

# CrystEngComm

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

[rsc.li/crystengcomm](http://rsc.li/crystengcomm)

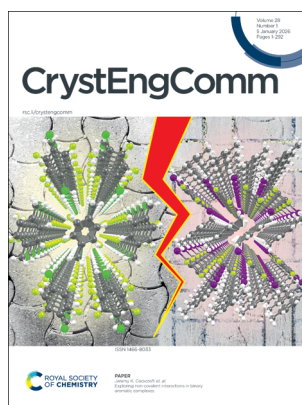
The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

## IN THIS ISSUE

ISSN 1466-8033 CODEN CRECF4 28(1) 1-292 (2026)



**Cover**  
See Duane Choquesillo-Lazarte *et al.*, pp. 88–100.  
Image reproduced by permission of Duane Choquesillo-Lazarte from *CrystEngComm*, 2026, 28, 88. Cover image courtesy of Raúl Lara.



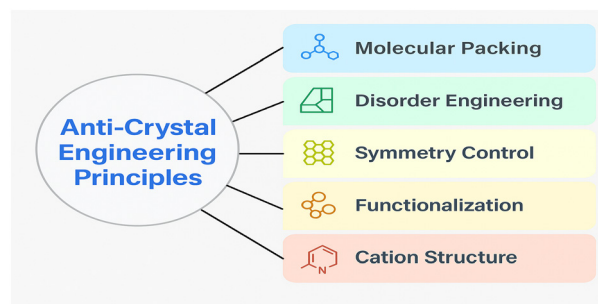
**Inside cover**  
See Jeremy K. Cockcroft *et al.*, pp. 101–111.  
Image reproduced by permission of Jeremy K. Cockcroft from *CrystEngComm*, 2026, 28, 101.

## TUTORIAL REVIEW

11

### The anti-crystal engineering principles of imidazolium cations for ionic liquids

Patrick C. Hillesheim\* and Arsalan Mirjafari\*

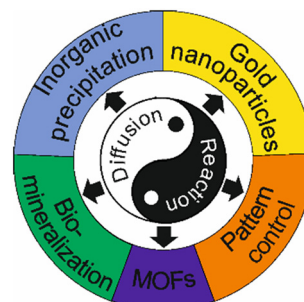


## HIGHLIGHTS

36

### Diffusion-assisted synthesis of crystalline materials in rigid gels

Norbert Németh, Gábor Holló, Sung Ho Yang, Bilge Baytekin, Gábor Schuszter, István Szalai, Federico Rossi and István Lagzi\*



GOLD  
OPEN  
ACCESS

# EES Solar

## Exceptional research on solar energy and photovoltaics

Part of the EES family

**Join** | Publish with us  
**in** | [rsc.li/EESSolar](https://rsc.li/EESSolar)

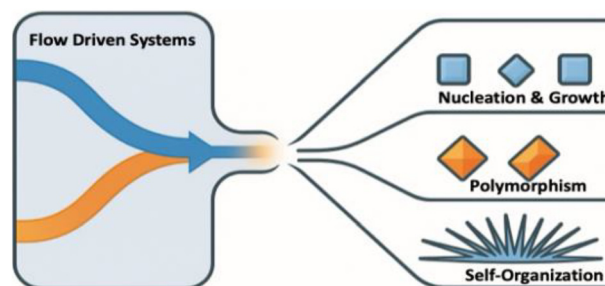


## HIGHLIGHTS

51

### Harnessing flow and microfluidics to direct inorganic crystal growth and architecture

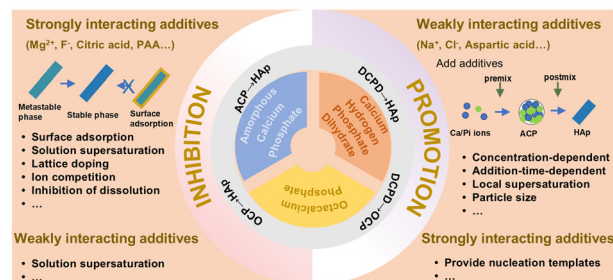
Michael Emmanuel, Dezső Horváth, Ágota Tóth\* and Ali Abou-Hassan\*



