

# Dalton Transactions

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**Cover**  
See Myung Hwan Park *et al.*,  
pp. 7840–7847.

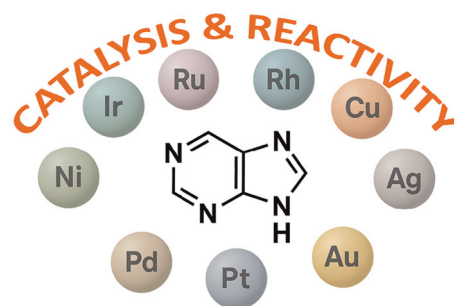
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2026, **55**, 7840.

## PERSPECTIVES

7752

### Purine-derived N-heterocyclic carbene metal complexes: catalytic applications and reactivity

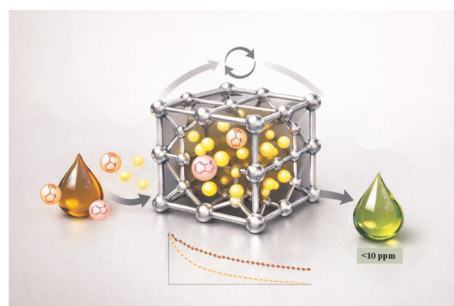
Alejandro Cervantes-Reyes,\* Ricardo Malpica-Calderón,  
Hugo Valdés\* and David Morales-Morales\*



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### From metal nodes to sulfur capture: design principles and challenges in MOF-based adsorptive desulfurization

Aleena Tariq, Abdulrahman G. Alhamzani,  
Mohd Zeeshan, Mohd Haaris, Mohammad Muaz,  
M. Shahid, Farasha Sama\* and Ehab A. Abdelrahman\*



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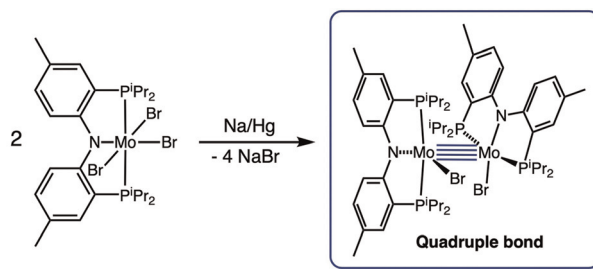
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## COMMUNICATIONS

7816

**A metal–metal quadruply bonded dimer of two pincer-ligated metal centers**

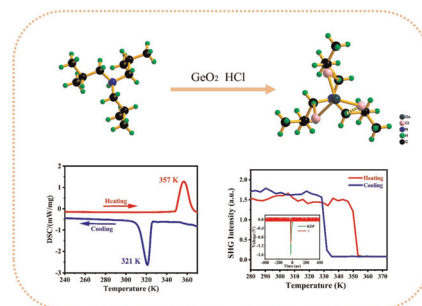
Souvik Mandal, Ethan Y. Song, Thomas J. Emge, Faraj Hasanayn\* and Alan S. Goldman\*



7821

**A novel 0D germanium-based organic–inorganic hybrid material (C<sub>12</sub>H<sub>28</sub>N)GeCl<sub>3</sub> showing reversible phase transition, dielectric anomaly and SHG response**

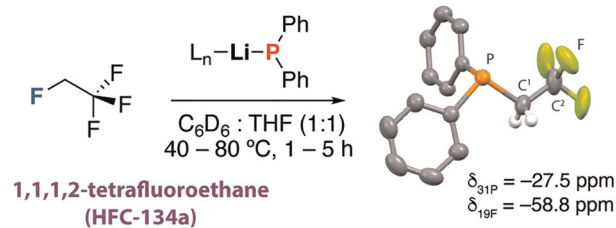
Jie Zhou, Binyi Tong, Zhirong Zhong, An Duan, Yong Ai, Lin Zhou,\* Zhenhong Wei\* and Hu Cai\*



