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See Ryo Tanaka, Yousuke Ooyama et al., pp. 5047-5055.

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#### Inside cover

See Giuseppe Resnati, Antonio Frontera et al., pp. 5056-5064.

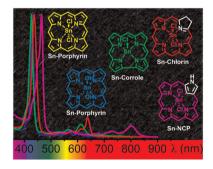
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#### **PERSPECTIVE**

#### 5000

Sn(IV)-porphyrinoids for photodynamic anticancer and antimicrobial chemotherapy

Balaji Babu, John Mack\* and Tebello Nyokong

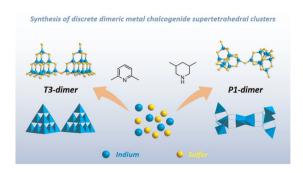


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#### 5019

Two discrete dimeric metal-chalcogenide supertetrahedral clusters

Jin Wu, Ning Chen and Tao Wu\*



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Dalton Transactions (electronic: ISSN 1477-9234) is published 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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#### **COMMUNICATIONS**

#### 5023

#### Reactive FLP-alkyne addition products: a route to anionic and zwitterionic phosphines

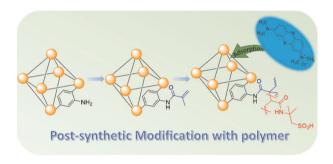
Hyehwang Kim and Douglas W. Stephan\*

$$\begin{array}{c} H \\ Et_2N \oplus \\ B(C_6F_5)_3 \\ \hline Tol \\ \hline \end{array} \qquad \begin{array}{c} Et_2N \\ B(C_6F_5)_3 \\ \hline X' \\ \hline Tol \\ \hline \end{array} \qquad \begin{array}{c} Et_2N \\ B(C_6F_5)_3 \\ \hline \\ Et_3P \\ \hline \\ Tol \\ \hline \end{array} \qquad \begin{array}{c} Et_2N \\ B(C_6F_5)_3 \\ \hline \\ Et_3P \\ \hline \\ Tol \\ \hline \end{array}$$

#### 5028

#### Post-synthetic modification (PSM) of MOFs with an ionic polymer for efficient adsorptive removal of methylene blue from water

Hao Fan, Zhufeng Zhang, Yingjie Chen, Ziquan Wang, Huimin Wen, Shilin Tian, Siyu Chen, Huaixia Zhao,\* Yiyan He\* and Yangxin Wang\*



#### 5034

Iridium(III) polypyridine artificial metalloenzymes with tunable photophysical properties: a new platform for visible light photocatalysis in aqueous solution

Bingqing Liu, Yasmine S. Zubi and Jared C. Lewis\*

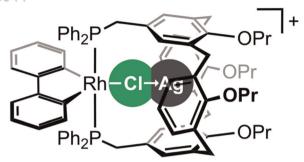
#### 5039

#### $B(3,4,5-F_3H_2C_6)_3$ Lewis acid-catalysed C3-allylation of indoles

Nusaybah Alotaibi, Rasool Babaahmadi, Milan Pramanik, Tanja Kaehler, Ayan Dasgupta, Emma Richards, Alireza Ariafard, Thomas Wirth and Rebecca L. Melen\*

#### **COMMUNICATIONS**

5044

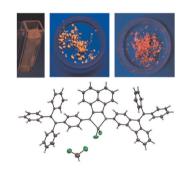


Template synthesis of an intermediate in silver salt metathesis using a calix[4]arene-based diphosphine ligand

Jack Emerson-King and Adrian B. Chaplin\*

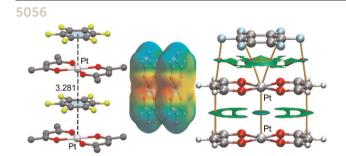
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5047



Aggregation-induced emission of a bis(imino) acenaphthene zinc complex with tetraphenylethene units

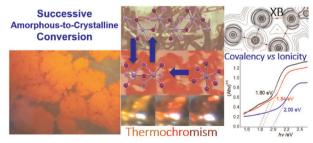
Takuma Fumoto, Ryo Tanaka\* and Yousuke Ooyama\*



Group-10  $\pi$ -hole···d<sub>z²</sub>[M<sup>II</sup>] interactions: a theoretical study of model systems inspired by CSD structures

Miriam Calabrese, Sergi Burguera, Giuseppe Resnati\* and Antonio Frontera\*

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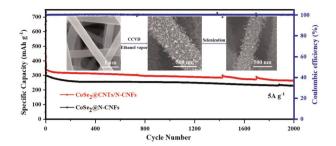
Halogen bonds regulating structures and optical properties of hybrid iodobismuthate perovskites

