

CrystEngComm

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

rsc.li/crystengcomm

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

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



Cover

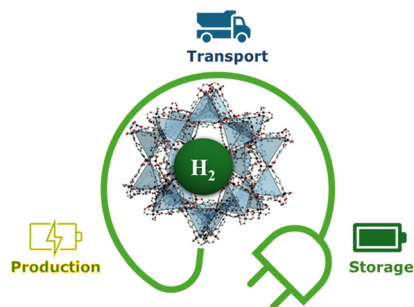
See Eduardo Schott *et al.*, pp. 4425–4442.
Image reproduced by permission of Eduardo Schott from *CrystEngComm*, 2025, 27, 4425.

HIGHLIGHTS

4425

MOFs as a partner for the H₂ industry

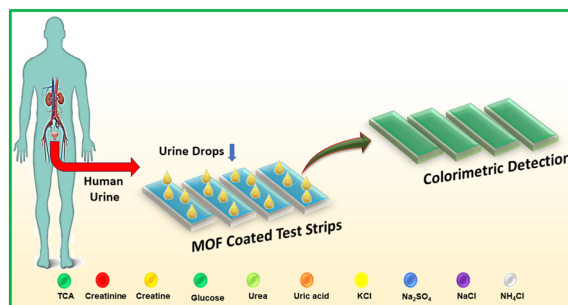
Javier Salazar-Muñoz, Yazmin Arellano, Vanesa Roa, Gabriel Bernales, Diego Gonzalez, Yoan Hidalgo-Rosa, Ximena Zarate and Eduardo Schott*



4443

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

Vibhav Shukla and Kafeel Ahmad Siddiqui*



Environmental Science: Atmospheres

GOLD
OPEN
ACCESS

Connecting communities
and inspiring new ideas

rsc.li/submittoEA

Fundamental questions
Elemental answers

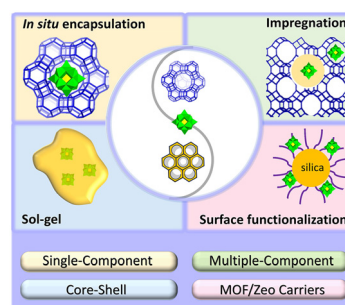


HIGHLIGHTS

4453

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

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

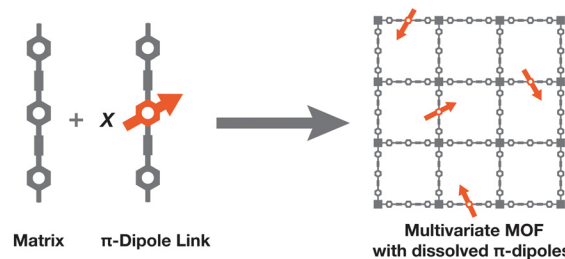


COMMUNICATION

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*



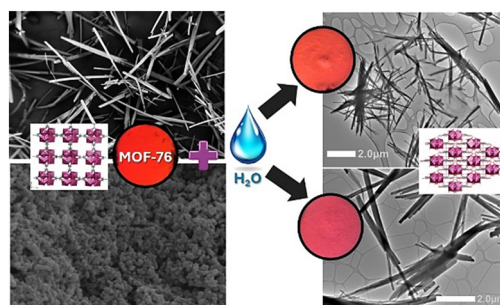
Hypsochromic Coupling Meyer-Neldel Compensation

PAPERS

4470

Time dependence of water-induced phase transition in nano- and microcrystalline Eu³⁺-doped MOF-76(Y): different luminescence responses with memory effect

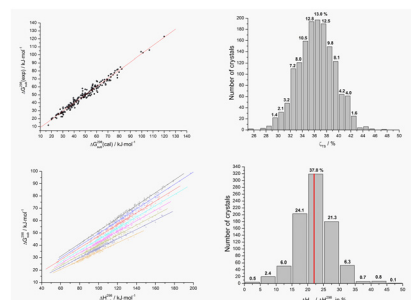
Zulma L. Moreno Botello, Marcos Illescas, Beatriz C. Barja, Sebastian E. Collins, Griselda E. Narda and Maria C. Bernini*



4488

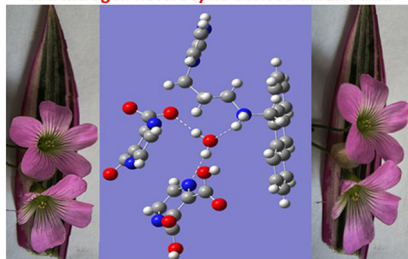
Molecular crystals sublimation: structural clusterization of the database as an approach for prediction of the thermodynamic functions

German L. Perlovich*



4498

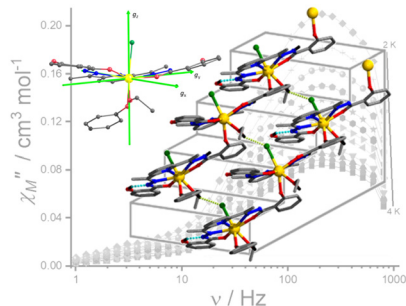
Different facet of a binary and a ternary assembly of a nitrogen heterocycle derived dibasic acid



