

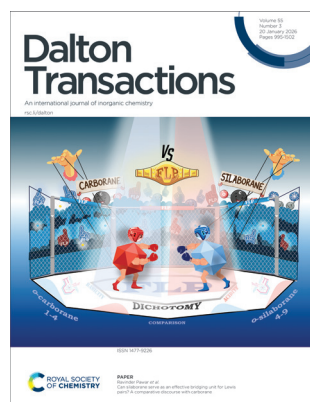
# Dalton Transactions

An international journal of inorganic chemistry incorporating Acta Chemica Scandinavica  
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## IN THIS ISSUE

ISSN 1477-9226 CODEN DTARAF 55(3) 995-1502 (2026)



**Cover**  
See Ravinder Pawar et al.,  
pp. 1125–1139.

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**Inside cover**  
See Fathima Thanha  
Thazhe Namboorikandy and  
Pattiyil Parameswaran,  
pp. 1140–1148.

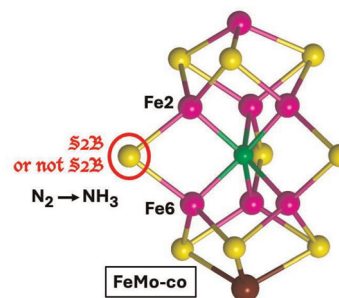
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2026, **55**, 1140.

## PERSPECTIVES

1008

### S 2B or not 2B?

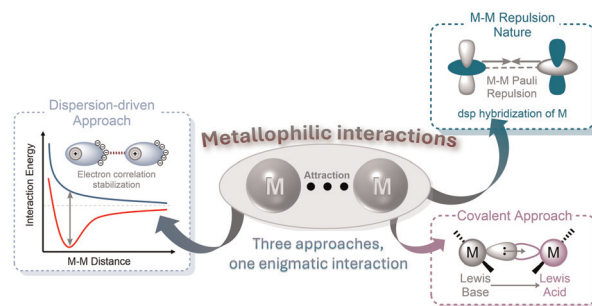
Ian Dance



1024

### A journey through metallophilic interactions: computational approaches and insights

Félix Reboiro, M. Elena Olmos,  
José M. López-de-Luzuriaga\* and Miguel Monge\*



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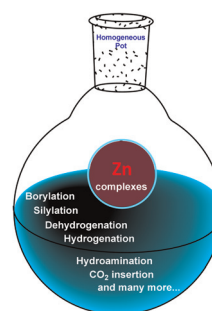
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## PERSPECTIVES

1037

## Well-defined Zn-complexes in homogeneous catalysis: recent advances and future scope

Subhasree Pal, Amit Kumar Guin and Nanda D. Paul\*

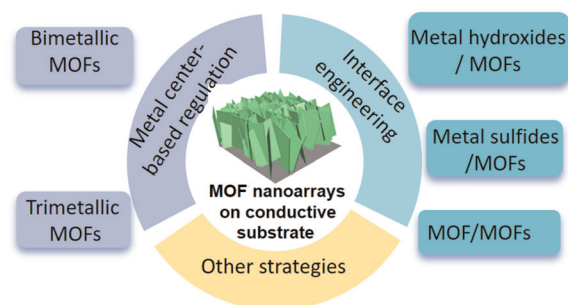


## FRONTIER

1100

## Strategies for improving oxygen evolution performance of MOF nanoarrays

Shuangyan Lin and Zhikun Xu\*

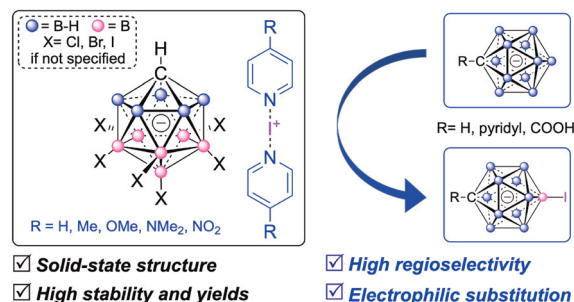


## COMMUNICATIONS

1109

Monocarborane-stabilized iodonium salts enable regioselective B12-iodination of  $[CB_{11}H_{12}]^-$ 

