

# Dalton Transactions

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## IN THIS ISSUE

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### Cover

See M. Concepción Gimeno *et al.*, pp. 7797–7808.

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### Inside cover

See Claudia Bizzarri *et al.*, pp. 7809–7818.

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## EDITORIAL

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Linda H. Doerrer and H. V. Rasika Dias

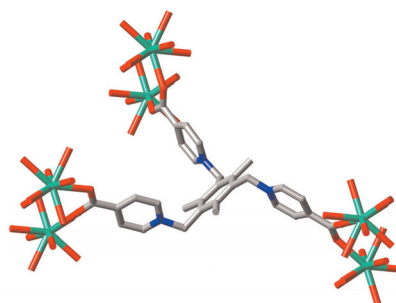


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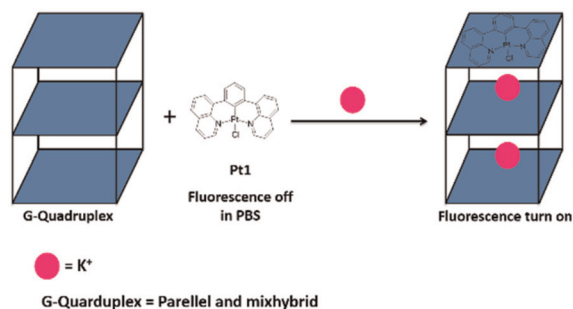


## COMMUNICATIONS

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**Cyclometalated platinum(II) complex as a selective light switch for G-quadruplex DNA**

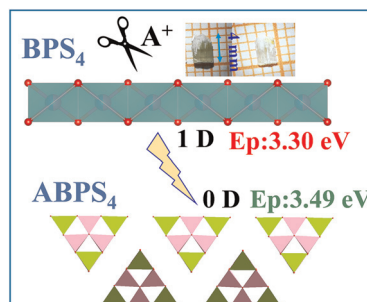
Meenaxi Saini and Tia E. Keyes\*



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**From BPS<sub>4</sub> to AB<sub>3</sub>P<sub>2</sub>S<sub>10</sub> (A = Na, K): cations inducing dimension reduction and bandgap enlargement**

Yi Huang, Dongdong Chu, Yihan Yun, Wenlong Xie, Guangmao Li\* and Yong Zhang\*

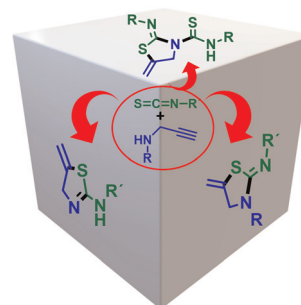


## PAPERS

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**Catalysis-free synthesis of thiazolidine–thiourea ligands for metal coordination (Au and Ag) and preliminary cytotoxic studies**

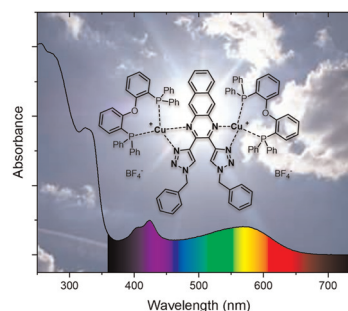
Daniel Salvador-Gil, Raquel P. Herrera and M. Concepción Gimeno\*



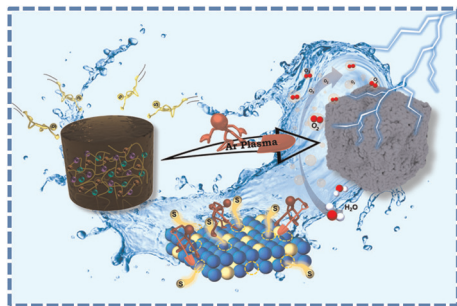
7809

**Reaching strong absorption up to 700 nm with new benzo[g]quinoxaline-based heteroleptic copper(I) complexes for light-harvesting applications**

