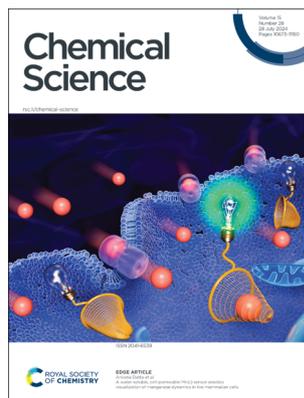


## IN THIS ISSUE

ISSN 2041-6539 CODEN CSHCBM 15(28) 10673–11150 (2024)



**Cover**  
See Gustavo Fernández *et al.*, pp. 10745–10752. Image reproduced by permission of Gustavo Fernández from *Chem. Sci.*, 2024, 15, 10745.



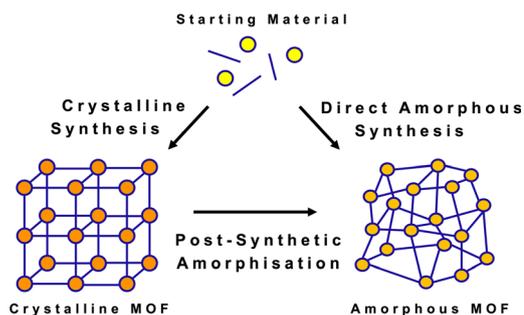
**Inside cover**  
See Ankona Datta *et al.*, pp. 10753–10769. Image reproduced by permission of Ankona Datta from *Chem. Sci.*, 2024, 15, 10753.

## PERSPECTIVE

10689

### Synthetic and analytical considerations for the preparation of amorphous metal–organic frameworks

Emily V. Shaw, Ashleigh M. Chester, Georgina P. Robertson, Celia Castillo-Blas and Thomas D. Bennett\*

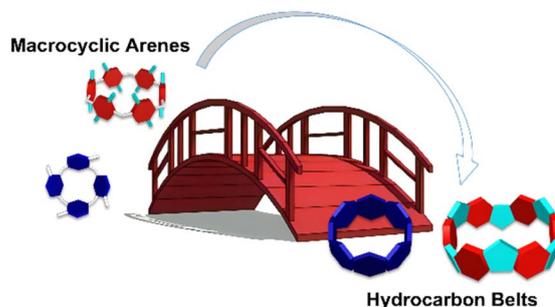


## REVIEWS

10713

### Construction of hydrocarbon belts based on macrocyclic arenes

Guangtan Fan, Zhi Zhang, Guangguo Wang, Li Shao, Bin Hua\* and Feihe Huang\*



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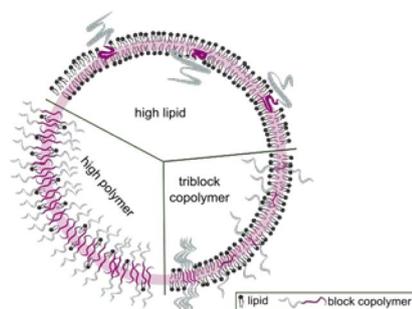
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## REVIEWS

10724

**Advances in block copolymer-phospholipid hybrid vesicles: from physical–chemical properties to applications**

Edit Brodzkij\* and Brigitte Städler



## EDGE ARTICLES

10745

**Pathway-dependent supramolecular polymerization by planarity breaking**

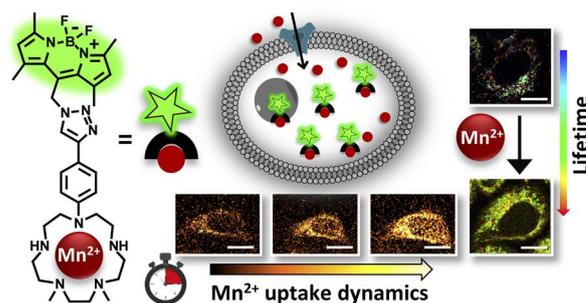
Rasitha Manha Veedu, Zulema Fernández, Nils Bäumer, Antonia Albers and Gustavo Fernández\*



