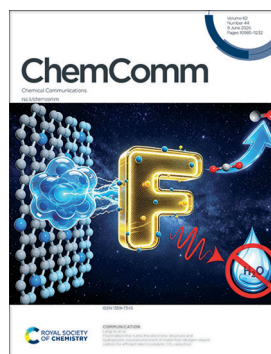


## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 62(44) 10985-11232 (2026)



### Cover

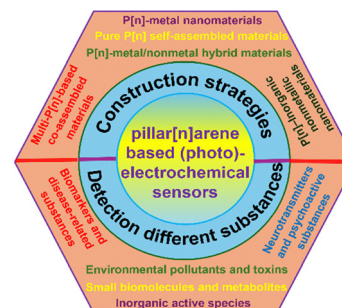
See Lang Xu *et al.*, pp. 11112-11116. Image reproduced by permission of Lang Xu from *Chem. Commun.*, 2026, 62, 11112.

## FEATURE ARTICLES

10997

### Recent advances in pillar[n]arene-based (photo)electrochemical sensors

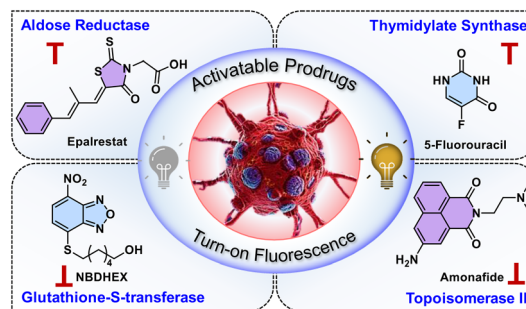
Lintao Wu, Wenqiang Yu, Chun Han, Jian Li, Yushan Cheng, Yao Zhou, Jiaye Zou, Haotian Wang, Hui Duan, Tingting Chen, Yan Cai, Jin Wang, Yang Wang, Zhijun Wang and Yong Yao\*



11014

### Stimuli-responsive fluorogenic prodrugs of potent inhibitors targeting overexpressed metabolic enzymes in cancer

Pallavi Barman, Nikita Pal, Rahul Kesarwani and Krishna P. Bhabak\*



# Royal Society of Chemistry approved training courses

Explore your options.  
Develop your skills.  
Discover learning  
that suits you.

**Courses in the classroom,  
the lab, or online**

Find something for every  
stage of your professional  
development. Search our  
database by:

- subject area
- location
- event type
- skill level

Members **get at least 10% off**

Visit [rsc.li/cpd-training](https://rsc.li/cpd-training)



