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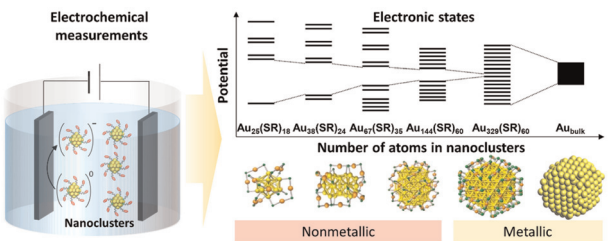
Tokuhisa Kawawaki* and Yuichi Negishi*



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PERSPECTIVES

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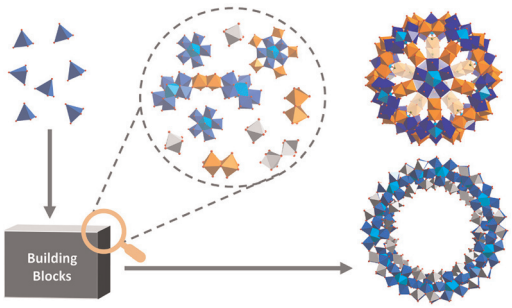
Insights into the self-assembly of giant polyoxomolybdates from building blocks to supramolecular structures

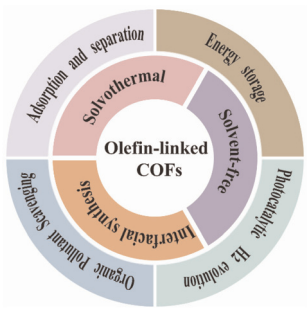
Ke Li, Kai-Ling Zhu, Li-Ping Cui and Jia-Jia Chen*



15178

Olefin-linked covalent organic frameworks: synthesis and applications

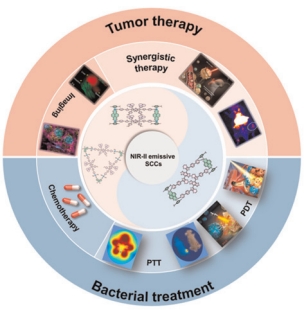
Ting Wang, Yushu Zhang, Zhifang Wang,* Yao Chen, Peng Cheng and Zhenjie Zhang*



15193

Recent advances on the construction of long-wavelength emissive supramolecular coordination complexes for photo-diagnosis and therapy

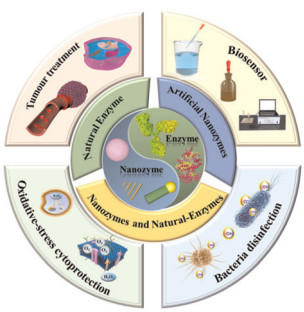
Zhipeng Zhang, Huan Ye, Fei Cai* and Yao Sun*



15203

Emerging enzyme-based nanocomposites for catalytic biomedicine

Minchao Liu, Hongyue Yu, Tiancong Zhao* and Xiaomin Li*



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PERSPECTIVES

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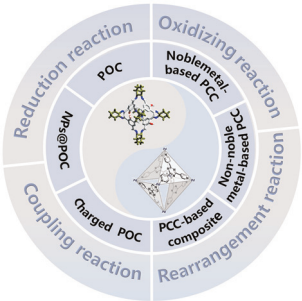

Recent advances in porous molecular cages for photocatalytic organic conversions

Yaoyao Peng, Zhifang Su, Meng Jin, Lei Zhu,* Zong-Jie Guan* and Yu Fang*

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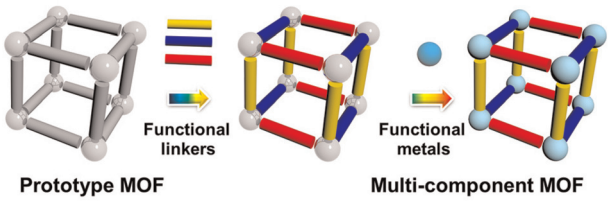

Stepwise construction of multi-component metal–organic frameworks

Xinyu Xu, Lei Gao and Shuai Yuan*

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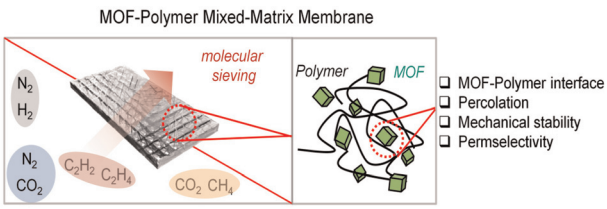

A roadmap to enhance gas permselectivity in metal–organic framework-based mixed-matrix membranes

