

# Dalton Transactions

An international journal of inorganic chemistry incorporating Acta Chemica Scandinavica  
[rsc.li/dalton](http://rsc.li/dalton)

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

## IN THIS ISSUE

ISSN 1477-9226 CODEN DTARAF 55(6) 2349–2730 (2026)



**Cover**  
See Andreas Schnepf *et al.*,  
pp. 2438–2442.

Image reproduced by  
permission of  
Andreas Schnepf  
from *Dalton Trans.*,  
2026, **55**, 2438.

Acknowledgment:  
background generated with AI.



**Inside cover**  
See Sabina W. Jaros,  
Božena Michniak-Kohn *et al.*,  
pp. 2443–2451.

Image reproduced by  
permission of Sabina W. Jaros  
from *Dalton Trans.*,  
2026, **55**, 2443.

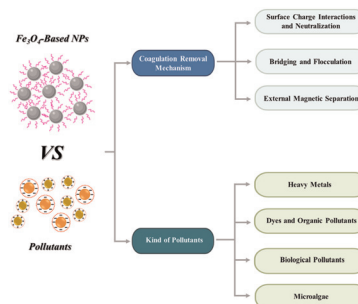
Acknowledgement:  
Cover partly generated with AI.

## PERSPECTIVES

2361

### Fe<sub>3</sub>O<sub>4</sub>-based magnetic nanoparticles for the removal of water contaminants

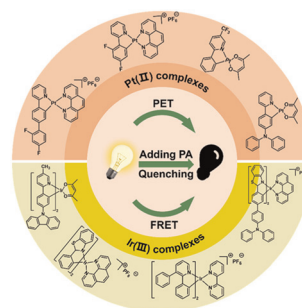
Ali Moeini, Iman Khezri, Reza Ahadi Dolatsara, Maryam Hajiebrahimi, Hamed Beydaghi, Aziz Shahraki, Adrine Malek Khachatourian,\* Muhammet S. Toprak and Rajender S. Varma\*



2400

### Recent progress in Pt(II)- and Ir(III)-complex-based chemical sensors for detecting picric acid

Xiaoran Yang, Qinglong Zhang, Boyuan Miao\* and Chun Liu\*



**GOLD  
OPEN  
ACCESS**

# EES Batteries

**Exceptional research on  
batteries and energy storage**

Part of the EES family

**Join  
in**

Publish with us

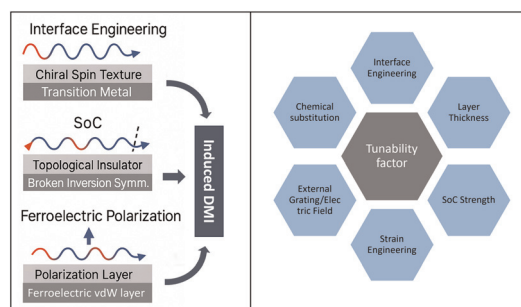
[rsc.li/EESBatteries](https://rsc.li/EESBatteries)

## PERSPECTIVES

2408

## Dzyaloshinskii–Moriya interaction-based collective magnetic properties of van der Waals heterostructures

Shahana KC, Deepshekhar Roy and Pritam Deb\*

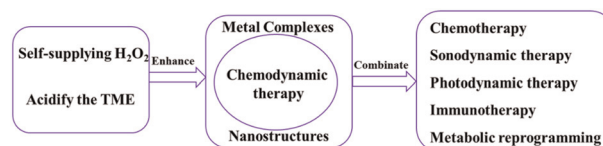


## FRONTIER

2418

## Recent advances in metal complexes and nanostructured materials for enhanced chemodynamic therapy

Wen-Ying Shen, Hong Liang\* and Zhen-Feng Chen\*

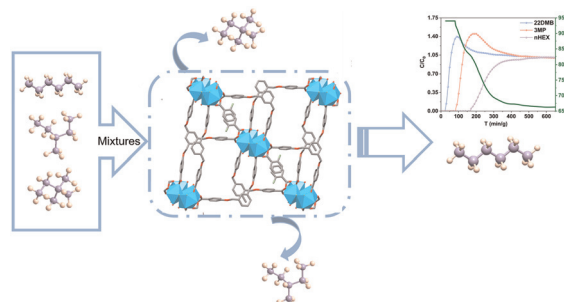


## COMMUNICATIONS

2428

## A stable yttrium-based metal–organic framework built on ladder building units for size-exclusion separation of hexane isomers

