

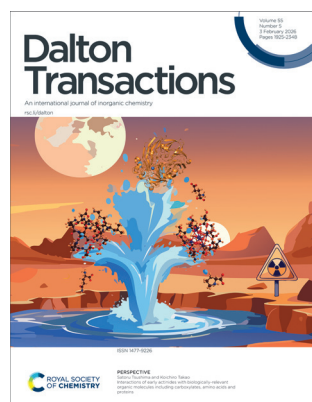
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IN THIS ISSUE

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See Satoru Tsushima and Koichiro Takao, pp. 1938–1957.

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See Petr Štěpnička, pp. 2000–2014.

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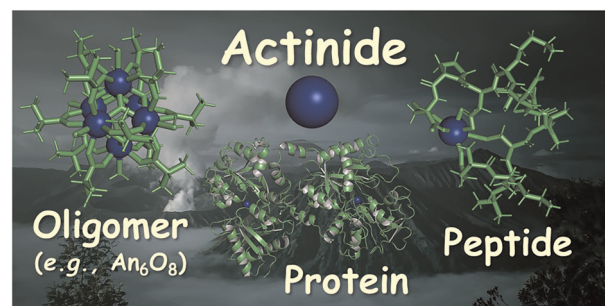
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PERSPECTIVES

1938

Interactions of early actinides with biologically-relevant organic molecules including carboxylates, amino acids and proteins

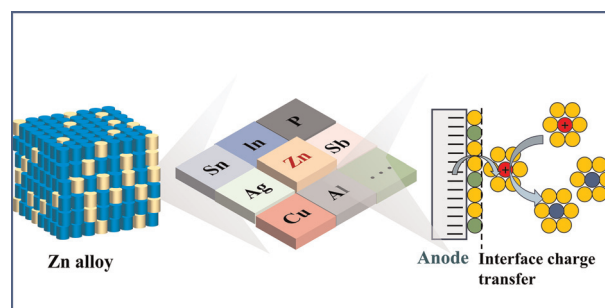
Satoru Tsushima* and Koichiro Takao*



1958

Alloying-mediated stability enhancement of zinc anodes for high-performance zinc-ion batteries

Pushan Guo,* Zhihao Dong, Jinrong Qi, Jingjing Yuan, Tao Chen, Yi Zhang* and Linhao Xin



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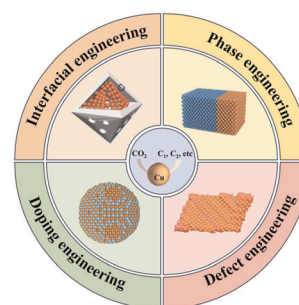
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PERSPECTIVES

1973

Rational structural engineering strategies for electrochemical CO₂ reduction on copper