Susmita Kundu and Ritesh Haldar*

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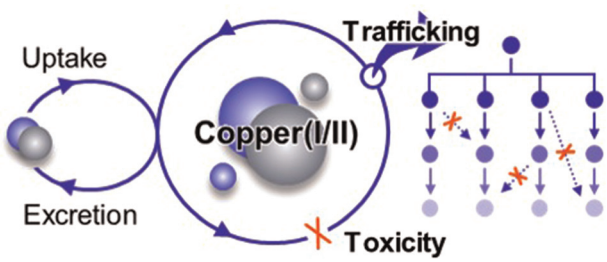

Copper trafficking systems in cells: insights into coordination chemistry and toxicity

Jiyeon Han

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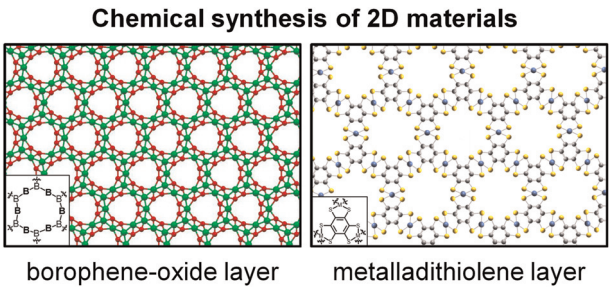
Chemical bottom-up approach for inorganic single-atomic layers aiming beyond graphene

Tetsuya Kambe,* Hiroshi Nishihara* and Kimihisa Yamamoto*



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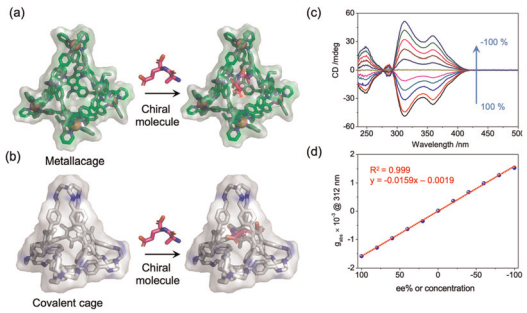
Cage-based sensors for circular dichroism analysis

Jianjian Zhao, Chang-Yin Yang, Lianrui Hu,* Lin Xu and Wei-Tao Dou*



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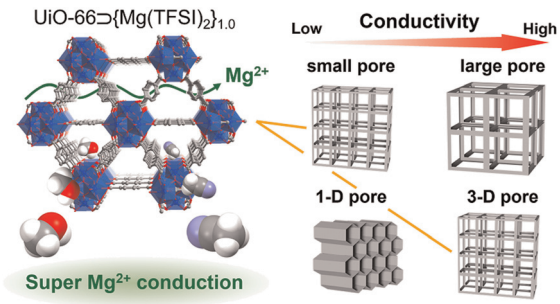
15313

High Mg^{2+} conduction in three-dimensional pores of a metal–organic framework under organic vapors

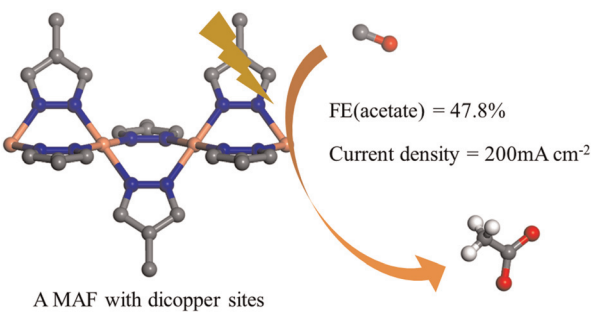
Kouhei Aoki, Kenichi Kato and Masaaki Sadakiyo*



15317

Efficient electroreduction of CO to acetate using a metal–azolate framework with dicopper active sites

Hao-Lin Zhu, Yu-Xuan Han, Pei-Qin Liao* and Xiao-Ming Chen



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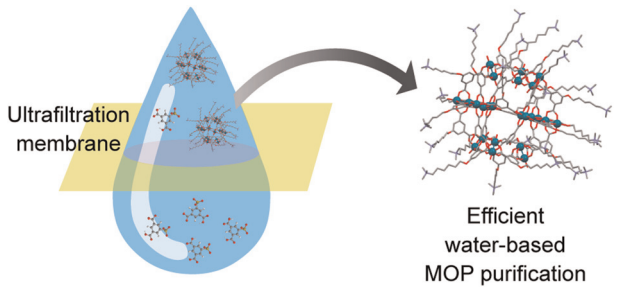