7826

**Selective defluorination of 1,1,1,2-tetrafluoroethane by lithium phosphide reagents**

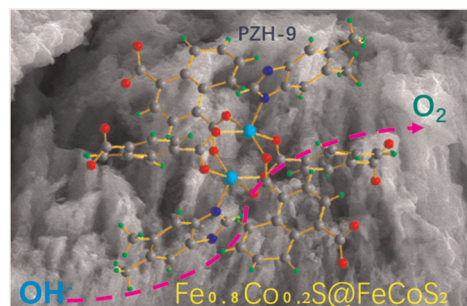
Hodan R. Warsame, Colleen M. Demetriou and Mark R. Crimmin\*



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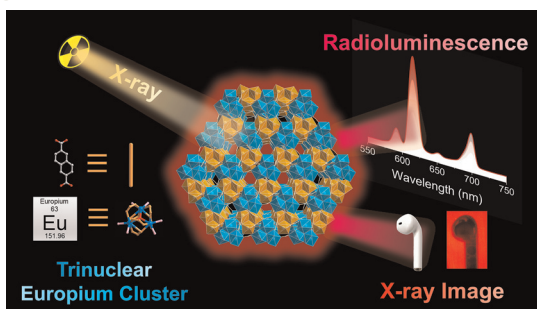
**Two-component bimetallic sulfides enhancing OER activity**

Chengjie Liao, Ting Liu, Hui Chang, Yufeng Li, Jin Lu, Dexiang Zhang,\* Tian Wen\* and Zhiqiang Jiang\*



## COMMUNICATIONS

7835



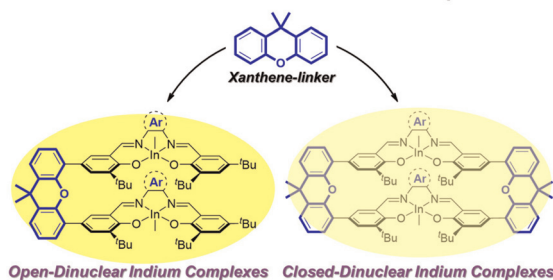
### A europium-based metal–organic framework as a high-performance X-ray scintillator

Shangwei Guo, Wenxuan Yang, Shuode Feng, Jinwen Dou, Tiyang Lin, Yining Zheng, Yaxin Jiang, Junpu Yang,\* Wei Liu and Jian Lin\*

## PAPERS

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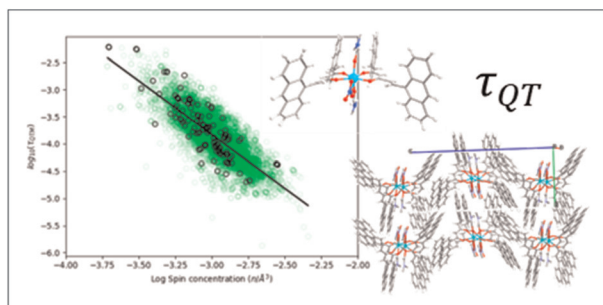
### Xanthene-Anchored Dinuclear Indium Complexes



### Xanthene-anchored salen-based open and closed dinuclear indium complexes: synthesis and photophysical properties

Yoseph Kim, Ji Hye Lee, Hyeongkwon Moon, Himchan Mo, Hyonseok Hwang, Junseong Lee, Jun Hui Park, Youngjo Kim\* and Myung Hwan Park\*

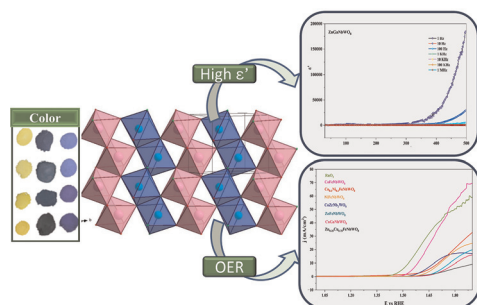
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### Lanthanide single molecule magnets: relation between crystal packing and tunnelling relaxation time

