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## IN THIS ISSUE

ISSN 1477-9226 CODEN DTARAF 52(27) 9173–9512 (2023)



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pp. 9202–9207.

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**Inside cover**  
See Zhenxia Chen,  
Mingli Deng *et al.*,  
pp. 9208–9214.

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9208.

## EDITORIAL

9186

### Spotlight collection on photoinduced redox chemistry

Paul I. P. Elliott,\* Katja Heinze and Thomas S. Teets

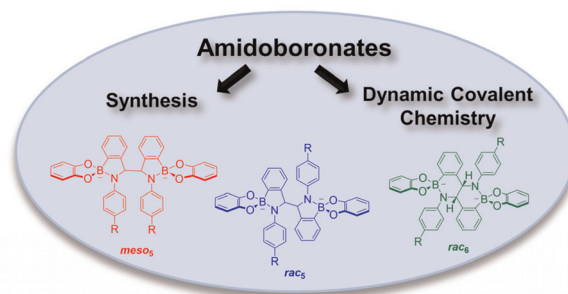


## PERSPECTIVE

9189

### Amidoboronates: bringing together the synthesis of BN-heterocycles via a reductive coupling and dynamic covalent chemistry

Anna J. McConnell



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48 times a year by the Royal Society of Chemistry,  
Thomas Graham House, Science Park, Milton Road,  
Cambridge, UK CB4 0WF.

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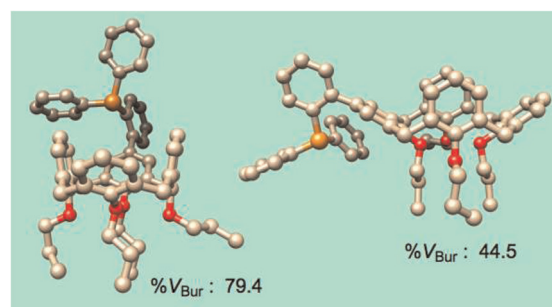


## PAPERS

9202

### Structural and conformational analysis of a biaryl phosphine integrating a calix[4]arene cavity. Can the phosphorus atom behave as an introverted donor?

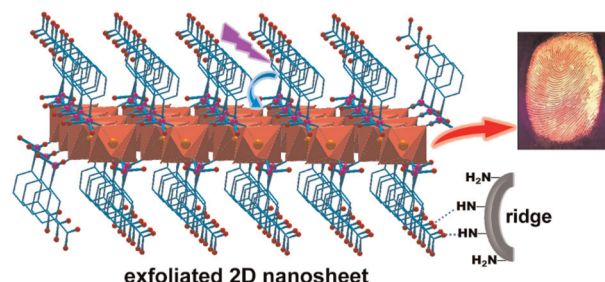
Christophe Gourlaouen, Fethi Elaieb, Eric Brenner, Dominique Matt,\* Jack Harrowfield and Louis Ricard



9208

### Nanosheets of two-dimensional photoluminescent lanthanide phosphonocarboxylate frameworks decorated with free carboxylic groups for latent fingerprint imaging

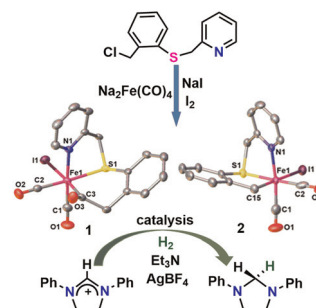
Dan Luo, Hongjie He, Huiru Jing, Yun Ling, Yu Jia, Yongtai Yang, Xiaofeng Liu, Zhenxia Chen\* and Mingli Deng\*



9215

### Structural and functional biomimetics of [Fe]-hydrogenase featuring a mono-, di- or tetrasubstituted pyridine ligand with a *fac*-C, N, and S ligation

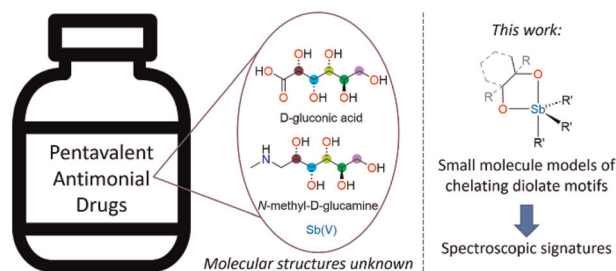
Li-Cheng Song,\* Zhen-Qing Zhang and Bei-Bei Liu



