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See Chunman Jia, Jianwei Li *et al.*, pp. 8676–8679. Image reproduced by permission of Jianwei Li from *Chem. Commun.*, 2023, 59, 8676.



### Inside cover

See Paola Vivo *et al.*, pp. 8616–8625. Image reproduced by permission of Laura Canil from *Chem. Commun.*, 2023, 59, 8616.

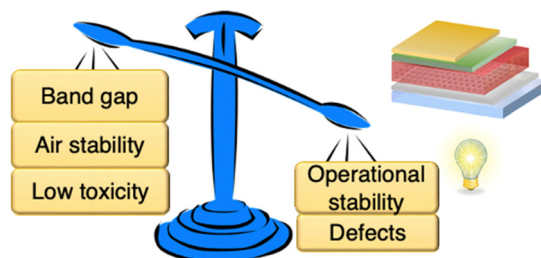
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### Lead-free perovskite-inspired semiconductors for indoor light-harvesting – the present and the future

G. Krishnamurthy Grandhi, Lethy Krishnan Jagadamma, Vipinraj Sugathan, Basheer Al-Anesi, Debjit Manna and Paola Vivo\*

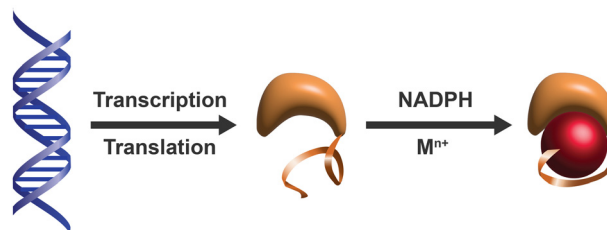
### Perovskite-inspired materials



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### Cloneable inorganic nanoparticles

Alexander R. Hendricks, Bradley F. Guilliams, Rachel S. Cohen, Tony Tien, Gavin A. McEwen, Kanda M. Borgognoni and Christopher J. Ackerson\*



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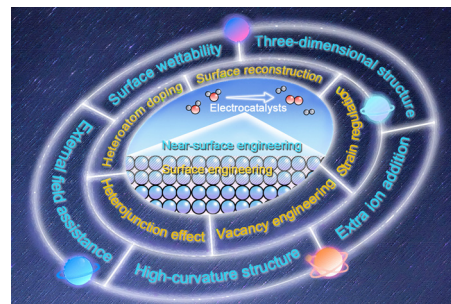


## FEATURE ARTICLES

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# Surface and near-surface engineering design of transition metal catalysts for promoting water splitting

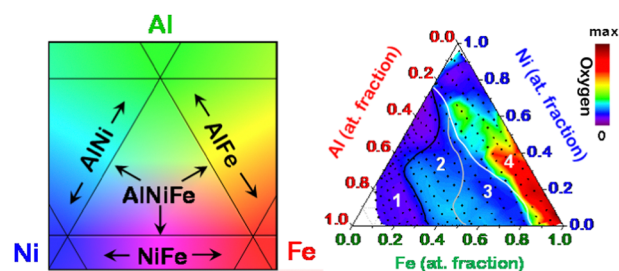
Yanmin Wang, Chao Meng,\* Lei Zhao, Jialin Zhang, Xuemin Chen and Yue Zhou\*



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# Alloy corrosion and passivation spanning composition space

Camille Ferris, Nicholas Golio, Herve Martinez and Andrew J. Gellman\*

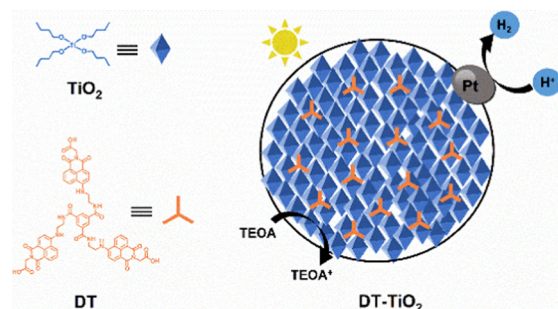


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# Visible light-driven highly-efficient hydrogen production by a naphthalene imide derivative-sensitized TiO<sub>2</sub> photocatalyst