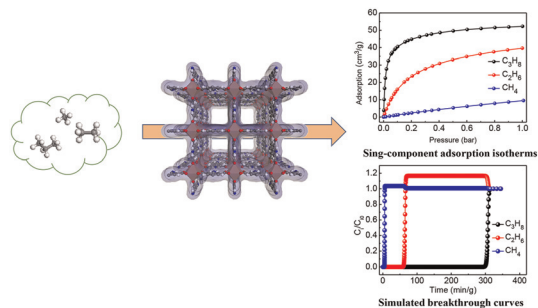
Chennuo Jiang, Lianyu Chen, Yujie Jin, Jiyong Liu, Kang Zhang\* and Simon Duttwyler\*



1114

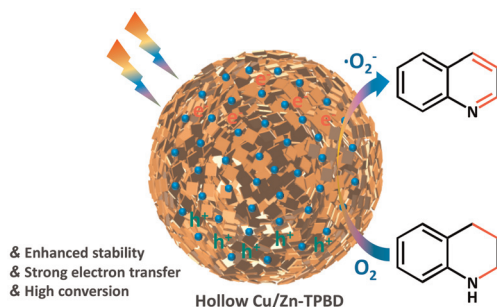
Efficient separation of  $CH_4/C_2H_6/C_3H_8$  enabled by an indium-tetracarboxylate MOF with cross-channel and amino sites

Chaohui He,\* Jinglin Guo, Rajamani Krishna, Zhenzhen Jia, Yujuan Zhang, Xiao-Qing Wang\* and Tuoping Hu\*



## COMMUNICATIONS

1119

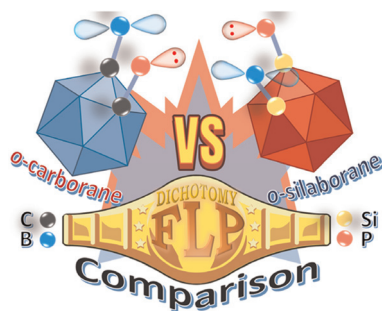


### Ostwald ripening-induced hollow photoactive Zn-MOF-confined electron-deficient Cu NPs for enhanced photocatalytic oxidative dehydrogenation to quinoline

Leixin Hou,\* Yanli Chen, Ziyang Li, Congfa Bian, Youyi Li, Mi Zhang, Guilin Wen, Daofu Liu and Huilin Huang\*

## PAPERS

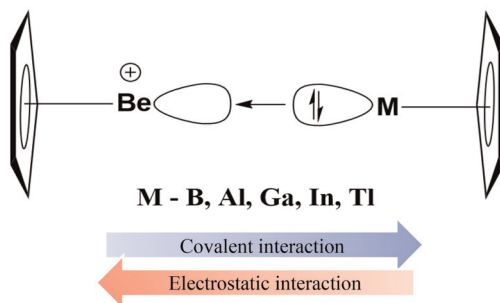
1125



### Can silaborane serve as an effective bridging unit for Lewis pairs? A comparative discourse with carborane

Mohammad Faizan, Zaid Malik, Madem Sandhya and Ravinder Pawar\*

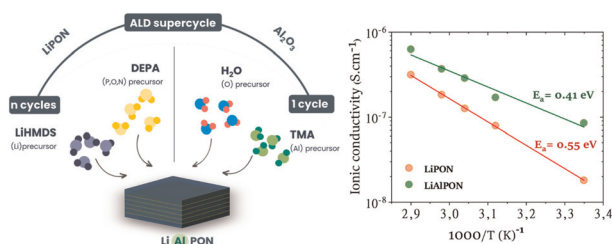
1140



### Cationic beryllium–group 13 heterobimetallic dimetalocenes with a donor–acceptor bond

Fathima Thanha Thazhe Namboorikandy and Pattiyil Parameswaran\*

1149



### Unveiling the structural and electrochemical effects of Al<sub>2</sub>O<sub>3</sub> incorporation within LiPON electrolyte thin films by atomic layer deposition

