

# CrystEngComm

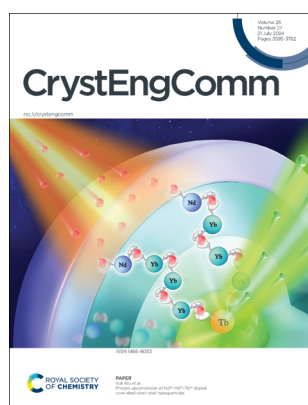
A journal at the forefront of the design and understanding of solid-state and crystalline materials

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## IN THIS ISSUE

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### Cover

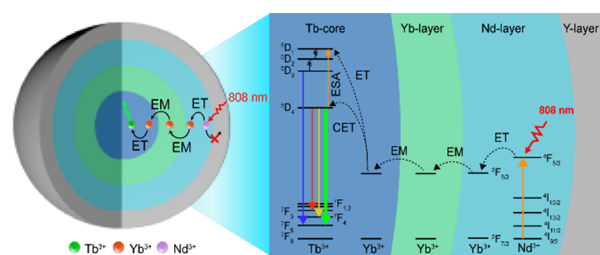
See Suli Wu *et al.*, pp. 3603-3608. Image reproduced by permission of Suli Wu from *CrystEngComm*, 2024, 26, 3603.

## PAPERS

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### Photon upconversion of Nd<sup>3+</sup>-Yb<sup>3+</sup>-Tb<sup>3+</sup> doped core-shell-shell-shell nanoparticles

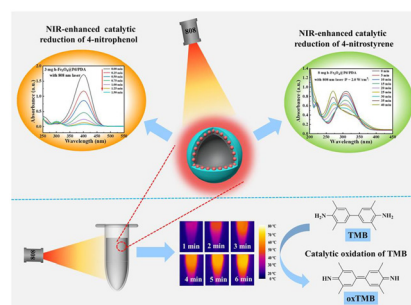
Wenfei Xun, Zhipeng Meng,\* Chuwei Xie and Suli Wu\*



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### NIR-enhanced multi-mode catalytic activity over Pd nanocrystals sandwiched within magnetic polydopamine hollow spheres

Jie Jin,\* Haoran Li, Shanshan Wu, Jing Wang, Qunling Fang, Chunyan Xu,\* Yunqi Xu, Weili Kong, Di Wang and Shouhu Xuan\*



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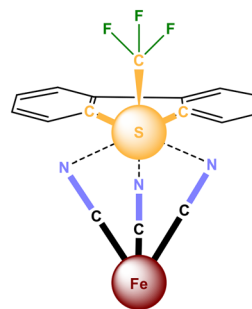
Fundamental questions  
Elemental answers



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### Structural diversity of supramolecular networks formed between polycyanometalates and sulfur-based chalcogen bond donors

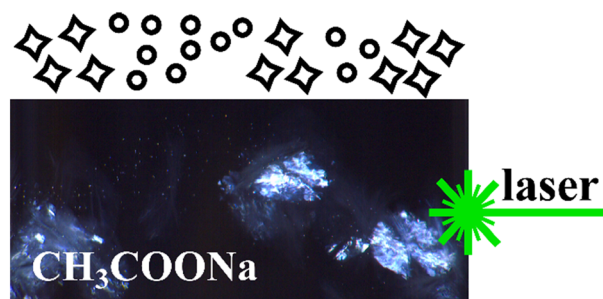
Tim-Niclas Streit, Jan Langwald, Rosa M. Gomila, Antonio Frontera\* and Moritz Malischewski\*



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### The role of cavitation and gas bubbles in the non-photochemical laser-induced nucleation of sodium acetate

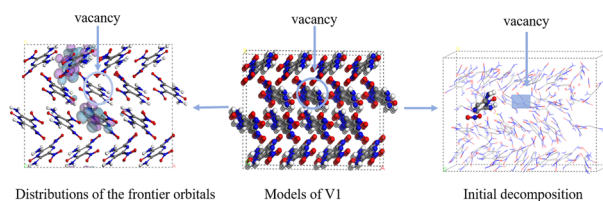
Eleanor R. Barber, Martin R. Ward and Andrew J. Alexander\*



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### Stability, electronic properties, and decomposition mechanisms of 2,6-diamino-3,5-dinitropyrazine-1-oxide crystals with different vacancy defects