Meiling Xu, Shuyu Ye, Yaqin Lin, Qinlu Zeng, Zhongshui Li* and Lingxing Zeng*

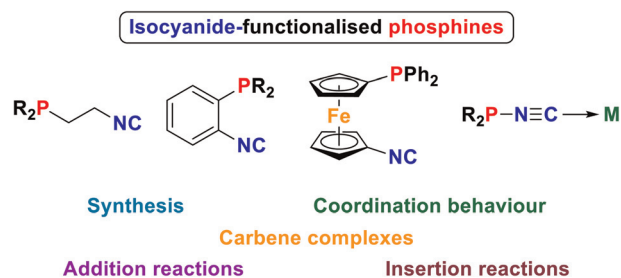


FRONTIERS

2000

Isocyanide-functionalised phosphines: an uncharted field

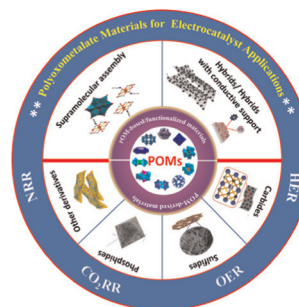
Petr Štěpnička



2015

Beyond traditional electrocatalysts: polyoxometalates at the frontier

Zonish Zeb, Md Maruf Ahmed, Lubin Ni* and Yongge Wei*



COMMUNICATIONS

2025

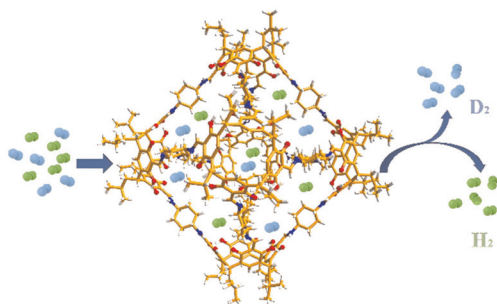
Fused pyrazolo[3,4-d] pyrimidine nitrogen-rich salts with balanced energetic performance

Sagar Nehe, Vikas D. Ghule and Srinivas Dharavath*



COMMUNICATIONS

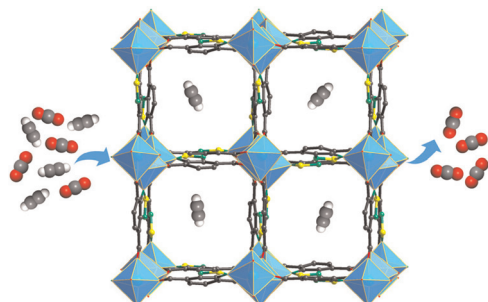
2030



Effective hydrogen isotope separation by a robust flexible calix[4]resorcinarene-based porous organic cage

Yanan Guo, Jiajun Feng, Wenjing Wang, Kongzhao Su* and Daqiang Yuan*

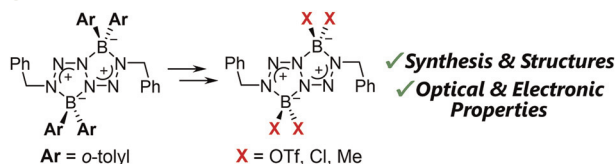
2036



Functionalization of benzothiadiazole in magnesium-based metal–organic framework for C₂H₂/CO₂ separation

Haiyi Sun, Yunlei Liu, Meng Sun, Fei Gao, Xueying Feng, Mingming Xu* and Xiaokang Wang*

2041

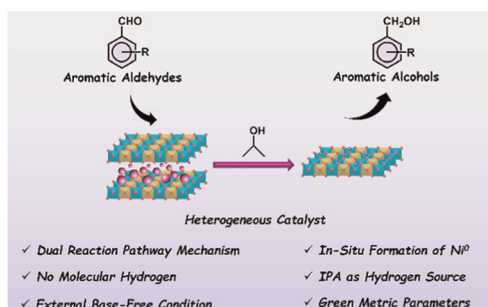


Substituent effect on the boron atoms in boron-bridged hexazenes

Masahiro Yamamoto and Makoto Yamashita*

PAPERS

2046



Dual reaction pathway catalysis: base free transfer hydrogenation of aromatic aldehydes by a NiAl LDH catalyst *via in situ* Ni(0) formation

Anitya Sharma, Sahil Kumar, Devendra Sharma, Ashish Bahuguna and Venkata Krishnan*

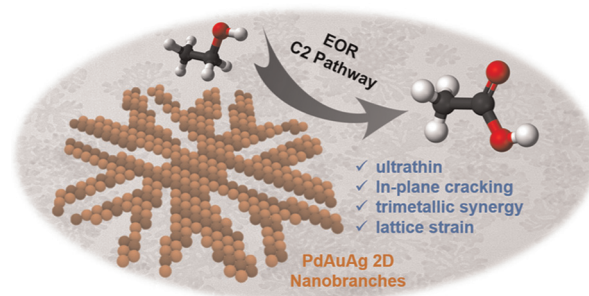


PAPERS

2060

Engineering two-dimensional nanobranched architecture in PdAuAg for enhanced ethanol electrooxidation