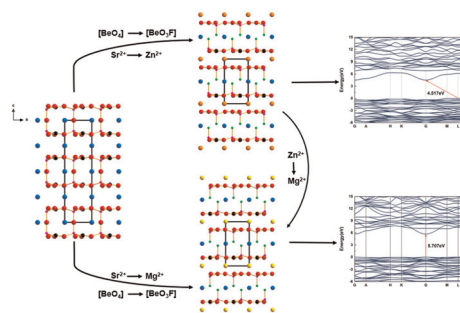
Ilyass Ghandari,\* Nicolas Gauthier, Névine Rochat, Sylvain Poulet, Lara Casiez, Manon Letiche, Violaine Salvador, Hélène Coudert-Alteirac, Nicolas Vaxelaire, Mikhael Bechelany and Messaoud Bedjaoui\*



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### SrMBe<sub>2</sub>(BO<sub>3</sub>)<sub>2</sub>F<sub>2</sub>(M = Zn, Mg): two SBBO-like compounds obtained by cation regulation

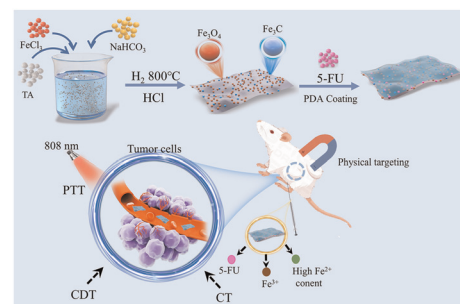
Tong Wu, Lei Kang, Fan Liu, Ruixin Guo, Shu Guo, Tianhong Huang, Shuangyue Shang, Lijuan Liu and Xiaoyang Wang\*



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### Engineering Fe<sub>3</sub>O<sub>4</sub>–Fe<sub>3</sub>C/C heterojunction nanosheets with multimodal therapy for tumor microenvironment-programmed drug delivery and enhanced chemodynamic therapy

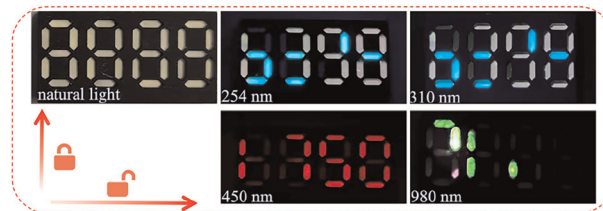
Desheng Wang, Changjin Xu,\* Shikui Wu, Gang Li, Huiwen Zhang, Herima Qi, Riqing Cheng, Liang Bao, Huiqing Guo\* and Jianping Chen\*



1184

### Multicolor luminescence of Cs<sub>2</sub>KLuCl<sub>6</sub> for anti-counterfeiting and information encryption applications

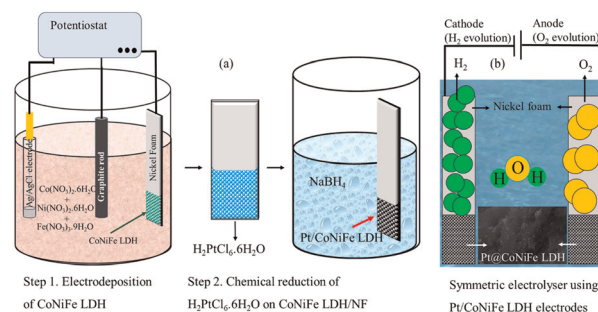
Yanyang Li, Lu Lei, Sirui Shu, Jian Zou, Shanshan Hu and Jun Yang\*



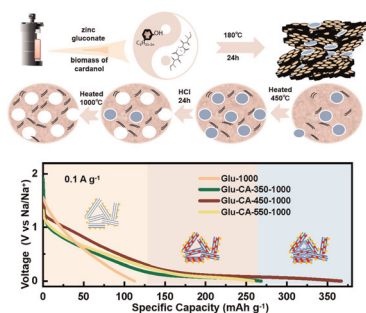
1192

### Triggering the intrinsic catalytic activity of electrodeposited CoNiFe LDH via Pt decoration for an efficient hydrogen evolution reaction

