

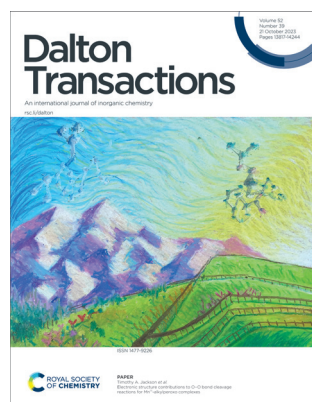
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ISSN 1477-9226 CODEN DTARAF 52(39) 13817–14244 (2023)

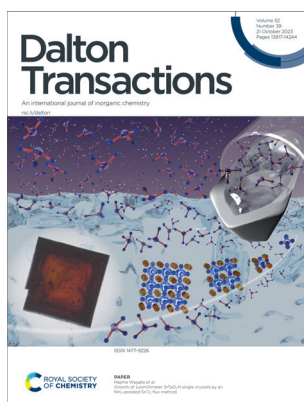


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See Timothy A. Jackson *et al.*, pp. 13878–13894.

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Inside cover

See Hajime Wagata *et al.*, pp. 13895–13905.

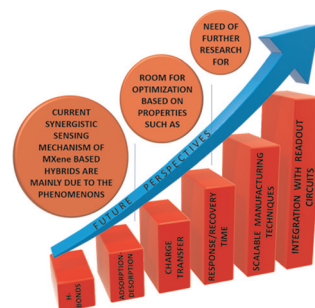
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PERSPECTIVE

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Room-temperature chemiresistive ammonia sensors based on 2D MXenes and their hybrids: recent developments and future prospects

Sayali Atkare, Som Datta Kaushik, Shweta Jagtap* and Chandra Sekhar Rout*

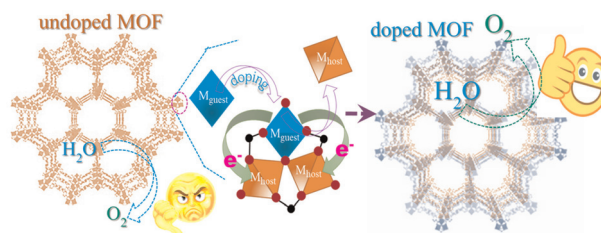


FRONTIER

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Metal-ion doping in metal–organic-frameworks: modulating the electronic structure and local coordination for enhanced oxygen evolution reaction activity

Nabeen K. Shrestha,* Supriya A. Patil, Amol S. Salunke, Akbar I. Inamdar, Hyungsang Kim* and Hyunsik Im*



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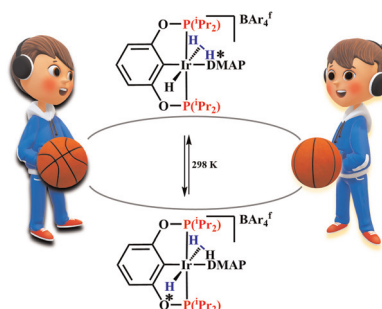


COMMUNICATIONS

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H-atom site exchange in an iridium *trans*-dihydrogen/hydride complex, *trans*-[Ir(H)(η^2 -H₂)(iPr)₄(POCOP)(DMAP)]⁺

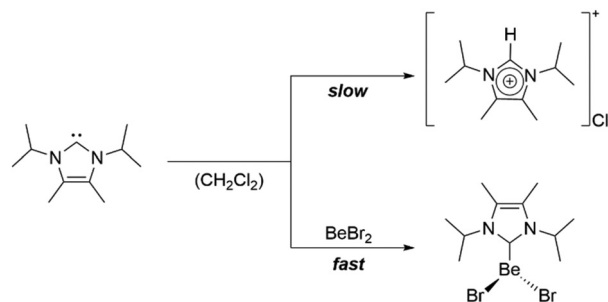
Nisha K. Agrawal, S. Gayathridevi, Soumya R. Dash, Kumar Vanka* and Balaji R. Jagirdar*



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Reactivity of free N-heterocyclic carbenes in dichloromethane