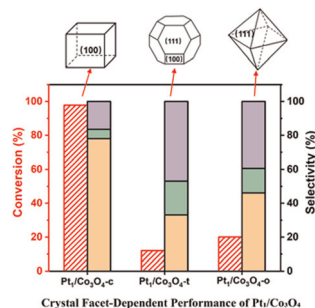
Ying Wang, Yan-Li Gai, Xin Zhou, Hao Wang\* and Kecai Xiong\*



2433

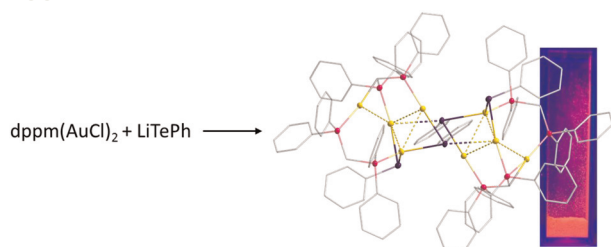
Crystal facet engineering of Pt<sub>1</sub>/Co<sub>3</sub>O<sub>4</sub> single-atom catalysts for highly selective hydrogenation of cinnamaldehyde

Liyun Huang, Zheng Zhang, Qingdi Sun, Huanshi Lan, Liangbin Wang\* and Xiaohui He\*



## PAPERS

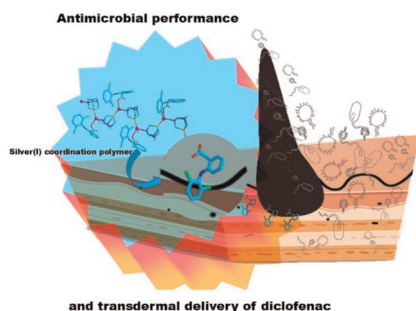
2438



**[Au<sub>8</sub>(TePh)<sub>4</sub>dppm<sub>2</sub>(Ph<sub>2</sub>PCHPh<sub>2</sub>)<sub>2</sub>]Cl<sub>2</sub>: a water and air stable red-luminescent gold–telluroate cluster with an excellent quantum yield**

Adrian Ott, Wolfgang Leis, Michael Seitz and Andreas Schnepf\*

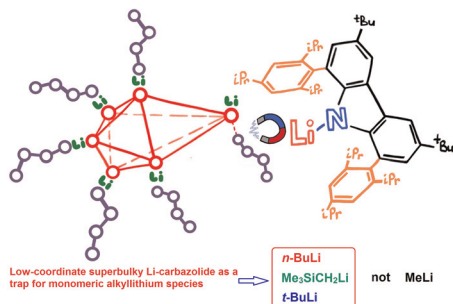
2443



**Silver(I) coordination polymer meets chia seed mucilage based film – antimicrobial performance and evaluation of permeability trends through human skin *in vitro***

Sabina W. Jaros,\* Justyna Markieton, Magdalena Florek, Jarosław Król, Seeprarani Rath, Sessa Rajeswari Talluri, Nubul Albayati and Bożena Michniak-Kohn\*

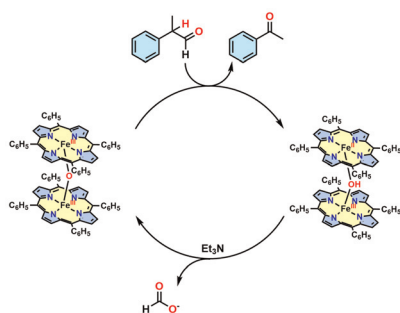
2452



**Electrophilic lithium carbazolide as an efficient trap for organolithium species: complexes containing monomeric *n*-BuLi, *t*-BuLi and  $\text{Me}_3\text{SiCH}_2\text{Li}$  units**

Mikhail A. Bogachev, Alexander N. Selikhov,\* Anton V. Cherkasov, Rinat R. Aysin and Alexander A. Trifonov\*