Mengyun Mei, Zijian Sun, Jincheng Ji and Weihua Zhu\*



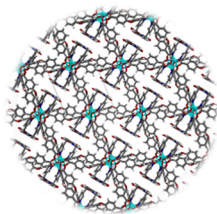
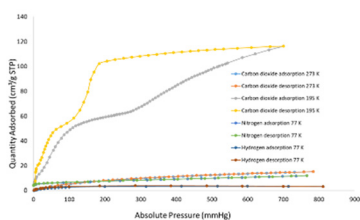
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### Avoiding pits on the energy landscape – alternative strategies for stabilizing nateglinide co-amorphous systems

Joana F. C. Silva, Małgorzata Jasiurkowska-Delaporte, Pedro S. Pereira Silva, Manuela Ramos Silva, M. Ermelinda S. Eusébio and Mário T. S. Rosado\*



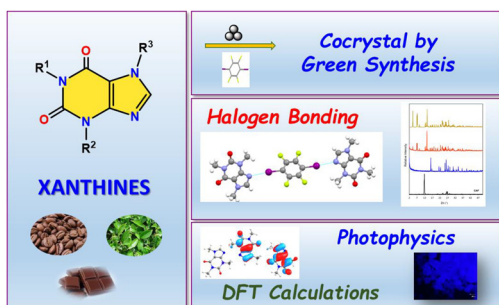
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### Three-dimensional metal–organic frameworks (MOFs) containing substituted diimide ligands: synthesis, structures and gas sorption studies

Luccile Mbonzhe, Lufuno Mushango, Nabanita Chatterjee, Leigh Loots, Clive L. Oliver and Eustina Batisai\*

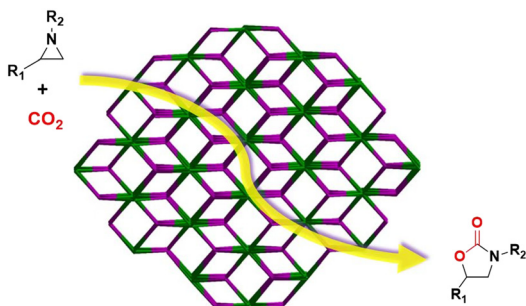
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### Methylxanthines for halogen bonded cocrystals with 1,4-diiodotetrafluorobenzene: green synthesis, structure, photophysics and DFT studies

Mónica Benito,\* Rosario Núñez,\* Sohini Sinha, Claudio Roscini, Yoan Hidalgo-Rosa, Eduardo Schott, Ximena Zarate\* and Elies Molins

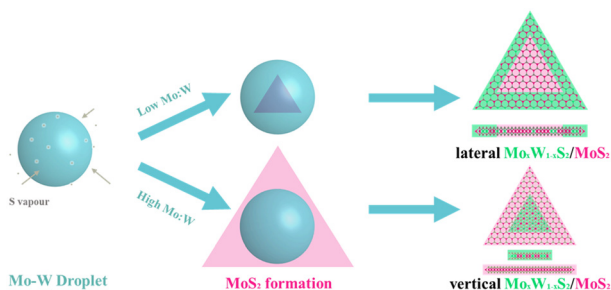
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### A highly stable cerium–organic framework: an efficient catalyst for the cycloaddition of CO<sub>2</sub> and aziridines under mild-pressure

Tong-Ji Liu, Hang Xu, Ying Shi\* and Bin Zhao\*

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### Morphological evolution of Mo<sub>x</sub>W<sub>1-x</sub>S<sub>2</sub>/MoS<sub>2</sub> heterostructures modulated with a growth dynamic process by one-step chemical vapor deposition

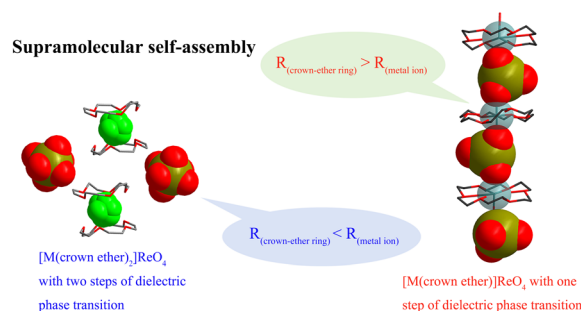
Zi-Qiao Li, Qi-Bo Wang, Qin-Qin Xu,\* Zhen-Hua Han, Tong Cheng and Jian-Zhong Yin