**SAVE  
10%**

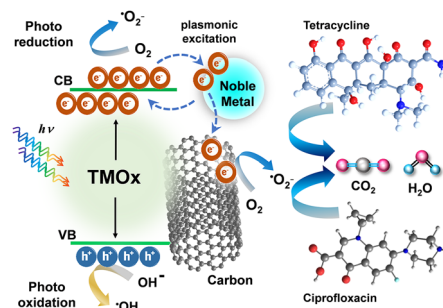


## FEATURE ARTICLES

11034

## Noble metal–TMO–carbon hybrid catalysts for solar-driven antibiotic detoxification in wastewater

Deepak Kumar, Anshika Gupta, Sejoon Lee\* and Sanjeev Kumar Sharma\*

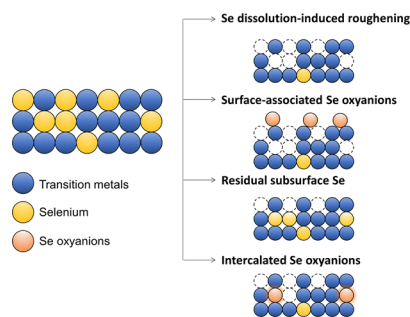


## REVIEWS

11057

## Transition-metal selenides in oxygen evolution electrocatalysis: from pre-catalysts to active regulators

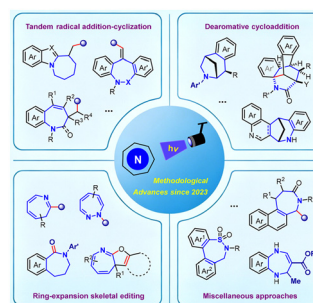
Seunghwa Lee\*



11073

## Photocatalytic construction of seven-membered aza-heterocycles: recent advances and mechanistic insights

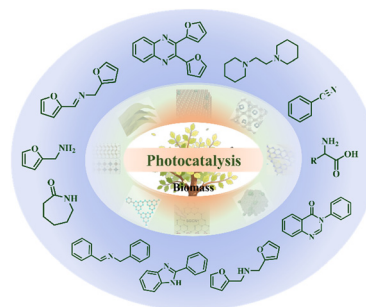
Yanchen Chen, Siyao Luo, Enpan Yin, Zhipeng Zhou, Fubin Jiang\* and Binbin Huang\*



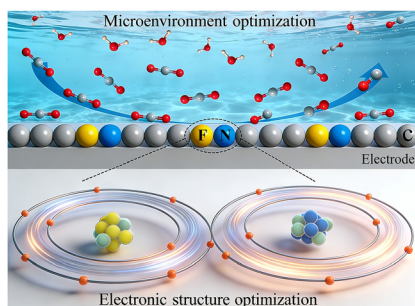
11096

## Photocatalytic synthesis of biomass-based N-containing chemicals

Ye Meng,\* Zhi Xia, Minjian Yang\* and Hu Li\*



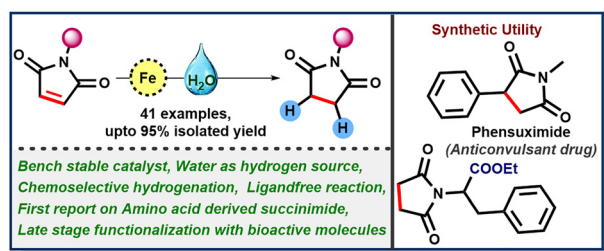
11112



### Fluorination fine-tunes the electronic structure and hydrophobic microenvironment of metal-free nitrogen-doped carbon for efficient electrocatalytic CO<sub>2</sub> reduction

Weiqli Liu, Chuangchuang Yang, Peiyao Bai, Shilin Wei, Haoquan Wang, Shiyong Xu and Lang Xu\*

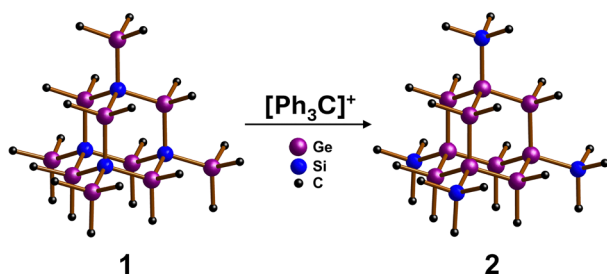
11117



### Fe-catalysed chemoselective hydrogenation of maleimides to succinimides using water as the hydrogen source

Suteerna Mullick and Debasis Banerjee\*

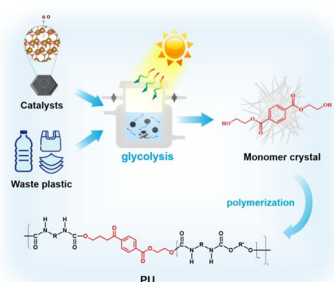
11121



### Something germane about germanium: facile access to Ge<sub>10</sub> adamantane

Sebastian Karger, Elias Drösemeier, Alexander V. Virovets, Eugenia Peresypkina, Hans-Wolfram Lerner, Thomas Müller\* and Matthias Wagner\*

11126



### Defect-enhanced photothermal catalysis over ZnO for efficient depolymerization of waste polyester into high-purity BHET

Mengyao Wang, Haoze Li, Hailong Cheng, Xueming Li, Weihong Lai, Tengfei Zhou, Dionisio Zaldivar Silva, Manuel Rapado Paneque, Derek Hao, Li Wang\* and Jianping Yang\*

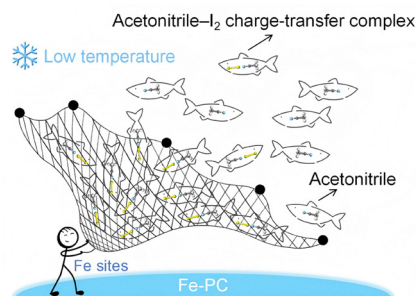


## COMMUNICATIONS

11131

### Confining acetonitrile–I<sub>2</sub> complexes *via* Fe single-atom sites for rapid and reversible iodine redox kinetics at –40 °C