Cecilia Bruschi, Xin Gui, Olaf Fuhr, Wim Klopper and Claudia Bizzarri\*



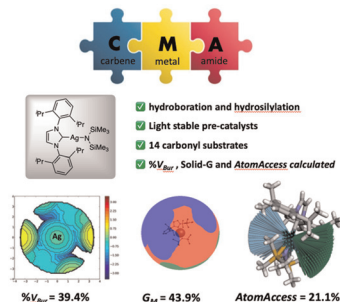
7819



### Ar plasma assists in enhanced oxygen evolution kinetics of MOG-derived multicomponent transition metal sulfides

Jia-Yang Luo, Ya-Meng Yin,\* Gui-Zhi Guo, Xi-Wen Chang, Xue-Qian Wu, Ya-Pan Wu, Shuang Li, Ru-An Chi and Dong-Sheng Li\*

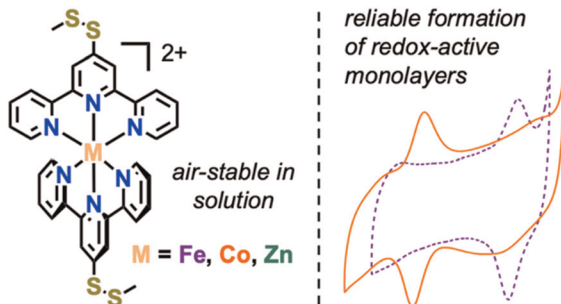
7828



### Catalytic exploration of NHC–Ag(I)HMDS complexes for the hydroboration and hydrosilylation of carbonyl compounds

Claudia P. Giarrusso, Daniel V. Zeil and Victoria L. Blair\*

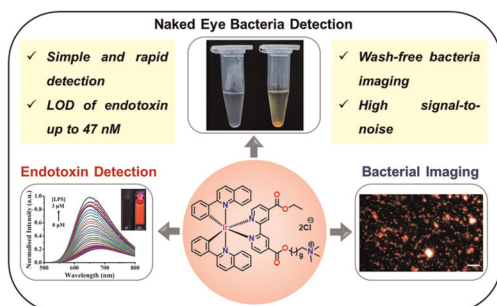
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### Methyldisulfide groups enable the direct connection of air-stable metal bis(terpyridine) complexes to gold surfaces

Christina D. M. Trang, Thomas Saal and Michael S. Inkpen\*

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### AIE-active cyclometalated iridium(III) complexes for the detection of lipopolysaccharides and wash-free imaging of bacteria

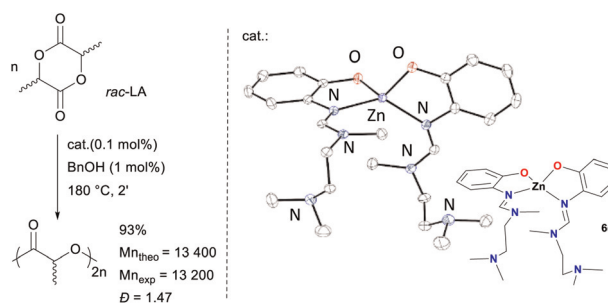
Aryan Gautam, Ajay Gupta, Puja Prasad and Pijus K. Sasmal\*



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### Al and Zn phenoxy-amidine complexes for lactide ROP catalysis

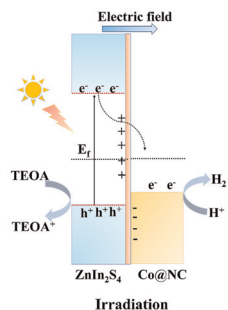
Benjamin Théron, Valentin Vaillant-Coindard, Cédric Balan, Yoann Rousselin, Jérôme Bayardon, Raluca Malacea-Kabbara and Pierre Le Gendre\*



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### Constructing Co–S interface chemical bonds over Co@NC/ZnIn<sub>2</sub>S<sub>4</sub> for an efficient solar-driven photocatalytic H<sub>2</sub> evolution