Daniel Aravena

7858



### Synthesis, structure and properties of compounds stabilized in the wolframite structure: (AA')(BB')O<sub>8</sub>; A = Zn<sup>2+</sup>, Mg<sup>2+</sup>, Co<sup>2+</sup>, Ni<sup>2+</sup>, or Cu<sup>2+</sup>, A' = Fe<sup>3+</sup>, Ga<sup>3+</sup>, In<sup>3+</sup>, Mn<sup>3+</sup>, or Sc<sup>3+</sup>, B = Nb<sup>5+</sup> or Ta<sup>5+</sup>, and B' = W<sup>6+</sup>

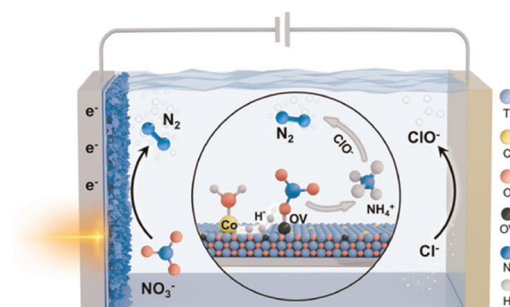
Diksha Malik, Karthikraja Esackraj, Venkatesan Subramanian\* and Srinivasan Natarajan\*



7874

### Self-purifying chloride-mediated sequential nitrate reduction–oxidation enabled by a Co-oxygen vacancy tandem photoelectrocatalyst

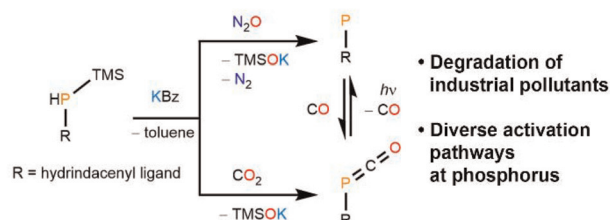
Yue He, Hongbao Jia, Ziyang Zhang, Jiale Wang, Xinyu Deng, Jinghuan Peng, Jue Wu, Hui Xu, Ding Wang, Huan Shang\* and Guisheng Li



7884

### Activation of N<sub>2</sub>O, CO<sub>2</sub>, and CO at a sterically protected phosphorus center

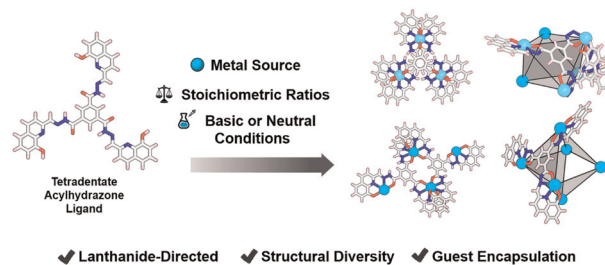
John S. Wenger,\* William J. Rowe and Meera Mehta\*



7891

### Diversified lanthanide-directed self-assembly using a tritopic tetradentate acylhydrazone ligand

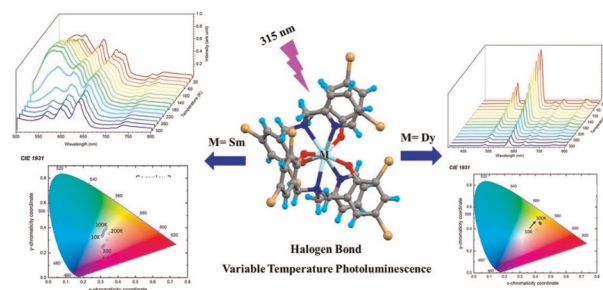
Ze-Hong Chen, Hui-Min Cai, Xiao-Shan Feng, Li-Xuan Cai, Ting-Ting Cheng, Li-Peng Zhou\* and Qing-Fu Sun\*



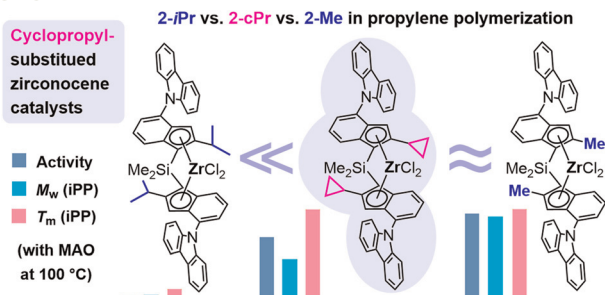
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### Halogen-bonded self-assembly of mononuclear lanthanide(III) complexes: variable temperature photoluminescence study and sensing of nitroaromatics