10753

**A water-soluble, cell-permeable Mn(II) sensor enables visualization of manganese dynamics in live mammalian cells**

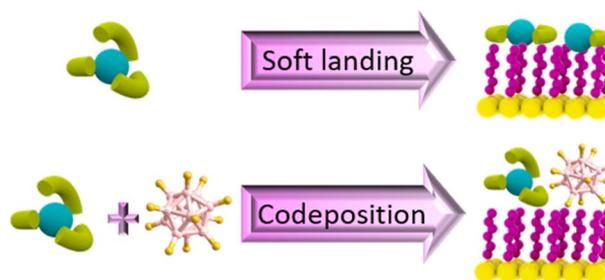
Smitaroopa Kahali, Sujit Kumar Das, Ravinder Kumar, Kunika Gupta, Rajasree Kundu, Baivabi Bhattacharya, Arnab Nath, Ravindra Venkatramani and Ankona Datta\*



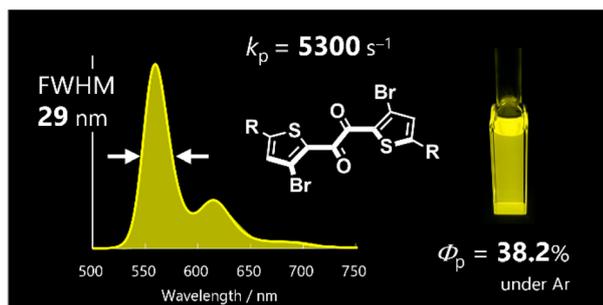
10770

**Spontaneous ligand loss by soft landed  $[\text{Ni}(\text{bpy})_3]^{2+}$  ions on perfluorinated self-assembled monolayer surfaces**

Hugo Y. Samayoa-Oviedo, Harald Knorke, Jonas Warneke\* and Julia Laskin\*



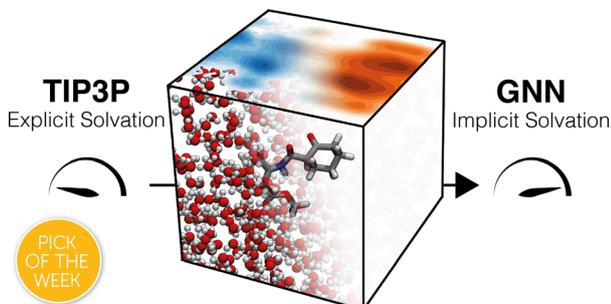
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### Fast, efficient, narrowband room-temperature phosphorescence from metal-free 1,2-diketones: rational design and the mechanism

Yosuke Tani,\* Kiyoshi Miyata,\* Erika Ou, Yuya Oshima, Mao Komura, Morihisa Terasaki, Shuji Kimura, Takumi Ehara, Koki Kubo, Ken Onda and Takuji Ogawa

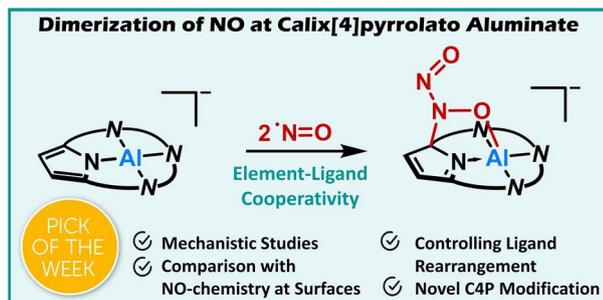
10794



### A general graph neural network based implicit solvation model for organic molecules in water

Paul Katzberger and Sereina Riniker\*

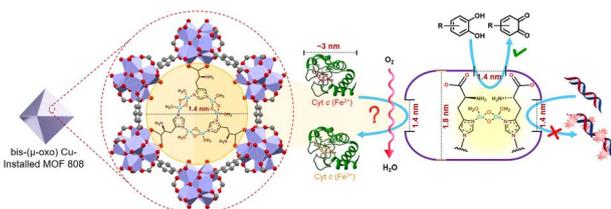
10803



### Nitrogen monoxide and calix[4]pyrrolato aluminato: structural constraint enabled NO dimerization

Senta J. Kohl, Lukas M. Sigmund, Manuel Schmitt and Lutz Greb\*

10810



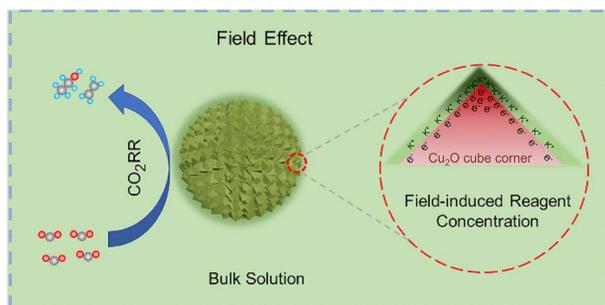
### Approach of a small protein to the biomimetic bis-( $\mu$ -oxo) dicopper active-site installed in MOF-808 pores with restricted access perturbs substrate selectivity of oxidase nanozyme

