

# CrystEngComm

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

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## IN THIS ISSUE

ISSN 1466-8033 CODEN CRECF4 27(26) 4417-4606 (2025)



### Cover

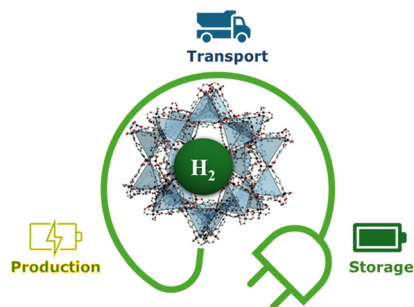
See Eduardo Schott *et al.*, pp. 4425–4442.  
Image reproduced by permission of Eduardo Schott from *CrystEngComm*, 2025, 27, 4425.

## HIGHLIGHTS

4425

### MOFs as a partner for the H<sub>2</sub> industry

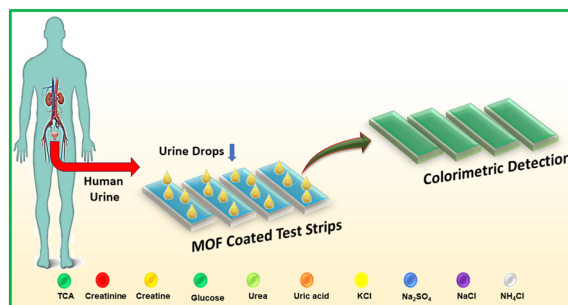
Javier Salazar-Muñoz, Yazmin Arellano, Vanesa Roa, Gabriel Bernales, Diego Gonzalez, Yoan Hidalgo-Rosa, Ximena Zarate and Eduardo Schott\*



4443

### MOFs in healthcare diagnostics: shaping the future of biomedical test strips

Vibhav Shukla and Kafeel Ahmad Siddiqui\*



# Environmental Science: Atmospheres

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Elemental answers



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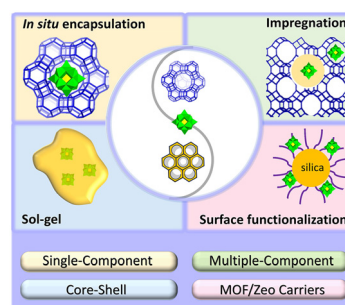


## HIGHLIGHTS

4453

**Structural engineering of POM-based composite materials: zeolite and silica as supports**

Chang Sun, Wenli Hao, Yutong Han, Zhihan Chang and Xiuli Wang\*

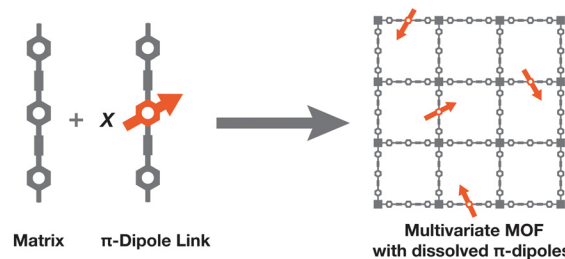


## COMMUNICATION

4463

**A multivariate library of zirconia metal-organic frameworks with dissolved *p*-nitroaniline dipoles and concentration-dependent optical and dielectric response**

Kyle R. Langlois, Yangyang Wang, Fnu Joshua, Wesley J. Newsome, Lei Zhai, James K. Harper and Fernando J. Uribe-Romo\*



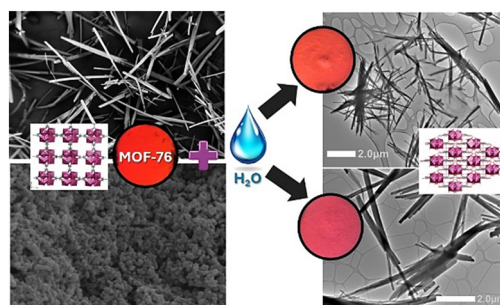
Hypsochromic Coupling Meyer-Neldel Compensation

## PAPERS

4470

**Time dependence of water-induced phase transition in nano- and microcrystalline Eu<sup>3+</sup>-doped MOF-76(Y): different luminescence responses with memory effect**

