

# Dalton Transactions

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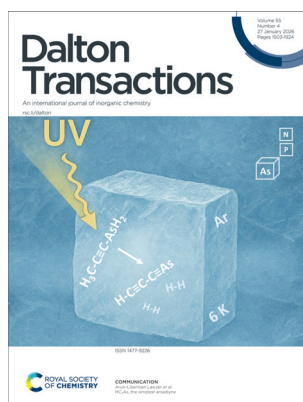
## IN THIS ISSUE

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See C. W. Liu *et al.*,  
pp. 1637–1641.

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**Inside cover**  
See Arun-Libertsen Lawzer  
*et al.*, pp. 1642–1645.

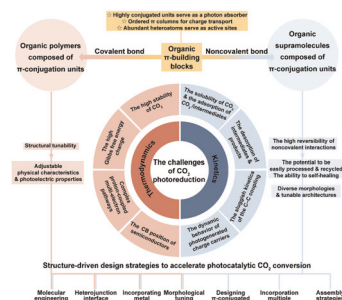
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## PERSPECTIVES

1515

### CO<sub>2</sub> photoreduction with heterogeneous organic photocatalysts based on $\pi$ -conjugated monomers: structure–property insights and regulation strategies

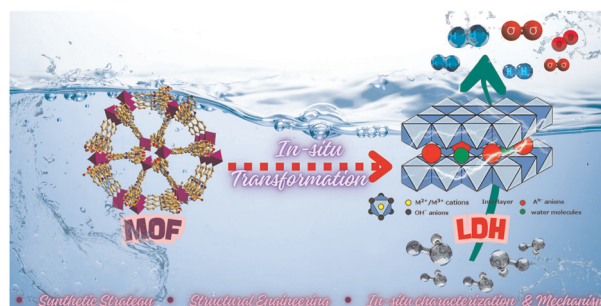
Li Yang, Yuqiang Sheng\* and Di Liu\*



1548

### Tracking *in situ* transformation of metal–organic frameworks into layered double hydroxides during synthesis and alkaline water oxidation through *operando* mechanistic studies

Meena Chettri, Nilankar Diyali and Bhaskar Biswas\*



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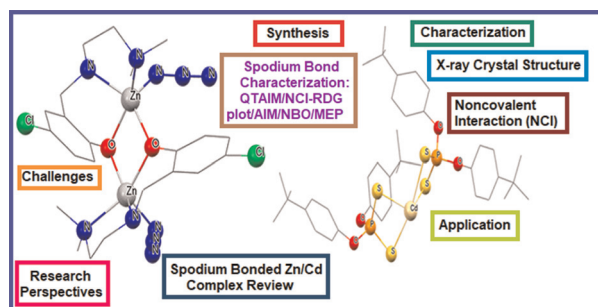
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## PERSPECTIVES

1584

### A comprehensive review of the spodium bond as a new crystal engineering motif in Zn/Cd complexes: challenges and future perspectives

Suman Hazra, Dhruvayoti Majumdar,\* Dhiraj Das, Lalmohan Barman, Sourav Roy and Sudipta Dalai\*

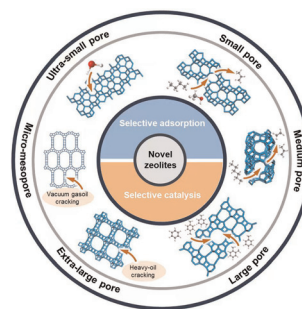


## FRONTIER

1625

### Recent syntheses of novel zeolites with different pore sizes

Yi Zhai, Qinming Wu,\* Feiyong Xiang and Feng-Shou Xiao\*

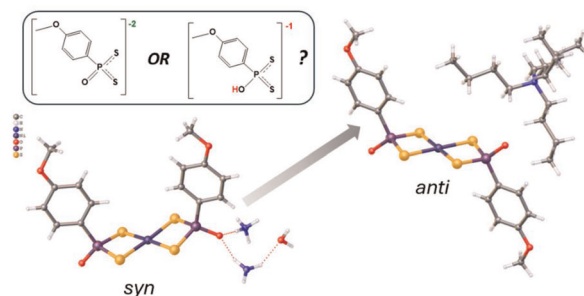


## COMMUNICATIONS

1637

### Solving the P–O/P–OH riddle: direct synthesis and neutron diffraction characterization of dianionic dithiophosphonates