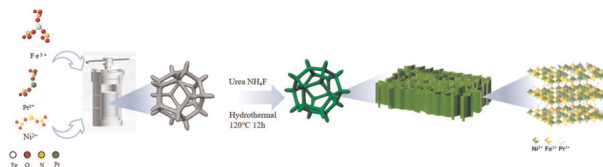
Guangtao Wang, Yuanyuan Min, Ruiqi Shen, Xuening Jin, Yingying Wang,* Yanyun Ma* and Yiqun Zheng*



2071

Pr-doped NiFe-layered double hydroxide on plasma-etched nickel foam as a high-efficiency electrocatalyst for oxygen evolution reaction

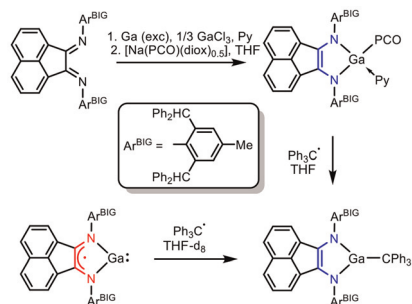
Jian-Long Lei, Shui-Sheng Li, Xi Zhen, Lu Shen and Bin He*



2080

Gallium phosphaketenes derived from bis(imino)acenaphthenes (bian): synthesis and reactivity towards a trityl radical and bian-gallylene

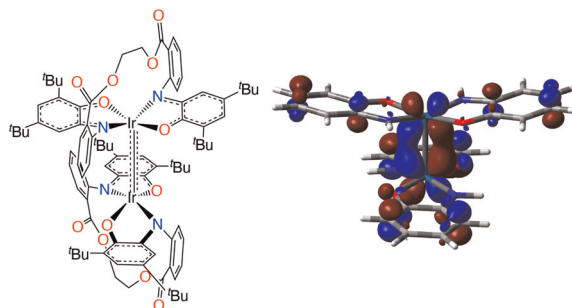
Alexandra A. Skatova, Andrey A. Bazanov, Evgeny V. Baranov, Mikhail A. Kiskin, Sergey Yu. Ketkov and Igor L. Fedushkin*



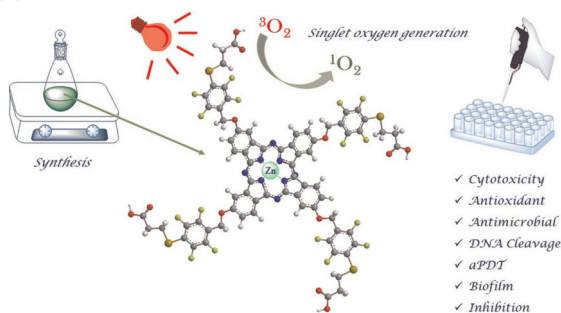
2088

Iridium complexes of a chelating bis(iminoxolene): augmentation of metal–metal π bonding by metal–ligand π bonding

Kristin D. Grandstaff, Halen Carbonel and Seth N. Brown*



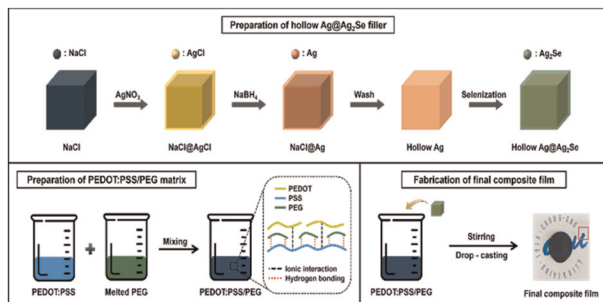
2100



Investigation of the photophysical, photochemical, and multifunctional biological properties of fluorinated zinc(II) phthalocyanine functionalized with carboxylic acid

Gülru Özay, Mukaddes Özçeşmeci, Seyma Isik, Ceren Can Karanlık, Ayfer Kalkan Burat, Ali Erdoğan, Sadin Özdemir, Gülay Giray, M. Serkan Yalçın, Muge Serhatli and Esin Hamuryudan*