Anil Rajnath Singh, Arnab Sil, Kumar Shivam, Vishnu Poonia, Simran Thakur, Biswa Prakash Nayak, Hatem M. Titi,\* Biswajit Guchhait\* and Ranjan Patra\*



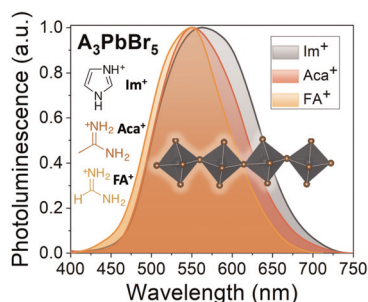
7910



### Cyclopropyl vs. isopropyl in zirconocenes: unexpected catalytic performance in propylene polymerization

Oleg V. Samsonov, Mikhail I. Sharikov, Danil I. Urintsev, Pavel S. Kulyabin, Georgy P. Goryunov, Dmitry V. Uborsky, Jo Ann M. Canich and Alexander Z. Voskoboynikov\*

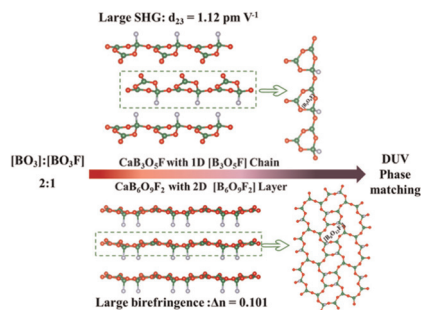
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### Crystal structure and properties of acetamidinium lead bromide: a new member of the $A_3PbBr_5$ halide family

Huanzhou Wang, Andrey A. Petrov,\* Andrey V. Petrov, Mingming Li\* and Sergey A. Fateev\*

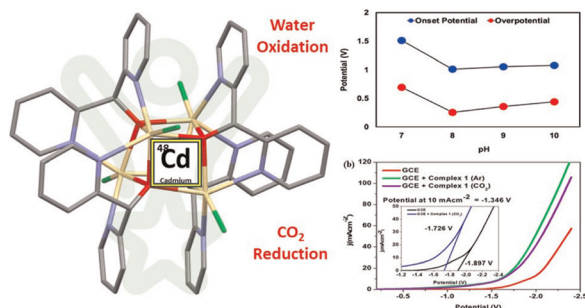
7926



### Computational design of new DUV NLO fluorooxoborates with [BO<sub>3</sub>]: [BO<sub>3</sub>F] = 2:1 via an anionic framework dimensionality-fixed strategy

Yajie Qi, Kewang Zhang,\* Xin Su,\* Abudukadi Tudi, Wenqi Jin\* and Congwei Xie

7936



### A novel Cd<sub>4</sub>O<sub>4</sub> cubane cluster-based complex and its bifunctional catalytic activity aiming for artificial photosynthesis

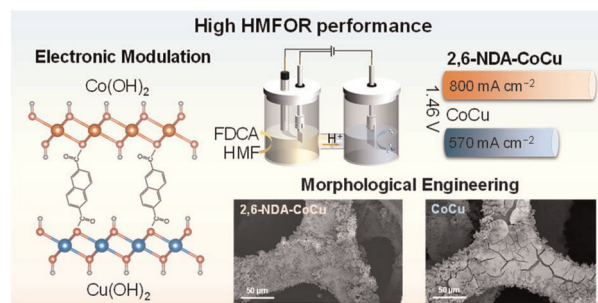
M. Sooraj, B. Haritha, S. N. Remello and E. Manoj\*



7947

### Ligand-induced morphological engineering and electronic modulation of CoCu bimetallic catalysts for efficient HMF electrooxidation

