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IN THIS ISSUE

ISSN 1466–8033 CODEN CRECF4 27(30) 5033–5214 (2025)

Cover
See Shouvik Chattopadhyay *et al.*, pp. 5104–5125.
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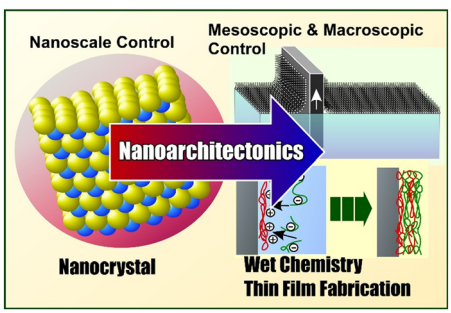
HIGHLIGHTS

5040

Wet chemistry nanoarchitectonics for nanocrystal-based films

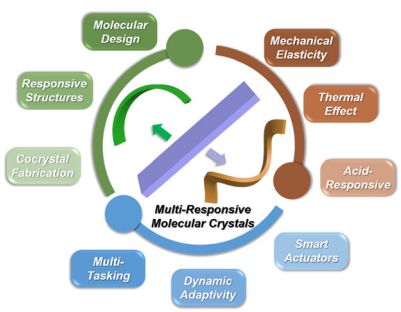
Gaulthier Rydzek* and Katsuhiko Ariga*



5070

Versatile responses beyond photomechanical behavior based on dynamic molecular crystals

Fei Tong,* Ya-Bing Sun, Lin Chen and Hui-Yao Lin



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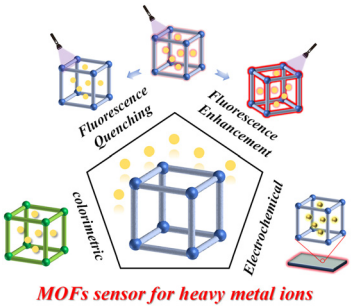
HIGHLIGHTS

5087

Metal–organic framework-based sensors for the detection of heavy metal ions in water

Guo-Zhu Liu, Zheng-Dong Liang, Zhu-Jun Long, Jie-Wei Liu, Huan-Ying Li* and Zong-Wen Mo*

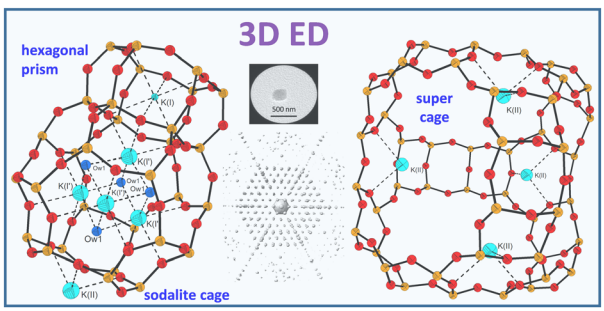


COMMUNICATIONS

5095

3D ED for the localization of cations in potassium exchanged and partially dehydrated nano Y zeolite

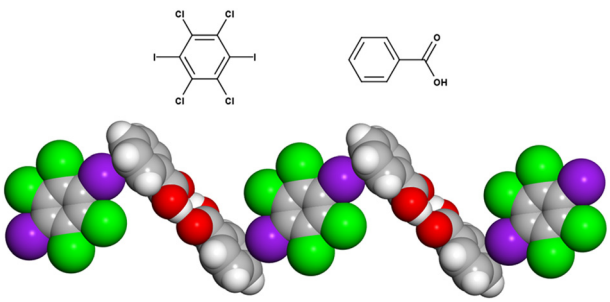
Yacine Malik Chaib Draa, Taylan Örs, Irena Deroche, Catherine Dejoie and Jean-Louis Paillaud*



5100

Hierarchy and cooperativity between π-type halogen bonds and aromatic carboxylic acid dimers in co-crystal formation