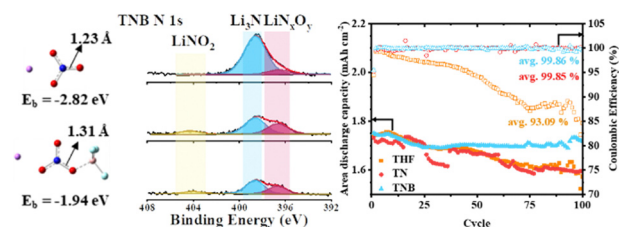
Dan Wei, Kang Yang, Chunman Jia\* and Jianwei Li\*



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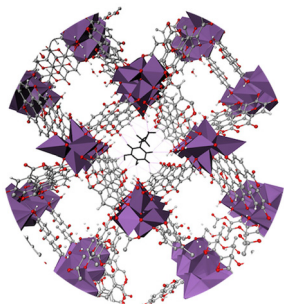
# Activation of trace LiNO<sub>3</sub> additives by BF<sub>3</sub> in high-concentration electrolytes towards stable lithium metal batteries

He-yi Xia, Yu-ke Wang and Zheng-wen Fu\*



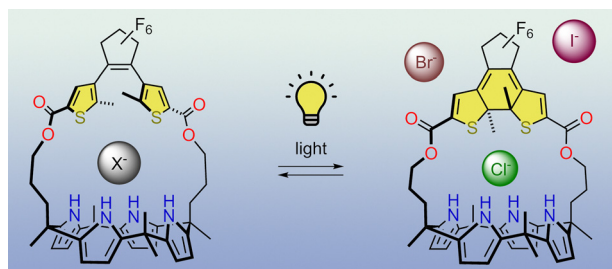
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**Encapsulation of dopamine within SU-101: insights by computational chemistry**

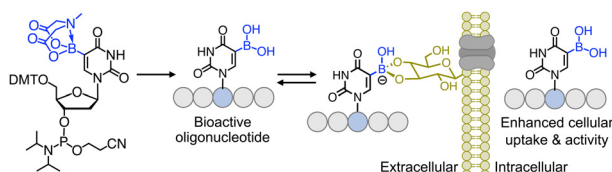
Erika Medel, Juan L. Obeso, Camilo Serrano-Fuentes, Jorge Garza,\* Ilich A. Ibarra, Carolina Leyva, A. Ken Inge, Ana Martínez\* and Rubicelia Vargas\*

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**Photoswitching of halide-binding affinity and selectivity in dithienylethene-strapped calix[4]pyrrole**

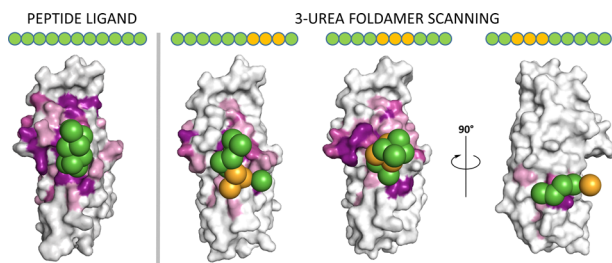
David Villarón, Guido E. A. Brugman, Maxime A. Siegler and Sander J. Wezenberg\*

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**5-Dihydroxyboryluridine enhances cytosolic penetration of antisense oligonucleotides**

Sam Kavooosi, Kirsten Deprey, Joshua A. Kritzer\* and Kabirul Islam\*

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**Unexpected binding modes of inhibitors to the histone chaperone ASF1 revealed by a foldamer scanning approach**

Marie E. Perrin, Bo Li, Johanne Mbianda, May Bakail, Christophe André, Gwenaëlle Moal, Pierre Legrand, Virginie Ropars, Céline Douat, Françoise Ochsenbein\* and Gilles Guichard\*



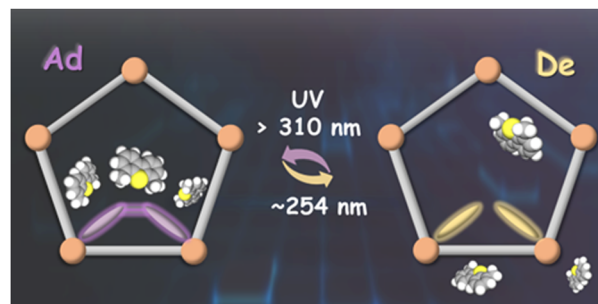


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### Coumarin-functionalized metal–organic frameworks: adsorbents with photo-responsive active sites for adsorptive desulfurization