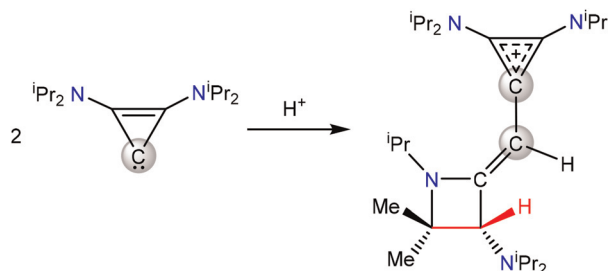
Magnus R. Buchner* and Deniz F. Bekiş



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Dimerization and ring-opening in bis(diisopropylamino)cyclopropenylidene (BAC) mediated by [U(NR₂)₃(CCPh)] (R = SiMe₃)

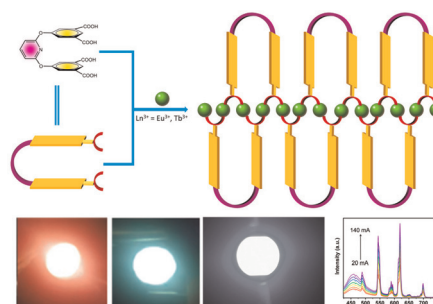
Thien H. Nguyen, Christophe Pauly, Gregory T. Kent, Guang Wu and Trevor W. Hayton*



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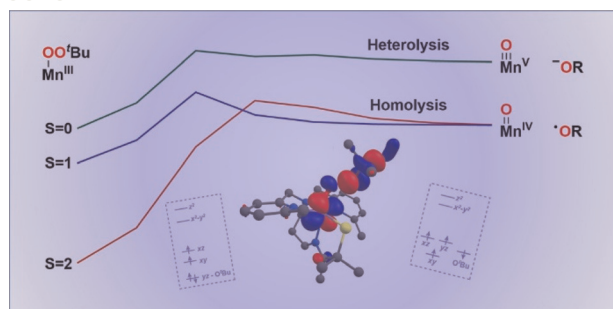
U-type π -conjugated phosphorescent ligand sensitized lanthanide metal–organic frameworks for efficient white-light-emitting diodes

Ying-Jun Chen, Chang-Xun Dou, Pei-Pei Yin, Jun-Ting Chen, Xiao-Gang Yang,* Bo Li,* Lu-Fang Ma and Li-Ya Wang*



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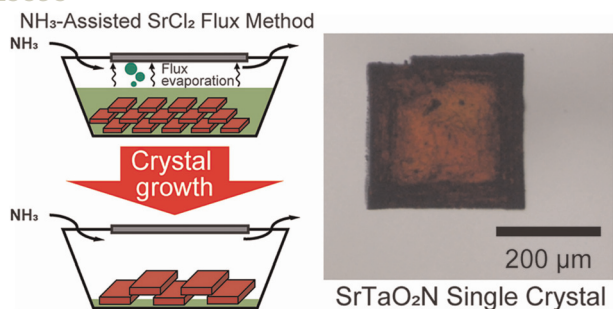
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Electronic structure contributions to O–O bond cleavage reactions for Mn^{III}-alkylperoxo complexes

Samuel A. Brunclik, Adedamola A. Opalade and Timothy A. Jackson*

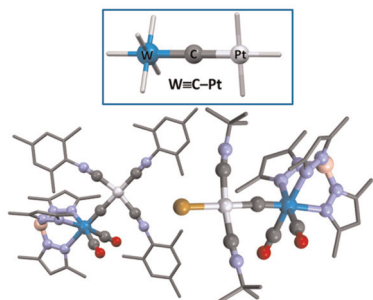
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Growth of submillimeter SrTaO₂N single crystals by an NH₃-assisted SrCl₂ flux method

Ginji Harada, Ryosuke Sinmyo, Shuhou Maitani, Tomoaki Watanabe, Mirabbos Hojamberdiev, Kitaru Suzuki and Hajime Wagata*

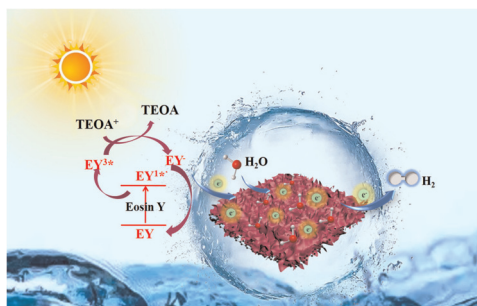
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Isonitrile μ₂-carbido complexes