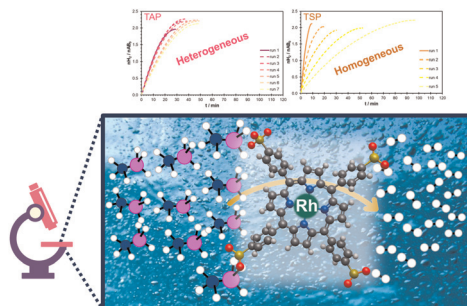
2111



Enhanced thermoelectric performance of flexible PEDOT:PSS/PEG matrices incorporating hollow Ag@Ag₂Se core-shell fillers

Oju Kwon, Minsu Kim, Jaeyeon Kim, Jaekyung Lee, Subin Lee, Dabin Park and Jooheon Kim*

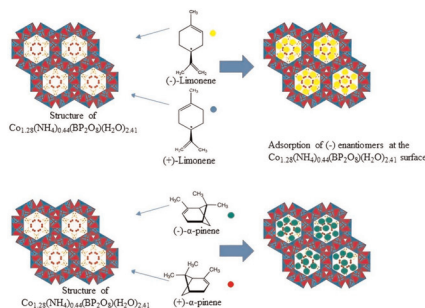
2123



Rhodium porphyrin complexes as catalysts for ammonia borane hydrolytic dehydrogenation

Manuel Minnucci, Ilaria Barlocco, Laura Prati, Marta Stucchi, Alberto Villa, Gabriele Di Carlo* and Francesca Tessore

2135



The adsorption features, surface polarity and enantioselectivity of the chiral zeolite-like material cobalt borophosphate

Zhanna D. Uteeva, Elina R. Mansurova, Alsu Sh. Nuretdinova, Marat R. Agliullin, Rezeda Z. Kuvatova, Timur A. Mukhametzyanov and Vladimir Yu. Guskov*

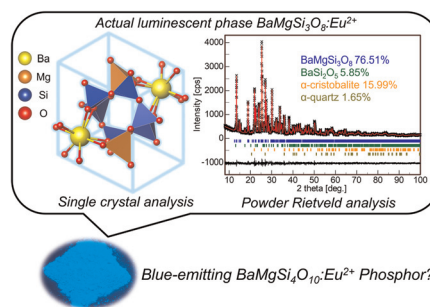


PAPERS

2148

Crystal structure elucidation and luminescence properties of a blue-emitting $\text{BaMgSi}_3\text{O}_8:\text{Eu}^{2+}$ phosphor with an alkali feldspar structure

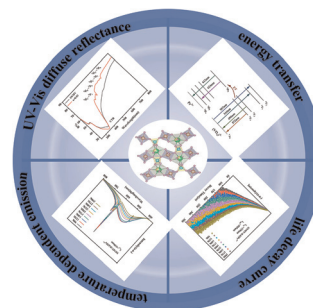
Wataru Hikita, Mineo Sato and Kenji Toda*



2156

Luminescence characteristics and low temperature optical temperature measurement of Pr^{3+} doped $\text{Sr}_2\text{NaMg}_2\text{V}_3\text{O}_{12}$ phosphors

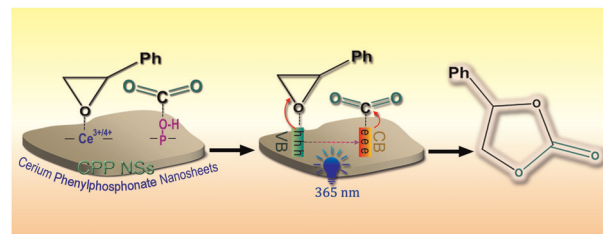
Qiuyue Mu, Huimin Li, Ran Pang, Da Li, Su Zhang, Xiaodong Li* and Lihong Jiang*



2167

Ultrathin cerium phenylphosphonate nanosheets for photocatalytic cycloaddition of carbon dioxide to epoxides