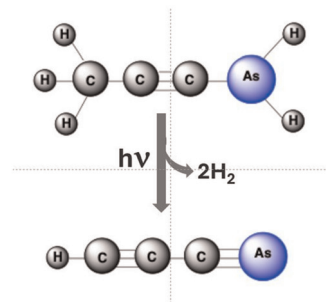
Michael N. Pillay, Min-Chi Li, Yu-Rong Ni, Wei-Jung Yen, Tzu-Hao Chiu, Xiaoping Wang, Jean-Yves Saillard and C. W. Liu\*



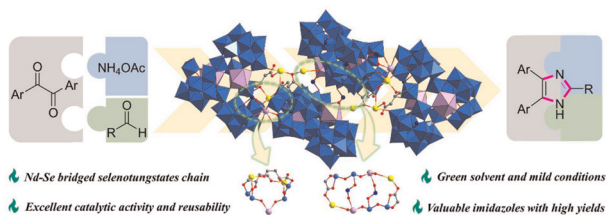
1642

### HC<sub>3</sub>As, the simplest arsadiyne

Arun-Libertsen Lawzer,\* Thomas Custer, Jean-Claude Guillemin and Robert Kotos



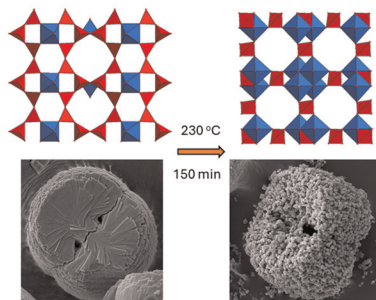
1646



### A one-dimensional selenotungstate based on neodymium and $\{\text{SeO}_3\}$ groups for catalytic synthesis of imidazoles

Hao-Zhe Wang, Yu-Feng Liu,\* Zhou-Fu Lin, Shi-Xiong Li\* and Guo-Ping Yang\*

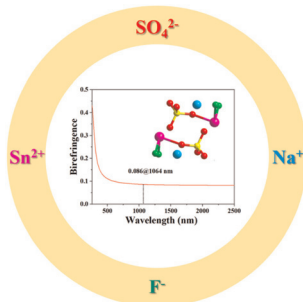
1653



### Interzeolite-type transformation between microporous titanosilicates

Stanislav Ferdov

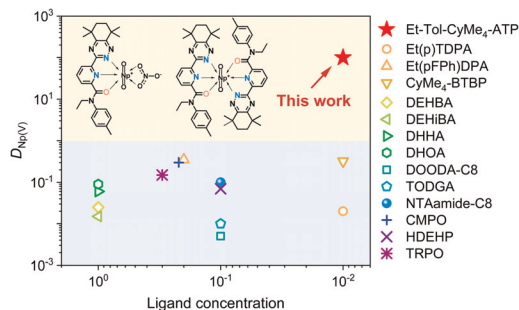
1659



### $\text{Na}_2\text{SnSO}_4\text{F}_2$ : an ultraviolet-transparent sulfate crystal with large birefringence driven by stereochemically active tin(II)

Jia Wang, Wenbin Zhang, Xiangcong Ma, Fangfang Zhang, Hong Du\* and Shujuan Han\*

1664



### Selective Np(v) extraction by an unsymmetrical amide–triazine–pyridine ligand enabling simplified actinide separation

Xiaofan Yang, Yufeng Wang, Dong Fang, Xiaocheng Xu,\* Anyun Zhang and Chengliang Xiao\*

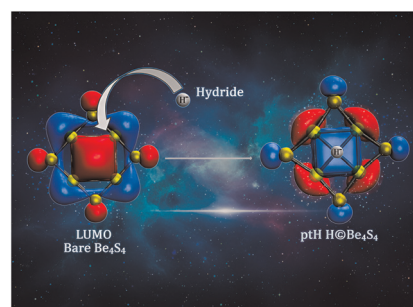


## COMMUNICATIONS

1670

**H@Be<sub>4</sub>S<sub>4</sub><sup>-</sup>: a superhalogen planar tetracoordinate hydrogen cluster**

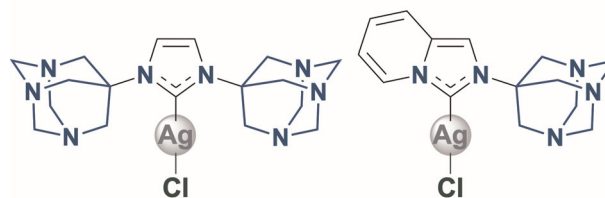
Amit Das, Palash J. Thakuria, Kangkan Sarmah, Amlan J. Kalita and Ankur K. Guha\*