Liam K. Burt and Anthony F. Hill*

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Integrating Co(OH)₂ nanosheet arrays on graphene for efficient noble-metal-free EY-sensitized photocatalytic H₂ evolution

Yu Wei, Jin-Ge Hao, Jia-Lin Zhang, Wei-Ya Huang, Shao-bo Ouyang, Kai Yang* and Kang-Qiang Lu*

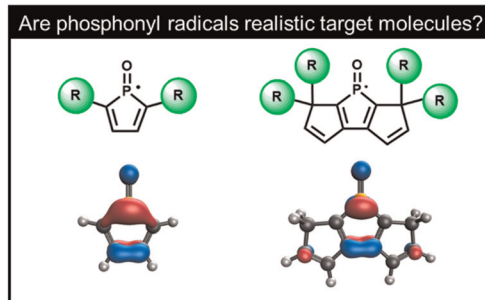


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A quest for stable phosphonyl radicals: limitations and possibilities of carbocyclic backbones and bulky substituents

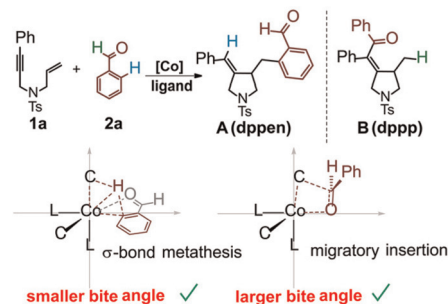
Pelin Kaymak, Meng Yang and Zoltán Benkő*



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Mechanism and origins of cobalt-catalyzed ligand-controlled regiodivergent C–H functionalization of aldehydes with enynes

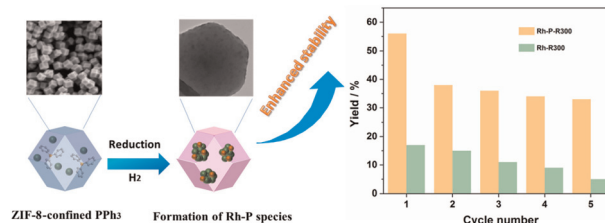
Jing-Wen Zhang, Xiao-Jun Liu, Jian Zhang* and Jian-Biao Liu*



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Enhancing stability *via* confining Rh–P species in ZIF-8 for hydroformylation of 1-octene

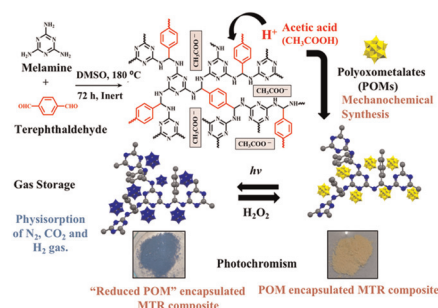
Xiaorui Yan, Lele Chen, Haisheng Wei,* Tiantian Liu, Kairui Li and Jing Li*



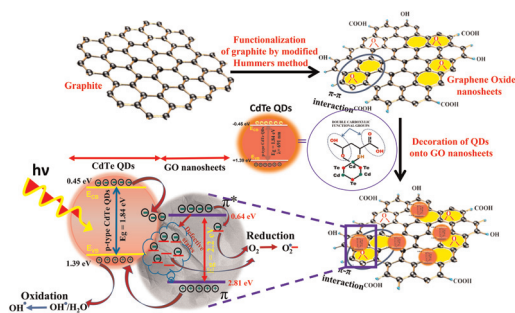
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Photochemical and gas adsorption studies of Keggin polyoxometalate functionalized porous melamine terephthalaldehyde material

Anjali Tripathi and Sabbani Supriya*



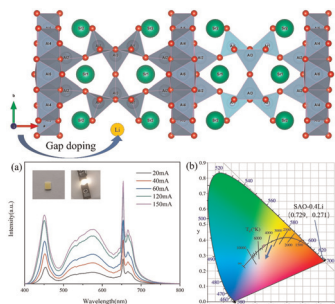
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CdTe QD-decorated GO nanosheet heterojunction for efficient photocurrent generation and photocatalytic activity