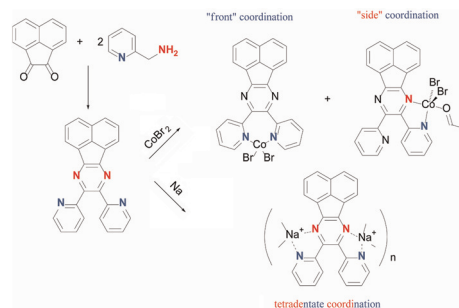
Deling Wang, Lu Chen,\* Yuzhou Xia, Ruowen Liang, Xiyao Liu, Shaoming Ying\* and Guiyang Yan\*



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### Cobalt(II) coordination to an N<sub>4</sub>-acenaphthene-based ligand and its sodium complex

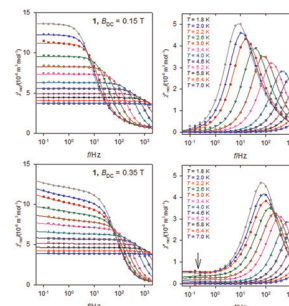
Vera V. Khrizanforova,\* Robert R. Fayzullin, Artem S. Bogomyakov, Vladimir I. Morozov, Ruslan G. Batulin, Tatiana P. Gerasimova, Daut R. Islamov and Yulia H. Budnikova



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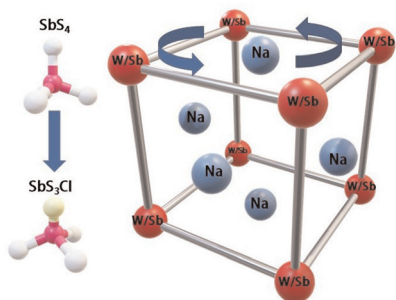
### Easy-axis magnetic anisotropy in tetragonally elongated cobalt(II) complexes beyond the spin-Hamiltonian formalism

Romana Mičová, Cyril Rajnák,\* Ján Titiš, Alina Bieňko, Ján Moncol, Erika Samolová and Roman Boča





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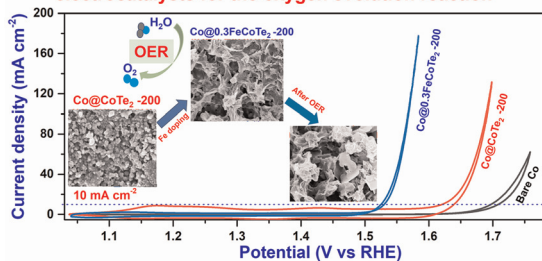


### Designed anion and cation co-doped $\text{Na}_3\text{Sb(WM)}_x\text{S}_4$ ( $M = \text{Cl, Br, I}$ ) sulfide electrolytes with an improved conductivity and stable interfacial qualities

Lingjun Shu, Jingxuan Yin, Zhemin Gon, Chengwei Gao, Yongxing Liu, Xiaolong Zhou, Hongli Ma, Xianghua Zhang, Xiang Shen, Shixun Dai, Changgui Lin\* and Qing Jiao\*

7906

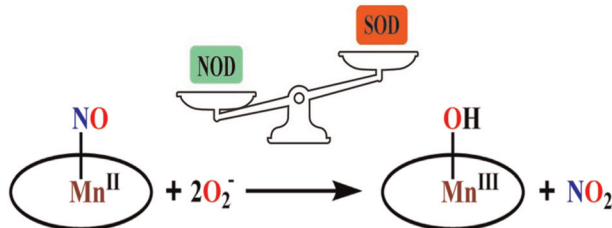
### Hydrothermal synthesis of nanostructured Fe-doped $\text{CoTe}_2$ electrocatalysts for the oxygen evolution reaction



### Preparation and characterization of nanostructured Fe-doped $\text{CoTe}_2$ electrocatalysts for the oxygen evolution reaction