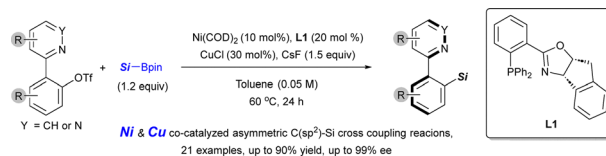
Chuangyang Li, Chengxu Niu, Ruoyang Xu, Jikun Li, Yanchen Liu, Hengjian Pu, Jin Li, Teng Zhai\* and Hui Xia



11136

### Nickel/copper co-catalysed atroposelective C–Si cross-coupling for the synthesis of axially chiral heterobiaryl silanes

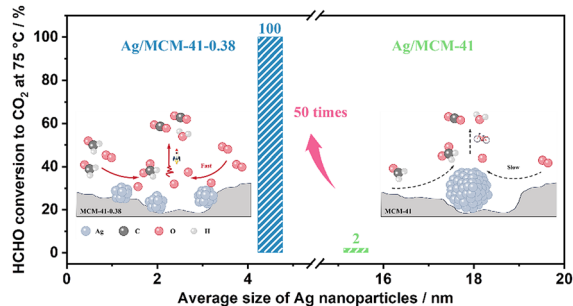
Lei Su, Shen Gao\* and Jiawang Liu\*



11140

### Boosting formaldehyde oxidation at low temperature with low-loading Ag catalysts *via* surface silanol engineering of MCM-41

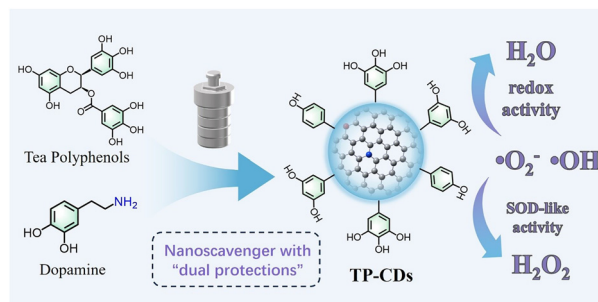
Yuchun Chang, Jing Xu, Yi Wang, Hui Wang\* and Zhenping Qu\*



11145

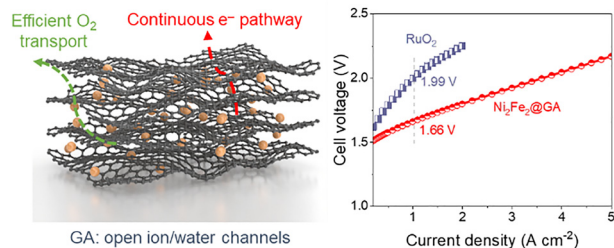
### Surface-engineered carbon dots as green and efficient nanoscavengers with dual protective functions against oxidative stress

Zijian Wu, Siqi Wu, Yaxuan Cheng, Zijian Li\* and Hong Bi\*



## COMMUNICATIONS

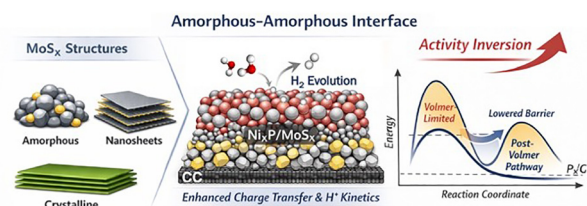
11150



### A graphene aerogel-supported NiFe alloy for efficient anion exchange membrane water electrolysis

Suhan Zhang, Jie Li, Mengrui Liu, Yanqing Fu, Likun Jia, Lan Jiang,\* Ruiyao Yu, Bahar Karadeniz, Krunoslav Užarević, Joyal Johny, Suraj Gupta, Weiyou Yang and Qiliang Wei\*