Rasmi V. Morajkar, Adarsh P. Fatrekar and Amit A. Vernekar\*





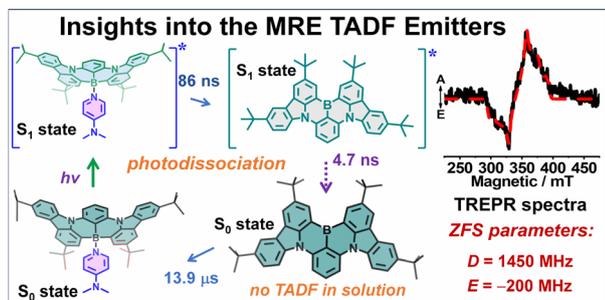
10858



### Enhancing local $K^+$ adsorption by high-density cube corners for efficient electroreduction of $CO_2$ to $C_{2+}$ products

Hu Zang, Changjiang Liu, Qinyuan Ji, Jiahao Wang, Haiyan Lu, Nan Yu and Baoyou Geng\*

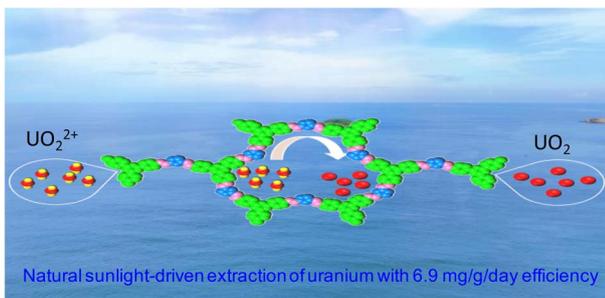
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### Photophysics and photochemistry of thermally activated delayed fluorescence emitters based on the multiple resonance effect: transient optical and electron paramagnetic resonance studies

Xi Chen, Lei Sun, Andrey A. Sukhanov, Sandra Doria, Laura Bussotti, Jianzhang Zhao,\* Haijun Xu,\* Bernhard Dick,\* Violeta K. Voronkova\* and Mariangela Di Donato\*

10882



### An imidazole-based covalent-organic framework enabling a super-efficiency in sunlight-driven uranium extraction from seawater

Lizhen Zhong, Xuefeng Feng,\* Qingyun Zhang, Xianqing Xie and Feng Luo\*

10892



### Hydroxyl carboxylate anion catalyzed depolymerization of biopolyesters and transformation to chemicals

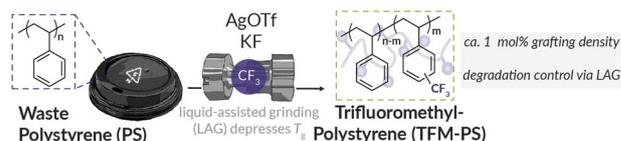
Yanfei Zhao, Hui Zhang, Fengtian Wu,\* Rongxiang Li, Minhao Tang, Yusi Wang, Wei Zeng, Buxing Han and Zhimin Liu\*



10900

### Liquid-assisted grinding enables a direct mechanochemical functionalization of polystyrene waste

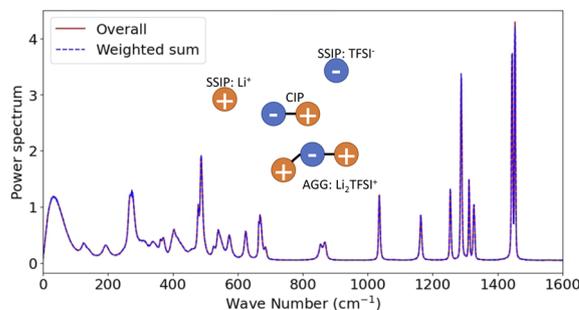
Morgan E. Skala, Sarah M. Zeitler and Matthew R. Golder\*