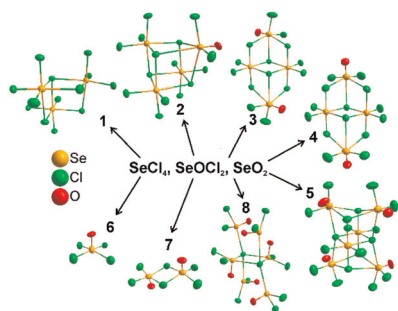
9229

### Models of the putative antimony(v)–diolate motifs in antileishmanial pentavalent antimonial drugs

Brent Lindquist-Kleissler and Timothy C. Johnstone\*



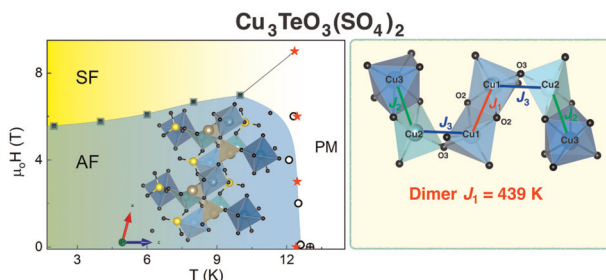
9238



### Oxychloridoselenites(IV) with cubane-derived anions and stepwise chlorine-to-oxygen exchange

Maxime A. Bonnin and Claus Feldmann\*

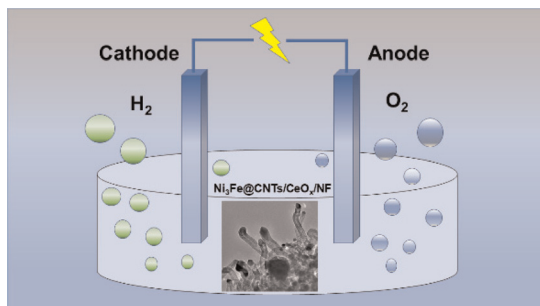
9247



### Anhydrous copper tellurite disulfate $\text{Cu}_3\text{TeO}_3(\text{SO}_4)_2$ featuring the coexistence of spin singlets and a long-range antiferromagnetic order

Alisher F. Murtazoev, Peter S. Berdonosov, Konstantin A. Lyssenko, Valery A. Dolgikh, Zlata V. Pchelkina, Konstantin V. Zakharov, Michael Y. Geidorf, Tatyana M. Vasilchikova, Olga S. Volkova and Alexander N. Vasiliev\*

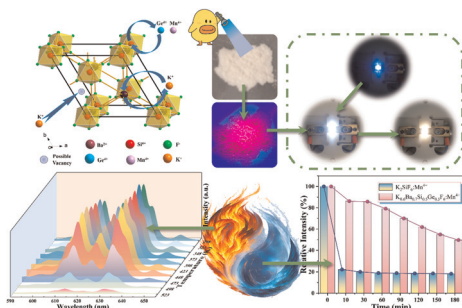
9254



### A low-content $\text{CeO}_x$ dually promoted $\text{Ni}_3\text{Fe}@\text{CNT}$ electrocatalyst for overall water splitting

Mingqi Sun, Shuai Zhang, Yaru Li, Chen Yang, Ying Guo,\* Lan Yang and Sailong Xu\*

9261



### Crystal field optimization and fluorescence enhancement of a $\text{Mn}^{4+}$ -doped fluoride red phosphor with excellent stability induced by double-site metal ion replacement for warm WLED

Junze Tong, Feng Hong,\* Long Li, Edwin Yue Bun Pun and Hai Lin\*

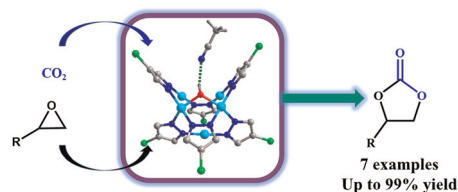


## PAPERS

9275

### An efficient mixed-valence copper pyrazolate catalyst for the conversion of carbon dioxide and epoxides into cyclic carbonates