Efficient water-based purification of metal–organic polyhedra by centrifugal ultrafiltration

Benjamin Le Ouay,* Tomo Ohara, Ryosuke Minami, Rin Kunitomo, Ryo Ohtani and Masaaki Ohba*

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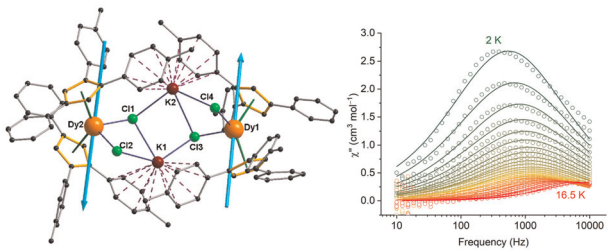

Dipotassiumtetrachloride-bridged dysprosium metallocenes: a single-molecule magnet

Selvakumar Arumugam, Björn Schwarz,* Prathap Ravichandran, Sunil Kumar, Liviu Ungur* and Kartik Chandra Mondal*

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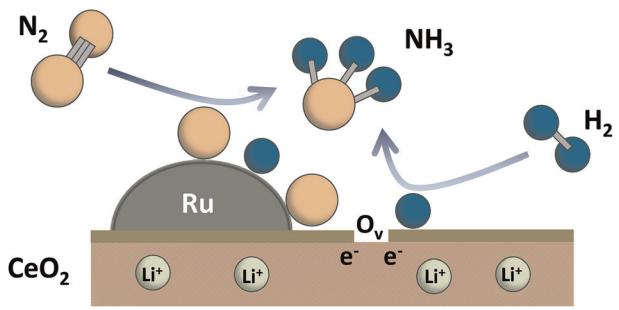
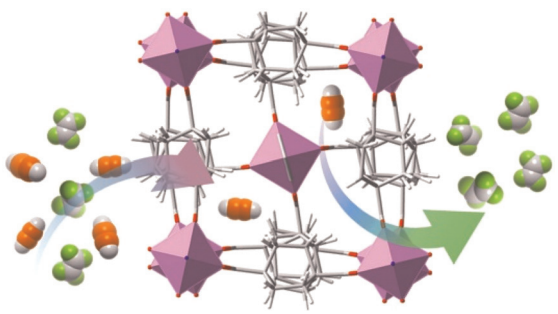


Li-intercalated CeO_2 as an ideal substrate for boosting ammonia synthesis

Zhuoyang Gao, Xiaowei Mu, Qingchuan Xiong and Lu Li*

15338



An aliphatic MOF with a molecular sieving effect for efficient C_2H_2/C_2H_4 separation

Xianzhen Li, Chen Cao, Ziwen Fan, Jianfa Liu, Tony Pham, Katherine A. Forrest and Zheng Niu*

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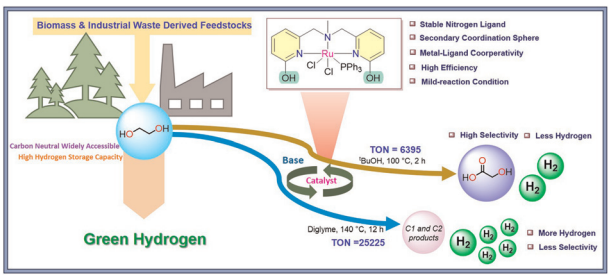
COMMUNICATIONS

15343

A switchable route for selective transformation of ethylene glycol to hydrogen and glycolic acid using a bifunctional ruthenium catalyst

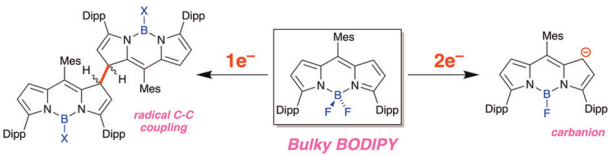
Satabdee Tanaya Sahoo, Aisa Mohanty, Raju Sharma and Prosenjit Daw*



15348

One- and two-electron reductions of a bulky BODIPY compound

Liam M. Pascoe, Li Feng Lim, Fabian Kallmeier, Nicholas Cox, Penelope J. Brothers and Jamie Hicks*



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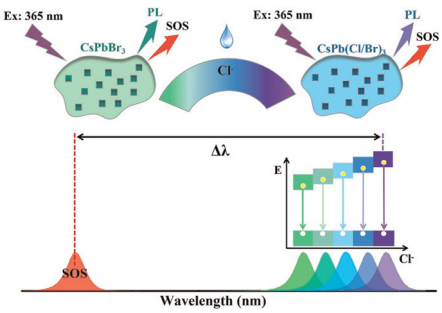
Fluorescence wavelength shifts combined with light scattering for ratiometric sensing of chloride in the serum based on $CsPbBr_3$@SiO_2 perovskite nanocrystal composite halide exchanges