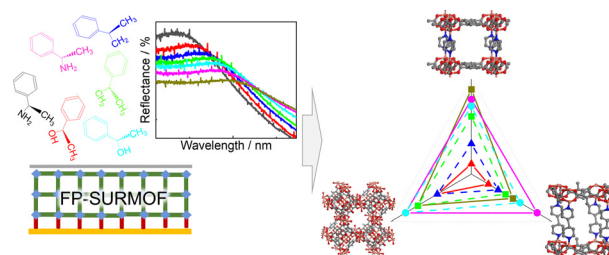
Jing Zhu,\* Shi-Chao Qi, Xiao-Qin Liu and Lin-Bing Sun\*



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### Optical sensor array of chiral MOF-based Fabry–Pérot films for enantioselective odor sensing

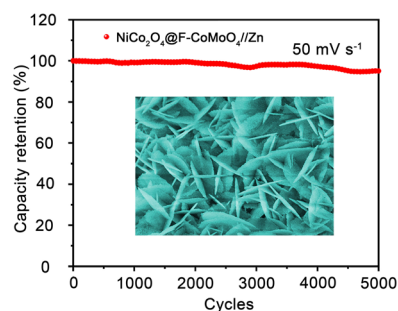
Kuo Zhan, Yunzhe Jiang and Lars Heinke\*



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### F-doped $\text{NiCo}_2\text{O}_4@\text{CoMoO}_4$ as an advanced electrode for aqueous Zn-ion batteries

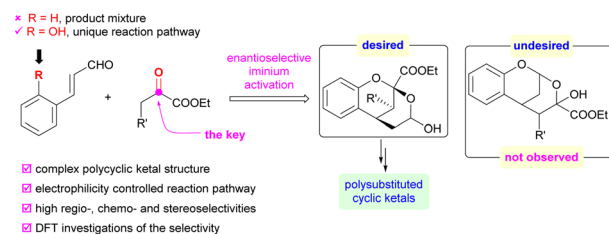
Ze Cen, Fang Yang,\* Jie Wan and Kaibing Xu



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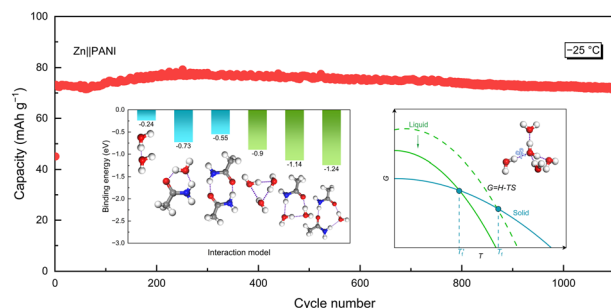
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Yong-Chao Ming, Xue-Jiao Lv, Ying-Han Chen and Yan-Kai Liu\*



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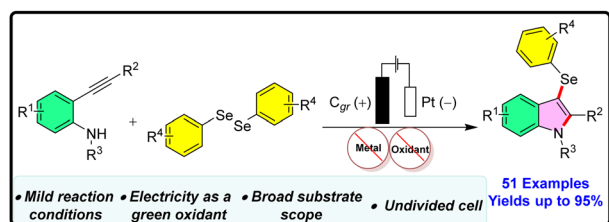
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### High-entropy solvent design enabling a universal electrolyte with a low freezing point for low-temperature aqueous batteries

Huimin Ji, Chunlin Xie, Tingqing Wu, Hao Wang, Zhiwen Cai, Qi Zhang, Wenbin Li, Liang Fu,\* Huanhuan Li and Haiyan Wang\*

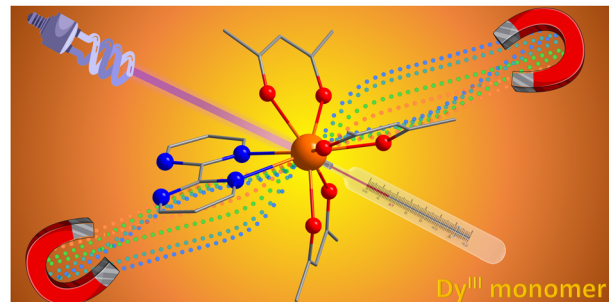
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### An electrochemical cascade process: synthesis of 3-selenylindoles from 2-alkynylanilines with diselenides