67

### Regulation of calcium phosphate phase transition kinetics in aqueous solution *via* additives

Zhiyu Liu, Dongyue Yin and Chunlin Deng\*

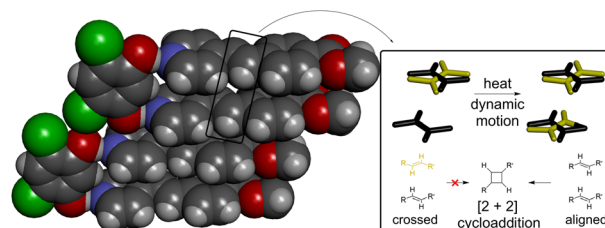


## COMMUNICATIONS

78

### Heating enables solid-state motion and improves the yield of a [2 + 2] cycloaddition reaction within an organic cocrystal

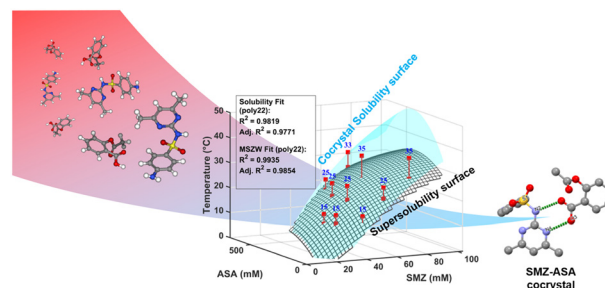
Gary C. George III, Drew Owens, Damon M. Osbourn, Kristin M. Hutchins\* and Ryan H. Groeneman\*



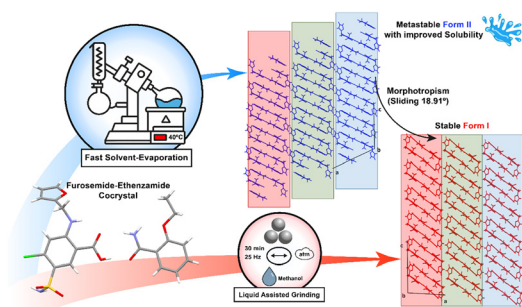
83

### Non-monotonic metastable zone-width behavior in cooling cocrystallization: a case study on the sulfamethazine-acetylsalicylic acid cocrystal system

Anindita Saha and Jose V. Parambil\*



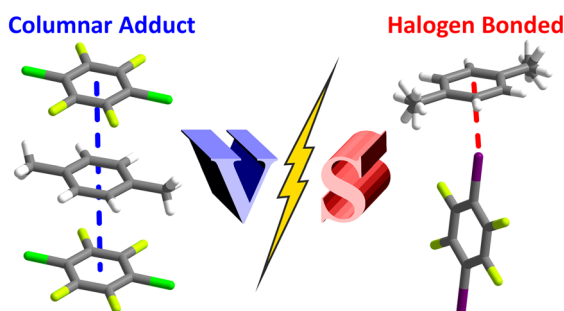
88



### Seeking new polymorphs in pharmaceutical cocrystals: focus on furosemide–ethenzamide

Estephany Muñoz-Hernández, Carolina Alarcón-Payer, Antonio Frontera, Rafel Prohens, Rafael Barbas, Francisco Javier Acebedo-Martínez,\* Alicia Domínguez-Martín and Duane Choquesillo-Lazarte\*

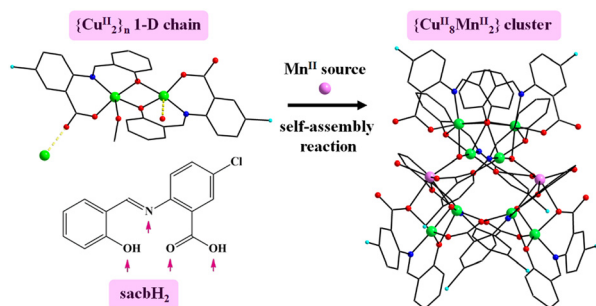
101



### Exploring non-covalent interactions in binary aromatic complexes

Joseph C. Bear, Jeremy K. Cockcroft,\* Alexander Rosu-Finsen and Jeffrey H. Williams