1675

**Triazaadamantyl N-heterocyclic carbenes (NHC-TA): water-soluble ligands and silver complexes**

Jorge Sanz-Garrido, Román Andrés, Avelino Martín, Camino Gonzalez-Arellano\* and Juan C. Flores\*

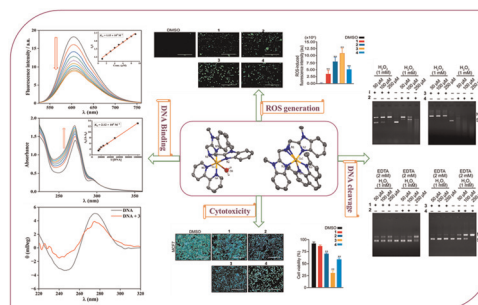


## PAPERS

1680

**Comprehensive design and synthesis of methyl-substituted benzimidazole-based mononuclear copper(II) complexes and evaluation of DNA cleavage and ROS-induced apoptosis**

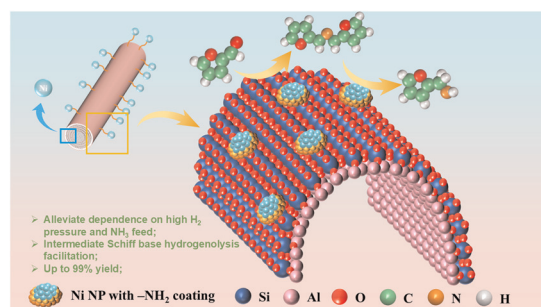
Manoj Kumar Kumawat, Shobhit Mathur, Sharan Shanmuga Vuppaladadium Rathnam, Jitender Jangra, Roy Anindya and Somnath Maji\*



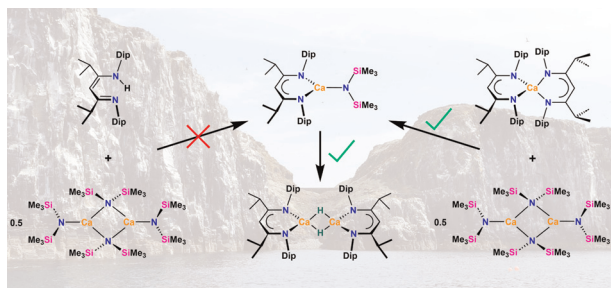
1697

**Amino-modified halloysite nanotube-supported nickel catalysts for the efficient reductive amination of biomass aldehydes and ketones**

Weihong Li, Nan Zhong, Yifei Yin, Weiming Xiao, Shunmin Ding, Rongping Zhou, Chao Chen and Shengjun Deng\*



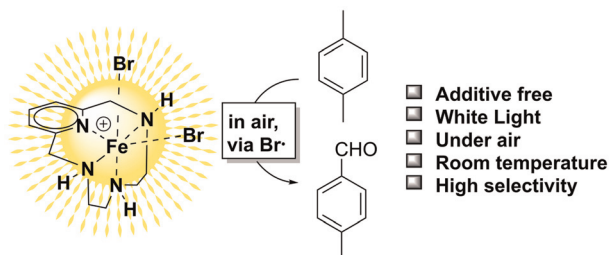
1708



### Synthesis of heteroleptic calcium amide complexes *via* manipulation of the Schlenk equilibrium

Matthew de Vere-Tucker, Alexandra M. Z. Slawin, David B. Cordes and Andreas Stasch\*

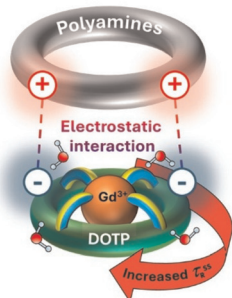
1716



### Photoactive Fe(III) pycen complexes for light-driven aerobic oxidation of *p*-xylene

Matteo Alberti, Greta Rossi, Djihed Boucherabine, Fausto Cargnoni,\* Mario Italo Trioni, Giulia Taini, Dominika Zakutna, Arianna Gentilin, Luka Đorđević, Andrea Sartorel\* and Alessandro Caselli\*