Ao Li, Mengling Wu, Junle Zhang, Fahui Song\* and Fangfang Pan\*

#### 5075

CoSe<sub>2</sub> nanoparticles anchored on dual 1D carbon nanotubes/N-doped carbon nanofibers as highperformance anodes for sodium-ion storage

Qilei Jiang, Xu Han, Mengling Zhang, Zheng Qin, Xianggang Huang, Yan Hou, Xuegin Cao, Jian-ping Lang and Hongwei Gu\*



#### 5085

#### Synthesis of imidazolium-based pentacoordinated organofluorosilicate and germanate salts

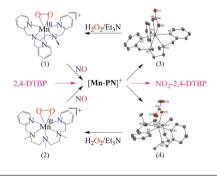
Jan Gnidovec, Evelin Gruden, Melita Tramšek, Jernej Iskra, Jaroslav Kvíčala and Gašper Tavčar\*



#### 5095

#### Exploring the nitric oxide dioxygenation (NOD) reactions of manganese-peroxo complexes

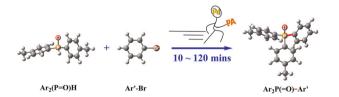
Sandip Das, Akshaya Keerthi C S, Kulbir, Shivangi Singh, Soumik Roy, Raman Singh, Somnath Ghosh\* and Pankaj Kumar\*



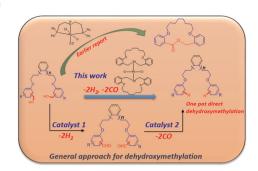
#### 5101

#### Highly efficient and well-defined phosphinous acid-ligated Pd(II) precatalysts for Hirao cross-coupling reaction

Li-Hui Hong, Wei-Jung Feng, Wei-Chih Chen and Yu-Chang Chang\*



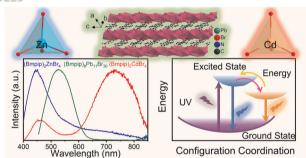
#### 5110



## A palladium complex of a macrocyclic selenium ligand: catalyst for the dehydroxymethylation of dihydroxy compounds

Sunil Kumar, Sohan Singh, Suman Mahala, Prachi Janjani, S. Rajagopala Reddy, Tanmay Rom, Avijit Kumar Paul, Partha Roy and Hemant Joshi\*

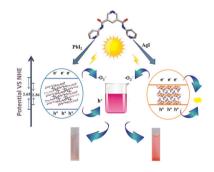
#### 5119



## Luminescent hybrid halides with various centering metal cations (Zn, Cd and Pb) and diverse structures

Liubing Fan, Shiqiang Hao, Shihui He, Xusheng Zhang, Mingyang Li, Christopher Wolverton, Jing Zhao\* and Quanlin Liu

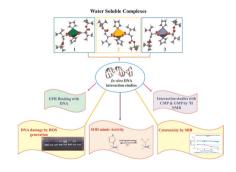
#### 5127



### Photocatalytic properties of iodometallates with in situ-generated organic bases as countercations

Feng Leng, Xiao Zhang\* and Jie-Hui Yu\*

#### 5141



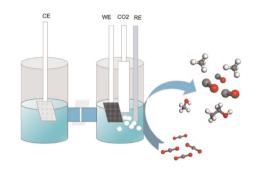
Revelation of potential bioactive water-soluble Boc-L-valine and imidazole appended metal complexes  $\{M = Co(II), Cu(II) \& Zn(II)\}$ : synthesis, characterization, ct-DNA binding, pBR322 cleavage, SOD mimetic, and cytotoxicity studies

Suffora Akhter, Salman Khursheed, Farukh Arjmand and Sartaj Tabassum\*

#### 5155

## Evaluating the efficacy of nanosized CuZnAl and CuZnZr mixed oxides for electrocatalytic CO<sub>2</sub> reduction

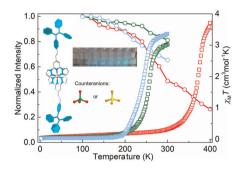
Mohamed Mokhtar M. Mostafa,\* Yining Li, Wael Halawani, Katabathini Narasimharao, Mohamed Abdel Salam, Abdulmohsen A. Alshehri, Nezar H. Khdary, Sulaiman Al-Faifi, Lin Gu and Abhishek Dutta Chowdhury\*



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## Constructing spin crossover-fluorescence bifunctional iron(II) complexes based on tetraphenyl ethylene-decorated AlEgens