Jian-Ge Wang, Yang Liu, Chun-Mei Liu,  
Jing-Huo Chen\* and Guang Yang\*

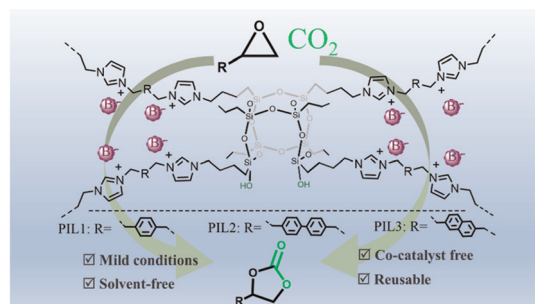


- ✓ Cu/pz system
- ✓ Easy preparation
- ✓ Highly active
- ✓ High efficiency
- ✓ Mild condition
- ✓ Broad substrate scope

9282

### POSS-based polyionic liquids for efficient CO<sub>2</sub> cycloaddition reactions under solvent- and cocatalyst-free conditions at ambient pressure

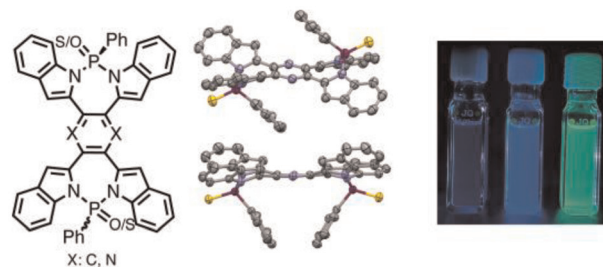
Longqiang Xiao, Yiming Lai, Qianyu Song, Jingyu Cai,\*  
Rui Zhao\* and Linxi Hou\*



9294

### Synthesis, post-functionalization, and photoluminescence of contorted diazaphosphepine-based polycyclic aromatic heterocycles

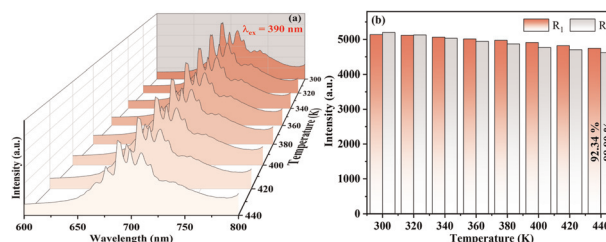
Can Li, Kai Yang, Xinyu Li, Shuya Wen, Na Yu and  
Yi Ren\*



9301

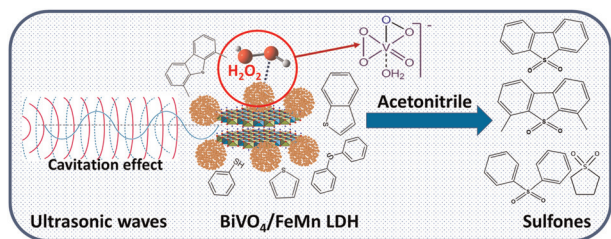
### A far-red-emitting ZnAl<sub>1.95</sub>Cr<sub>0.05</sub>O<sub>4</sub> phosphor for plant growth LED applications