10908

### Cluster analysis as a tool for quantifying structure–transport properties in simulations of superconcentrated electrolyte

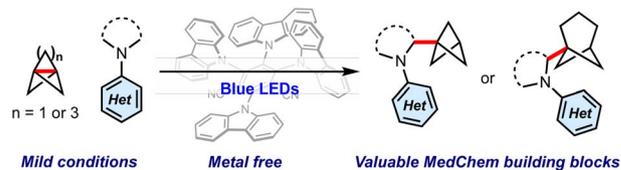
Sheng Bi and Mathieu Salanne\*



10918

### $\alpha$ -Amino bicycloalkylation through organophotoredox catalysis

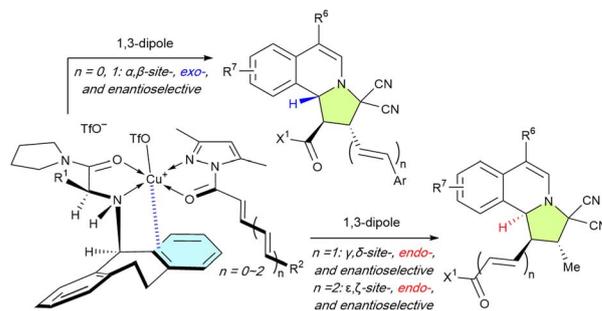
Jeremy Nugent, Adrián López-Francés, Alistair J. Sterling, Min Yi Tay, Nils Frank, James J. Mousseau, Fernanda Duarte\* and Edward A. Anderson\*



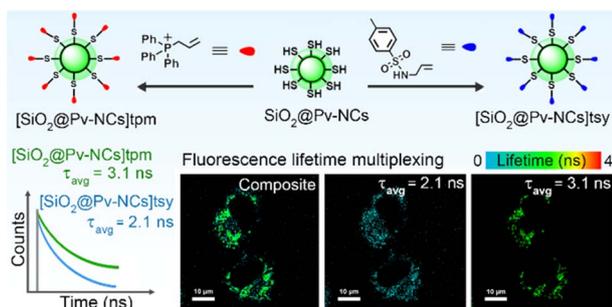
10926

### Chiral $\pi$ -Cu(II)-catalyzed site-, *exo/endo*-, and enantioselective dearomative (3 + 2) cycloadditions of isoquinolinium ylides with enamides, dienamides, and a trienamide

Weiwei Guo, Jianhao Huang and Kazuaki Ishihara\*



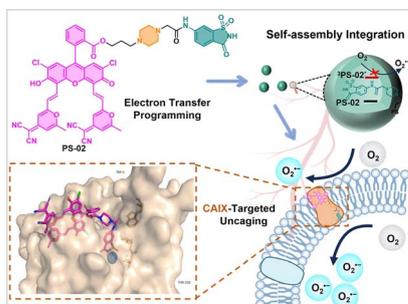
10935



### Surface functionalized perovskite nanocrystals: a design strategy for organelle-specific fluorescence lifetime multiplexing

Anik Kumar Dey, Subhadeep Das, Sharon Mary Jose, Sreejesh Sreedharan, Noufal Kandoth, Surajit Barman, Abhijit Patra,\* Amitava Das\* and Sumit Kumar Pramanik\*

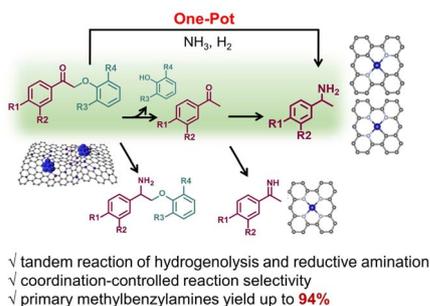
10945



### Self-assembly-integrated tumor targeting and electron transfer programming towards boosting tumor type I photodynamic therapy

Wenlong Chen, Zehui Wang, Gaobo Hong, Jianjun Du, Fengling Song\* and Xiaojun Peng