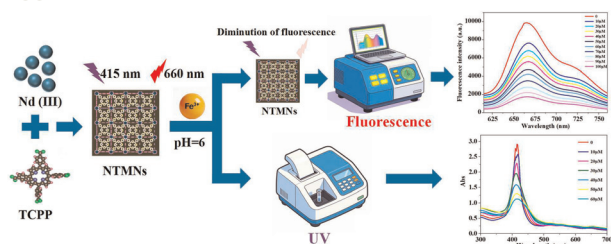
1727



### From polyamines to nanogels: a supramolecular approach for boosting relaxivity of [Gd(DOTP)]<sup>5-</sup>

Marco Ricci, Fabio Carniato, Marco Saccone, Giovanni B. Giovenzana and Mauro Botta\*

1739



### Novel neodymium-based porphyrin metal-organic frameworks for dual-mode detection of iron ions

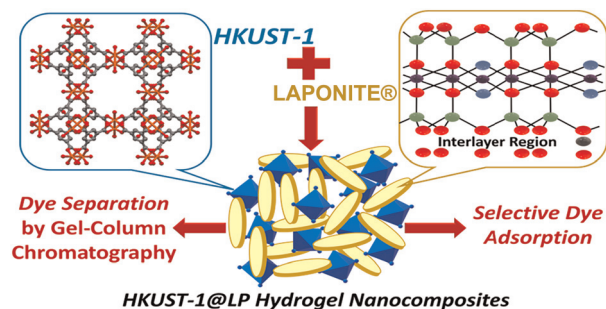
Yan Wan, Congping Zhao, Yan Zhou, Lin Li, Xianfeng Wang, Tao Zhong, Yan Yang, Huan Li, Yi Yang\* and Jing Liu\*



1753

### Self-assembled nanocomposite of HKUST-1 and LAPONITE®: towards a hydrogel with high mechanical strength for selective dye adsorption and column chromatographic separation

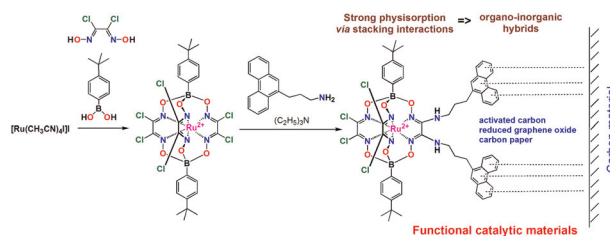
Jyoti, Chhaya, Vinod Kumar and Anindita Chakraborty\*



1765

### Novel ruthenium(II) hexachloromacrobicyclic complexes and their first polyaromatic-terminated diaminochlorochelate derivative: preparation, structure, redox and adsorption characteristics, and electrocatalytic activity in the hydrogen evolution reaction

Yan Z. Voloshin,\* Alexander S. Chuprin, Danila O. Mosov, Anna V. Vologzhanina, Pavel V. Dorovatovskii, Yulia H. Budnikova, Vera V. Khrizanforova, Alexey G. Dedov, Sergey Yu. Kottsov, Maria A. Teplonogova and Vladimir K. Ivanov

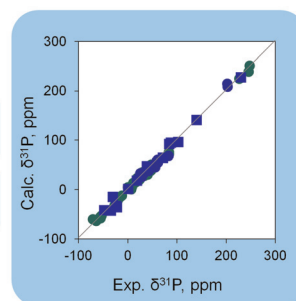


1781

### Combined DFT protocol for the calculation of <sup>31</sup>P NMR shifts in platinum complexes

Svetlana A. Kondrashova and Shamil K. Latypov\*

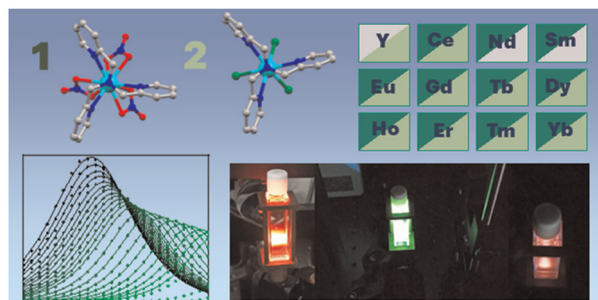
	Theory	RMSE
[Pt] $\begin{matrix} \text{P} \\   \\ \text{R} \end{matrix}$	fully relativistic	4.6 ppm
[Pt] $\begin{matrix} \text{P} \\    \\ \text{R} \end{matrix}$	non relativistic	8.2 ppm