Emmett H. Feld, Eric Bosch, Daniel K. Unruh, Herman R. Krueger Jr. and Ryan H. Groeneman*

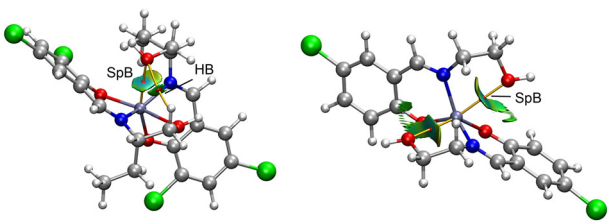


PAPERS

5104

Synthesis, structural characterization, and DFT analysis of zinc(II) Schiff base complexes featuring noncovalent spodium bonds

Md Gishan, Puspendu Middya, Sergi Burguera, Antonio Frontera* and Shouvik Chattopadhyay*



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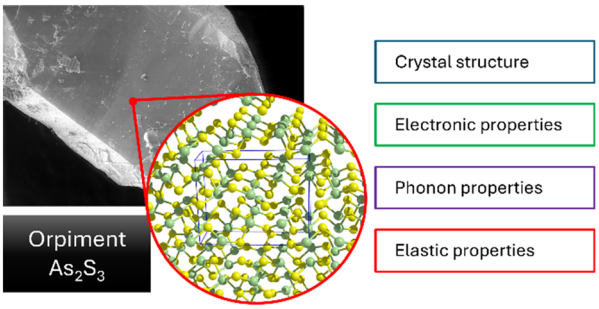
PAPERS

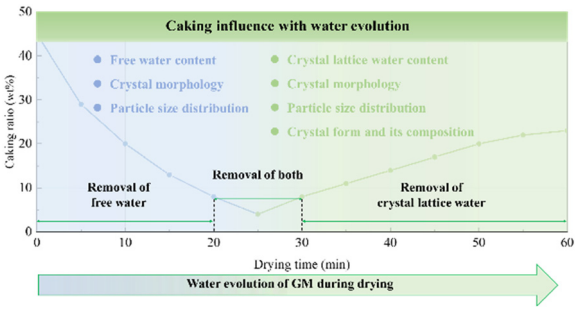
5126



Cross-correlated experimental and theoretical characterisation of orpiment As_2S_3, a potential material for new advanced technological applications

Gianfranco Ulian, Francesca Ranellucci and Giovanni Valdrè*

5140



Revealing the relationship between the anti-caking function of wet hydrate crystals and water migration: a case study of glucose monohydrate

Mengdi Zhang, Mingxuan Li, Hongwei Zhao, Zhilong Liu, Dandan Han,* Mingyang Chen* and Junbo Gong

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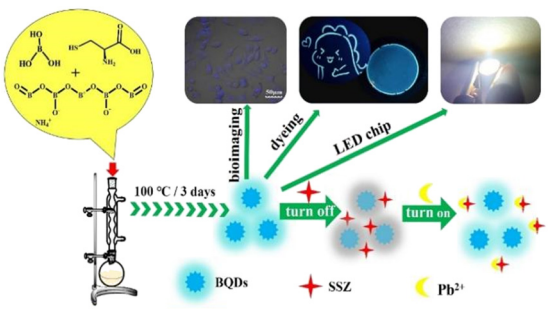

A simple low-temperature synthesis of fluorescent boron quantum dots for versatile applications

Shutao Li, Pengyi Ma, Jinping Song,* Xiaoting Guo, Jianhua Xue and Qi Ma*

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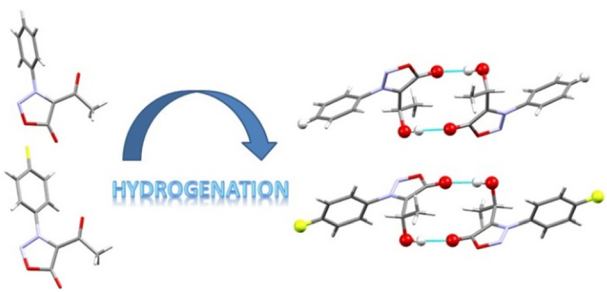