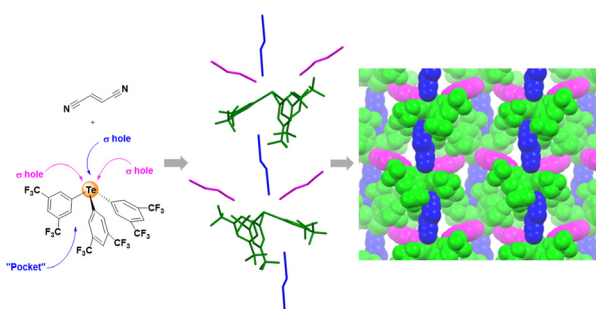
112



### A preformed 1-D $\{CuII\}_n$ helical chain as precursor to a decanuclear 0-D $\{CuII_8MnII_2\}$ cluster: synthesis, structure and magnetism

Konstantinos N. Pantelis, Dimitris I. Alexandropoulos,\* Albert Escuer, George E. Kostakis\* and Theocharis C. Stamatatos\*

123



### Supramolecular assemblies involving triaryltelluronium cations: combining chalcogen bonding, hydrogen bonding and lone pair– $\pi$ interactions

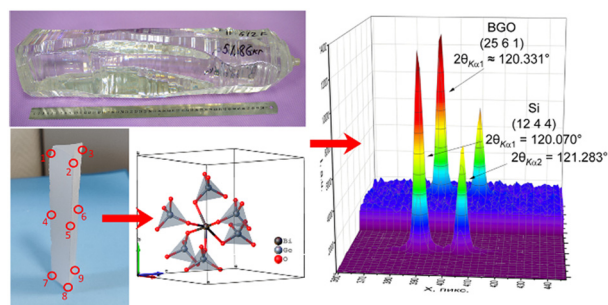
Loic Gros Lambert, Andres Padilla Hernandez, Avantika Hasija, Emmanuel Aubert, Patrick Pale and Victor Mamane\*



130

### Investigation of the homogeneity of BGO single crystals, a promising X-ray diffraction standard

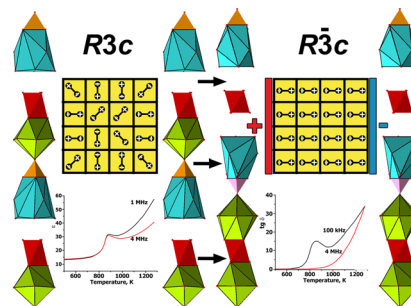
Polina S. Serebrennikova,\* Vladimir N. Shlegel and Sergey A. Gromilov



143

### $\beta$ - $\text{Ca}_3(\text{PO}_4)_2$ -related structure and dielectric properties of $\text{Ca}_8\text{CdLa}(\text{PO}_4)_7$

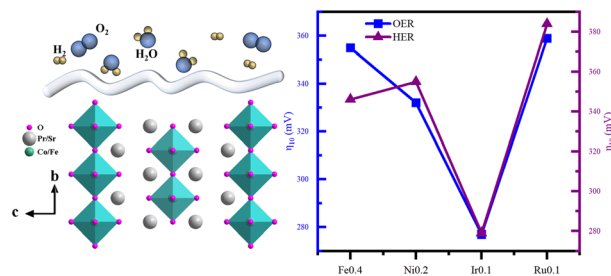
Elena V. Sipina, Evgeniya S. Zhukovskaya, Vladimir A. Morozov, Sergey Yu. Stefanovich, Vadim V. Grebenev, Alexei A. Belik, Bogdan I. Lazoryak and Dina V. Deyneko\*



152

### B-site substitution in $\text{A}_2\text{BO}_4$ Ruddlesden–Popper perovskites for enhanced OER and HER in alkaline medium

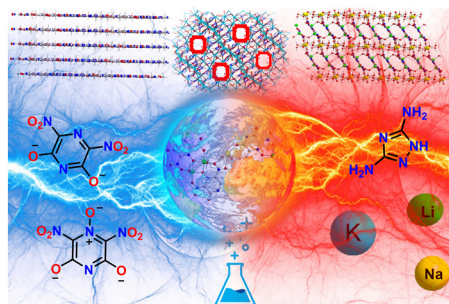
Yuhu Huang, Jin Li, Dayu Yu, Jiaping Hu, Han-Shu Xu and Kaibin Tang\*