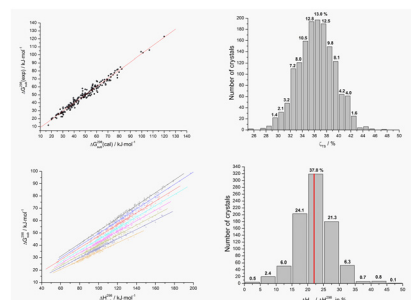
Zulma L. Moreno Botello, Marcos Illescas, Beatriz C. Barja, Sebastian E. Collins, Griselda E. Narda and Maria C. Bernini\*



4488

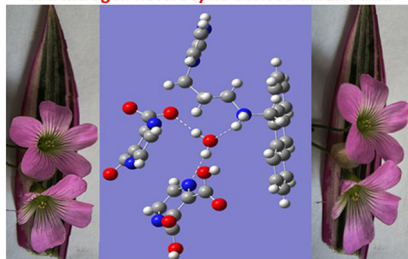
**Molecular crystals sublimation: structural clusterization of the database as an approach for prediction of the thermodynamic functions**

German L. Perlovich\*



4498

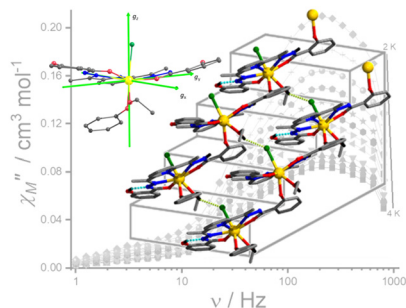
Different facet of a binary and a ternary assembly of a nitrogen heterocycle derived dibasic acid



### Ternary assembly of pyrazine 2,3-dicarboxylic acid with a ditopic amine

Abhay Pratap Singh and Jubaraj Bikash Baruah\*

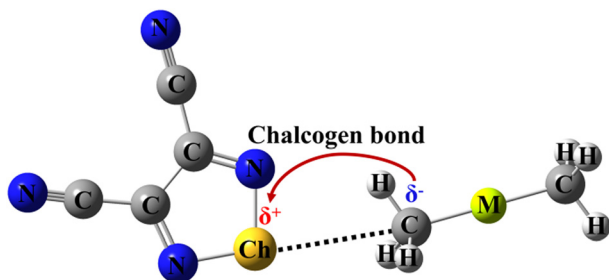
4508



### Ladder-type 1D coordination polymer of Dy(III): synthesis and investigation of magnetic behaviour

Naushad Ahmed,\* Rizwan Nabi, Xiaoguang Zhang and Donald J. Darensbourg\*

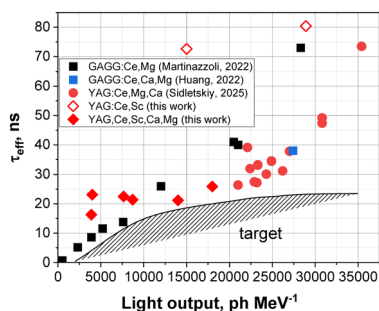
4516



### Methyl groups as unconventional Lewis bases in chalcogen bonding

Hangyu Zhou, Xin Wang, Xiulin An, Qingzhong Li\* and Sean A. C. McDowell\*

4528



### Acceleration of scintillation response in Sc,Ca,Mg-codoped YAG:Ce crystals

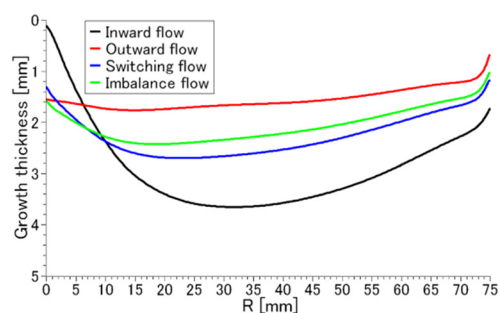
Ia. Gerasymov, S. Tkachenko, D. Kurtsev, D. Kofanov, O. Viahin, P. Maksimchuk, I. Rybalka, B. Grynyov, J. Delenne, L. Martinazzoli, L. Roux, E. Auffray, A. Padmanaban and O. Sidletskiy\*



4539

### Dynamic deformation modeling for the interfaces of growth, etching, and deposition under switching flow in TSSG-SiC growth