I. Elhamdi,\* F. Mselmi, S. Kammoun, E. Dhahri,  
A. J. Carvalho, P. Tavares and B. F. O. Costa



## PAPERS

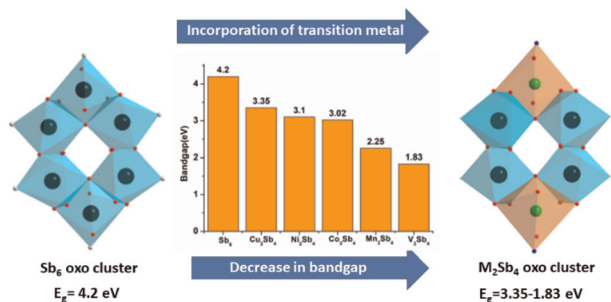
9315



### Sonocatalytic oxidative desulfurization of diesel oil using a novel $\text{BiVO}_4/\text{FeMn LDH}$ nanocomposite

Asmaa A. Abdelrahman, Doaa I. Osman, Abdelrahman M. Rabie\* and Heba M. Salem\*

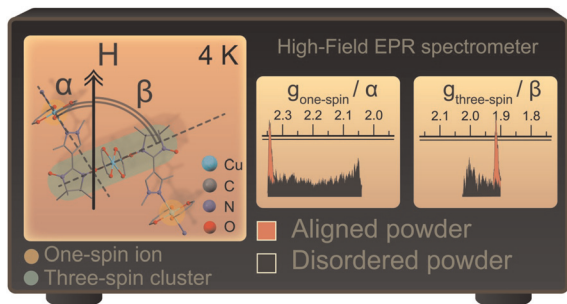
9328



### Tunable bandgaps in self-assembled transition metal-incorporated heterometallic $\text{M}_2\text{Sb}_4$ ( $\text{M} = \text{V}, \text{Mn}, \text{Co}, \text{Ni},$ and $\text{Cu}$ ) oxo clusters

Tokala Navaneetha, Uppara Ugandhar, Calvin Samuel, Thierry Guizouarn, Fabrice Pointillart, Rajamani Raghunathan\* and Viswanathan Baskar\*

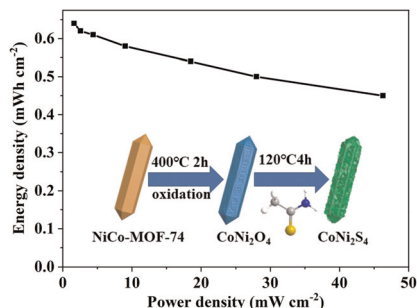
9337



### High-field EPR of copper(II)–nitroxide compound exhibiting three-step phase transition: structural insights from the field-induced sample orientation

Sergey V. Tumanov,\* Alexey N. Ponomaryov, Kseniya Yu. Maryunina, Artem S. Bogomyakov, Victor I. Ovcharenko, Sergei A. Zvyagin, Matvey V. Fedin and Sergey L. Veber\*

9346



### Controlled preparation of $\text{CoNi}_2\text{S}_4$ nanorods derived from MOF-74 nanoarrays involving an exchange reaction for high energy density supercapacitors

Qihang Chen, Wenna Zhao,\* Zihao Huang, Guochang Li, Kai Tao and Lei Han\*

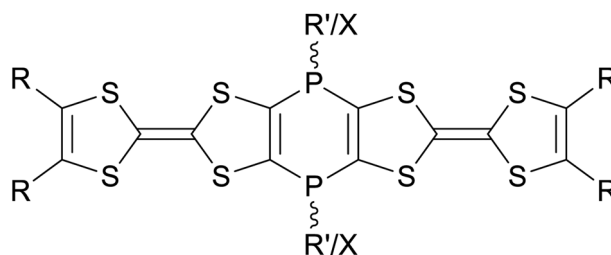


## PAPERS

9356

### Access to and reactions of P-functional 1,4-dihydro-1,4-diphosphinines fused to two TTF units

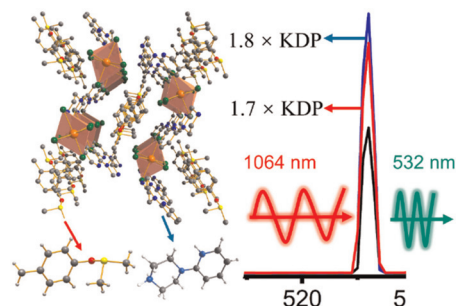
Shahriar Kermanshahian, Tim Kalisch, Zsolt Kelemen, Gregor Schnakenburg, László Nyulászi,\* René T. Boéré\* and Rainer Streubel\*



9368

### Second harmonic generation from symmetry breaking stimulated by mixed organic cations in zero-dimensional hybrid metal halides