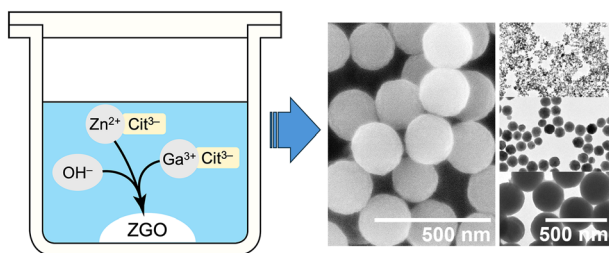
163

### Synthesis of energetic materials derived from hydroxynitropyrazine

Xiu'e Jiang, Zeyu Xu, Mingren Fan, Ruihui Wang, Yi Wang\* and Qinghua Zhang\*



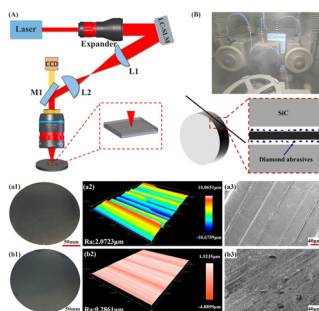
169



### Size-controlled synthesis of monodisperse zinc gallium oxide particles *via* coprecipitation under hydrothermal conditions using trisodium citrate

Fumiyuki Shiba,\* Naoki Koyama and Yusuke Okawa

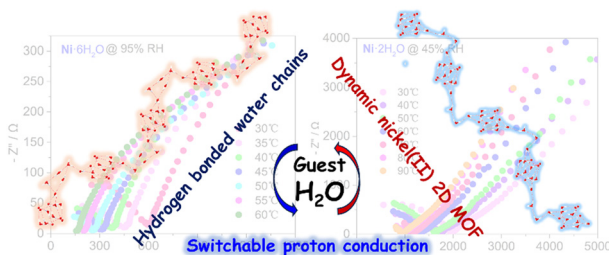
177



### Comparative study on substrate quality of laser slicing and wire saw slicing for SiC wafers

Jianfei Zhang, Yiyang Chen, Linlin Che, Bixue Li, Xing Zhang, Haoyu Fan, Qingyu Li, Jiawei Wang, YuFeng Xue, Yangyang Jia, Qiu Chen,\* Xiufang Chen\* and Rongkun Wang\*

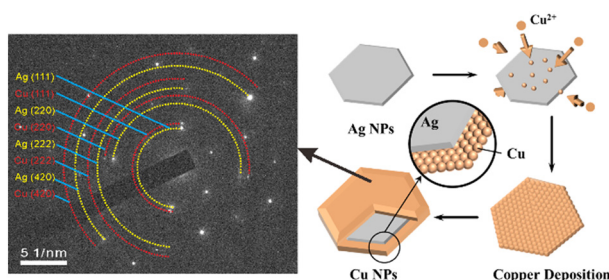
189



### Guest water-induced reversible regulation of proton conduction in a two-dimensional nickel(II) coordination polymer

Ao-Na Sun, Fu-Wan Dong, Yi-Chen, Si-Chen Zhang, Rui-Han Liu, Junlun Zhu and Dong Shao\*

197



### Seed-mediated growth for aspect-ratio-tunable copper nanoplates

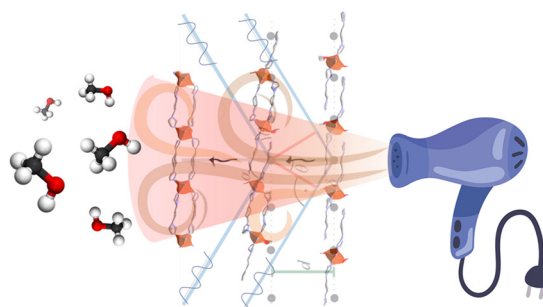
Yu Zhou, Ying Liang,\* Bin Fang, Shuanglong Yuan and Zhen Zhang\*



207

### Stepwise single-crystal-to-single-crystal phase transition in copper-based coordination polymers triggered by solvent release