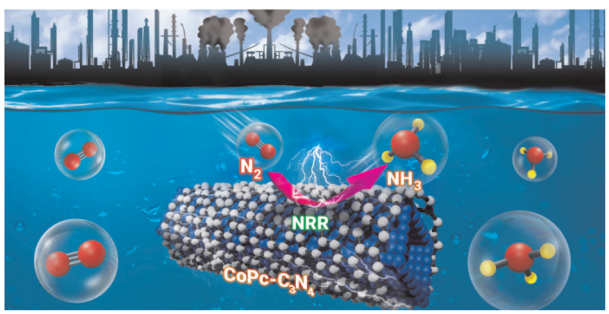
Peng Zhang, Liming Chen, Xiaoyan Cai, Binbin Luo,* Tianju Chen,* Haini Chen, Guoliang Chen and Feiming Li*



15360

1D/2D interface engineering of a CoPc–C_3N_4 heterostructure for boosting the nitrogen reduction reaction to NH_3

Sourav Paul, Sougata Sarkar, Dependu Dolui, Debashrita Sarkar, Marc Robert and Uttam Kumar Ghorai*



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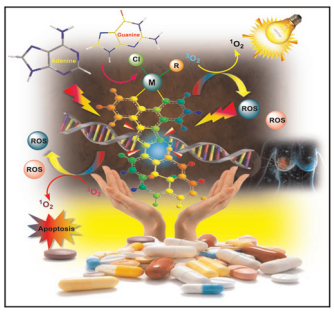
PAPERS

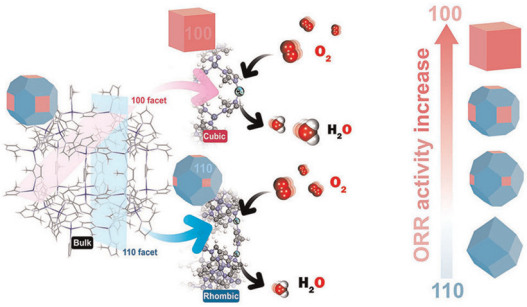
15365



GSH resistant, luminescent 2-(pyren-1-yl)-1*H*-imidazo[4,5-*f*][1,10]phenanthroline-based Ru(II)/Ir(III)/Re(I) complexes for phototoxicity in triple-negative breast cancer cells

Rishav Das and Priyankar Paira*

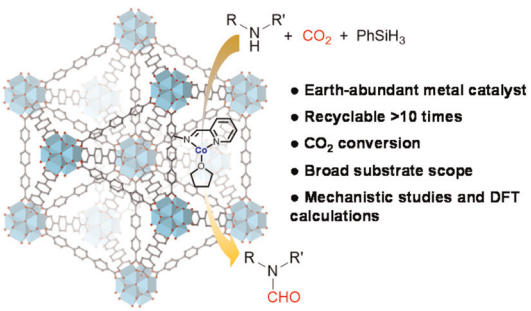
15377



Impact of exposed crystal facets on oxygen reduction reaction activity in zeolitic imidazole frameworks

Sorawich Pimu, Nuttapon Yodsin, Sirawee Maneewan, Jaruwan Kanthachan, Supawadee Namuangruk* and Kanokwan Kongpatpanich*

15384



A supported pyridylimine–cobalt catalyst for *N*-formylation of amines using CO_2

Naved Akhtar, Manav Chauhan, Poorvi Gupta, Neha Antil and Kuntal Manna*

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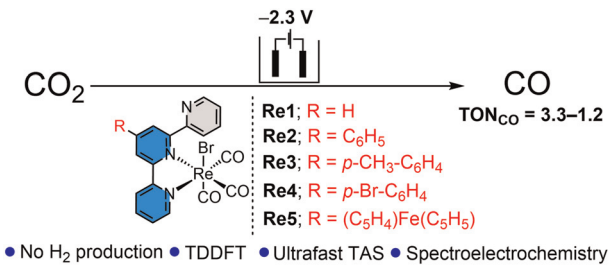

Electrocatalytic reduction of CO_2 to CO by a series of organometallic Re(I)-tpy complexes

Shriya Saha, Thomas Doughty, Dibyendu Banerjee, Sunil K. Patel, Dibyendu Mallick,* E. Siva Subramaniam Iyer, Souvik Roy* and Raja Mitra*