2465



**Dioxygen-promoted catalytic deformylation of aldehydes via hydrogen atom abstraction by [Fe(TPP)]<sub>2</sub>O**

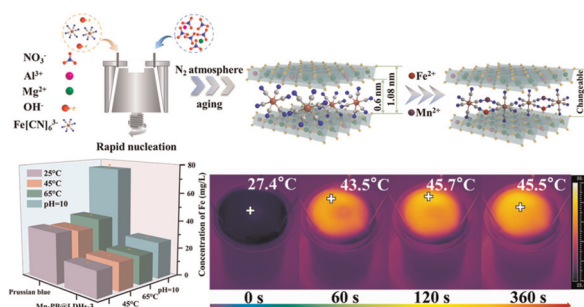
Kai-Chun Hsu, Bhakayaraj Kasi, Tanmoy Pain and Chen-Hsiung Hung\*



2471

### Optimal Mn doping for enhanced photothermal conversion performance in Prussian blue@layered double hydroxides

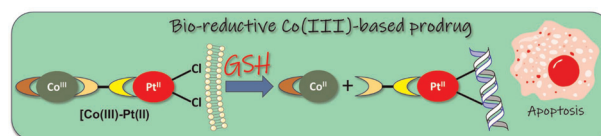
Weixin Mo, Liming Yang, Xinggui Gu, Huiyu Li and Yongjun Feng\*



2485

### Bio-reductive hetero-bimetallic Co(III)–Pt(II) complex for tumor-selective platinum release and cytotoxicity

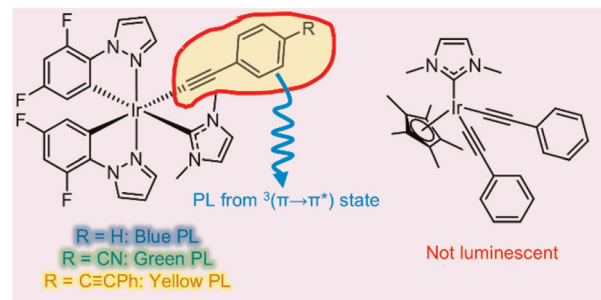
Sharmila Wahengbam, Neha Masarkar, Himanshi Sharma, Sukhes Mukherjee, Chandi C. Malakar and Mithun Roy\*



2499

### Synthesis and photoluminescence of iridium(III) arylacetylide complexes with acetylide-localized emissive excited states

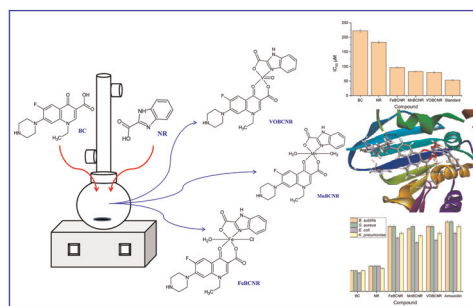
Son N. T. Phan, João V. Schober, Judy I. Wu and Thomas S. Teets\*



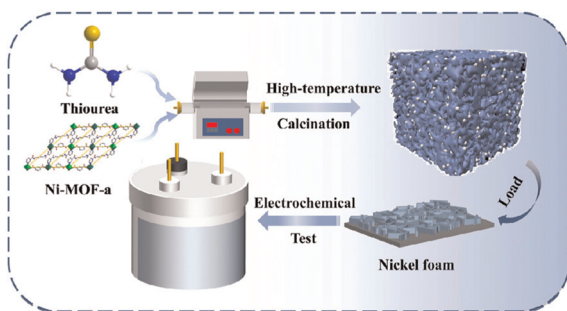
2509

### Structure-DFT-bioactivity correlation in mixed-ligand Fe(III), Mn(II), and V(IV)O complexes with bidentate NO donor 1H-benzimidazole-2-carboxylic acid and norfloxacin ligands