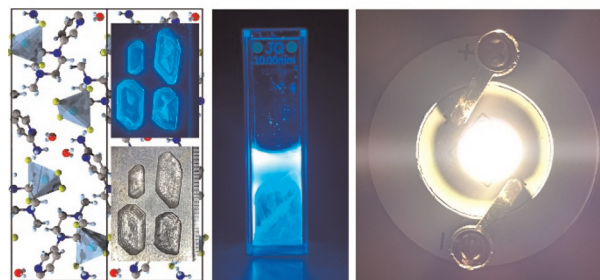
Soumalya Banerjee, Soumita Sarkar, Sk Afsar Ali, Sunny Sarkar, Anjumun Rasool, Manzoor Ahmad Dar, Sasanka Dalapati and Astam K. Patra*



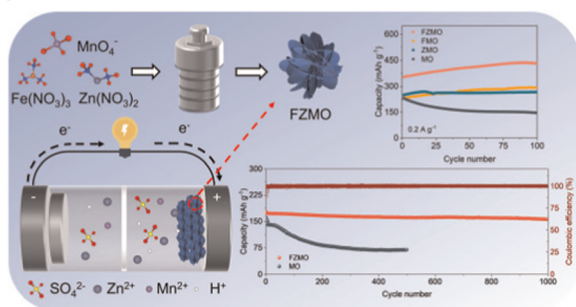
2181

A centimeter-sized water-resistant blue-light-emitting zero-dimensional hybrid halide for solid-state lighting

Jie Chen, Hao Qu, Jie Zhang, Meng-Rui Huo, Wen-Wen Zhang, Bing-Qi Liu, Jianfei Chai, Chunqing Ji, Xiangyu Chen,* Yu-Yin Wang,* Yan Zhou and Guoming Lin*



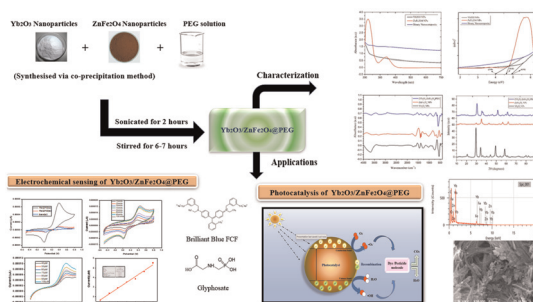
2191



Fe/Zn co-doped MnO₂ nanoflowers for high-performance aqueous zinc-ion batteries

Yannan Zhang, Jiawei Shi, Cheng Wang, Zhiyuan Yao, Yang Zou* and Xiaoming Ren*

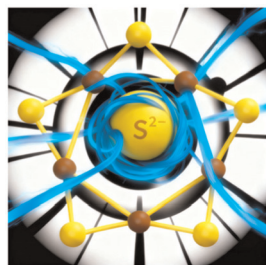
2200



Environmental applications of an ultrasonically synthesized and PEG assisted Yb₂O₃/ZnFe₂O₄ nanocomposite for dye and herbicide degradation and electrochemical sensing of catechol

Nashra Fatima, Srishti Dwivedi, Pratibha Bansal, Eklakh Veg, Vishal Mishra and Tahmeena Khan*

2224



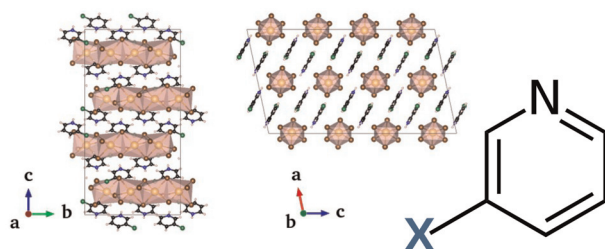
Pentacoordinate Sulfur Atom Transition-metal ligands components

[S@Cd₅S₅]²⁻: a planar pentacoordinate sulfur dianion stabilized by a transition-metal framework

Xin-bo Liu, Yu-le Dou, Xiao-han Yin, Li-juan Cui and Zhong-hua Cui*

2232

Quasi 1D perovskites 3-X-C₅H₄NH-PbBr₃ (X = Cl, Br, I)