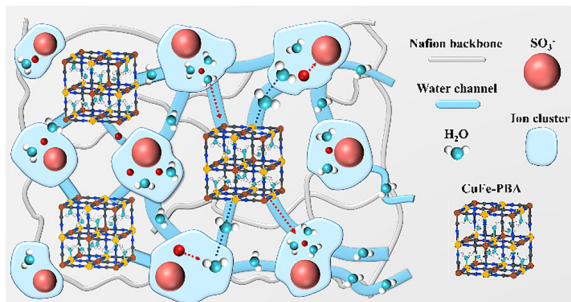
11154



### Reversing the activity landscape of MoS<sub>x</sub> electrocatalysts *via* Ni<sub>x</sub>P interfacial coupling for alkaline hydrogen evolution

Ioannis Vamvasakis,\* Aggelos Grammenos and Gerasimos S. Armatas\*

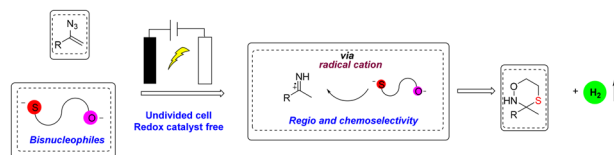
11159



### Water-confined CuFe Prussian blue analogues empower Nafion membranes for high-temperature/low-humidity fuel cells

Jun Zhang, Yalin Fan, Jinqiu Ye, Changming Zhong, Liangyu He, Xuan Zhou, Yu Liu, Ce Wang, Ping Hu and Yong Liu\*

11163



### Electrochemically enabled synthesis of oxathiazinane *via* a radical cyclization cascade

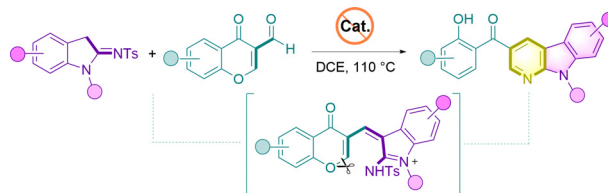
Zhuo-Qi Lin, Zhi-Long Lei,\* Xiu-Jin Meng, Wen-Bing Wang,\* Hai-Tao Tang and Ying-Ming Pan\*



11167

### Catalyst-free synthesis of $\alpha$ -carboline derivatives via chromone skeleton remodeling

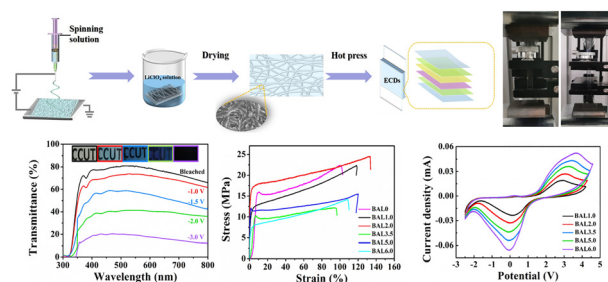
Wenting Fu, Sifeng Li, Peng Li, Bin Cheng,\*  
Wenjun Zhang, Ying Zhang, Kang Zhou, Taimin Wang,\*  
Hongbin Zhai and Dezhi Yang\*



11171

### Strength-enhanced solid-state electrolyte polyvinyl butyral film and its electrochromic application

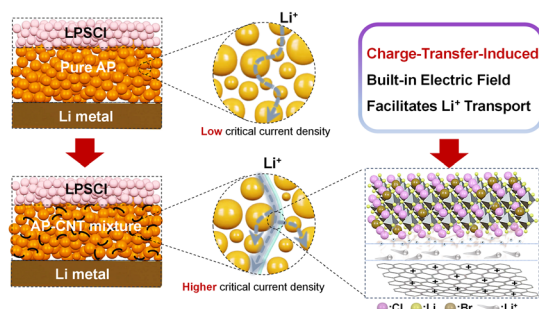
Ruize Yuan, Di Rong, Yingli Wu, Wei Wang, Yan Wang  
and Shiwei Wang\*