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PAPERS

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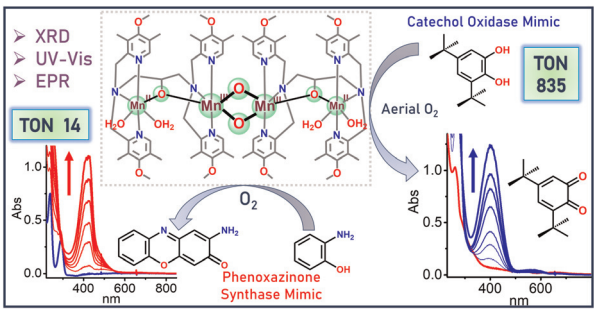
A tetranuclear Mn-diamond core complex as a functional mimic of both catechol oxidase and phenoxazinone synthase enzymes

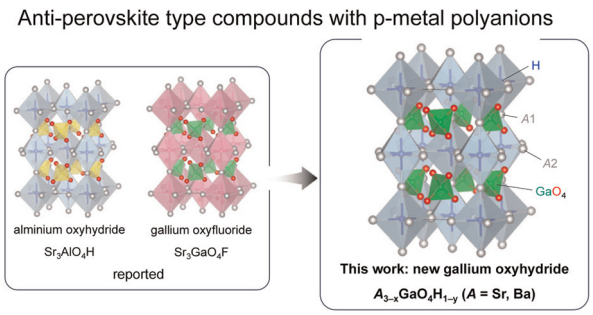
Rakesh Kumar, Rahul Keshri, Koushik Prodhan, Kanchan Shaikh and Apparao Draksharapu*



15420

A new family of anti-perovskite oxyhydrides with tetrahedral GaO_4 polyanions

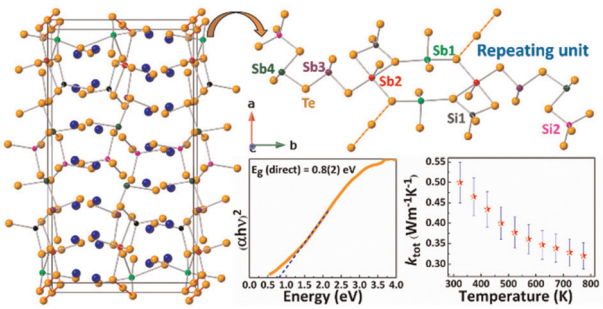
Nur Ika Puji Ayu, Fumitaka Takeiri,* Takafumi Ogawa, Akihide Kuwabara, Masato Hagihala, Takashi Saito, Takashi Kamiyama and Genki Kobayashi*



15426

$Ba_{14}Si_4Sb_8Te_{32}(Te_3)$: hypervalent Te in a new structure type with low thermal conductivity

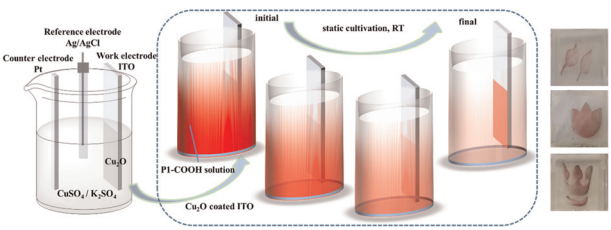
Subhendu Jana, Sweta Yadav, Swati, Manish K. Niranjan and Jai Prakash*



15440

Soluble polymer facilely self-grown *in situ* on conducting substrates at room temperature towards electrochromic applications

Xiongchao Shao, Yuhua Yang, Qidi Huang, Dacheng Dai, Haichang Fu, Guohua Gong, Cheng Zhang, Mi Ouyang,* Weijun Li and Yujie Dong*



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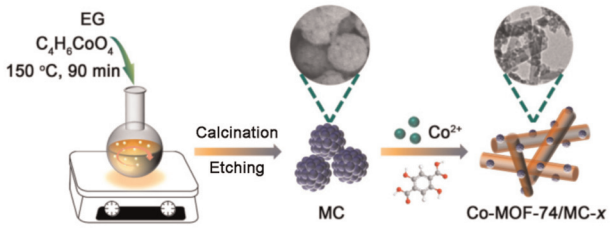
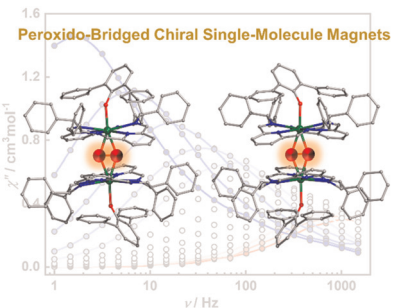