S. Vijaya and L. John Kennedy\*



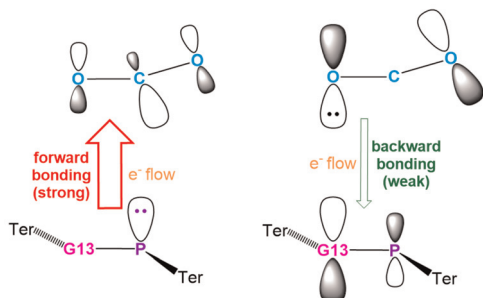
1207



### Cardanol biomass-derived hard carbon: a promising anode material for sodium-ion batteries

Weichen Li, Xiang Zheng, Luchao Yue, Zhi Wang, Chaohong Shi and Jing Tang\*

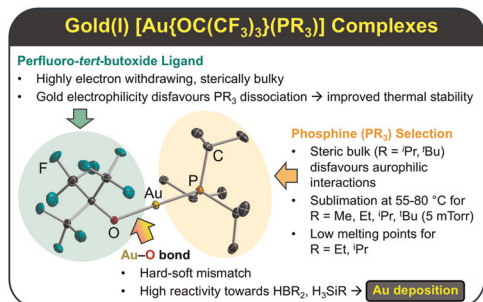
1217



### CO<sub>2</sub> activation without metals enabled by Lewis acid/base-free G13=P double bonds

Zheng-Feng Zhang and Ming-Der Su\*

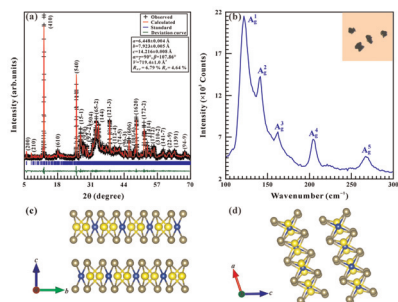
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### Gold(I) alkoxide and thiolate complexes as potential atomic layer deposition precursors

Nicholas A. Hoffman and David J. H. Emslie\*

1248



### Pressure-induced metallization and electronic transition in a two-dimensional ferroelastic semiconductor of Nb<sub>2</sub>SiTe<sub>4</sub> in different hydrostatic environments

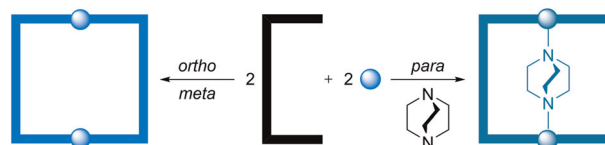
Xinyu Zhang, Lidong Dai,\* Haiying Hu, Meiling Hong, Bing Lv, Xuefei Liu, Juxiang Shao, Ming Yang, Shiwei Xie, Hongchun Luo, Yu Gao, Tao Wang, Miao Ren and Haonan Cheng



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## Discrete and polymeric supramolecular complexes assembled from $\text{Cu}^{2+}$ and isomeric xylylenebis(pyridyltriazoles)

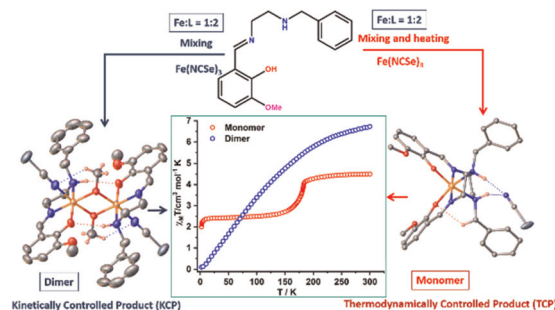
Uttam R. Pokharel,\* Frank R. Fronczek and Andrew W. Maverick\*



1274

## Thermal monomerization unlocks $3/2 \leftrightarrow 5/2$ spin crossover in a kinetically trapped high-spin Fe(III) dimer

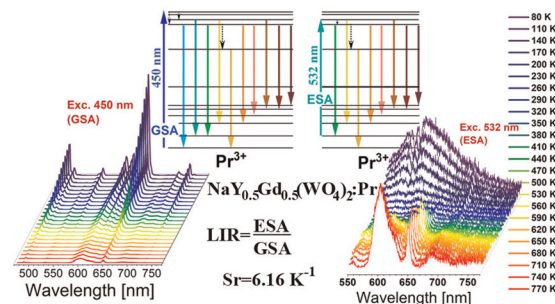
Bijoy Dey, Ján Titiš, Sakshi Mehta, Abhishake Mondal\* and Vadapalli Chandrasekhar\*



1284

## Emission and ESA/GSA thermographic properties of Pr-doped tungstate phosphors under vacuum ultraviolet and visible excitation