Zhi Yang, Hao Tan, Yu Qi, Shiyu Ma, Jilin Bai, Lifeng Liu and Dehua Xiong\*

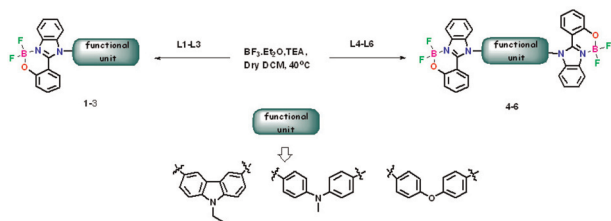
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### Reaction of a nitrosyl complex of $\text{Mn(II)}$ –porphyrinate with superoxide: NOD activity is favoured over SOD activity

Rakesh Mazumdar, Shankhadeep Saha, Bapan Samanta, Riya Ghosh, Sayani Maity and Biplab Mondal\*

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### 2-Hydroxyphenyl benzimidazoles and their boron complexes: synthesis, structure, aggregation-induced emission and picric acid sensing

Ramar Arumugam, Prakash Nayak, Bijoy Dey, Ramkumar Kannan, Krishnan Venkatasubbaiah\* and Vadapalli Chandrasekhar\*

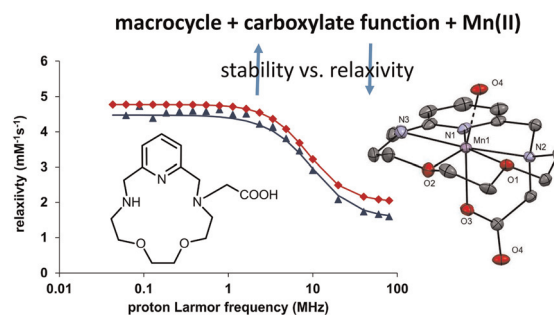


## PAPERS

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### A seven-coordinate Mn(II) complex with a pyridine-based 15-membered macrocyclic ligand containing one acetate pendant arm: structure, stability and relaxation properties

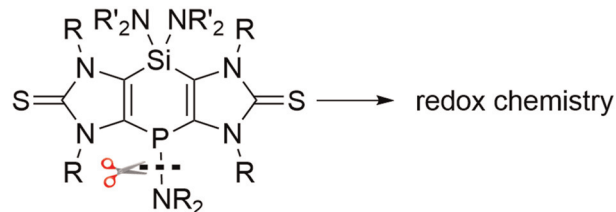
Marie Pražáková, Daouda Ndiaye, Éva Tóth\* and Bohuslav Drahoš\*



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### P-Centred redox reactions of a 1,4-dihydro-1,4-phospha-silole

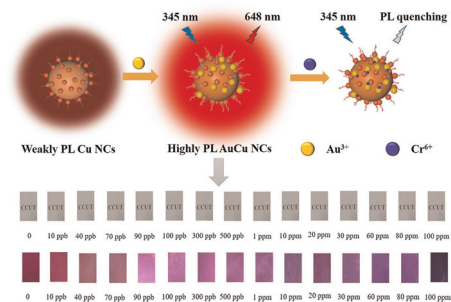
Mridhul R. K. Ramachandran, Philipp C. Brehm, Gregor Schnakenburg, Takahiro Sasamori, René T. Boeré\* and Rainer Streubel\*



7957

### Facile fabrication of an Au/Cu bimetallic nanocluster-based fluorescent composite film for sensitive and selective detection of Cr(VI)

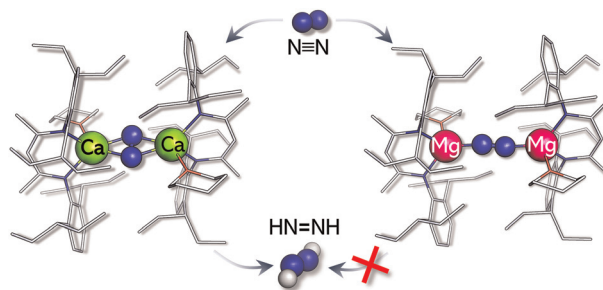
Xirui Miao, Jinna Bai, Yidan Liang, Menglei Sun, Yuanqing Sun\* and Xudong Yang\*



