

Hao Zhao, Rafael Muñoz-Mármol, Liliia Moshniaha, Qiqi Yang, Mischa Bonn, Xiaomin Liu, Ryota Kabe, Giuseppe Maria Paternò* and Akimitsu Narita*

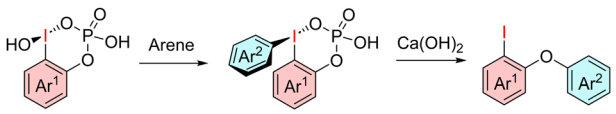
14649



Electroreduction of CO_2 and nitrate for urea synthesis on a low-coordinated copper catalyst

Peng Guo, Xindong Wang, Yufei Wang, Yanwei Luo* and Ke Chu*

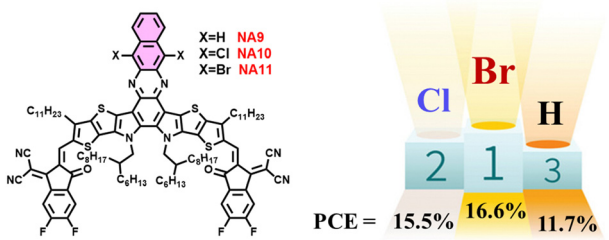
14653



Synthesis of phosphate stabilised iodanes and their application in intramolecular aryl migrations

Jan Rick Koch, Mattis Damrath, Pim Puylaert and Boris J. Nachtsheim*

14656



Efficient organic solar cells with benzo[*b*]phenazine-core acceptors: insights into the effects of halogenation

Han Tian, Kangbo Sun, Yufei Wang, Zhanxiang Chen, Guangye Zhang* and Zhenghui Luo*

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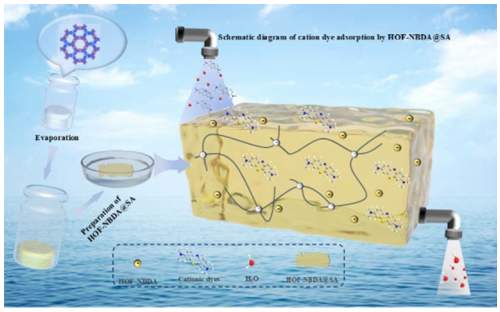
A stable HOF-embedded alginate hydrogel membrane for selective adsorption of cationic dyes

Ruiqi Zhu, Qiuxia Wu, Shengjie Lin, Limin Wang, Ye Liang, Lin Zhang,* Dian Zhao, Yabing He* and Banglin Chen*



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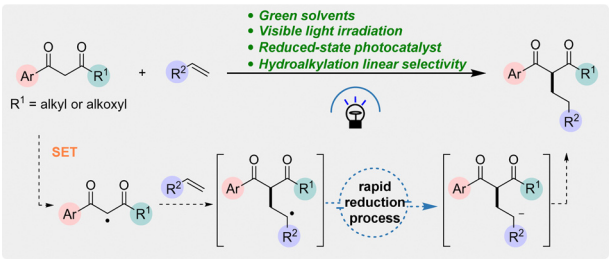
Visible-light-induced hydroalkylation of alkenes with aromatic β-ketoesters

Ming Gong, Qingrui Li, Honghong Qin, Haixin Fu, Guoping Li,* Yabo Li* and Yangjie Wu



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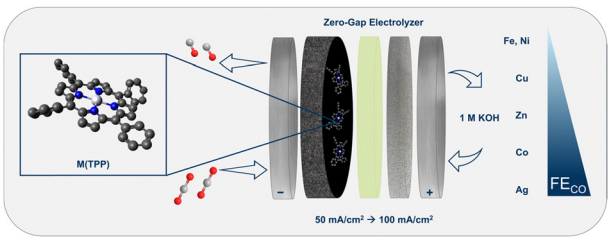
Scaling up electrochemical CO_2 reduction: enhancing the performance of metalloporphyrin complexes in zero-gap electrolyzers

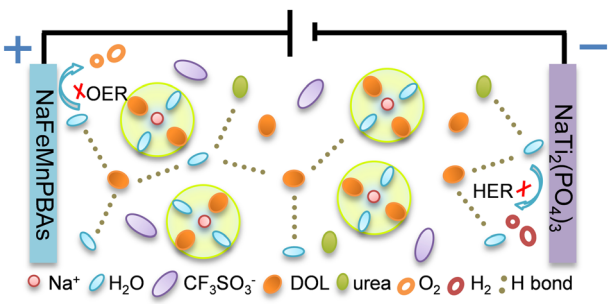
Wiebke Wiesner, Jenny Yurley Maldonado Arias, Julia Jökel, Rui Cao and Ulf-Peter Apfel*



14672

Synergistic effect of hydrogen-bond interaction and interface regulation for stable aqueous sodium-ion batteries

Lingyu Du,* Miaomiao Xie, Zizhen Liu, Weiyu Cao, Jianchao Sun and Litao Kang*



CORRECTION

14676

Correction: Impacts of trace level chromium on formation of superoxide within uranyl triperoxide complexes

Sarah K. Scherrer, Harindu Rajapaksha, Dmytro V. Kravchuk, Sara E. Mason and Tori Z. Forbes*