Structural and optoelectronic properties of quasi-1D hybrid 3-halogenopyridinium lead bromides

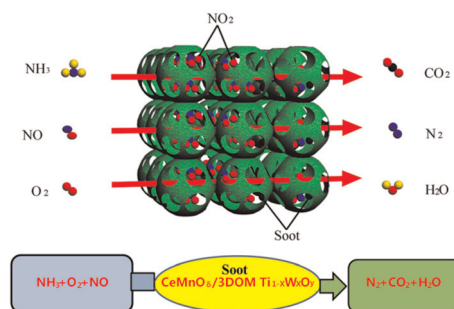
N. I. Selivanov,* R. Kevorkyants* and A. V. Emeline



2242

Synthesis of $\text{CeMnO}_\delta/3\text{DOM Ti}_{1-x}\text{W}_x\text{O}_y$ catalysts: catalytic performance and reaction mechanism for the simultaneous removal of soot and NO_x

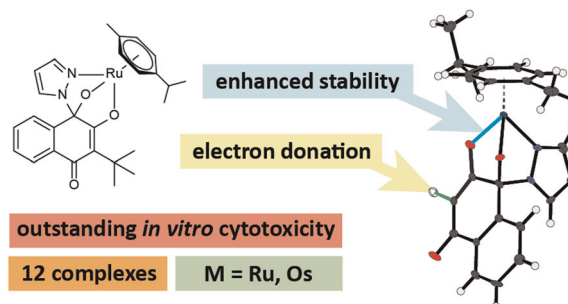
Ruidan Wang, Lanyi Wang, Xinyu Chen, Di Yu, Chunlei Zhang, Siyu Gao, Xiaoqiang Fan, Xuehua Yu* and Zhen Zhao*



2254

Naphthoquinone-derived tridentate Ru(II) and Os(II) organometallics with exceptional cytotoxicity: synthesis, characterization, stability in aqueous solution and biological *in vitro* evaluation

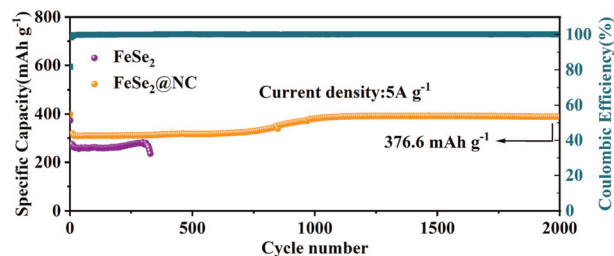
Alexander Rosner, Heiko Geisler, Michaela Hejl, Mathias Gradl, Anton A. Legin, Alexander Prado-Roller, Michael A. Jakupec, Petra Heffeter, Walter Berger, Bernhard K. Keppler and Wolfgang Kandioller*



2269

Synthesis of carbon-coated FeSe_2 nano-microspheres with a stable SEI film as anode materials for high-performance sodium-ion batteries

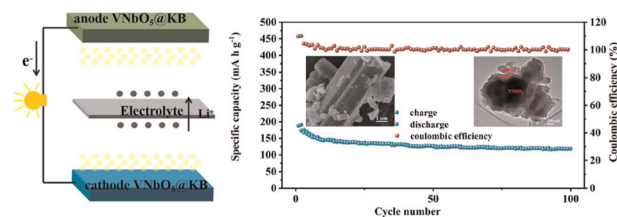
Zhiya Lin, Yidan Chen, Zhilong Wu, Shaoming Ying* and Xiaohui Huang*



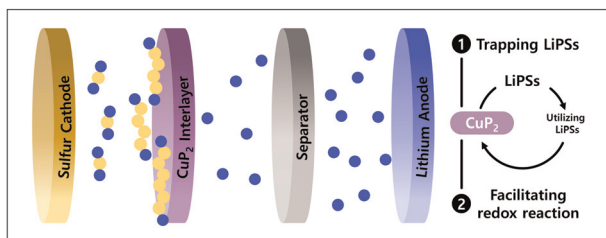
2277

Facile synthesis of a new, highly stable lithium-ion battery dual-function electrode material, $\text{VNbO}_5@KB$