11175

### Interface-induced fast $\text{Li}^+$ transport in mixed ionic–electronic conductors

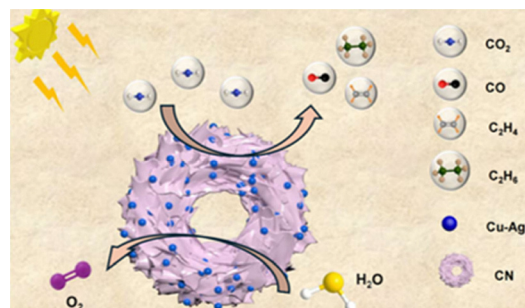
Chenchen He, Zhuoxun Zhang and Tao Li\*



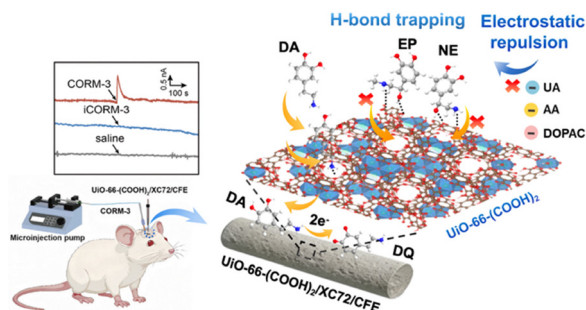
11179

### Boosting photoreduction of $\text{CO}_2$ via synergistic Cu–Ag bimetallic sites on carbon nitride

Jingru Wang, Jinke Li, Zhenbo Zhang, Hao Shi,  
Jiayi Wan, Yiming Zhou, Tong Bian\* and Huijun Yu\*



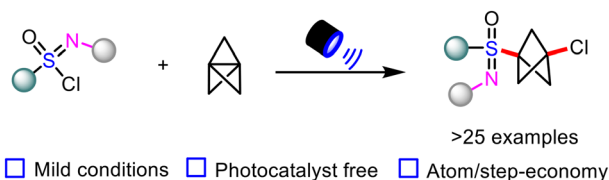
11184



### A UiO-66-derived nano-separation microelectrode for *in vivo* dopamine sensing with high sensitivity and selectivity

Lingting Meng, Chenglin Qing, Yufeng Wang, Yuqing Cai, Huan Wei\* and Meining Zhang\*

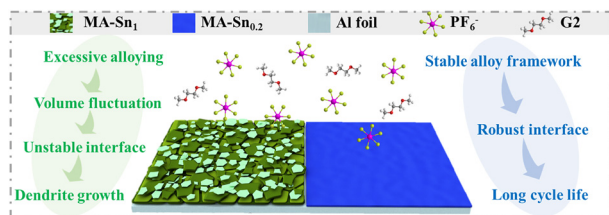
11188



### Photochemical chloro-sulfoximide of bicyclo[1.1.1]pentane with sulfonylimidoyl chlorides

Gao-feng Yang, Mengting Kou, Zhi Liu, Jin Xie, Chengjian Zhu and Weipeng Li\*

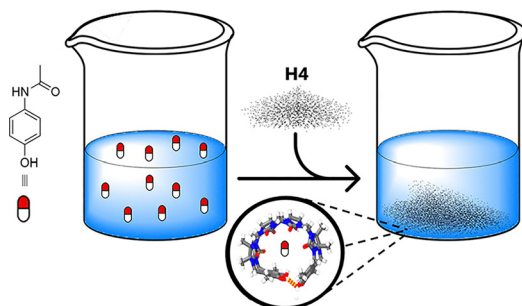
11192



### Balancing sodiophilicity and mechanical stability: Sn-engineered multicomponent alloy interfaces for anode-free sodium metal batteries

Yuju Qi, Zewei Hu, Haiying Lu, Zhenwei Tang, Jiayao Wang, Chao Han and Weijie Li\*

11197



### Acyclic cucurbituril as sequestrant for acetaminophen

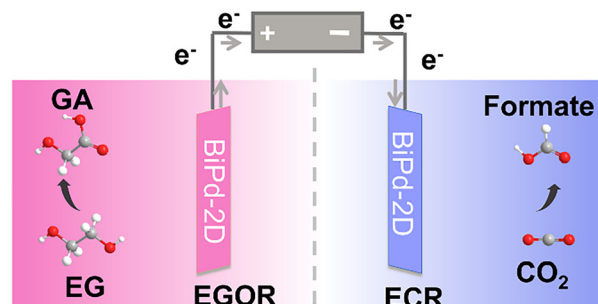
Jeppe S. Mogensen, Thomas M. Hofmann, Suvenika Perera, Yann Lie, Michael Pittelkow\* and Lyle Isaacs\*