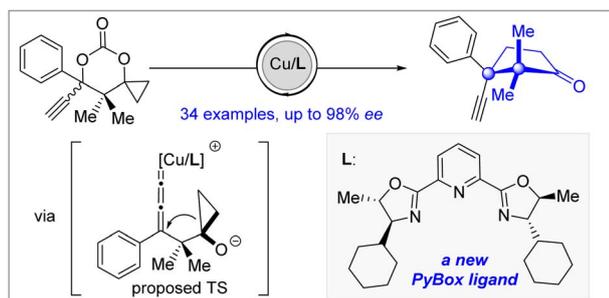
10954



### Atomically dispersed cobalt catalysts for tandem synthesis of primary benzylamines from oxidized $\beta\text{-O-4}$ segments

Sen Luan, Wei Wu, Bingxiao Zheng, Yuxuan Wu, Minghua Dong, Xiaojun Shen, Tianjiao Wang, Zijie Deng, Bin Zhang, Bingfeng Chen, Xueqing Xing, Haihong Wu,\* Huizhen Liu\* and Buxing Han\*

10963



### Catalytic asymmetric intramolecular propargylation of cyclopropanols to access the cuparane core

Yankun Zhao, Hongya Yan, Yulian Zhang, Tao Zhou, Mengxing Tian, Chongzhou Zhang, Shan Yuan, Hanyue Qiu,\* Ling He and Min Zhang\*



10969

### Dual-modal imaging-guided agent based on NIR-II aggregation-induced emission luminogens with balanced phototheranostic performance

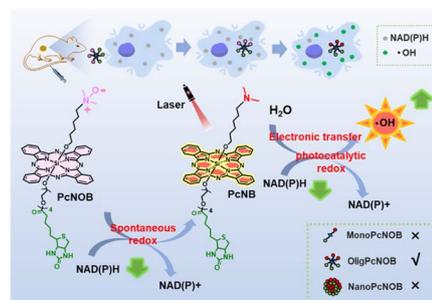
Chengjun Dong, Ziwen Zhang, Hongyu Wu, Xinting Liang, Shihao Pang, Kehuan Wu, Jie Sun, Xuemei Dong, Lixin Sun, Xianfeng Gu\* and Chunchang Zhao\*



10980

### Efficient hydroxyl radical generation of an activatable phthalocyanine photosensitizer: oligomer higher than monomer and nanoaggregate

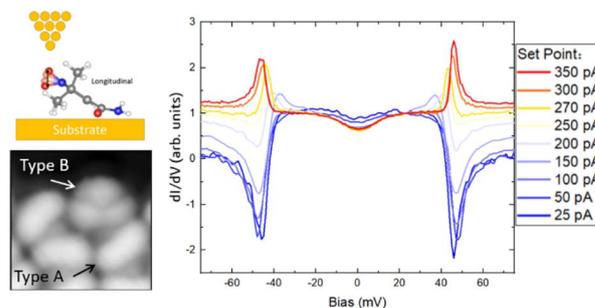
Li Li, Yalan Liao, Shuwen Fu, Zixuan Chen, Tinghe Zhao, Luyue Fang and Xingshu Li\*



10989

### Large negative differential conductance and its transformation in a single radical molecule

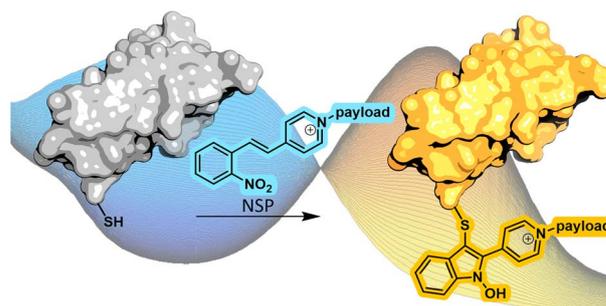
Xiangqian Tang, Wenyu Wang, Haitao Tang, Muyu Wang, Xia Ye, Dong Hao, Jinyu Zhang, Xinyan Shan and Xinghua Lu\*