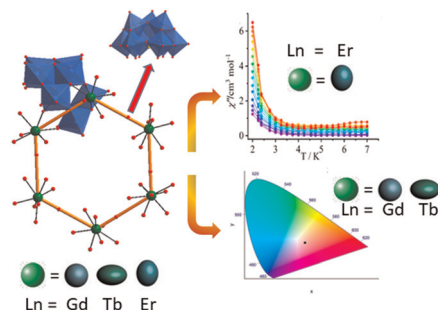
Jindong Cao, Kunjie Liu, Mingzhen Quan, An Hou, Xingxing Jiang,\* Zheshuai Lin,\* Jing Zhao\* and Quanlin Liu



9377

### $[\alpha\text{-AsW}_9\text{O}_{33}]^{9-}$ bridged hexagonal clusters of Ln(III) showing field induced SMM behavior: experimental and theoretical insight

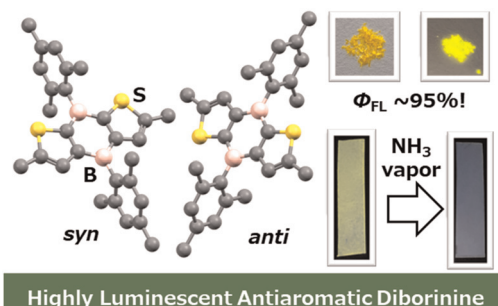
Sandhya Kapurwan, Pradip Kumar Sahu, Mukul Raizada, Ranjan Kharel and Sanjit Konar\*



9389

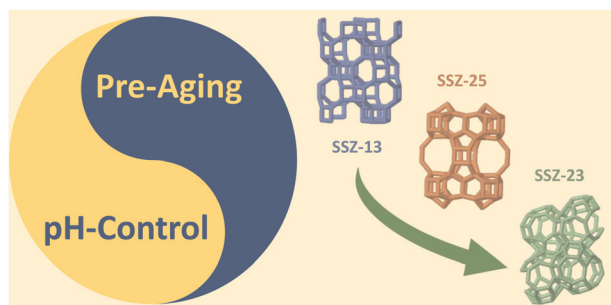
### Highly luminescent antiaromatic diborinines with fused thiophene rings

Yohei Adachi,\* Takumi Hasegawa and Joji Ohshita\*



## PAPERS

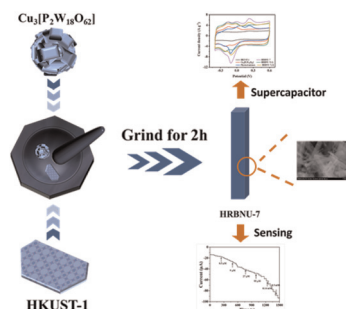
9398



### Facile synthesis of aluminosilicate zeolites with STT, CHA and MWW topology structures

Yuliang Guo, Peilun Li, Zhengchang Wei, Guangjun Wu\* and Landong Li\*

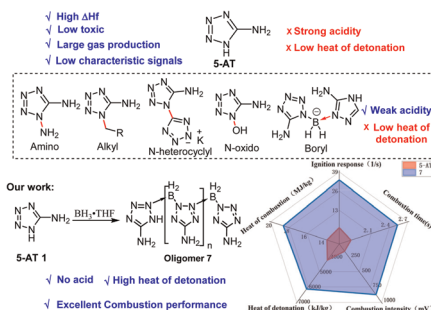
9406



### A host–guest compound formed by $\text{Cu}_3[\text{P}_2\text{W}_{18}\text{O}_{62}]$ and HKUST-1 with capacitance and $\text{H}_2\text{O}_2$ sensing properties

Caihong Shi, Shan Di, Hongquan Jiang,\* Chunxiao Wang, Chunmei Wang, Kai Yu,\* Jinghua Lv and Baibin Zhou\*