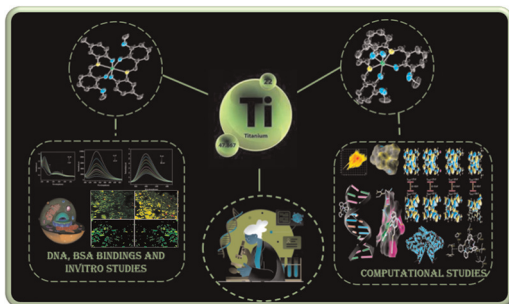
1792

### Correlating luminescence and single-molecule magnetism for two series of heteroleptic lanthanoid complexes

Jonay González, Vinicius K. Fagundes, Moya A. Hay, Elena Dallerba, Massimiliano Massi, Christopher R. Hall, Marcus J. Giansiracusa\* and Colette Boskovic\*



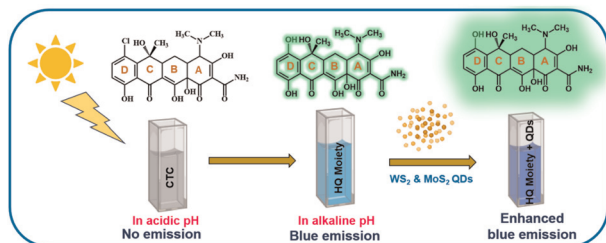
1806



### Synthesis, characterization and *in vitro* studies of metallacyclic derivatives of titanium(IV) incorporated with Schiff's bases: DNA/BSA binding, computational aspects and cytotoxic potential

Mahabarathi Subramaniyan, Sathish Thanigachalam, Shivabasayya V. Salimath, Selva Kumar Ramasamy, Kevin George and Madhvesh Pathak\*

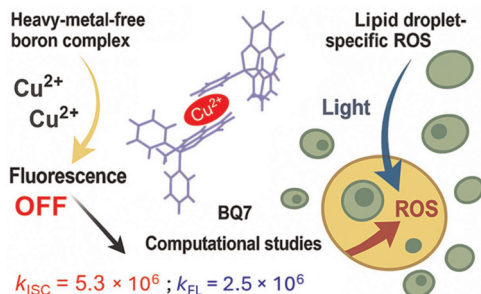
1833



### pH-Induced fluorescence emission in chlortetracycline and signal amplification using MoS<sub>2</sub> and WS<sub>2</sub> quantum dots

Sampathkumar Prakasam, Selvaraj Paramasivam, Senthilkumar Shanmugam,\* Giribabu Krishnan\* and Suresh Chinnathambi\*

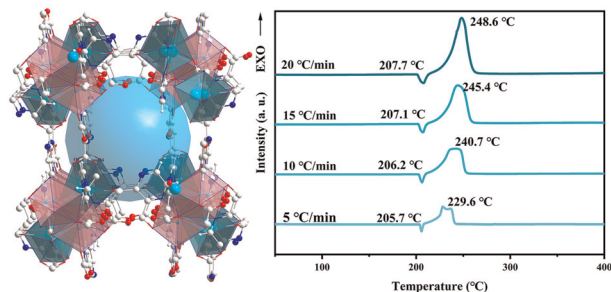
1844



### Light- and copper-activated (photo)cytotoxicity of 8-hydroxyquinoline-based boron photosensitizers with lipid droplet targeting and lipid peroxidation accumulation

Thanh Chung Pham, Gun Kim, Pham Van Thong, Tran Ngoc Dung, Hung Tan Pham, Nguyen Van Trang, Le Thi Hong Hai, Arne Meulemans, Luc Van Meervelt, Eduard Fron, Mark Van der Auweraer, Daniel Escudero,\* Hue Minh Thi Nguyen\* and Wim Dehaen\*

1855



### A green bismuth metal–organic framework catalyzing RDX combustion and thermal decomposition

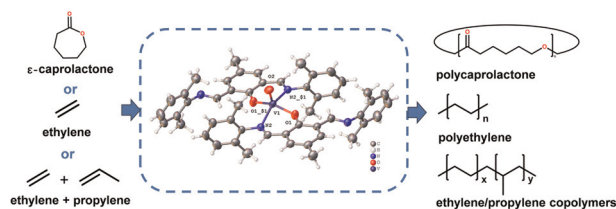
Tao Huang, Hong Wu, Ping Qing, Xiaosen Wang, Wei Pan, Liqiong Luo, Rufang Peng\* and Bo Jin\*