Hany M. Abd El-Lateef,\* Mai M. Khalaf\* and Aly Abdou\*



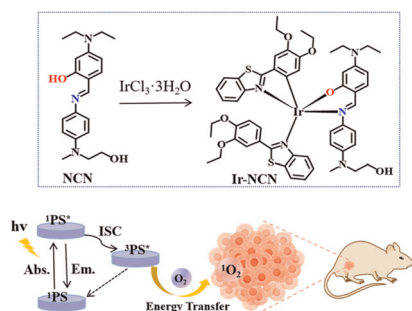
2524



### Temperature-controlled synthesis of MOF-derived $\text{Ni}_3\text{S}_2/\text{C}$ nanocomposites for high-performance supercapacitors

Xin Wang, Jian Luan,\* Ying Yang, Wen-Long Duan,\* Tian-Fang Cui and Wen-Ze Li\*

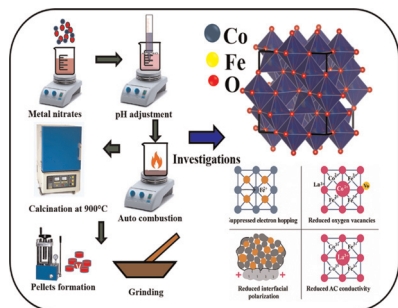
2533



### Rational engineering of a Schiff base–iridium(III) complex for enhanced photodynamic therapy

Changlin Li, Xuan Liu, Tao Shao, Guodang Chen, Jingran Xuan, Dong Wang,\* Zhenbao Li\* and Zhihui Feng\*

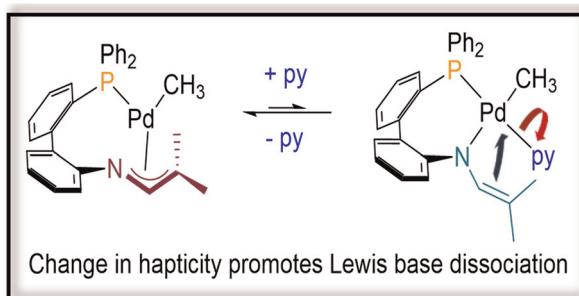
2542



### Tailoring structural, photoluminescence, and dielectric properties of cobalt ferrite *via* $\text{La}^{3+}$ doping for high-performance ceramic applications

Muhammad Adnan Munir,\* Awais Khalid, Sana Ben Khalifa, Pervaiz Ahmad, Saleh Chebaane, Abdulaziz M. Alanazi, Mudassir Hasan and Shahroz Saleem\*

2556



### A change in ligand hapticity promotes Lewis base dissociation

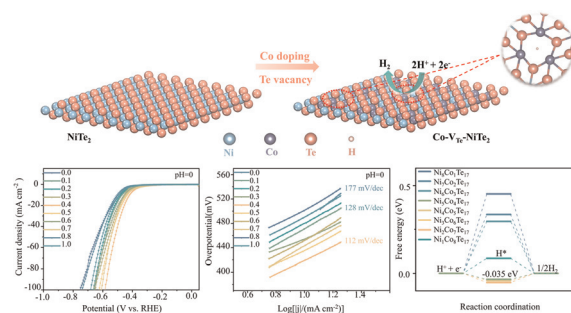
Payton A. Fortuna, Leslie S. G. Kelley, Yipeng Sun, Jiabin Xu, Zhiqiang Wang, Paul D. Boyle, Tsun-Kong Sham,\* Viktor N. Staroverov\* and Johanna M. Blacquiere\*



2564

### Synergistic Co-doping and Te-defects engineering in NiTe<sub>2</sub> single-crystals for enhanced hydrogen evolution in acidic and alkaline environments

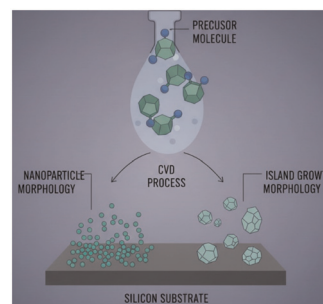
Zilong Xie, Qingyan Li, Jing Fang, Yuhang Yang, Haisen Liu, Bin Liu,\* Lei Gao\* and Jianchen Lu\*



2574

### Investigation into the viability of *N,N*-disubstituted-*N'*-acylthiourea copper(II) precursors for thermal deposition without the use of solvents and the affect precursor geometry has on the deposited composites