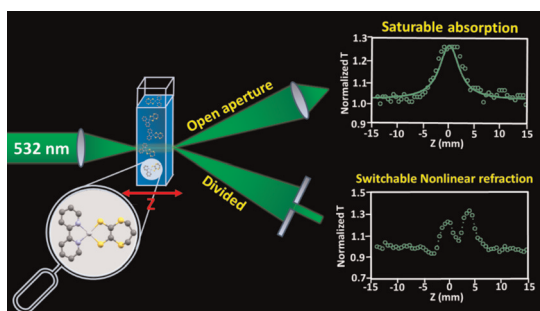
9414



### Performance enhancement strategy for tetrazoles based on nitrogen–boron bonds

Kunkai Wang, Kaidi Yang, Heng Li, Junlin Zhang, Minjie Wu, Xiangzhi Li, Qi Xue, Bozhou Wang\* and Fuqiang Bi\*

9423



### A new class of third-order nonlinear optical materials: laser pulse-duration dependant saturable absorption and nonlinear refraction in platinum(II) diimine-dithiolate complexes

Anna Pintus,\* Cristian Pilloni, Gabriele Pippia, Enrico Podda, M. Carla Aragoni, Vito Lippolis, Panagiotis Aloukos, Dionysios Potamianos, Nikolaos Chazapis, Stelios Couris,\* George C. Anyfantis, Alexandra M. Z. Slawin, J. Derek Woollins and Massimiliano Arca\*

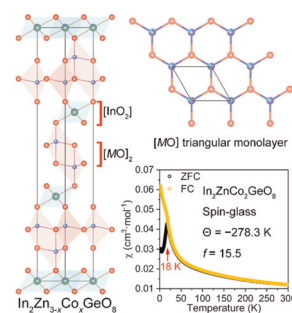


## PAPERS

9433

# Rational design, crystal structure, and frustrated magnetism of the Ge-containing YbFe<sub>2</sub>O<sub>4</sub>-type layered oxides In<sub>2</sub>Zn<sub>3-x</sub>Co<sub>x</sub>GeO<sub>8</sub> (0 ≤ x ≤ 3)

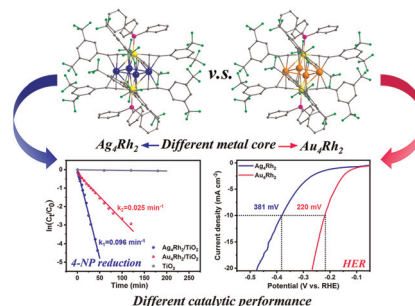
Yuhan Wu, Pengfei Jiang\* and Tao Yang\*



9441

# Structure, optical properties, and catalytic applications of alkynyl-protected M<sub>4</sub>Rh<sub>2</sub> (M = Ag/Au) nanoclusters with atomic precision: a comparative study

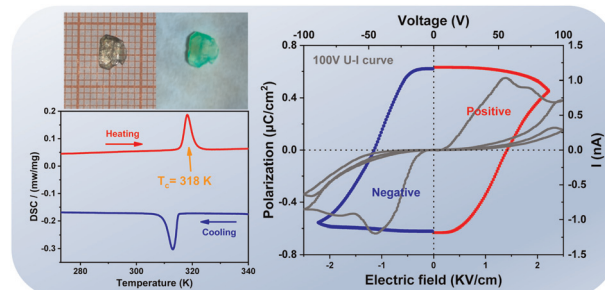
Leyi Chen, Fang Sun, Quanli Shen, Lei Wang, Yonggang Liu, Hao Fan, Qing Tang and Zhenghua Tang\*



9448

# A room temperature ferroelectric material with photoluminescence: (1,3-dicyclohexylimidazole)<sub>2</sub>MnCl<sub>4</sub>

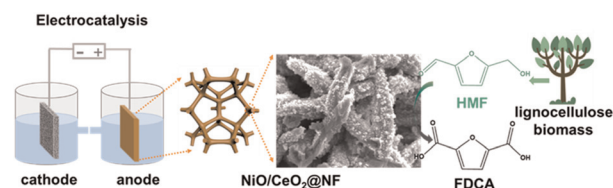
Peng Chen, Shulin Jiao, Zheng Tang, Xiaofan Sun, Dong Li, Zhu Yang, Yanzhou Lu, Wentao Zhang, Hong-Ling Cai\* and X. S. Wu