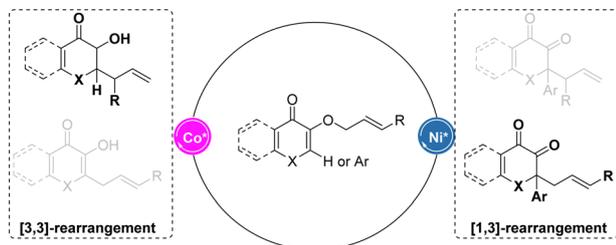
10997

### NSPs: chromogenic linkers for fast, selective, and irreversible cysteine modification

Yong Hua, Zhi Zou, Alessandro Prescimone, Thomas R. Ward, Marcel Mayor and Valentin Köhler\*

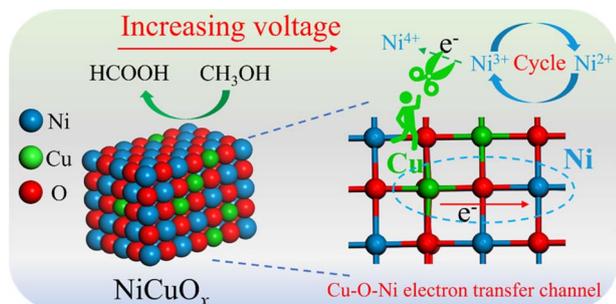


11005

**[1,3]-rearrangement or [3,3]-rearrangement?****Asymmetric catalytic [1,3]- or [3,3]-sigmatropic rearrangement of 3-allyloxy-4H-chromenones and their analogues**

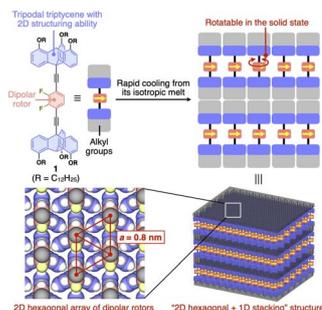
Yi Li, Lichao Ning, Qi Tang, Kexin Lan, Bingqian Yang, Qianchi Lin, Xiaoming Feng\* and Xiaohua Liu\*

11013

**Construction of an electron-transfer channel via Cu–O–Ni to inhibit the overoxidation of Ni for durable methanol oxidation at industrial current density**

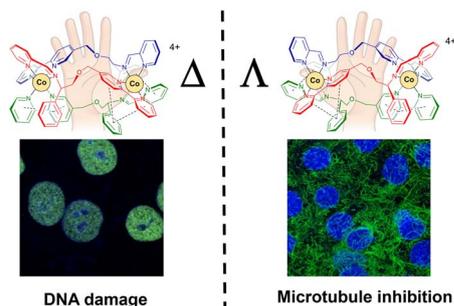
Han Tian, Xiaohan Wang, Wenshu Luo, Rundong Ma, Xu Yu, Shujing Li, Fantao Kong, Xiangzhi Cui\* and Jianlin Shi

11021

**2D hexagonal assembly of a dipolar rotor with a close interval of 0.8 nm using a triptycene-based supramolecular scaffold**

Takejiro Ogawa, Fumitaka Ishiwari,\* Fatin Hajjaj, Yoshiaki Shoji, Takashi Kajitani, Koji Yazawa, Takahiro Ohkubo and Takanori Fukushima\*

11029

**Dicobalt(II) helices kill colon cancer cells via enantiomer-specific mechanisms; DNA damage or microtubule disruption**

Hualong Song,\* Hana Kosthunova, Jakub Cervinka, Julie Macpherson, Jaroslav Malina, Teena Rajan, Roger Phillips, Miles Postings, Samantha Shepherd, Xuejian Zhang, Viktor Brabec,\* Nicola J. Rogers\* and Peter Scott\*

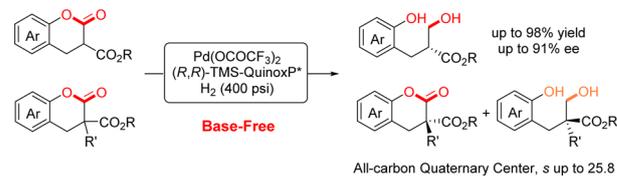


11038

### Palladium-catalyzed asymmetric hydrogenation of lactones under base-free conditions

Han Wang, Shan-Shan Xun, Chang-Bin Yu\* and Yong-Gui Zhou\*

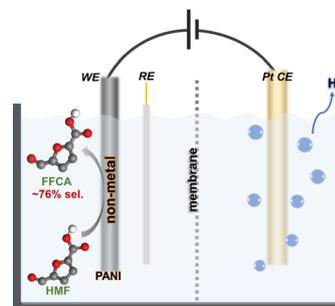
#### Pd-catalyzed Asymmetric Hydrogenation of Esters under Base-free Condition