11202

### A bifunctional two-dimensional BiPd electrocatalyst for efficient paired CO<sub>2</sub> reduction and ethylene glycol oxidation

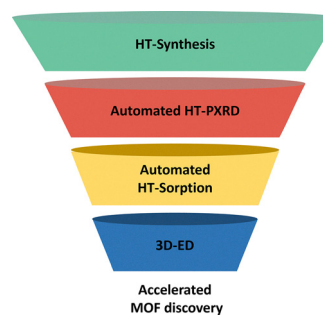
Shengqi Yang, Tong Xu, Ruoyin Wang, Yuxin Chen, Feng Yu,\* Leiduan Hao\* and Zhenyu Sun\*



11206

### Rapid discovery of yttrium-MOFs via combined high-throughput synthesis, automated PXRD, optical calorimetry screening and three-dimensional electron diffraction

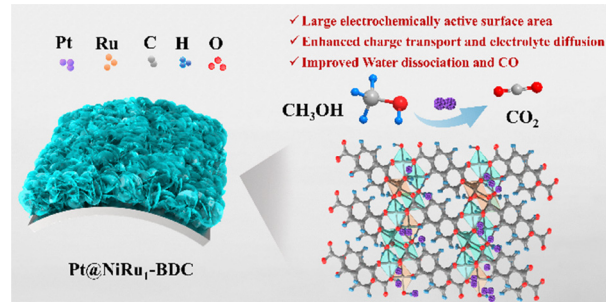
Lasse Wegner, Zheting Chu, Tobias A. Engesser, Xiaodong Zou\* and Norbert Stock\*



11211

### Ultrafine Pt nanoparticle decorated NiRu-BDC nanosheets as bifunctional electrocatalysts for alkaline hydrogen evolution and methanol oxidation

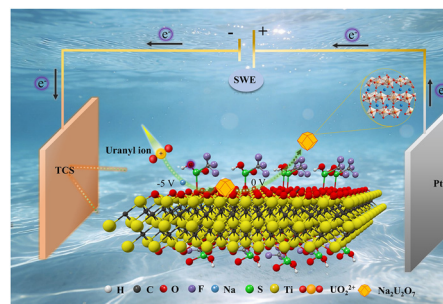
Binghao Chen, Yilun Gao, Dongyang Zhang, Jiahui Xiang and Binbin Fan\*



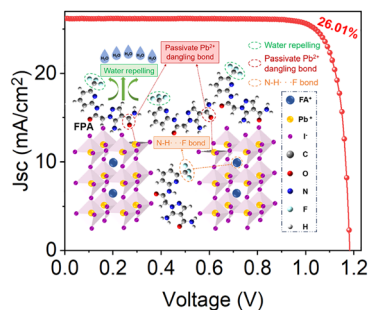
11215

### One-step etching–functionalization of MXene with preserved structural integrity for ultrahigh uranium extraction

Dawang Li, Yan Liu,\* Zhirong Liu, Changfu Wang, Yun Wang, Ruiming Zhang and Hao Jiang\*



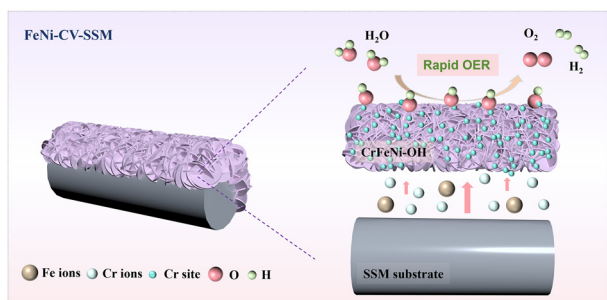
11220



### A post-treatment additive enables synergistic surface passivation and secondary grain growth regulation for high-performance air-processed perovskite solar cells

Kelan Wang, Shuai Xu, Rong Cao, Xinyi Zhang, Haocong Wang, Chongzhen Tang, Ran Fansheng,\* Yipu Wang,\* Minmin Wang\* and Yanqiang Hu\*

11225



### *In situ* electrochemically activated stainless steel-derived NiFe hydroxides for a highly efficient and stable oxygen evolution reaction

Ziran Tang, Shangye Tang, Xingyan Zhang, Yufeng Liu, Yanan Zhou, Haijun Liu and Shengxia Yang\*