9456

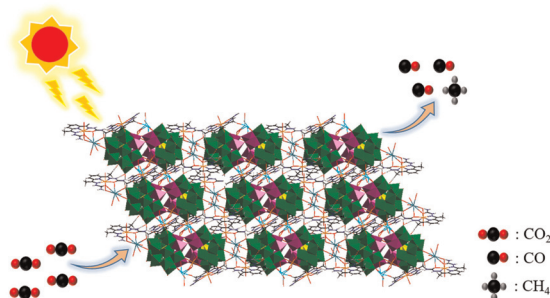
# Interface engineering of the NiO/CeO<sub>2</sub>@NF heterostructure to boost the electro-oxidation of 5-hydroxymethylfurfural

Xiu He, ZhenZhen Mo,\* Huiling Liu\* and Cheng Wang



## PAPERS

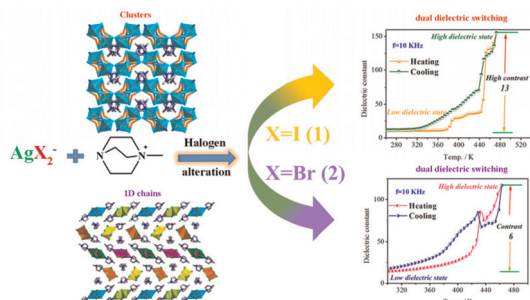
9465



### Two bimetal-doped (Fe/Co, Mn) polyoxometalate-based hybrid compounds for visible-light-driven CO<sub>2</sub> reduction

Jiu-Lin Zhou, Xin-Ying Xiang, Ling-Tong Xu, Ji-Lei Wang, Si-Man Li, Ya-Ting Yu, Hua Mei\* and Yan Xu\*

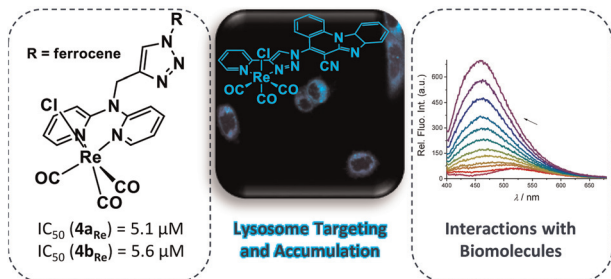
9472



### Organic–inorganic haloargentate hybrids of [Me-dabco]Ag<sub>2</sub>X<sub>3</sub> (X = I or Br) with halide ions manipulating the crystal structure, phase transition, and dielectric behavior

Xue-Wei Pan, Qing-Qing Li, Lu Zhai,\* Jin Zhang, Wen-Long Liu and Xiao-Ming Ren\*

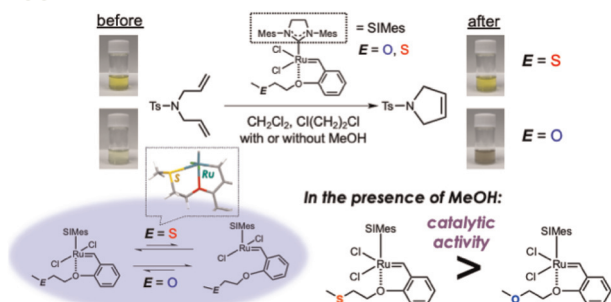
9482



### Synthesis, characterisation and biological evaluation of monometallic Re(I) and heterobimetallic Re(I)/Fe(II) complexes with a 1,2,3-triazolyl pyridine chelating moiety

Silvio Jakopec, Lisa Gourdon-Grünewaldt, Ivona Čipor, Andrijana Mešćić Macan, Berislav Perić, Ivo Piantanida, Kevin Cariou, Gilles Gasser,\* Srećko I. Kirin\* and Silvana Raić-Malić\*

9499



### Reactivity regulation for olefin metathesis-catalyzing ruthenium complexes with sulfur atoms at the terminal of 2-alkoxybenzylidene ligands

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## RETRACTION

9509

**Retraction: Bis-salophen palladium complex immobilized on  $\text{Fe}_3\text{O}_4@\text{SiO}_2$  nanoparticles as a highly active and durable phosphine-free catalyst for Heck and copper-free Sonogashira coupling reactions**

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