Sumathi Subramanian, Sasikala Ganapathy,*
Suguna Subramanian and Ayyaswamy Arivarasan

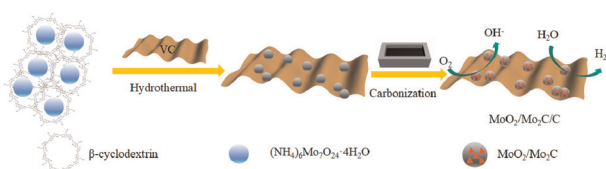
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Theoretical calculations and photoluminescence properties of $\text{Sr}_4\text{Al}_{14}\text{O}_{25}:\text{Mn}^{4+}$ red phosphors doped with Li^+

Xingsen Wang, Daoyuan Ma, Yunzheng Liu,
Biqing Song, Linfang Long and LiBin Xia*

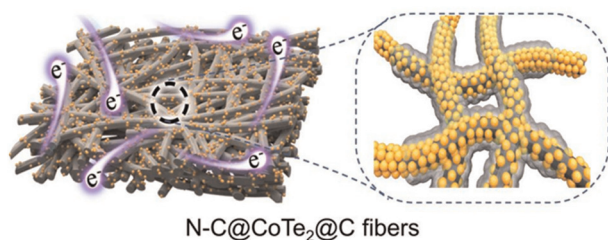
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Synthesis of a carbon-wrapped microsphere $\text{MoO}_2/\text{Mo}_2\text{C}$ heterojunction as an efficient electrocatalyst for the oxygen reduction reaction and the hydrogen evolution reaction

Jiannan Cai, Xiaofeng Zhang, Ting Wang, Yuande Shi*
and Shen Lin*

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Sandwich-type $\text{N-C@CoTe}_2\text{@C}$ anode: a stress-buffer nanostructure for stable sodium-ion storage

Lixiang Wang,* Yahua Hu, Khak Ho Lim and Wei Zhang*

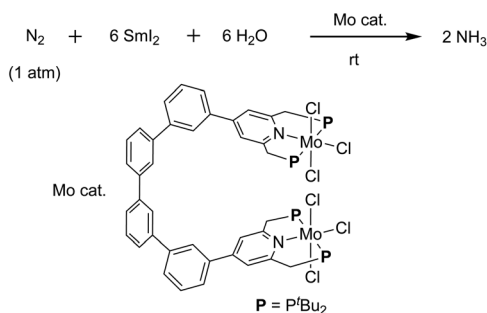


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Design, synthesis and reactivity of dimolybdenum complex bearing quaterphenylene-bridged pyridine-based PNP-type pincer ligand

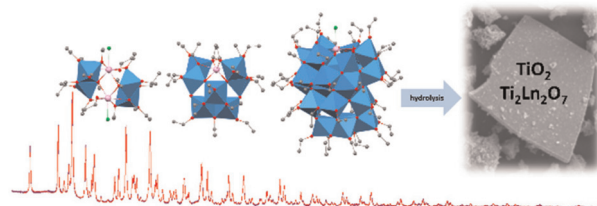
Aya Eizawa, Kazuya Arashiba, Hiromasa Tanaka, Asuka Konomi, Kazunari Yoshizawa* and Yoshiaki Nishibayashi*



14017

Structural variation, magnetism and single-source deposition of lanthanide-containing polyoxotitanates

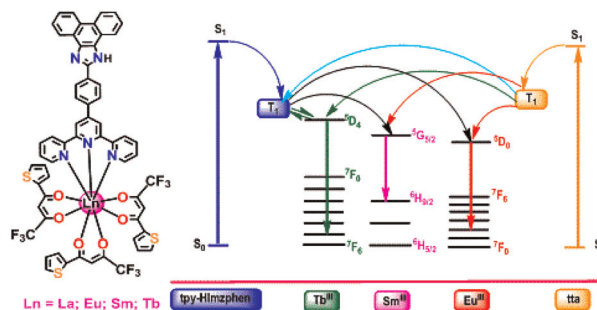
Rosa Müller, Olivia Georgiades, Joshua D. Bocarsly, Farheen N. Sayed, Víctor Riesgo-González, Andrew D. Bond, Clare P. Grey and Dominic S. Wright*



