



# EES Catalysis

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ACCESS

## Exceptional research on energy and environmental catalysis

### Open to everyone. Impactful for all

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Fundamental questions  
Elemental answers

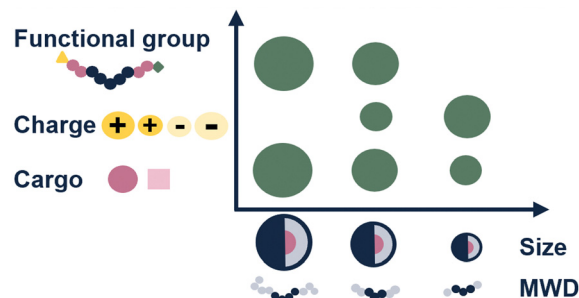


## FEATURE ARTICLES

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### Sample transformation in online separations: how chemical conversion advances analytical technology

Annika A. M. van der Zon, Joshka Verduin, Rick S. van den Hurk, Andrea F. G. Gargano and Bob W. J. Pirok\*

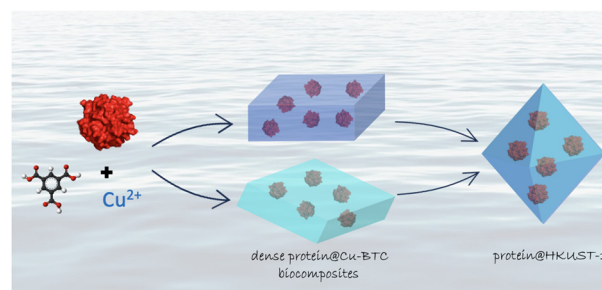


## COMMUNICATIONS

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### Alternative protein encapsulation with MOFs: overcoming the elusive mineralization of HKUST-1 in water

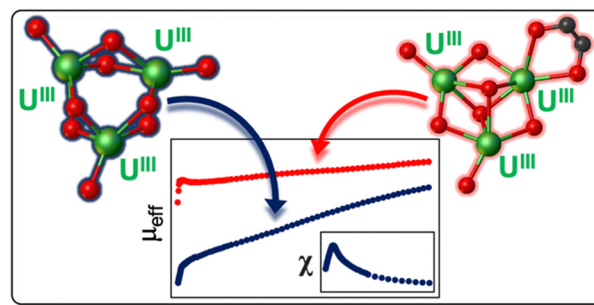
Jesús Cases Díaz and Mónica Giménez-Marqués\*



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### A trinuclear metallasilsesquioxane of uranium(III)

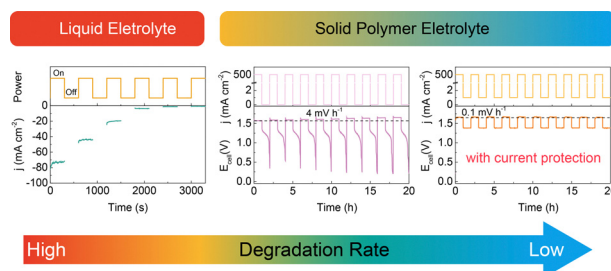
Maxime Tricoire, Nadir Jori, Farzaneh Fadaei Tirani, Rosario Scopelliti, Ivica Živković, Louise S. Natrajan and Marinella Mazzanti\*



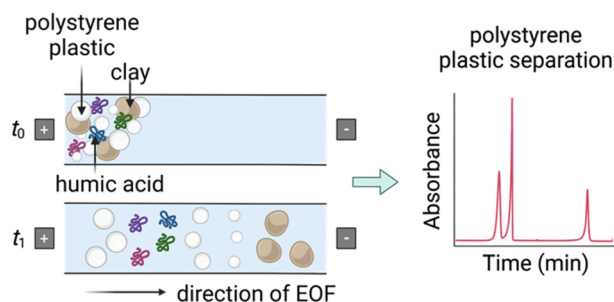
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### Exploring the degradation mechanism of nickel–copper–molybdenum hydrogen evolution catalysts during intermittent operation

Shengxiong Yang, Zhihan Liu, Pengcheng Wan, Liangsheng Liu, Yimin Sun, Fei Xiao,\* Shuai Wang\* and Junwu Xiao\*



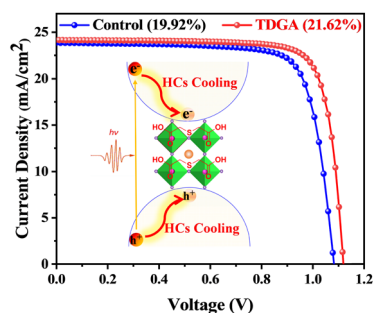
63



### Quantitative separation of polystyrene nanoparticles in environmental matrices with picogram detection limits using capillary electrophoresis