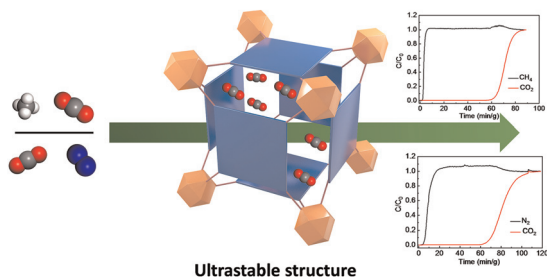
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### Activation of the N₂ molecule by means of low-valence complexes of calcium and magnesium

Anna Rovaletti,\* Luca De Gioia, Claudio Greco and Federica Arrigoni\*

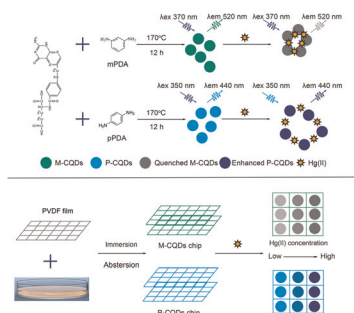


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Efficient separation of CO<sub>2</sub>/CH<sub>4</sub> and CO<sub>2</sub>/N<sub>2</sub> mixturesEfficient separation of CO<sub>2</sub> from CH<sub>4</sub> and N<sub>2</sub> in an ultra-stable microporous metal–organic framework

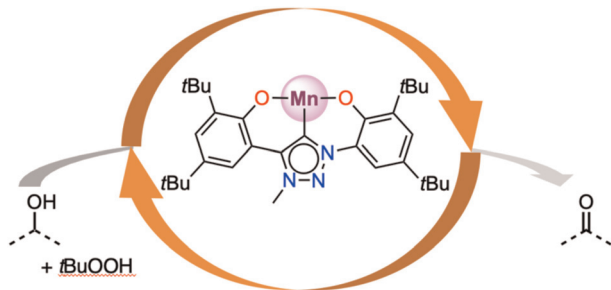
Chaohui He,\* Peng Zhang, Sai Ma, Yujuan Zhang and Tuoping Hu\*

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Synthesis of two nitrogen-doped carbon quantum dots to construct fluorescence probes for sensitive Hg<sup>2+</sup> detection with dual signal output

Chengxiang Chu, Chengyue Zou, Yue Qiu, Danqun Huo, Yuanyi Deng, Xianfeng Wang, Guoren Xu and Changjun Hou\*

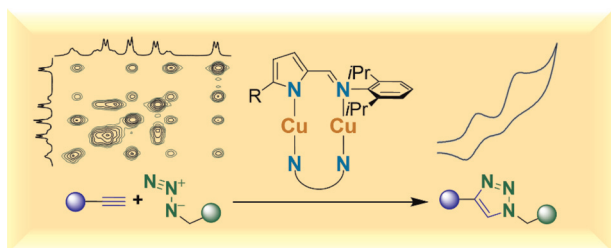
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## Manganese(III) complexes stabilized with N-heterocyclic carbene ligands for alcohol oxidation catalysis

Giacomo Rigoni, Pamela V. S. Nylund and Martin Albrecht\*

8003



Synthesis • Dynamics • Electrochemistry • Catalysis

## New copper(I) complexes of bulky 5-substituted-2-iminopyrrolyl ligands as catalysts for azide–alkyne cycloaddition

Tiago F. C. Cruz, Patrícia S. Lopes, M. Amélia N. D. A. Lemos, Luís F. Veiros and Pedro T. Gomes\*



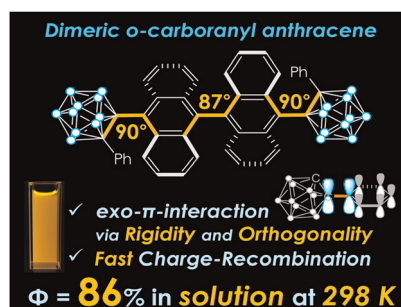


## PAPERS

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### High radiative efficiency based on intramolecular charge transfer in a 9,9'-bianthracene-*ortho*-carboranyl luminophore