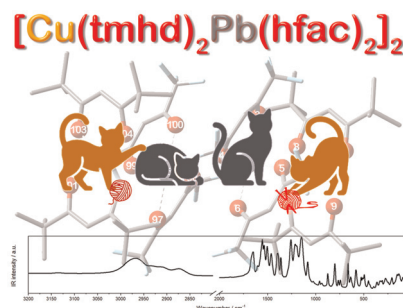
William Daly, David J. Otway,\* Ian M. Povey and Martyn E. Pemble



2588

### Intramolecular interactions in a heterometallic copper(II)–lead(II) tetranuclear $\beta$ -diketonate complex: insights from thermodynamics, molecular spectroscopy and quantum chemical calculations

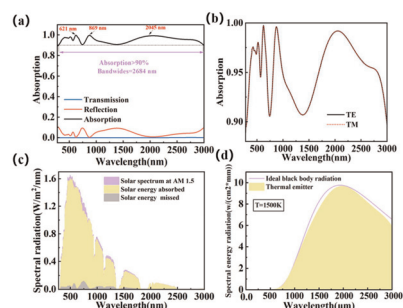
Svetlana Martynova, Vladislav Krisyuk, Sergey Sysoev and Enrico Benassi\*



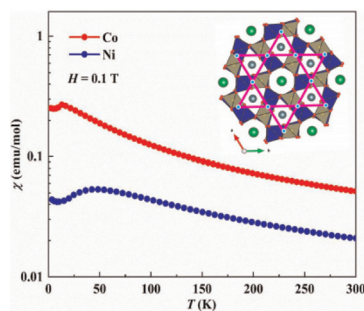
2607

### Ultra-wideband solar capture devices based on GaAs and Ti metasurface

Ying Zhong, Jun Zhu,\* Shubo Cheng, Majid Niaz Akhtar and Zao Yi\*



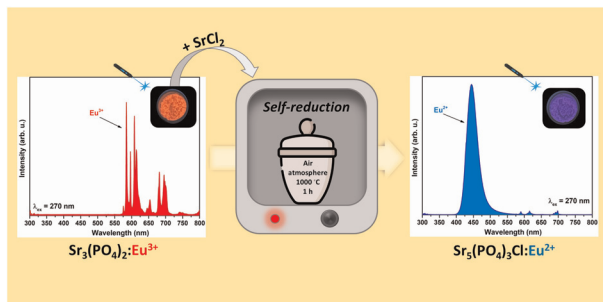
2618



### BaCa<sub>2</sub>M<sub>6</sub>Te<sub>3</sub>O<sub>18</sub> (M = Co, Ni): new 1D zigzag spin-chain compounds with a stacked kagomé structure

Suiman Fu, Yuerui Chen, Meiyang Cui, Zhiying Zhao, Yinfa Feng, Junfeng Wang and Zhangzhen He\*

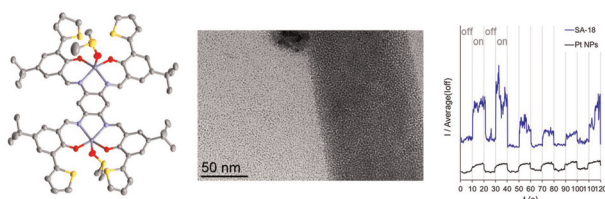
2624



### Molten salt synthesis of Eu<sup>2+</sup>-doped Sr<sub>5</sub>(PO<sub>4</sub>)<sub>3</sub>Cl in air atmosphere: europium self-reduction and optical properties

Simona Bendziute, Jonas Stadulis, Guna Doke, Guna Kriekė, Andris Antuzevics, Vladimir Pankratov, Inga Grigoravičiute, Arturas Katelnikovas and Aleksej Zarkov\*

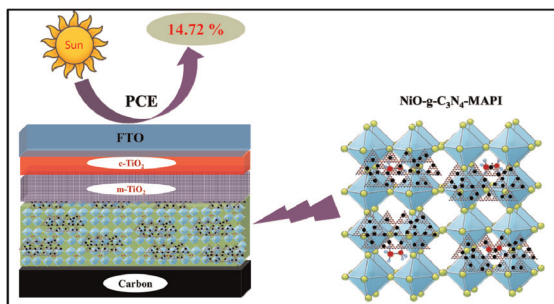
2635



### A family of thienyl-bis-salophen Zn(II) complexes for enhancing photoconductance in hybrid materials including platinum ultra-small nanoparticles