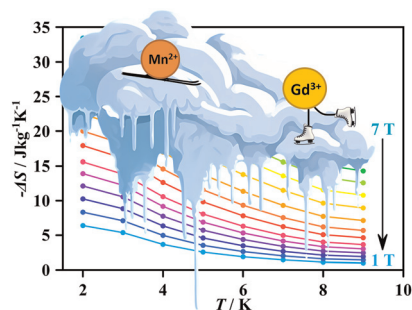
Radostaw Lisiecki,\* Nadiia Rebrova and Przemysław J. Dereń



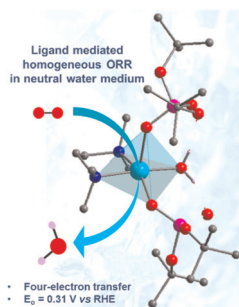
1298

## Dodecanuclear $\text{Mn}^{\text{II}}-\text{Gd}^{\text{III}}$ metallomacrocycles: magnetic and refrigerant responses

Ernesto Costa-Villén, Cristina Puigjaner, Júlia Mayans and Albert Escuer\*



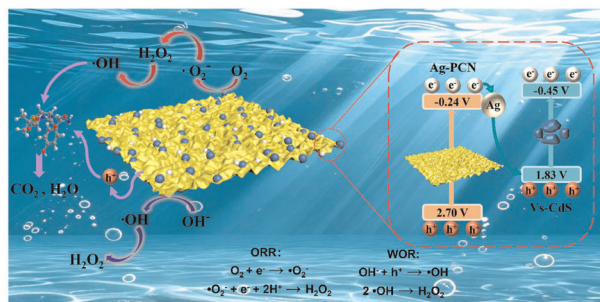
1306



### Ligand-mediated modulation in copper(II) complexes for four-electron oxygen reduction in neutral medium

Savi Chaudhary and Ramaswamy Murugavel\*

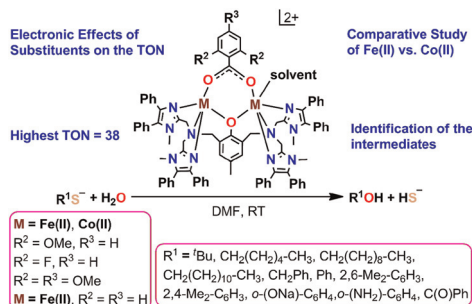
1318



### A defect engineered Z-scheme polymeric $C_3N_4/CdS$ heterojunction mediated by Ag boosts dual-channel $H_2O_2$ production with synergistic antibiotic degradation

Yongjian Sun, Xiangdong Wang, Hui Liu, Xintao Feng, Andre Lennox Olayemi Macauley, Wenli Zhang, Yinhua Jiang,\* Yan Liu, Jianming Zhang and Haiqing Xu\*

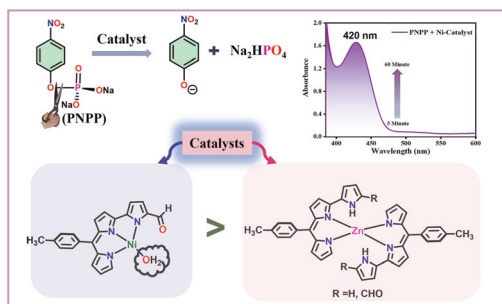
1335



### Electronic effects of substituents on the catalytic conversion of thiolates to alcohols by carboxylate bridged nonheme binuclear Fe(II) and Co(II) complexes

Anuj Baran Chakraborty, Rajib Hazra, Srimayee Mukherjee and Amit Majumdar\*

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### Synthesis of Ni(II) and Zn(II) complexes of pyrrolyl dipyrins and their biomimetic role in catalyzing the hydrolysis of the phospho-ester bond

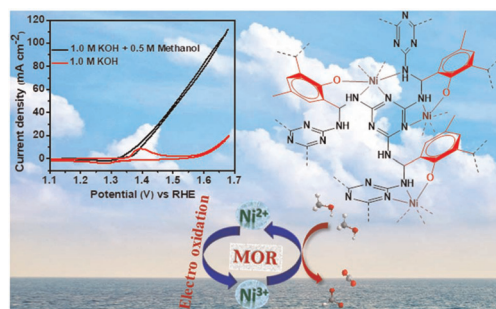
Pinky Chauhan, Abani Sarkar and Mangalampalli Ravikanth\*