A non-enzymatic glucose sensor based on a mesoporous carbon sphere immobilized Co-MOF-74 nanocomposite

Xianliang Li,* Diwei Deng, Lufang He and Yan Xu

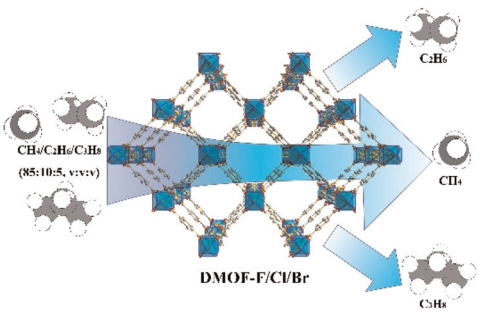
15456



Peroxido-bridged chiral double-decker dysprosium macrocycles

Chen Zhao, Tingting Wang, Xiaodong Liu, Zhenhua Zhu,* Xu Ying, Xiao-Lei Li and Jinkui Tang*

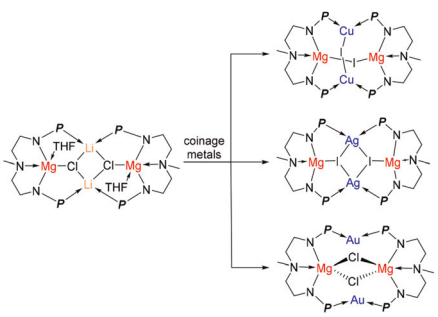
15462



Halogen-modified metal–organic frameworks for efficient separation of alkane from natural gas

Zhirong Song, Yanchun Zheng, Yiqi Chen, Youlie Cai, Rong-Jia Wei and Junkuo Gao*

15467



Magnesium complexes supported by a dianionic double layer nitrogen–phosphorus ligand: a synthesis and reactivity study

Yafei Li, Pengfei Chen, Qin Zhu* and Congqing Zhu*

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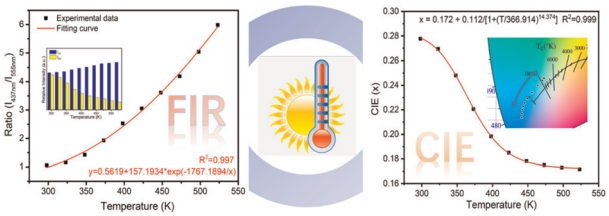
15475

White-emitting orthosilicate phosphor α-Sr_2SiO_4: $Ce^{3+}/Eu^{2+}/K^+$: a bimodal temperature sensor with excellent optical thermometric sensitivity

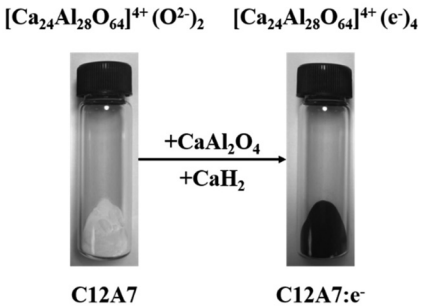
Bin Hui, Kai Zhao, Han Si, Xinlin Tong, Xinyi Wu, Li Yin and Saifang Huang*



15484

A simplified and facile preparation method for the $[Ca_{24}Al_{28}O_{64}]^{4+}(e^-)_4$ electride

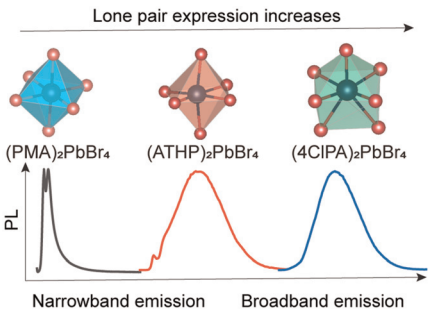
Xiangyu Zhang, Yunlei Chen, Yongfang Sun, Fei Wang, Xiao-Dong Wen* and Tian-Nan Ye*



15489

Broadband emission originating from the stereochemical expression of $6s^2$ lone pairs in two-dimensional lead bromide perovskites

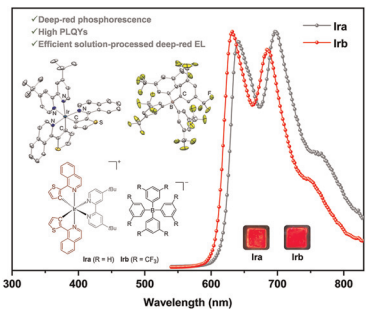
Xiaofan Jiang, Yu Tao, Jiazhen Gu, Leyang Jin, Chen Li, Wenkai Zhang* and Yongping Fu*