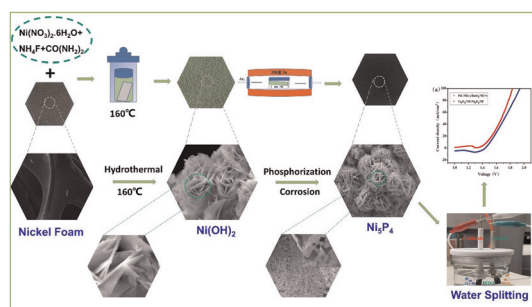
Mingi Kim, Sanghee Yi, Dongwook Kim, Ilsup Shin, Yung Ju Seo, Dong Kyun You, Chan Hee Ryu and Kang Mun Lee\*



8030

### Single-phase ultrathin holey nanoflower $\text{Ni}_5\text{P}_4$ as a bifunctional electrocatalyst for efficient water splitting

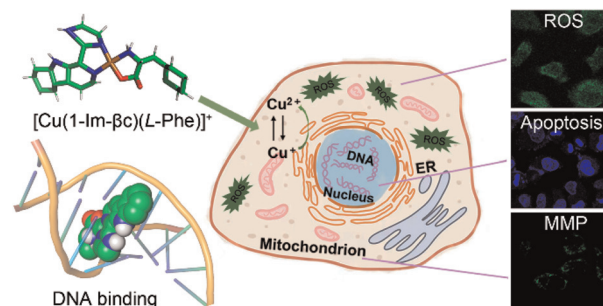
Lihua Yao, Zhuo Qiu, Xingliang Yin, Ying Yang, Xiaodi Hong and Zhi Yang\*



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### Synthesis, characterization and biological activity of novel copper complexes containing a $\beta$ -carboline derivative and amino acids

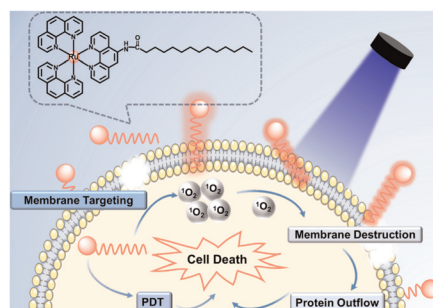
Bai-Hua Chen, Zheng-Yin Pan, Wen-Wen Feng, Qi-Yan Liu, Yingju Liu\* and Liang He\*



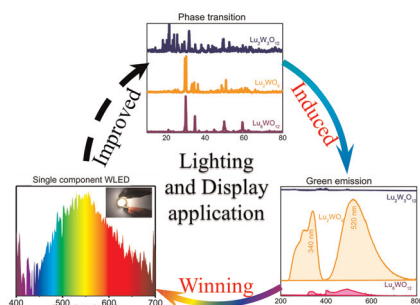
8051

### Cellular membrane-targeting ruthenium complexes as efficient photosensitizers for broad-spectrum antibacterial activity

Yi Wang, Ya-Tao Hu, Hai-Lin Zhang, Yu-Yu Chen, Hong-Dong Shi,\* Jin-Gang Liu\* and Qian-Ling Zhang\*



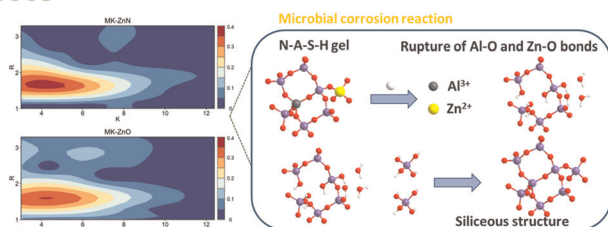
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### UV-excited single-component white phosphor of $\text{Lu}_2\text{WO}_6$ with broad-band emission for pc-WLED

Huibin Zheng, Chunyu Zheng, Xin lian, Yarui Shi, Jianxin Li, Haixiang Song and Bangfu Ding\*