Michael A. Caprise, Ana C. Quevedo and Kathryn R. Riley\*

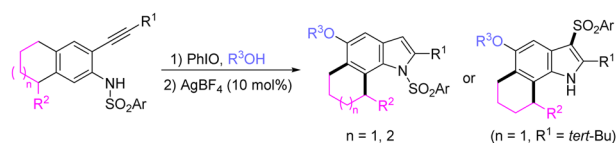
67



### Additive effect on hot carrier cooling in a hybrid perovskite

Yuanju Zhao, Peng Wang, Tai Wu, Rongjun Zhao,\* Lin Xie\* and Yong Hua\*

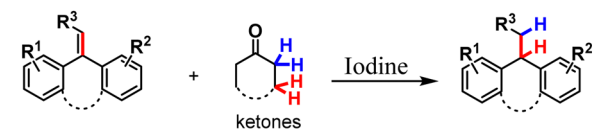
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### Cascade alkyl migration in 2-alkynylanilines for the synthesis of benzenoid ring multi-functionalized indoles

Jiwen He, Xiaohua Li, Qiuqin He\* and Renhua Fan\*

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♦ Metal-free transfer hydrogenation ♦ Ketones as novel hydrogen donors

### Iodine-promoted transfer of dihydrogen from ketones to alkenes, triphenylmethyl, and diphenylmethyl derivatives

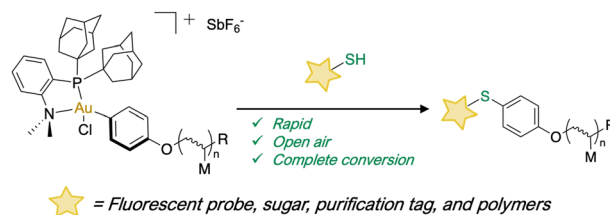
Yiping Duan, Wenyi Zhong, Zhaolan Zeng, Jiajie Feng, Jinyi Xu,\* Fulai Yang\* and Jie Liu\*



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### Efficient end-group functionalization and diblock copolymer synthesis via Au(III) polymer reagents

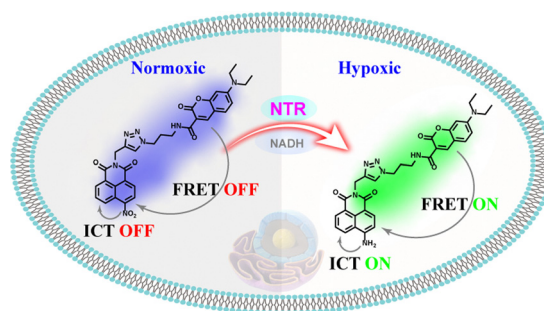
Grace E. Kunkel, Joseph W. Treacy,  
Hayden R. Montgomery, Ellie G. Puente, Evan A. Doud,  
Alexander M. Spokoyny and Heather D. Maynard\*



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### A highly selective ratio-metric fluorescent sensor for visualizing nitroreductase in hypoxic cells

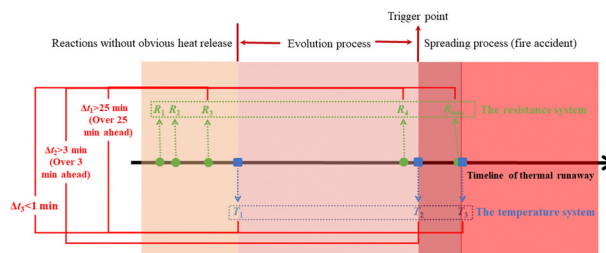
Yumei Xu,\* Bing Hu, Yanjun Cui, Li Li, Fang Nian,  
Zhixia Zhang and Wenting Wang



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### Early warning technology for common characteristic resistances of lithium-ion batteries with thermal runaway

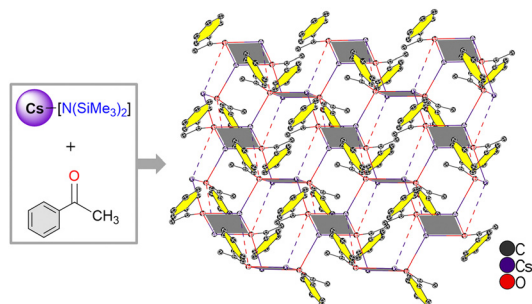
Zhigao Yang, Zhengjian Gu, Qianyi Tao, Jun Bao,  
Huanhuan Li\* and Shengping Wang\*



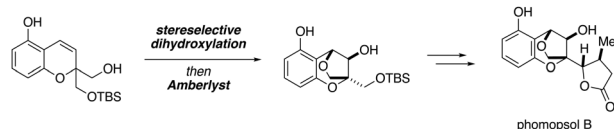
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### Isolable rubidium and caesium derivatives of common organic carbonyl compounds

Jakoba Wacker, Jennifer R. Lynch, Sumanta Banerjee,  
Peter A. Macdonald, Alan R. Kennedy, Biprajit Sarkar and  
Robert E. Mulvey\*