15496

Efficient 1-(thiophen-2-yl)isoquinoline-based ionic iridophosphors with bulky counterions for solution-processed deep-red electroluminescence

Peng Tao,* Xiao-Kang Zheng, He Jiang, Xinghao Sheng, Yongjing Deng, Yuk Yin Ian Chan, Qiang Zhao* and Wai-Yeung Wong*



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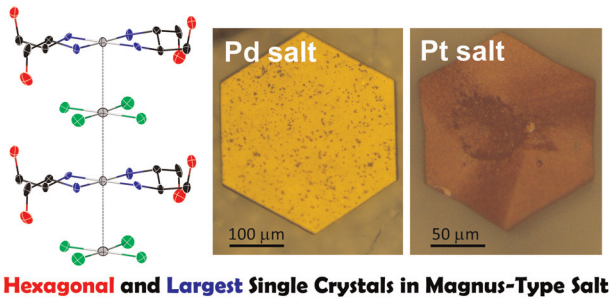
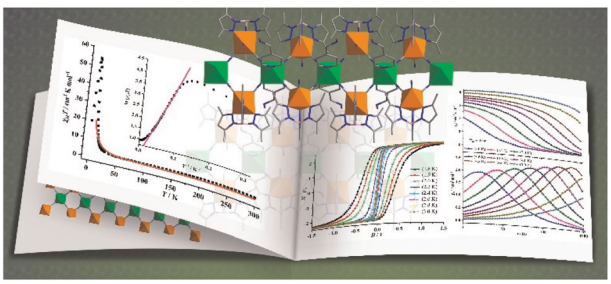


Hexagonal crystalline Magnus' green salt analogues prepared from hydroxy-functionalised Pt and Pd complexes

Mohammad Rasel Mian,* Unjila Afrin, Shinya Takaishi, Brian K. Breedlove, Masahiro Yamashita* and Hiroaki Iguchi*

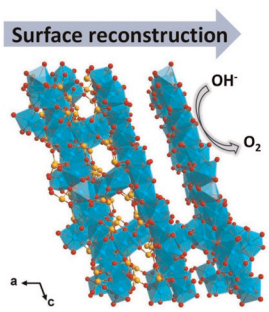
15510



Ferromagnetically coupled single-chain magnets exhibiting a magnetic hysteresis of 0.42 Tesla in cyano-bridged $Fe_2^{III}M^{II}$ (M = Ni, Fe) coordination polymers

Jin-Hua Wang, Mohammad Khurram Javed, Jia-Xin Li, Yi-Quan Zhang, Zhao-Yang Li* and Masahiro Yamashita

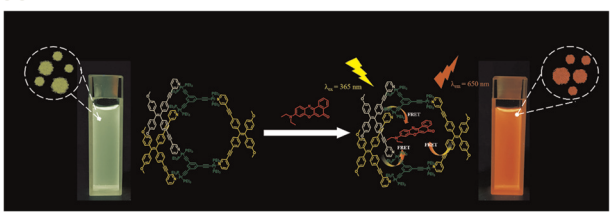
15518



A layered $CoSeO_3$ pre-catalyst for electrocatalytic water oxidation

Ting Wang, Shujiao Yang, Haoquan Zheng, Wei Zhang* and Rui Cao*

15524



A supramolecular artificial light-harvesting system based on a luminescent platinum(II) metallacage

Ning Wang, Weiao Yang, Lei Feng, Xing-Dong Xu* and Shengyu Feng*

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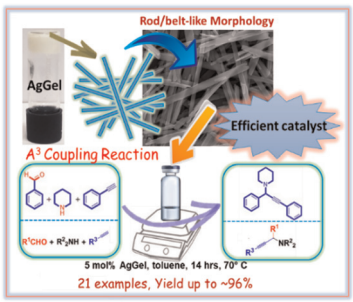
15530

Exploring amine-rich supramolecular silver(I) metallogels for autonomous self-healing and as catalysts for a three component coupling reaction

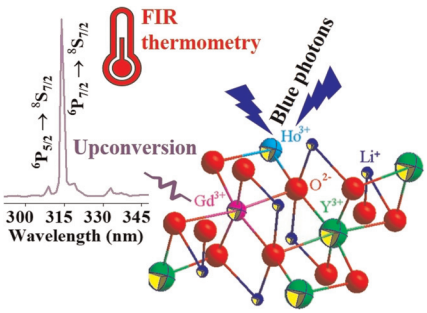
Ekata Saha, Ajijur Rahaman, Sukalyan Bhadra* and Joyee Mitra*