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

Abhay Pratap Singh and Jubaraj Bikash Baruah*

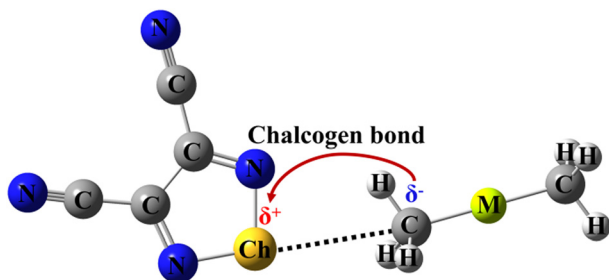
4508



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

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

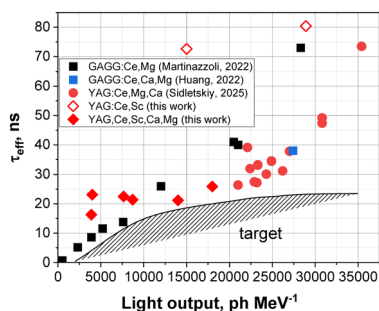
4516



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

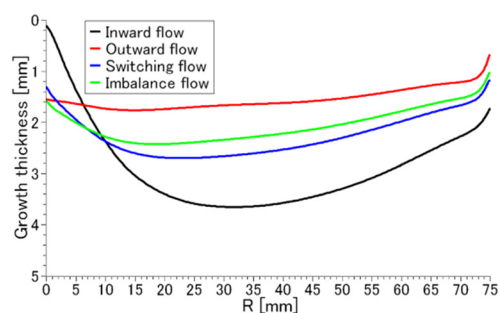
Ia. Gerasymov, S. Tkachenko, D. Kurtsev, D. Kofanov, O. Viahin, P. Maksimchuk, I. Rybalka, B. Grynyov, J. Delenne, L. Martinazzoli, L. Roux, E. Auffray, A. Padmanaban and O. Sidletskiy*



4539

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

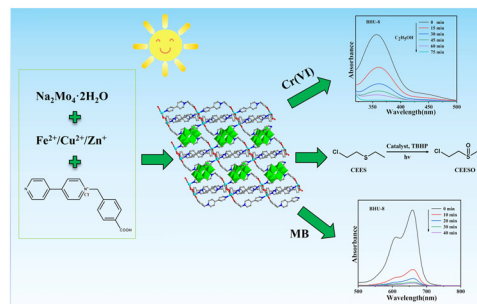
Xin Liu,* Zhicheng Guan, Tomoaki Furusho, Kentaro Kutsukake, Shunta Harada and Toru Ujihara



4547

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

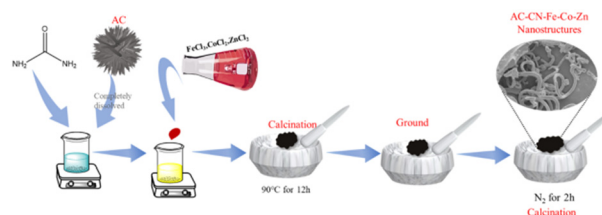
Guang-yang Zhang, Ying Sun, Zhong Zhang* and Xiu-li Wang*



4555

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

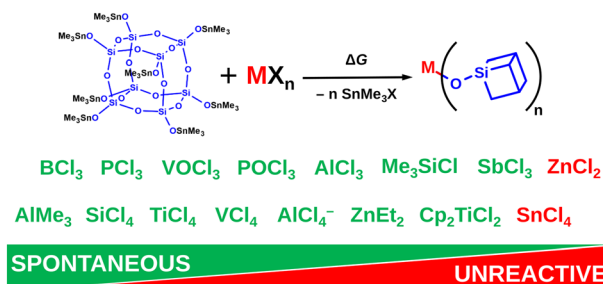
Yali Fang, Qiong Wu, Xin Ma and Zongli Ren*



4568

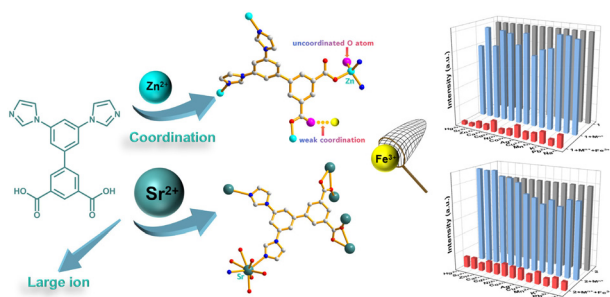
Thermodynamics of the condensation of the Si₈O₂₀(SnMe₃)₈ building block with M-X (M = B, Al, Si, P, Ti, V, Zn, Sn, Sb, X = Cl, Me, Et) precursors by DFT-D3 calculations

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



PAPERS

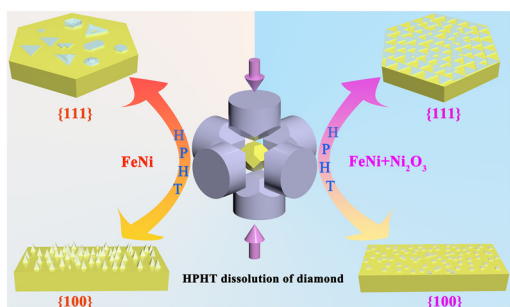
4582



Central metal ion of MOFs modulates the fluorescence detection of Fe³⁺

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*