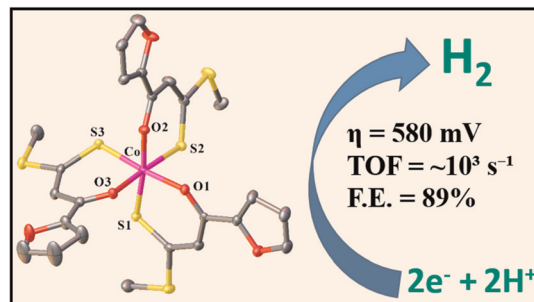
Hua Yu, Li Xu, Guizhen Li, Wei Xu, Yuxin Wang and Wen Zhang\*



7955

### Synthesis, structural characterization, and electrocatalytic hydrogen generation activity of fac-tris( $\beta$ -oxodithioester-O<sup>S</sup>)cobalt(III) complexes

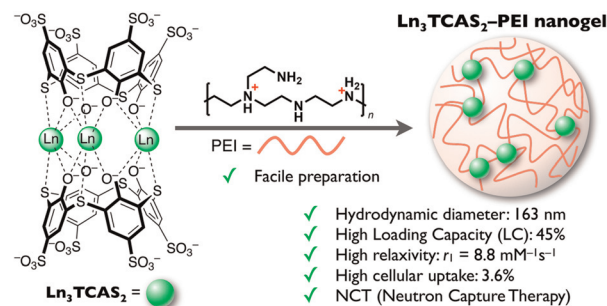
Anjali Mishra, Chote Lal Yadav, Jun Yi, George Lisensky, Michael G. B. Drew, Gaurav Kumar Mishra, Wendu Ding,\* Ebbe Nordlander,\* Nanhai Singh\* and Kamlesh Kumar\*



7970

### Ln<sub>3</sub>TCAS<sub>2</sub>-polyethyleneimine supramolecular nanogels: a platform for neutron capture therapy and complementary magnetic resonance imaging (Ln = lanthanide, TCAS = thiacalix[4]arene-*p*-tetrasulfonate)

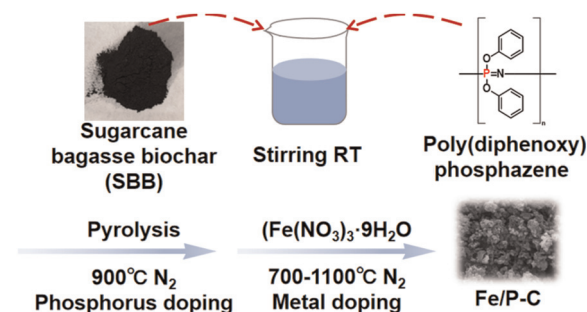
Nanaho Shindo, Ryota Sawamura, Ryunosuke Karashimada, Shan Gao, Yoshikazu Ozawa, Kensuke Osada,\* Ichio Aoki, Minoru Suzuki and Nobuhiko Iki\*



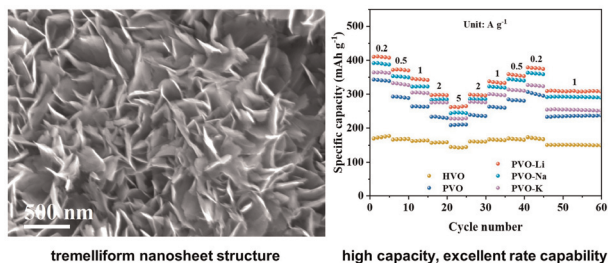
7979

### Phosphorus-induced electronic coupling between Fe single atoms and Fe<sub>2</sub>O<sub>3</sub> nanoparticles on biomass-derived carbon for efficient oxygen reduction

Zhidan Deng, Xincheng Xu, Junhong Gao, Chunzhong Liang, Yanyu Yang, Jinshun Lu, Hongyu Chen\* and Hao Yang\*



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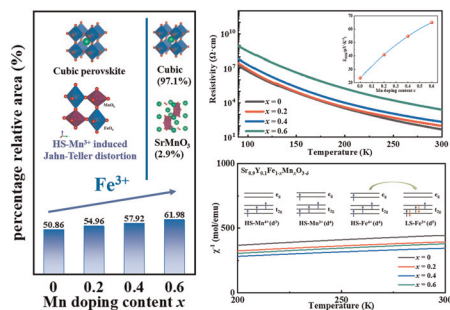
tremelliform nanosheet structure

high capacity, excellent rate capability

### Polyaniline and alkali cations co-intercalated V<sub>2</sub>O<sub>5</sub> composites with a tremelliform nanosheet structure for high performance aqueous zinc-ion batteries

