

## IN THIS ISSUE

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### Cover

See Shouvik Chattopadhyay et al.,

pp. 5104–5125.

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## HIGHLIGHTS

### 5040

#### Wet chemistry nanoarchitectonics for nanocrystal-based films

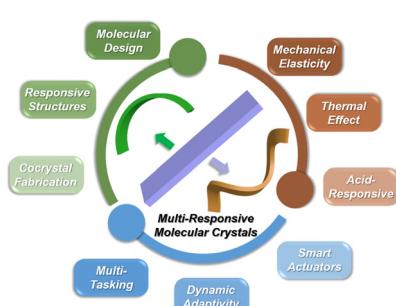
Gaultier Rydzek\* and Katsuhiko Ariga\*



### 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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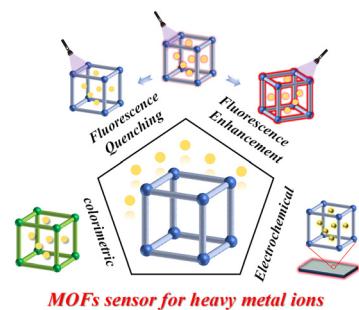
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## HIGHLIGHTS

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## 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\*

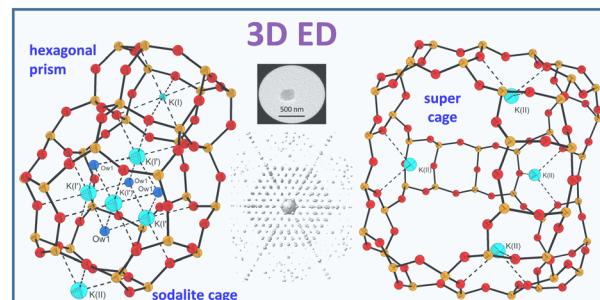


## COMMUNICATIONS

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

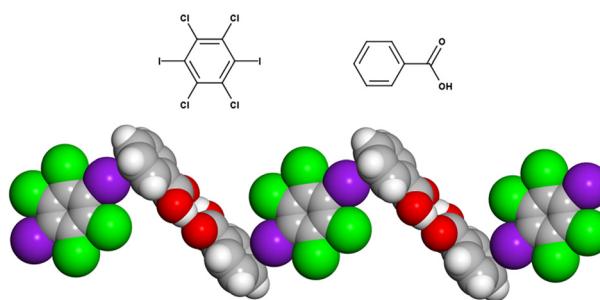
Yacine Malik Chaib Draa, Taylan Örs, Irena Deroche, Catherine Dejoie and Jean-Louis Paillaud\*



5100

Hierarchy and cooperativity between  $\pi$ -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\*

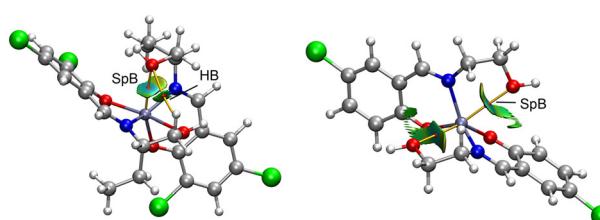


## PAPERS

5104

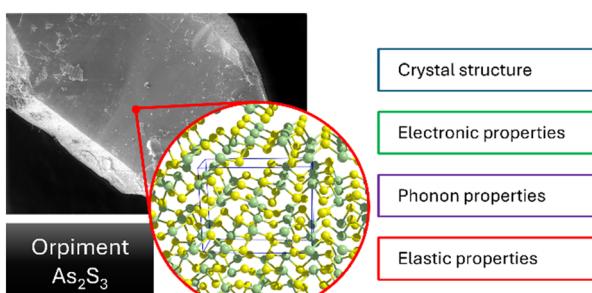
## Synthesis, structural characterization, and DFT analysis of zinc(II) Schiff base complexes featuring noncovalent spodium bonds

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



## PAPERS

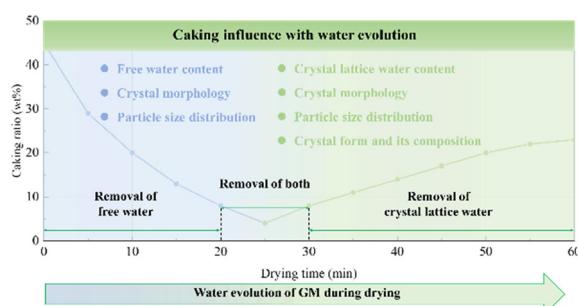
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**Cross-correlated experimental and theoretical characterisation of orpiment  $\text{As}_2\text{S}_3$ , a potential material for new advanced technological applications**