1360

### A nickel incorporated triazine-based porous organic polymer for the electrocatalytic methanol oxidation reaction

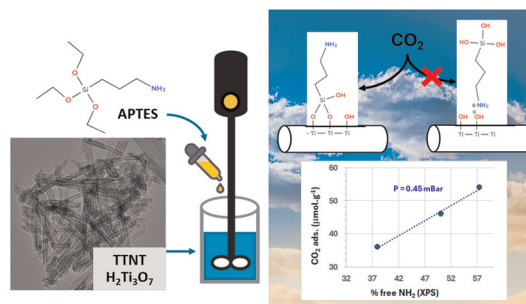
Indrani Pramanick, Samarpita Das, Bhabani Malakar, Sanjana Banerjee, Asim Bhaumik\* and Papu Biswas\*



1372

### Grafting titanate nanotubes with 3-aminopropyltriethoxysilane for enhanced CO<sub>2</sub> adsorption

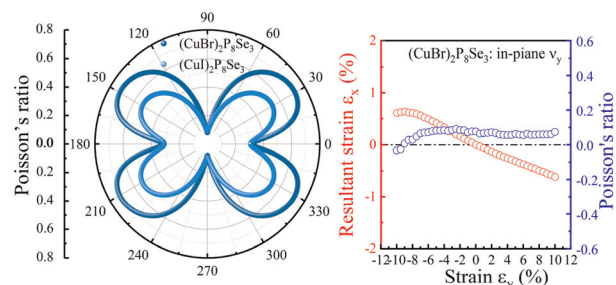
Cynthia Barreto, Edisson Morgado, Jr., Khrissy Medeiros, Marianne Diniz, Marcelo Maia, Aryandson da Silva, Sibebe B. C. Pergher, Deane Mesquita Roehl and Bojan A. Marinkovic\*



1392

### Strain-invariant near-zero Poisson's ratio emerging in 2D (CuX)<sub>2</sub>P<sub>8</sub>Se<sub>3</sub> (X = Br, I) hybrid structures

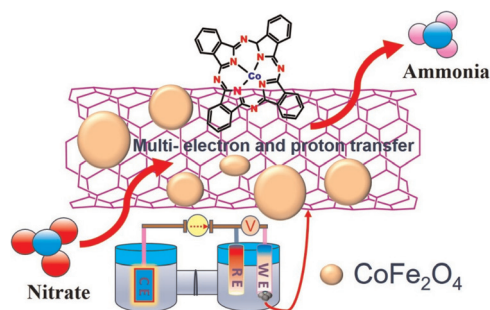
Xingxu Meng, Minglei Jia, Huimin Shen and Huabing Yin\*



1400

### A synergistic CoFe<sub>2</sub>O<sub>4</sub> spinel–cobalt phthalocyanine–carbon nanotube hybrid catalyst for highly selective electrochemical nitrate-to-ammonia conversion

Ningma Dorzi Sherpa, Hiren Jungi, Shakil Ahammad Chowdhury, Hiranmay Barma and Nitish Roy\*

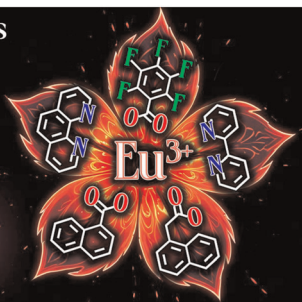


1417

### Mixed-anion complexes of lanthanides

Non-covalent interactions

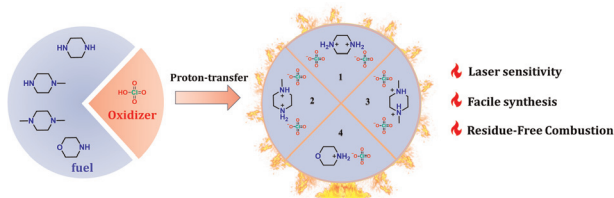
&  
Photoluminescent properties



### Effect of combining 1-naphthoate and pentafluorobenzoate anions in Eu(III) compounds on their structure and photoluminescent properties