Zhou Su, Yishu Yang, Mingshu Zhao,\* Min Li, Lidong Jiao, Feng Li, Qingyi Ren and Sen Yang

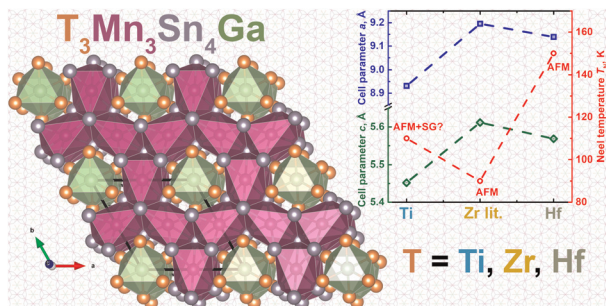
7998



### Effective tuning of electromagnetic properties in Sr<sub>0.9</sub>Y<sub>0.1</sub>FeO<sub>3-δ</sub> ceramics via high valence and spin-state Mn doping at the B-site

Xingcan Chen, Ruihang Yao, Haorong Wu,\* Jianlin Dong, Daiwei Zhang, Hongyuan Song, Kun Dong and Lan Yu\*

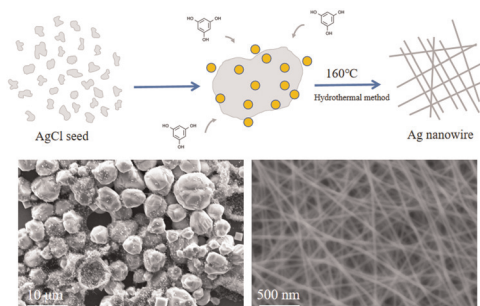
8008



### Completing the triad: synthesis, structure, and magnetic properties of kagome metals Ti<sub>3</sub>Mn<sub>3</sub>Sn<sub>4</sub>Ga and Hf<sub>3</sub>Mn<sub>3</sub>Sn<sub>4</sub>Ga

Roman A. Khalaniya,\* Konstantin A. Lyssenko, Iasmin A. Shakhmukhametova, Nikita Shuyev, Andrei V. Mironov, Aleksandr N. Kulchu, Alexey O. Polevik, Alexander N. Samarin, Alexey V. Bogach and Andrei V. Shevelkov

8016



### Synthesis of one-dimensional silver nanowires in aqueous solution using phloroglucinol as a reducing reagent

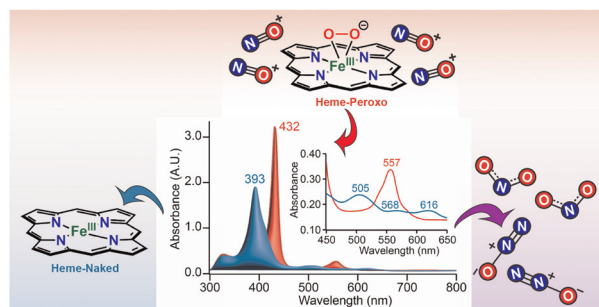
Yecheng Lu, Wenlong Wang, Ruijing Li, Shilong Wang and Cheng Wang\*



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### Stoichiometry dependent modifications in synthetic heme peroxy reactivity with nitrosonium: a new paradigm for understanding heme mediated nitration chemistry

Samith B. Jayawardana, Collin B. Gabel, Arya A. Bhosale, Aruzhan Abdikaiym, Gbolagade Olajide, Shanuk Rajapakse, Tibor Szilvási,\* Brad S. Pierce\* and Gayan B. Wijeratne\*



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### Aromatic guest-induced layer expansion and phase switching in a 2D square lattice coordination network

Shi-Qiang Wang,\* Shaza Darwish, Shan Xu, Rong Wang\* and Michael J. Zaworotko\*