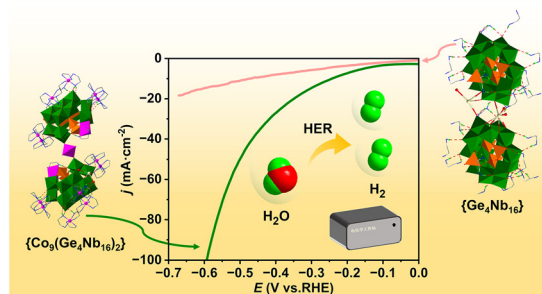
Massimo Guelfi,\* Marco Taddei and Giulio Bresciani\*



217

### Boosting alkaline hydrogen evolution via cobalt functionalization of organic-inorganic hybrid germanoniobate electrocatalysts

Xin-Rong Jin, Jin-Yang Li, Yong-Jiang Wang, Yan-Qiong Sun,\* Xin-Xiong Li and Shou-Tian Zheng\*



224

### Structural insights into the multi-component solid forms of aminocaproic acid and aminomethyl benzoic acid: mechanochemical approach for the preparation of salt forms

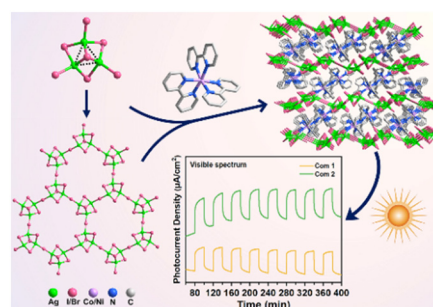
Manimurugan Kanagavel and Sunil Kumar Nechipadappu\*



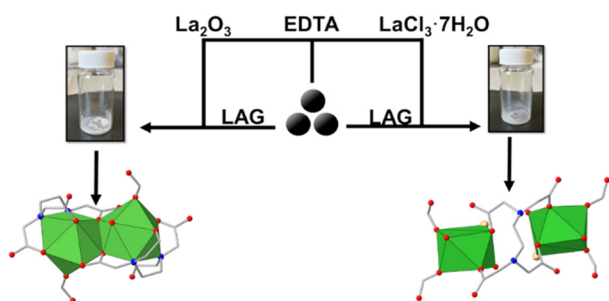
247

### Two semiconductive haloargentates with metal-complex cations: crystal structures, band gaps, photocurrent responses and theoretical investigations

Shu-Yue Xie, Ming-Hui Liu, Ning Wang, Xi-Meng Zhang, Shen-Hao Wang, Yan Yang, Jun Li\* and Bo Zhang\*



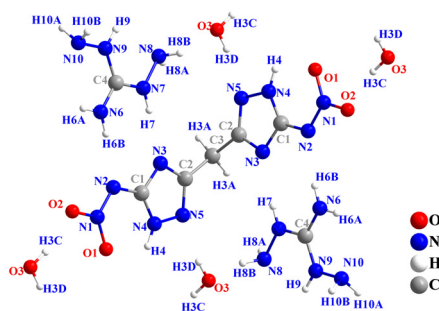
255



### Mechanochemical synthesis and micro-electron diffraction analysis of rare earth-aminopolycarboxylate coordination compounds

Ecem Çelik, Pierre Le Magueres, Eric W. Reinheimer, Korey P. Carter\* and Tori Z. Forbes\*

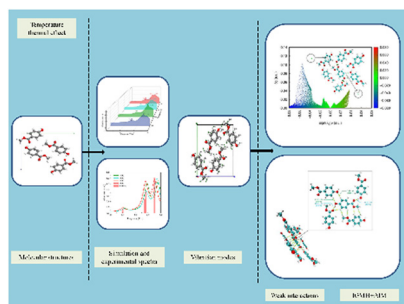
270



### Nitrogen-rich energetic salts of 5,5'-dinitramino-3,3'-methylene-1H-1,2,4-bistriazolates: powerful alliance towards good thermal stability and high performance

Yanna Wang, Xiaoming Yang, Xinrui Li, Jun Zhao, Qi Wang, Tonglai Zhang and Zhimin Li\*

276



### Study on terahertz spectroscopy and weak intermolecular interactions of methylparaben under temperature effects

Yuan Tang, Xiaojie Wang, Tao Chen,\* Daoguo Yang, Yueting Huang and Xianyan Huang