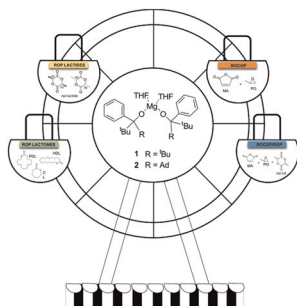
8065



### Structural composition of antibacterial zinc-doped geopolymers

Xiaojuan Kang and Hailong Ye\*

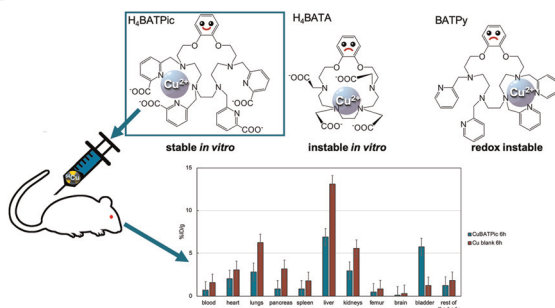
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### Simple magnesium alkoxides: synthesis, molecular structure, and catalytic behaviour in the ring-opening polymerization of lactide and macrolactones and in the copolymerization of maleic anhydride and propylene oxide

Duleeka Wannipurage, Sara D'Aniello, Daniela Pappalardo, Lakshani Wathsala Kulathungage, Cassandra L. Ward, Dennis P. Anderson, Stanislav Groysman\* and Mina Mazzeo\*

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### Effect of the type of *N*-substituent in the benzo-18-azacrown-6 compound on copper(II) chelation: complexation, radiolabeling, stability *in vitro*, and biodistribution *in vivo*

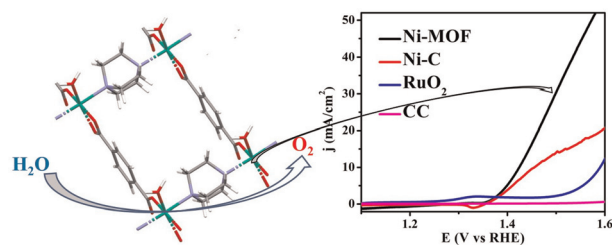
L. S. Zamurueva, B. V. Egorova,\* I. S. Ikonnikova, A. D. Zubenko, A. V. Pashanova, V. A. Karnoukhova, A. A. Mitrofanov, A. L. Trigub, A. A. Moiseeva, A. B. Priselkova, O. A. Fedorova and S. N. Kalmykov



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### A water coordinated Ni complex and a 2D Ni-MOF: topology dependent highly enhanced electrocatalytic OER activity

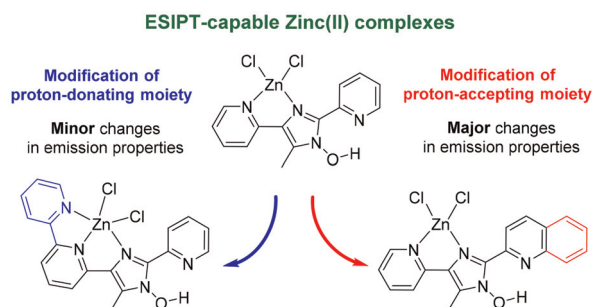
Pandi Muthukumar, Gunasekaran Arunkumar, Mehboobali Pannipara, Abdullah G. Al-Sehemi, Dohyun Moon\* and Savarimuthu Philip Anthony\*



8114

### Luminescence of ESIPT-capable zinc(II) complexes with a 1-hydroxy-1H-imidazole-based ligand: exploring the impact of substitution in the proton-donating moiety

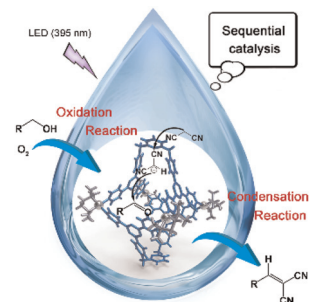
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### A Pd<sub>4</sub>L<sub>2</sub> cage containing Brønsted-base active sites for the one-pot photooxidation/Knoevenagel condensation reaction

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### Heteroleptic copper(I) complexes [Cu(dmp)(N<sup>^</sup>P)] BF<sub>4</sub> for photoinduced atom-transfer radical addition reactions

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