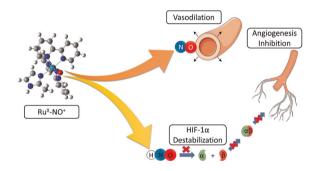
Cheng Yi, Shi-Hui Zhang, Liang Zhao, Nian-Tao Yao, Guo-Hui Zhao, Yin-Shan Meng and Tao Liu\*



#### 5176

### New nitrosyl ruthenium complexes with combined activities for multiple cardiovascular disorders

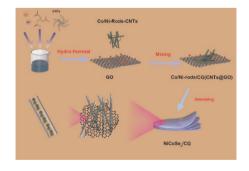
Florêncio Sousa Gouveia Júnior, João Alison de Moraes Silveira, Thais Muratori Holanda, Aline Diogo Marinho, Lisa A. Ridnour, David A. Wink, Rodrigo José Bezerra de Siqueira, Helena Serra Azul Monteiro, Eduardo Henrique Silva de Sousa\* and Luiz Gonzaga de França Lopes\*

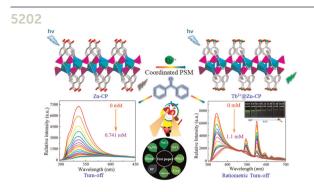


#### 5192

A NiCoSe<sub>x</sub>/CG heterostructure with strong interfacial interaction showing rapid diffusion kinetics as a flexible anode for high-rate sodium storage

Dan Li,\* Honglang Liu, Hanhao Liu, Yanjun Chen, Chao Wang\* and Li Guo\*

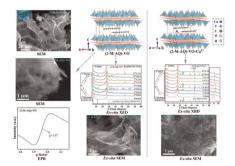




## Post-synthetic functionalization of Zn-CP by Tb<sup>3+</sup> ions: a ratiometric luminescent sensor for the ultraviolet filter benzophenone

Xu Zhang, Xin Li, Tianyang Ding, Jiahui Yu, Chengqi Jiao,\* Ye Hu, Yanan Zhou, Yanyu Zhu,\* Zhengang Sun\* and Hanwen Zheng

5212



Synergistic zinc-ion storage enabled by Cu ion in anthraquinone-preinserted vanadate: structural integrity and H<sup>+</sup>-promoted reversible phase conversion

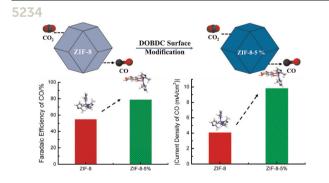
Kai Li, Yang Liu, Rui Tang and Yun Gong\*

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Triazene-bridged energetic materials based on nitrotriazole: synthesis, characterization, and laser-ignited combustion performance

Xiue Jiang, Yalin Yang, Huiying Du, Bo Yang, Pengfei Tang, Bo Wu\* and Congming Ma\*



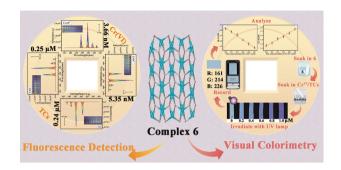
### Improvement of carbon dioxide electroreduction by crystal surface modification of ZIF-8

Ting Zhang, Hong Liu, Xu Han, Martí Biset-Peiró, Yunhui Yang, Inhar Imaz, Daniel Maspoch, Bo Yang,\* Joan Ramon Morante and Jordi Arbiol\*

#### 5243

Syntheses and fluorescence properties of lanthanide isostructural complexes derived from aspartic acid

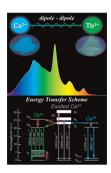
Yatong Zhang, Ai Wang,\* Sisi Feng, Caixia Yuan and Liping Lu\*



#### 5252

Near ultraviolet excitable cyan-green phosphors of Ba<sub>6</sub>La<sub>2</sub>Al<sub>3</sub>ScO<sub>15</sub>:Ce<sup>3+</sup> and Ba<sub>6</sub>La<sub>2</sub>Al<sub>3</sub>ScO<sub>15</sub>:Ce<sup>3+</sup>, Tb<sup>3+</sup>: investigations on the crystal structure, site assignment of Ce<sup>3+</sup> and Tb<sup>3+</sup> ions, and an energy transfer process from Ce<sup>3+</sup> to Tb<sup>3+</sup>

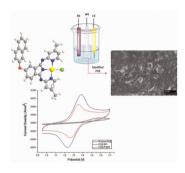
Masato Iwaki,\* Mizuho Onodera, Kazuyoshi Uematsu, Kenji Toda\* and Mineo Sato