Anastasia A. Levina, Maxim A. Shmelev,\* Andrey V. Lalov, Aleksandr S. Chistyakov, Julia K. Voronina, Evgeniya A. Varaksina, Ilya V. Taydakov, Alexey A. Sidorov and Igor L. Eremenko

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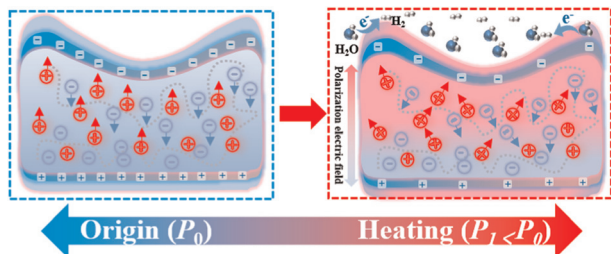


### Facile and low-cost construction of laser-ignitable energetic materials

Zeyu Xu, Xiu'e Jiang, Ruihui Wang, Mingren Fan, Yi Wang\* and Qinghua Zhang\*

- 🔥 Laser sensitivity
- 🔥 Facile synthesis
- 🔥 Residue-Free Combustion

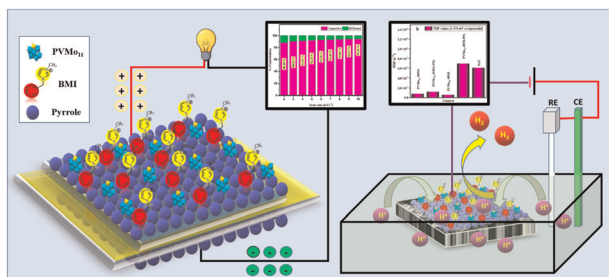
1445



### Oxygen vacancy-induced dipole moment enhancement in BiVO<sub>4</sub> for efficient pyro-catalytic hydrogen evolution

Jie Zhang, Qifeng Jia\* and Meng Li\*

1455



### Dual-functional phosphomolybdic acid-polypyrrole-ionic liquid nanocomposites for energy storage and hydrogen evolution: experimental and theoretical studies

Muhammed P. K. Anees, Selvaraj Iniyan, Chandrodai Pratap Singh, Murugavel Kathiresan,\* Sailaja Krishnamurthy and Sib Sankar Mal\*

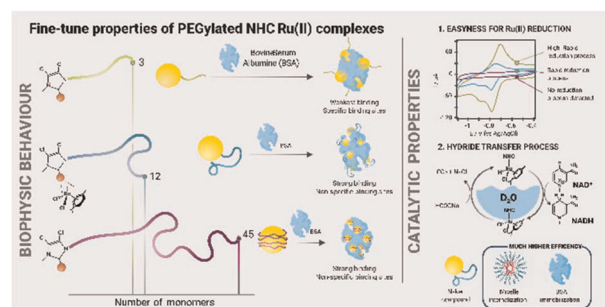


## PAPERS

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### Tuning chemical properties on ruthenium(II) complexes through PEGylation of N-heterocyclic carbene ligands

Oscar Barrios, Tamara Rodriguez-Prieto, Alicia Bort, Elżbieta Okła, Marek Maly, Miriam Chavez, Alberto Escarpa, Maksim Ionov, Maria Bryszewska, Jesús Cano, Inés Díaz-Laviada\* and Rafael Gómez\*



1490

### Symmetry and substituent electronics dictate electronic structure of low spin, mixed-ring rhenocene complexes

Eyram Asempa, Gregory M. Curtin, Ann Marie May, Jillian L. Dempsey\* and Elena Jakubikova\*



## CORRECTIONS

1498

### Correction: Tricarbonyl $^{99m}Tc(i)$ and $Re(i)$ -thiosemicarbazone complexes: synthesis, characterization and biological evaluation for targeting bacterial infection

Dipak Kumar Nayak, Rinku Baishya, Ramalingam Natarajan, Tuhinadri Sen and Mita Chatterjee Debnath\*

1499

### Correction: Exploring the effect of substituent in the hydrazone ligand of a family of $\mu$ -oxidodivanadium(v) hydrazone complexes on structure, DNA binding and anticancer activity

Debashis Patra, Subhabrata Paul, Indira Majumder, Nayim Sepay, Sachinath Bera, Rita Kundu, Michael G. B. Drew and Tapas Ghosh\*