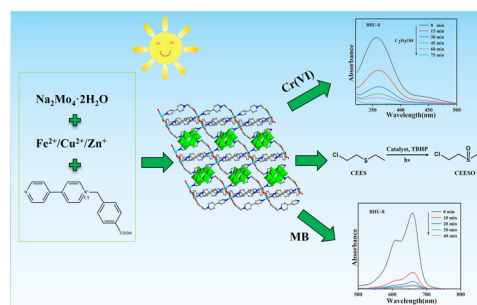
Xin Liu,\* Zhicheng Guan, Tomoaki Furusho, Kentaro Kutsukake, Shunta Harada and Toru Ujihara



4547

### Modulating central metals in 2D POMOFs for enhanced photocatalytic reduction of Cr(VI), oxidation of CEES and decolorization of MB

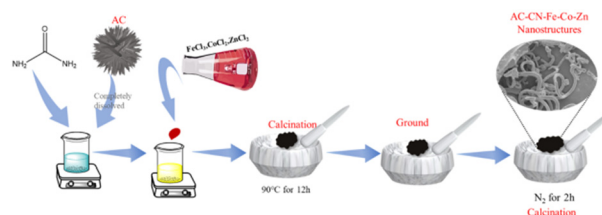
Guang-yang Zhang, Ying Sun, Zhong Zhang\* and Xiu-li Wang\*



4555

### A novel magnetic Fe-Co-Zn composite as an effective and recyclable adsorbent for the removal of dyes from wastewater

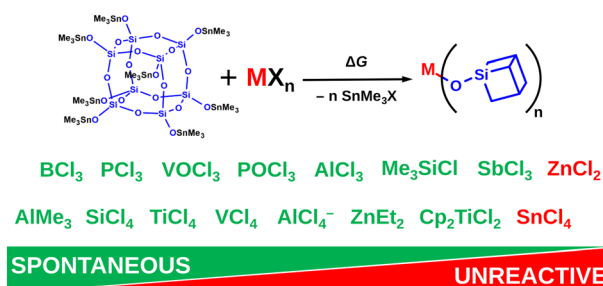
Yali Fang, Qiong Wu, Xin Ma and Zongli Ren\*



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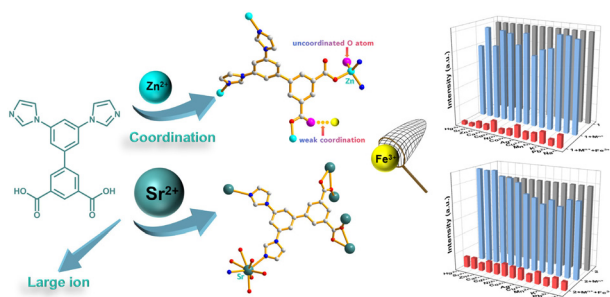
### Thermodynamics of the condensation of the Si8O20(SnMe3)8 building block with M-X (M = B, Al, Si, P, Ti, V, Zn, Sn, Sb, X = Cl, Me, Et) precursors by DFT-D3 calculations

Martin Kejik, Hugo Semrad, Ales Styskalik and Jiri Pinkas\*



## PAPERS

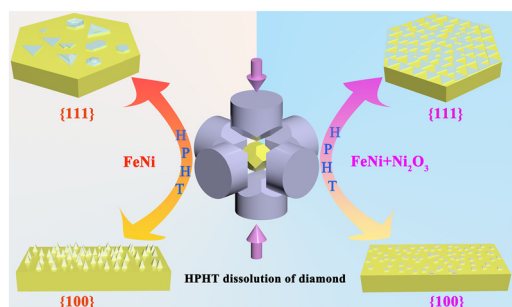
4582



### Central metal ion of MOFs modulates the fluorescence detection of Fe<sup>3+</sup>

Haitao Liu, Senlin Li, Bo Zhao, Yanan Gu, Qiaozhen Sun\* and Bingguang Zhang\*

4591



### High-pressure preparation of high-roughness diamond single crystals and analysis of surface morphology

Tengteng Shen, Wenhao Wang, Liangchao Chen,\* Zhuangfei Zhang, Yuewen Zhang, Qianqian Wang, Biao Wan, Yadong Li, Chunlei Du and Chao Fang\*

## CORRECTION

4603

### Correction: Synergistic crucible design and thermal-flow management for enhanced 4-inch AlN single crystal PVT growth: a combined numerical and experimental investigation

Wenliang Li, QianLing Liu, Jun Tan, Guangze He, Yingmin Wang, Zhenhua Sun, Baikui Li and Honglei Wu\*