#### 5265

Synthesis, fabrication and characterization of 2-naphthyloxy group-substituted bis(2-pyridylimino)isoindoline and its derivatives as a positive electrode for vanadium redox flow battery applications

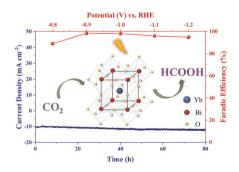
Selin Gümrükçü, Mukaddes Özçeşmeci, Nilüfer Koçyiğit, Kerem Kaya, Ahmet Gül, Yücel Şahin\* and İbrahim Özçeşmeci\*



#### 5277

Structure-evolved YbBiO<sub>3</sub> perovskites for highly formate-selective CO<sub>2</sub> electroreduction

Jiaying Yan, Xuanyu Wang, Yayu Guan, Yuyu Liu,\* Linlin Wang, Qinsi Shao\* and Qiuan Huang

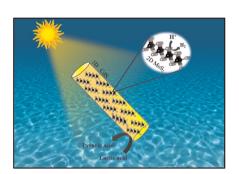


5287

### Ligand exchange at tetra-coordinated beryllium centres

Magnus R. Buchner,\* Dušan Ćoćić, Sergei I. Ivlev, Nils Spang, Matthias Müller and Ralph Puchta\*

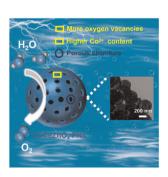
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## Effective tailoring of the $MoS_2$ layer number on the surface of CdS nanorods for boosting hydrogen production rate

Anjana E. Sudheer, Pooja Varma, Assa Aravindh Sasikala Devi, D. Amaranatha Reddy\* and D. Murali\*

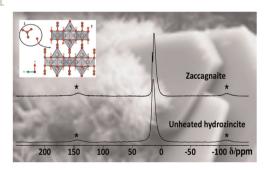
5312



#### General synthesis of $CoCeMO_x$ trimetallic oxides via a cation exchange reaction for the oxygen evolution reaction

Xianggang Huang, Xin Wang, Yingxin Liu, Yan Hou, Chengjin Li, Mingyang Cai, Hongwei Gu and Xueqin Cao\*

5321



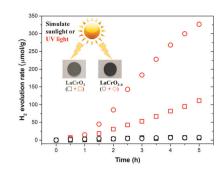
# Phase evolution, speciation and solubility limit of aluminium doping in zinc oxide catalyst supports synthesized *via* co-precipitated hydrozincite precursors

Benjamin Mockenhaupt, Jan Konrad Wied, Sebastian Mangelsen, Ulrich Schürmann, Lorenz Kienle, Jörn Schmedt auf der Günne\* and Malte Behrens\*

#### 5336

Remarkable enhancement of photocatalytic performance in LaCrO<sub>3</sub> through a controlled chemical reduction process

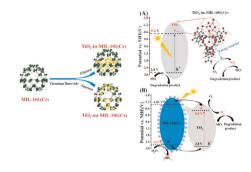
Lijun He, Jia Yang, Wenbin Guo, Yan Li, Alberto J. Fernández-Carrión\* and Xiaojun Kuang\*



#### 5345

In or on, a study of the influence of the binding site for TiO<sub>2</sub> and MIL-101(Cr)

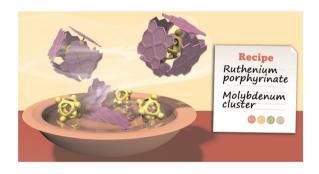
Jianwei Lin, Jing Chen, Yaling Ye, Yafeng Zhuang, Weiming Sun,\* Jinghua Chen and Zhizhong Han\*



#### 5354

Supramolecular hybrids based on Ru(II) porphyrin and octahedral Mo(II) iodide cluster

Marina V. Volostnykh,\* Gayane A. Kirakosyan, Anna A. Sinelshchikova, Polina A. Loboda, Pavel V. Dorovatovskii, Maxim A. Mikhaylov, Aslan Yu. Tsivadze, Maxim N. Sokolov\* and Yulia G. Gorbunova\*



#### 5366

Stable single phases of samarium gallium oxide (Sm<sub>3</sub>Ga<sub>x</sub>O<sub>v</sub>) nano semiconductor self-assembly for supercapacitor and photocatalytic applications

Priyadharshini Shanmugam, Thangaraju Dheivasigamani,\* Jesman Sthevan Kovil Pitchai and Alagar Muthukaruppan