H/F replacement in secondary alcohols of sydnones as examples of isostructural OH···O═C hydrogen bonded dimer structures

Florea Dumitrascu, Marcel Mirel Popa,* Sergiu Shova, Isabela C. Man, Constantin Draghici and Mino R. Caira

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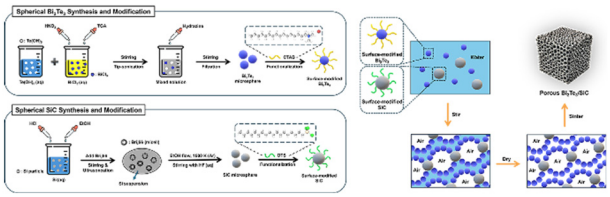
PAPERS

5173

Multistage pore structure in Bi_2Te_3/SiC composites: achieving lower thermal conductivity and enhanced thermoelectric Performance

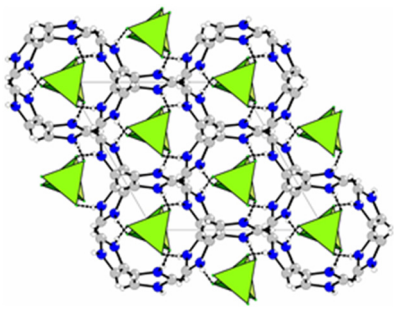
Oju Kwon, Minsu Kim, Jaeyeon Kim, Jaekyung Lee, Subin Lee, Jaeho Lee and Jooheon Kim*



5184

$(C_3H_5N_2)_3[Be_2F_7]$: the first imidazolium fluoroberyllate with a non-centrosymmetric structure based on linear tetrahedral $[Be_2F_7]^{3-}$ anions

Dmitri O. Charkin, Semen A. Ivanov, Vadim E. Kireev, Alevtina N. Gosteva, Alena A. Kompanchenko, Alexander M. Banaru, Sergey Yu. Stefanovich, Ivan G. Tananaev and Sergey M. Aksenov*



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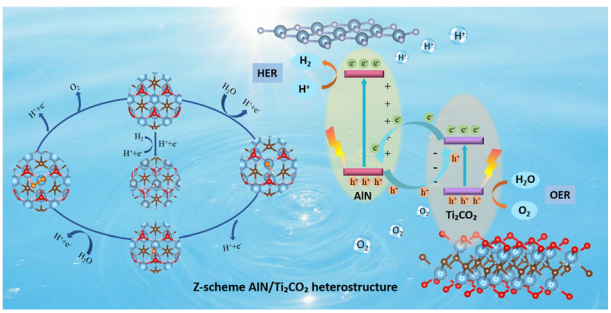
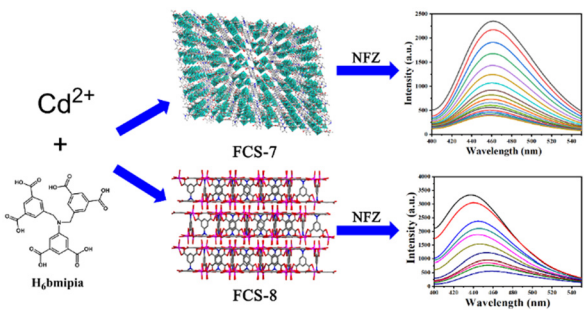
AlN/Ti_2CO_2 van der Waals heterostructure: a direct Z-scheme photocatalyst for efficient photocatalytic water splitting

Yanfei Li, Zhi Xiao, Wen Qiao,* Ru Bai, Tiejun Zhou and Shiming Yan*



5204

Structurally controllable Cd(II)-based luminescent metal–organic frameworks for efficient detection of antibiotics in water

Ning Xu, Yulong Zhou, Yexin Shen, Rui Li, Qinghua Zhang and Xiandong Zhu*