15539

UVB upconversion of $LiYO_2$:Ho^{3+},Gd^{3+} for application in luminescence thermometry

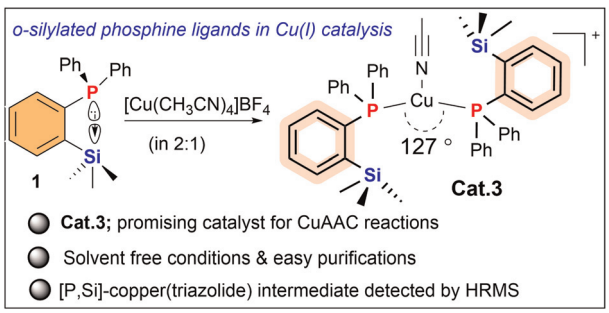
Shanshan Zhao, Benchun Li, Tiantian Shen, Fang Fang, Songlin Zhuang, Dawei Zhang and Dechao Yu*



15549

New cationic coinage metal complexes featuring silyl group functionalized phosphine: syntheses, structures and catalytic studies in alkyne–azide cycloaddition reactions

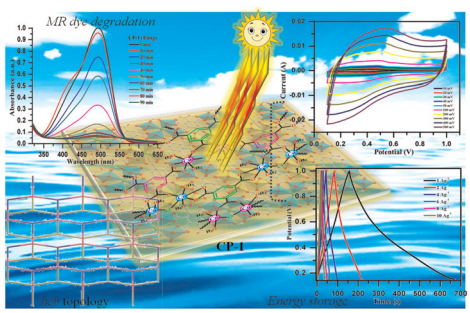
Amiya Kumar Sahoo, Ashish Kumar Sahoo, Bhagyashree Das, Subhra Jyoti Panda, Chandra Shekhar Purohit and Adinarayana Doddi*



15562

Bifunctional Cu(II)-based 2D coordination polymer and its composite for high-performance photocatalysis and electrochemical energy storage

Arif Ali, Waris, Basree, Mohammad Zain Khan, Necmi Dege, Musheer Ahmad* and M. Shahid*



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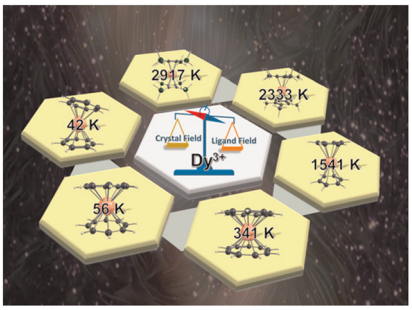
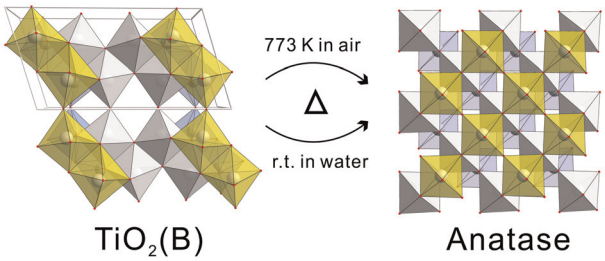


Understanding electrostatics and covalency effects in highly anisotropic organometallic sandwich dysprosium complexes [Dy(C_mR_m)$_2$] (where R = H, SiH_3, CH_3 and *m* = 4 to 9): a computational perspective

Ibtesham Tarannum, Shruti Moorthy and Saurabh Kumar Singh*

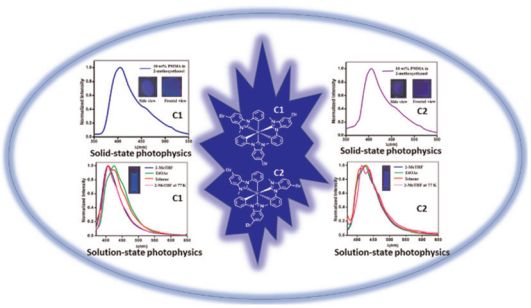
15590



Phase transition behaviour and mechanism of 2D TiO_2(B) nanosheets through water-mediated removal of surface ligands

Shirui Xie, Lijing Fan, Yanxin Chen, Jiliang Cai, Fan Wu, Kecheng Cao* and Pengxin Liu*

15597



Effect of substitution on deep-blue Ir(III) N-heterocyclic carbene (NHC) emitters

Rahat Gupta, Priya Sahni, Salil K. Jana, Anshul Negi and Amlan K. Pal*

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