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Synthesis, characterization, luminescence properties and deciphering the role of a terpyridyl-imidazole based ligand in the dissimilar luminescence sensitization of ternary lanthanide(III) tris-(β-diketonate) complexes

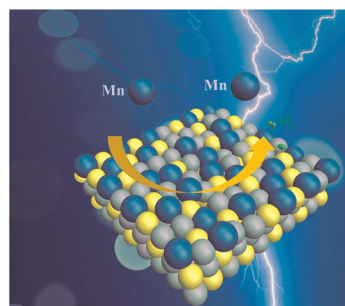
Toushique Ahmed, Amit Chakraborty, Animesh Paul and Sujoy Baitalik*



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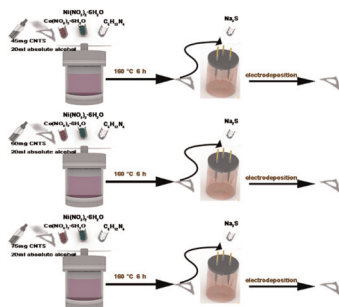
Constructing a NiMnS electrode with a Mn-rich surface for hydrogen production in anion exchange membrane water electrolyzers

Wenwu Guo, Hyunki Kim, Seokjin Hong, Soo Young Kim* and Sang Hyun Ahn*



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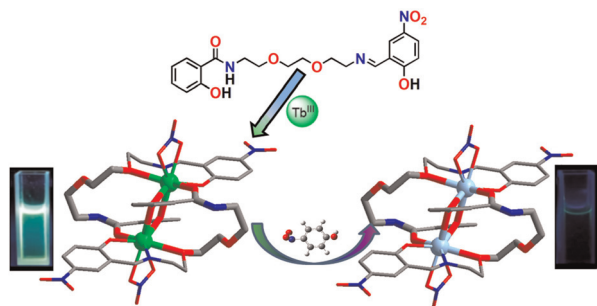
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Enhancing supercapacitor performance using nanosheet-covered nanotube structures $\text{Co}_3\text{S}_4/\text{Ni}_{0.96}\text{S}@\text{CNTs}$ with carbon nanotubes as conductive substrates

Yanmin Wang, Songtao Liu, Xuejiao Sun, Wenxiu He* and Yongqiang Zhang*

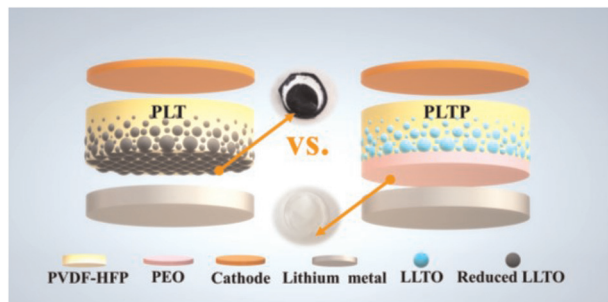
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A lanthanide luminescent sensor for the detection of 4-nitrophenol in aqueous media

Xue-Qin Song,* Fu-Qiang Song, Pei Zhang and Juan Li

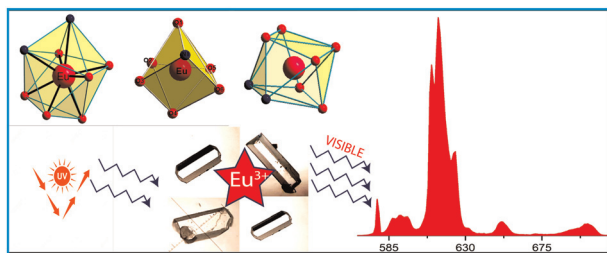
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An LLTO-containing heterogeneous composite electrolyte with a stable interface for solid-state lithium metal batteries

Jiaying Bi,* Ling Zhang, Borong Wu,* Meixia Xiao, Lei Wang and Zhao Li

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Pure red-light emitting europium based complexes as efficient UV light converters: synthesis, crystal structure and photoluminescence properties