Gianfranco Ulian, Francesca Ranellucci and Giovanni Valdrè\*

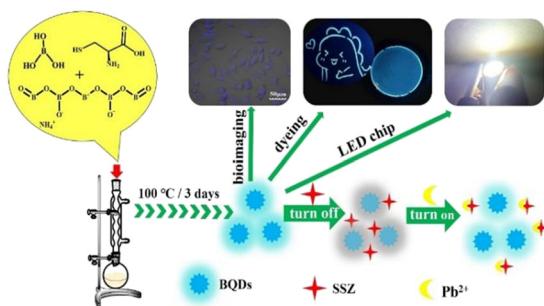
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**Revealing the relationship between the anti-caking function of wet hydrate crystals and water migration: a case study of glucose monohydrate**

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

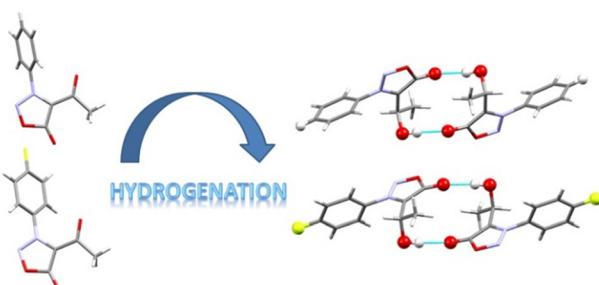
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**A simple low-temperature synthesis of fluorescent boron quantum dots for versatile applications**

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

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**H/F replacement in secondary alcohols of sydones as examples of isostructural  $\text{OH} \cdots \text{O}=\text{C}$  hydrogen bonded dimer structures**

Floreia Dumitrescu, Marcel Mirel Popa,\* Sergiu Shova, Isabela C. Man, Constantin Draghici and Mino R. Caira

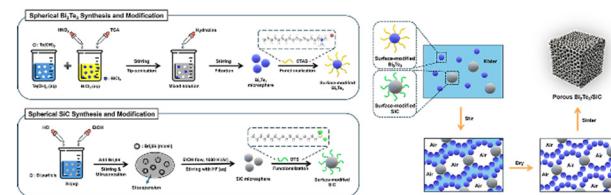


## PAPERS

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**Multistage pore structure in  $\text{Bi}_2\text{Te}_3/\text{SiC}$  composites: achieving lower thermal conductivity and enhanced thermoelectric Performance**

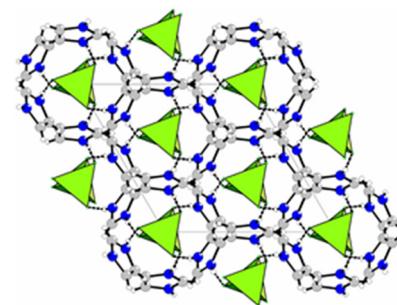
Oju Kwon, Minsu Kim, Jaeyeon Kim, Jaekyung Lee, Subin Lee, Jaeho Lee and Jooheon Kim\*



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**$(\text{C}_3\text{H}_5\text{N}_2)_3[\text{Be}_2\text{F}_7]$ : the first imidazolium fluoroberyllate with a non-centrosymmetric structure based on linear tetrahedral  $[\text{Be}_2\text{F}_7]^{3-}$  anions**

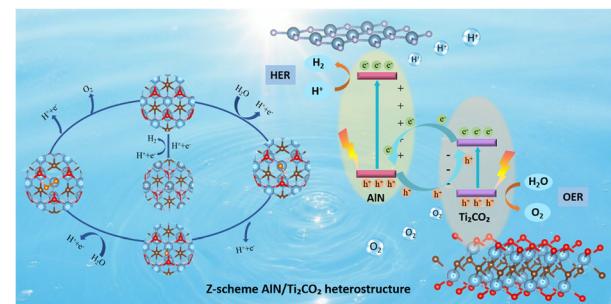
Dmitri O. Charkin, Semen A. Ivanov, Vadim E. Kireev, Alevtina N. Gosteva, Alena A. Kompanchenko, Alexander M. Banaru, Sergey Yu. Stefanovich, Ivan G. Tananaev and Sergey M. Aksenov\*



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**AlN/Ti<sub>2</sub>CO<sub>2</sub> 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\*



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

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