Xuejin Deng, Xin Zhang and Jianyin Zhang*



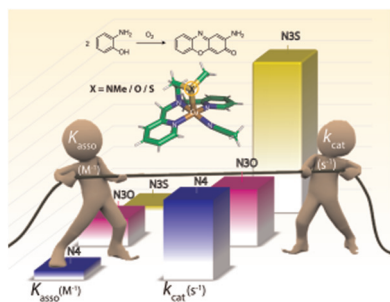
2288



A copper phosphide electrocatalyst enables high-areal-capacity and long-term stability in lithium–sulfur pouch cells

Sooan Bae, Jihyeon Park, Laurin Rademacher, Songhyun Lee, Chaehyeong Lee, Vivek Bharatbhai Kathiriyam, Maryam Nojabae, Andreas Friedrich, Jaeyoung Lee* and Jin Won Kim*

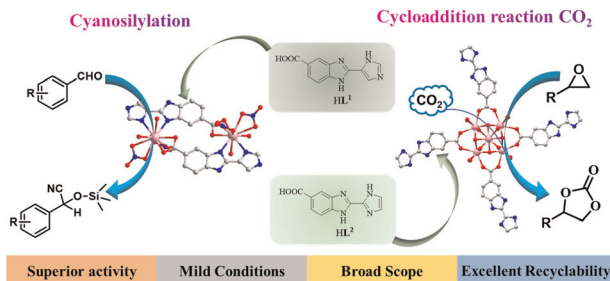
2297



Bioinspired Cu(II) complexes with tunable axial donors: unravelling structure–function correlations in phenoxazinone synthase mimics

Dyuti Bhandary, Limashree Sahoo, Gunasekaran Velmurugan* and Gourab Mukherjee*

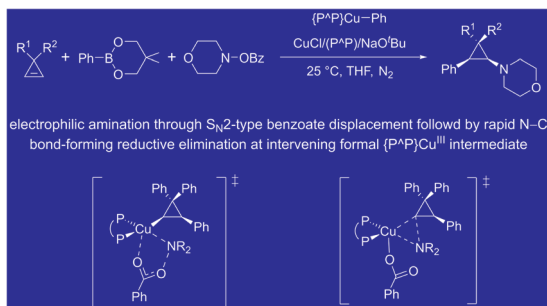
2312



Self-assembly of binuclear/hexanuclear lanthanide complexes for functional catalysis

Bo-Yu Liu, Ablimit Abdukader, Jian-Bo Huang,* Lu-Lu Wang and Duo-Zhi Wang*

2318



Copper-catalysed electrophilic carboamination of cyclopropenes with arylboron reagents – a computational mechanistic probe

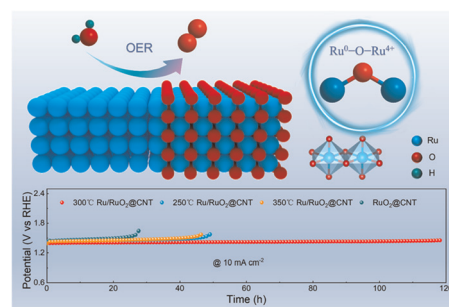
Sven Tobisch



2331

Interface engineering of Ru/RuO₂ heterostructures on carbon nanotubes for efficient and stable acidic oxygen evolution

Dazhou Kuang, Sheng Yao, Yang Yang,* Fangcai Zheng* and Hui Wang*



2339

Cationic doping engineering of the ZnV₂O₄ cathode toward fast Zn²⁺ storage

Xiaoqing Liu,* Mengmeng Bai, Ruimiao Si, Shun Zhou, Chuang Yu,* Jinjiang Wu,* Longlong Dong and Youzhi Liu*