11043

### Selective electrooxidation of 5-hydroxymethylfurfural to 5-formyl-furan-2-formic acid on non-metallic polyaniline catalysts: structure–function relationships

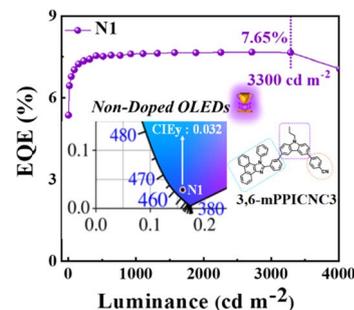
Xingyu Lu, Ke Qi, Xueya Dai, Yunlong Li, Di Wang, Jing Dou and Wei Qi\*



11053

### A record-high EQE of 7.65%@3300 cd m<sup>-2</sup> achieved in non-doped near-ultraviolet OLEDs based on novel D'-D-A type bipolar fluorophores upon molecular configuration engineering

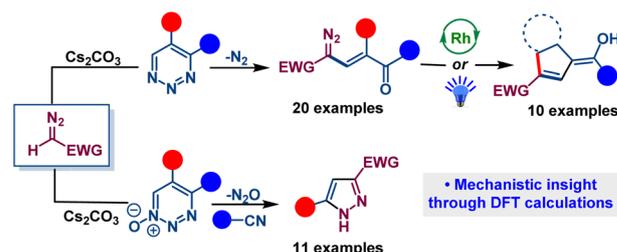
Haoyuan Qi, Danyu Xie, Zexuan Gao, Shengnan Wang, Ling Peng, Yuchao Liu, Shian Ying,\* Dongge Ma\* and Shouke Yan\*



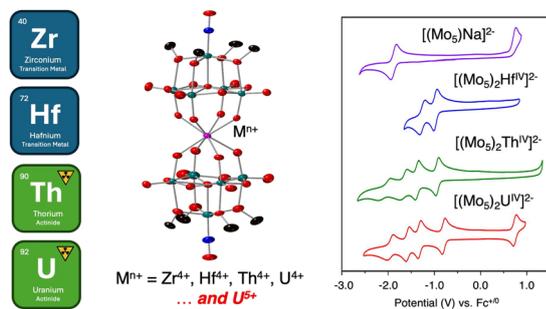
11065

### Denitrogenative dismantling of heteroaromatics by nucleophilic substitution reactions with diazomethyl compounds

Soumen Biswas, Claire Empel, Luis Mario Sanchez-Palestino, Hadi Arman, Rene M. Koenigs\* and Michael P. Doyle\*



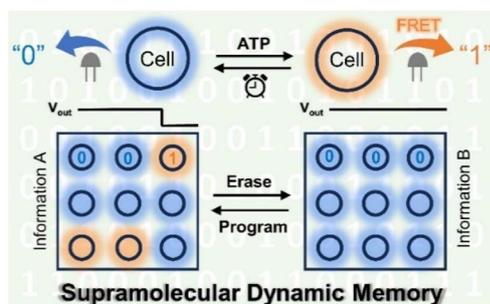
11072



### Leveraging a reduced polyoxomolybdate-alkoxide cluster for the formation of a stable U(V) sandwich complex

Dominic Shiels,\* William W. Brennessel, Matthew R. Crawley and Ellen M. Matson\*

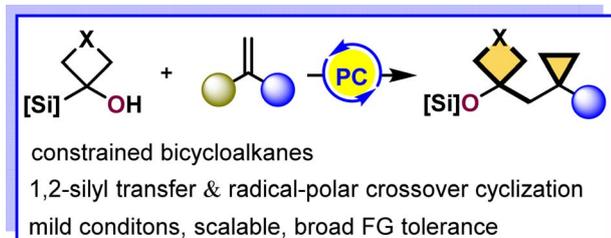
11084



### An enzymolysis-induced energy transfer co-assembled system for spontaneously recoverable supramolecular dynamic memory