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### Comprehensively understanding the distinct properties of crystal structure, phase transition and dielectrics in $[M(\text{crown})_n]\text{ReO}_4$ ( $M^+ = \text{Na}^+, \text{K}^+, \text{NH}_4^+$ ; crown = 15-crown-5, 18-crown-6; $n = 1$ or 2)

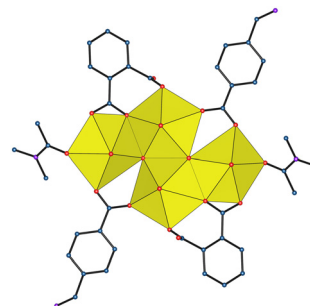
Guo-Jun Yuan,\* Xue-Wei Pan, Yan Gao, You-Fang Jiang, Li Li and Xiao-Ming Ren\*



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### 4-(Ammoniomethyl)benzoate, a protic zwitterionic bifunctional linker in uranyl ion carboxylate complexes

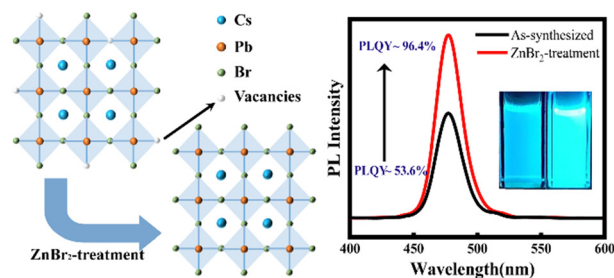
Youssef Atoini, Jack Harrowfield\* and Pierre Thuéry\*



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### Efficient and stable cyan-emitting $\text{CsPbBr}_3$ quantum dots with zinc bromide inorganic passivation

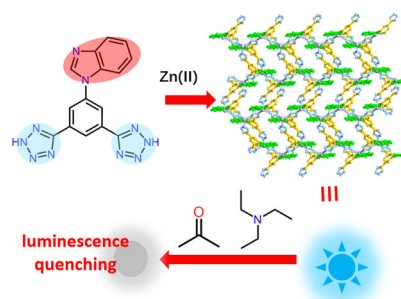
Tianfeng Li, Xingyi He, Zifan Liang, Yingxin Dong, Renming Liu, Zhen Chi, Yanmin Kuang, Xiaojuan Wang\* and Lijun Guo\*



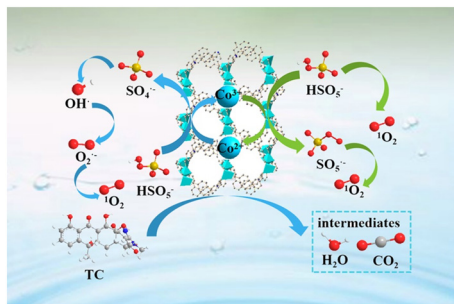
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### A luminescent Zn(II) coordination polymer based on a new tetrazolyl-benzimidazolyl tripodal heterotopic ligand for detecting acetone and triethylamine in water

Jia-Xuan Wu, Yi-Hong Mo, Xian Lin, Bing-Xun Zhou, Song-Liang Cai,\* Jun Fan, Mu-Biao Xie and Sheng-Run Zheng\*



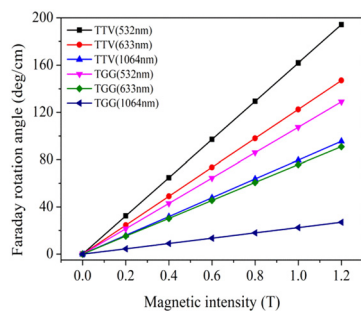
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### Co-based MOF as an efficient catalyst by peroxydisulfate activation for degradation of tetracycline: synthesis and performance

Shu-Ran Zhang, Shao-Dan Qin, Guang-Juan Xu, Wei Xie, Na Xu, Nan Jiang, Yan-Hong Xu,\* Xiao-Li Hu\* and Zhong-Min Su\*

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### Fabrication and properties of a Tm<sup>3+</sup> doped TbVO<sub>4</sub> magneto-optical crystal

Guangyu Dou, Hu Liu, Wenyu He, Ziqi Guo and Xianchao Zhu\*