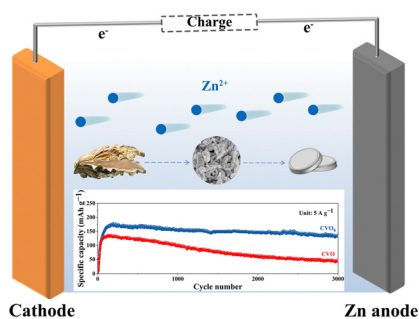
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### Total synthesis of highly oxygenated phomopsol B via acid-induced etherification to construct a bridged structure

Yuichiro Kawamoto,\* Ayaka Nishitani, Yukari Yoshimura, Toyoharu Kobayashi and Hisanaka Ito\*

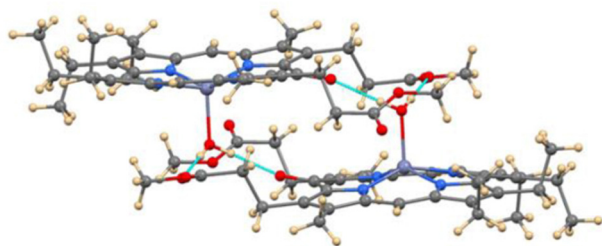
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### Spent shell as a calcium source for constructing calcium vanadate for high-performance Zn-ion batteries

Ningze Gao, Feng Li, Zhiyuan Wang, Xianghua Kong, Lei Wang, Yuanxiang Gu\* and Maojuan Bai\*

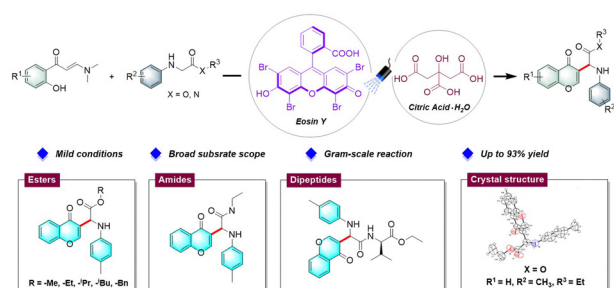
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### 5- and 10-oxocorroles from $\beta$ -octaalkylcorroles

Lorena Di Zazzo, Sara Nardis,\* Fabrizio Caroleo, Francesco Pizzoli, Frank R. Fronczek, Kevin M. Smith, Beatrice Berionni Berna and Roberto Paolesse

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### Visible-light-enabled cascade cross-dehydrogenative-coupling/cyclization to construct $\alpha$ -chromone substituted $\alpha$ -amino acid derivatives

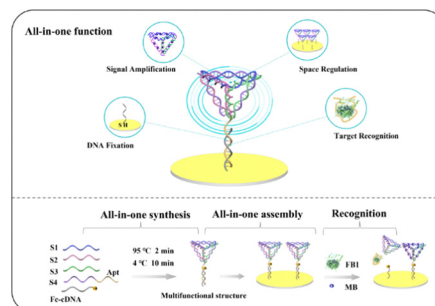
Zhi-Qiang Zhu,\* Jia-Yu Hu, Zong-Bo Xie and Zhang-Gao Le\*



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### All-in-one fabrication of a ratiometric electrochemical aptasensor with tetrahedral DNA nanostructure for fumonisin B1 detection

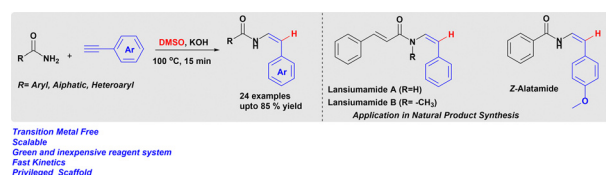
Na Dong, Shuda Liu, Yuye Li, Shuyun Meng, Yifan Liu, Xia Li, Dong Liu\* and Tianyan You\*



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### DMSO–KOH mediated stereoselective synthesis of Z-enamides: an expeditious route to Z-enamide bearing natural products

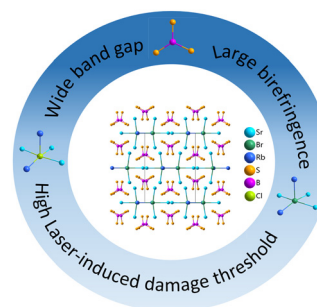
Showkat Ahmad Bhat, Qazi Naveed Ahmed\* and Khursheed Ahmad Bhat\*



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### [RbSr<sub>3</sub>X][(BS<sub>3</sub>)<sub>2</sub>] (X = Cl, Br): two salt-inclusion thioborates with large birefringence and structure transformation from centrosymmetric to asymmetric

Yihan Yun, Xueling Hou, Zhihua Yang, Guangmao Li\* and Shilie Pan\*



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### Facile one-step synthesis of mesoporous Pt-based alloy nanospheres for ethanol electrooxidation

Ruyi Wang, Shichun Gu, Dexiang Li, Chaoman Wang, Chongyuan Zhai, Yu Sun, Xue Wang,\* Hui Huang, Zhongcheng Guo and Yapeng He\*