Xuanyu Wang, Zhao Gao\* and Wei Tian\*

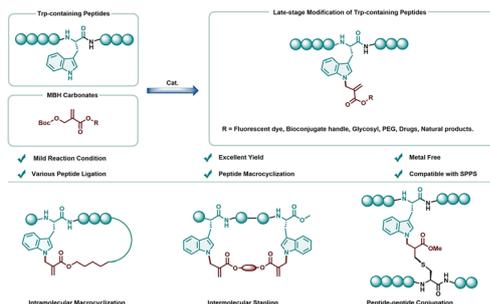
11092



### Synthesis of constrained bicycloalkanes through bibase-promoted brook rearrangement/radical-polar crossover cyclization

Xinke Ouyang, Bingyao Shi, Yuanyuan Zhao, Zhimin Zhu, Ziyang Li, Yuxin Yang and Chao Shu\*

11099



### Late-stage peptide modification and macrocyclization enabled by tertiary amine catalyzed tryptophan allylation

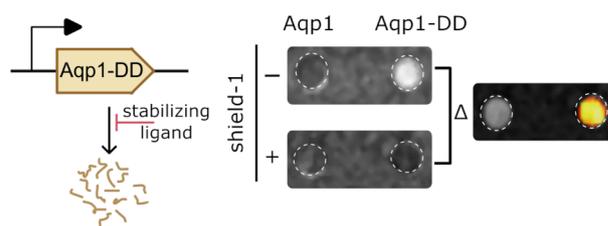
Yuyang Liu, Guofeng Li, Wen Ma, Guangjun Bao, Yiping Li, Zeyuan He, Zhaoqing Xu,\* Rui Wang\* and Wangsheng Sun\*



11108

### Destabilized reporters for background-subtracted, chemically-gated, and multiplexed deep-tissue imaging

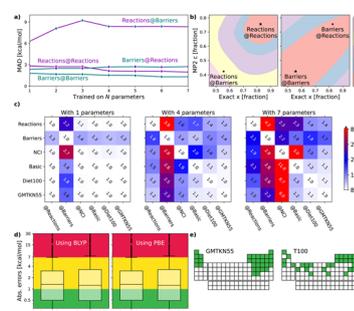
Jason Yun, Yimeng Huang, Austin D. C. Miller, Brandon L. Chang, Logan Baldini, Kaamini M. Dhanabalan, Eugene Li, Honghao Li and Arnab Mukherjee\*



11122

### Identifying and embedding transferability in data-driven representations of chemical space

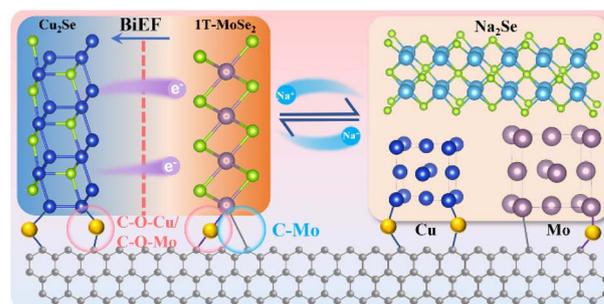
Tim Gould, Bun Chan, Stephen G. Dale and Stefan Vuckovic\*



11134

### A dual heterostructure enables the stabilization of 1T-rich MoSe<sub>2</sub> for enhanced storage of sodium ions

Yunfeng Chao, Shenghui Jia, Jinzhao Li, Guohui Chen, Lu Liu, Fei Tang, Jianhua Zhu,\* Caiyun Wang\* and Xinwei Cui



11145

### Correction: Convergent synthesis of thiodiazole dioxides from simple ketones and amines through an unusual nitrogen-migration mechanism

Kunlayanee Punjajom, Paul P. Sinclair, Ishika Saha, Mark Seierstad, Michael K. Ameriks, Pablo Garcia-Reynaga,\* Terry P. Lebold\* and Richmond Sarpong\*



## CORRECTIONS

11148

**Correction: Investing in entropy: the strategy of cucurbit[*n*]urils to accelerate the intramolecular Diels–Alder cycloaddition reaction of tertiary furfuryl amines**

Karen de la Vega-Hernández, Marcos G. Suero\* and Pablo Ballester\*