Asgar Ali,* Zubair Ahmed, Rahisuddin and K. Iftikhar

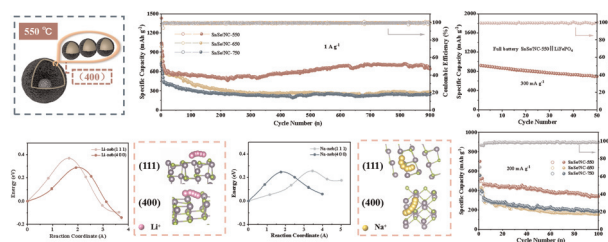


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Optimized crystal orientation for enhanced reaction kinetics and reversibility of SnSe/NC hollow nanospheres towards high-rate and long-term lithium/sodium storage

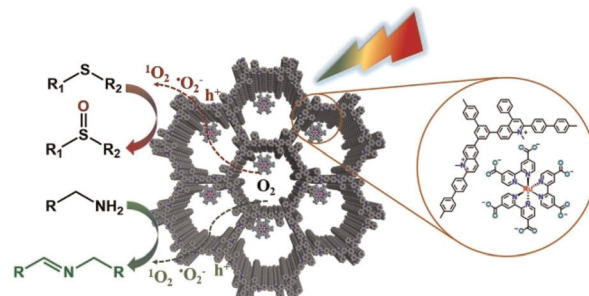
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Ru(N[^]N)₃-docked cationic covalent organic frameworks for enhanced sulfide and amine photooxidation

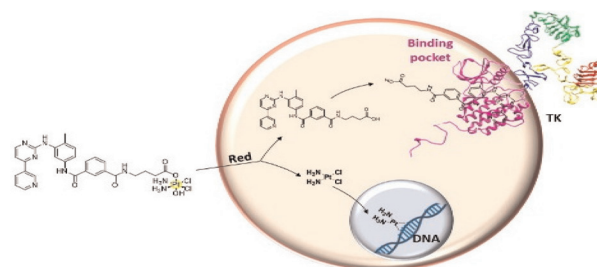
Yan-Xia Wang, Ying Wang, Jing Li, Yang Yu,* Sheng-Li Huang* and Guo-Yu Yang*



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Novel design of dual-action Pt(IV) anticancer pro-drugs based on cisplatin and derivatives of the tyrosine kinase inhibitors imatinib and nilotinib

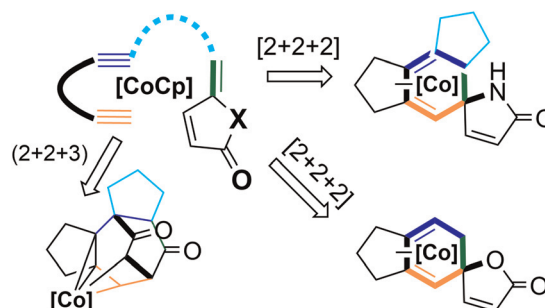
Darren Fergal Beirne, Barbara Farkaš, Chiara Donati, Valentina Gandin, Isabel Rozas, Trinidad Velasco-Torrijos* and Diego Montagner*



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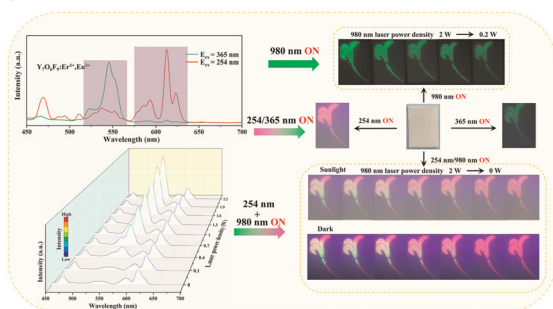
Mechanistic insight into cobalt-mediated [2 + 2 + 2]-cycloaddition reactions with γ -alkylidenebutenolide and γ -alkylidenebuterolactam as 2 π partners

Léo Chaussy, Marion Delorme, Alexander Punter, Yannick Carissan, Jean-Luc Parrain, Muriel Amatore,* Paola Nava* and Laurent Commeiras*