1866

### Phenoxybis(imine) complexes of vanadium: structure, ethylene polymerization, and ring opening polymerization of $\epsilon$ -caprolactone

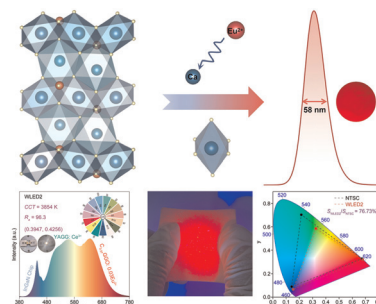
Yi Gong, Kaname Shibata, Kenji Michiue, Joseph Gbertyo, Zaid Rais, Mark R. J. Elsegood, Timothy J. Prior and Carl Redshaw\*



1882

### A novel narrow-band red-emitting phosphor for lighting and backlight display

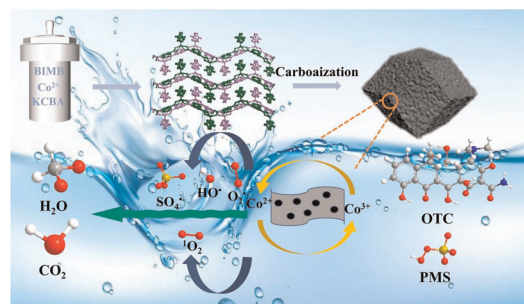
Tianyi Liu, Xiaoxue Huo, Xiaoshuai Zhang, Zhijun Wang and Panlai Li\*



1891

### Cobalt MOF-derived Co/CoO/C composites for efficient peroxymonosulfate activation and oxytetracycline degradation

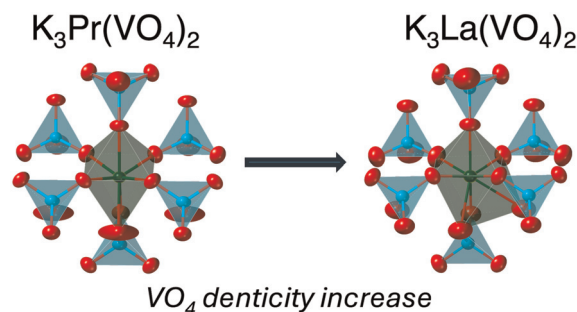
Jia-Hong She, Mi-Zhen Sun, Shu-Ran Zhang,\* Guang-Juan Xu, Yan-Hong Xu,\* Wei Xie, Xiao-Li Hu and Zhong-Min Su\*



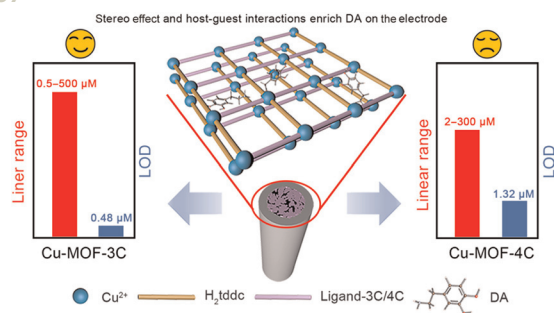
1901

### Flux crystal growth of potassium lanthanide double vanadates with lanthanide-dependent coordination number variance

Hunter B. Tisdale and Hans-Conrad zur Loye\*



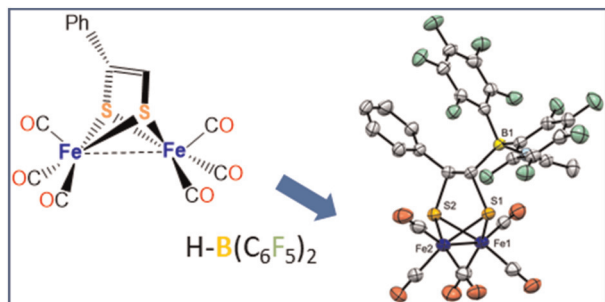
1907



### Cooperation of the stereo effect and host-guest interactions towards the electrochemical detection of dopamine

Xiaowen Wang, Xing-Yue He, Ziqing Zhang, Zhizeng Ni, Xiao-Hang Qiu,\* Jian-Gong Ma\* and Peng Cheng

1915



### Design of boron-decorated bimetallic iron complexes related to the active site of [FeFe]-hydrogenases and reactivity with hydride donors

Ines Bennour, Victor Monnot, Philippe Schollhammer\* and Lucile Chatelain\*