Anil Balajirao Dapkekar and Gedu Satyanarayana\*

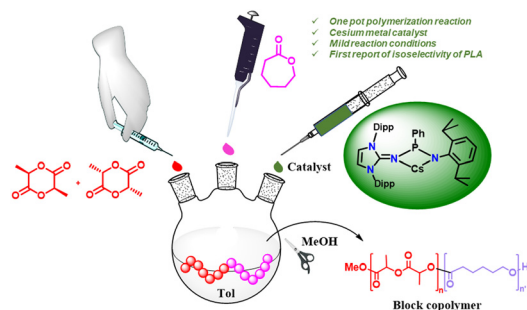
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Airton Germano Bispo-Jr, Laurence Yeh, Dylan Errulat, Diogo Alves Gállico, Fernando Aparecido Sigoli and Muralee Murugesu\*

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### Highly efficient and well-controlled ROP and copolymerization of cyclic esters using a cesium complex

Shweta Sagar, Himadri Karmakar, Priyanku Nath, Alok Sarkar,\* Vadapalli Chandrasekhar\* and Tarun K. Panda\*

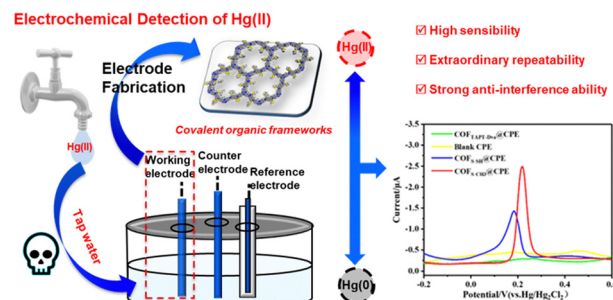


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### Thiol-grafted covalent organic framework-based electrochemical platforms for sensitive detection of Hg(II) ions

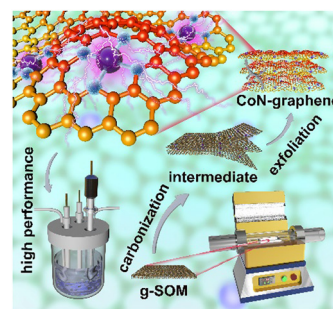
Xiang Tang, Qingqing Zhang, Dongyang Chen, Lifeng Deng, Yaxu He, Jianxiu Wang, Chunyue Pan, Juntao Tang\* and Guipeng Yu\*



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### Synthesis of graphene anchored with atomically isolated cobalt from a promising graphite-like supramolecule

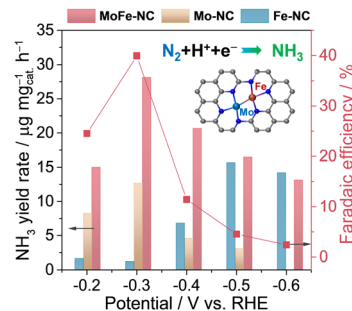
Guoli Zheng, Shunfa Zhou, Xuan Zhou, Ding Wen, Jinhui Xu, Lingling Li, Danyong Jiang, Weiwei Cai,\* Weiqiang Fan,\* Weidong Shi\* and Shuyan Song



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### A biomimetic MoFe-NC for efficient N<sub>2</sub> electroreduction to NH<sub>3</sub>

Yingna Chang, Jiawei Li, Yuxiang Zuo, Jindi Wang, Kefan Song, Yu Liu, Rong Xing\* and Guoxin Zhang\*



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### Hierarchical Mn-Ni<sub>2</sub>P/NiFe LDH nanosheet arrays as an efficient bifunctional electrocatalyst for energy-saving hydrogen production via urea electrolysis

Bin Sang, Yu Liu, Xiaoyu Wan,\* Shuixiang Xie, Guangyu Zhang, Mingzheng Ge, Jiamu Dai, Wei Zhang\* and Rui-Qing Li\*