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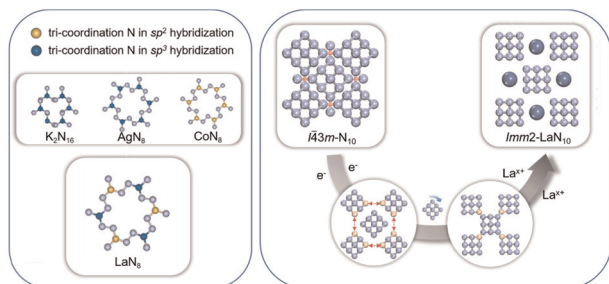
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Achieving excitation wavelength–power-dependent colorful luminescence *via* multiplexing of dual lanthanides in fluorine oxide particles for multilevel anticounterfeiting

Chenyang Zhao, Zikai Meng, Zhen Guo, Zhenbin Wang,* Jiajia Cao, Jihua Zhu, Cunhua Ma, Mingjin Zhang* and Weisheng Liu*

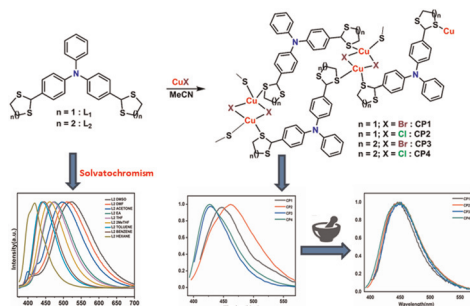
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Novel nitrogen-rich lanthanum nitrides induced by the ligand effect under pressure

Bo Jin, Yuanyuan Liu, Zhen Yao,* Shuang Liu* and Peng Wang*

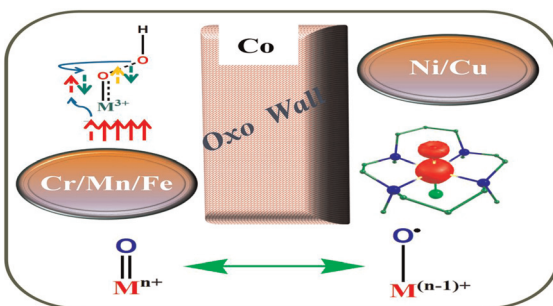
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Solvatochromic behaviour of cyclic dithioether-functionalized triphenylamine ligands and their mechano-responsive Cu(I) coordination polymers

Dilip Pandey, Gopal Singh, Shivendu Mishra, Lydie Viau, Michael Knorr and Abhinav Raghuvanshi*

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Theoretical study of the formation of metal–oxo species of the first transition series with the ligand 14-TMC: driving factors of the ‘‘Oxo Wall’’

Monika,* Manjeet Kumar, Somi, Arup Sarkar, Manoj Kumar Gupta and Azaj Ansari*

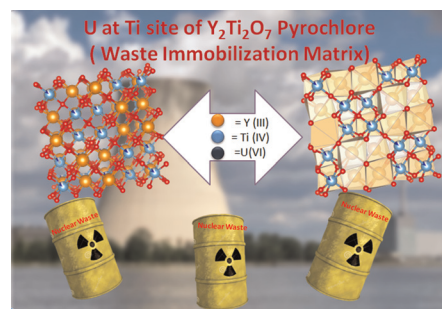


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Synthesis and feasibility studies of doping U at Ti site of $\text{Y}_2\text{Ti}_2\text{O}_7$ as a radioactive waste immobilization matrix

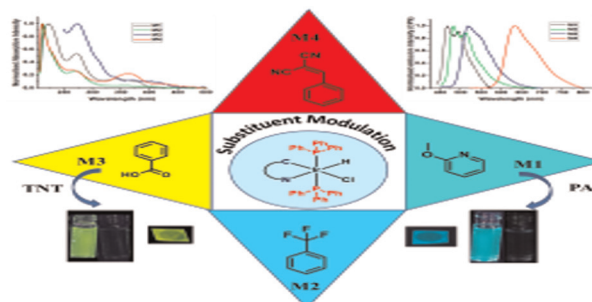
Nitin Gumber, Muhammed Shafeeq, Santosh K. Gupta, Rohan Phatak, Uttam Kumar Goutam, Ravi Kumar and Rajesh V. Pai*



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Controlling the sensitivity and selectivity for the detection of nitro-based explosives by modulating the electronic substituents on the ligand of AIPE-active cyclometalated iridium(III) complexes

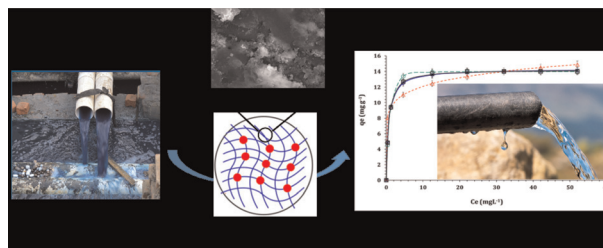
Annu Agarwal, Ram Prasad Bhatta, Vishal Kachwal and Inamur Rahman Laskar*



14194

Nickel-hydroxide-encapsulated polyacrylamide as a novel adsorptive composite for the capture of methylene blue from wastewater

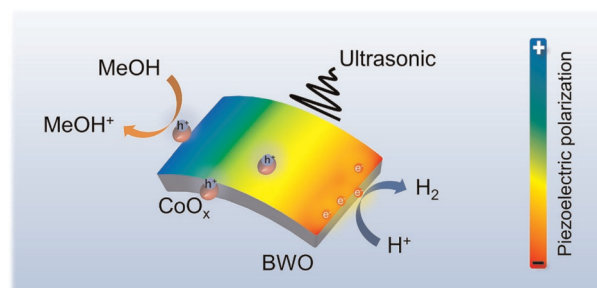
A. Marey, Marzouk Adel, Ahmed M. A. El Naggat,* Adel A. El-Zahhar and Mohamed H. Taha



14210

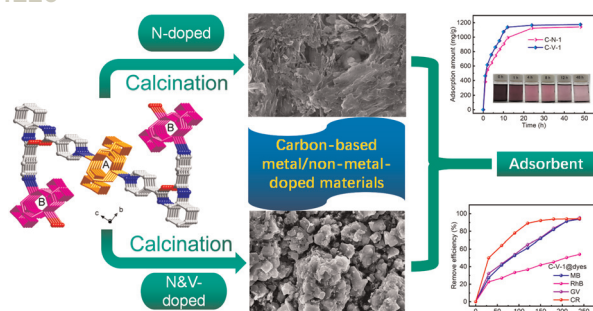
Aurivillius-layered Bi_2WO_6 nanoplates with CoO_x cocatalyst as high-performance piezocatalyst for hydrogen evolution

Lining Tan, Xinran Sun, Jintao Zhang, Chengchao Jin, Fei Wang* and Daiming Liu*



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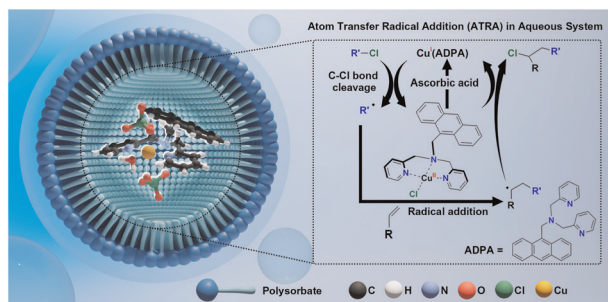
14220



Fabrication of bimetallic-doped materials derived from a Cu-based complex for enhanced dye adsorption and iodine capture

Ai-Ai Yang, Jian-Peng Cui, Yu Liu,* Xiao-Sa Zhang, Ze-Bang Sun, Nan Luo, Wen-Ze Li* and Jian Luan*

14235



Selective copper-catalysed atom transfer radical addition (ATRA) in water under environmentally benign conditions

Nutchanikan Phiomphu, Methasit Juthathan, Pattira Suktanarak, Mongkol Sukwattanasinitt, Thawatchai Tuntulani and Pannee Leeladee*

CORRECTION

14242

Correction: Silver complexes with substituted terpyridines as promising anticancer metallodrugs and their crystal structure, photoluminescence, and DNA interactions

Jiahe Li, Zhiyuan Wang, Zhongting Chen, Xingyong Xue, Kejuan Lin, Hailan Chen, Lixia Pan, Yulin Yuan* and Zhen Ma*