Melissa Dumartin, Adeline Pham, Nathalie Saffon-Merceron, Marine Tassé, Simon Tricard, Claire Kammerer and Jacques Bonvoisin\*

2643



### Hole transport material free-NiO-g-C<sub>3</sub>N<sub>4</sub>-incorporated methylammonium lead iodide-based perovskite solar cells

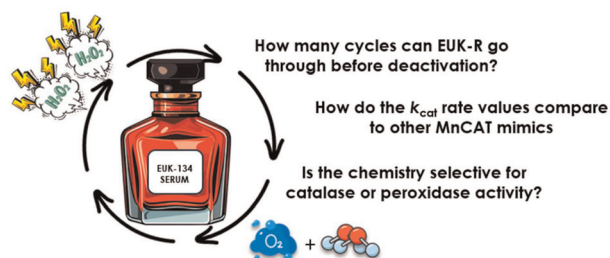
V. Arjun, K. P. Muthukumar, A. Nithya, M. Yoshimura and S. Karuppuchamy\*



2657

### Fundamental kinetic and selectivity properties of the anti-aging, antioxidant-active ingredient EUK-134

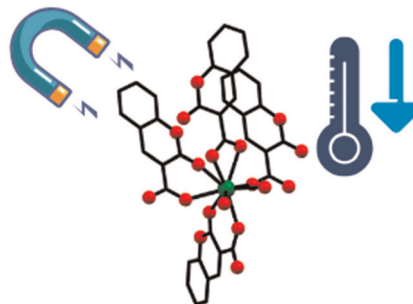
Nora Del Bosque, Grant T. Elam, David M. Freire, Timothy J. Hubin and Kayla N. Green\*



2665

### Unveiling single-ion magnetism in lanthanide–coumarin carboxylate coordination polymers

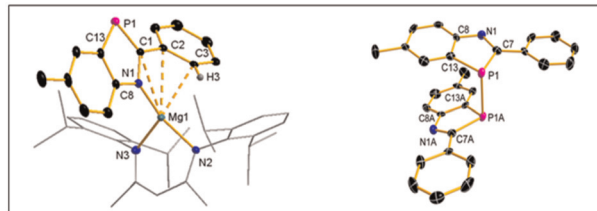
Henrique V. P. Hollauer, Guilherme P. Guedes, Davor L. Mariano, Luís Ghivelder, Alberto A. Mendonça, Stéphane Soriano, Renan L. Farias and Lívia B. L. Escobar\*



2673

### Isolation and reactivity of heteroleptic magnesium 1,3-benzazaphospholide complexes

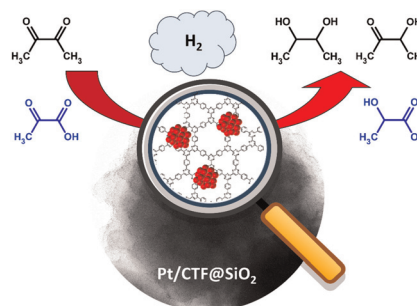
Chengfu Pi\* and Jie Zhou



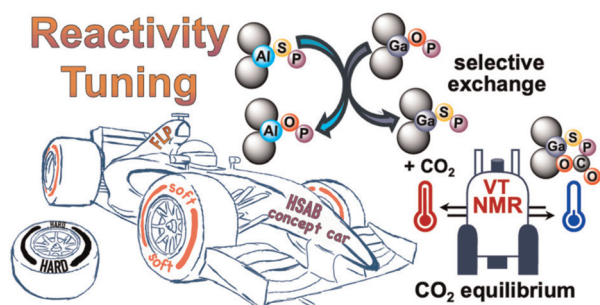
2681

### Covalent triazine framework@silica core–shell spheres decorated with ultrafine platinum nanoparticles: a robust catalyst for selective aqueous phase hydrogenation of butane-2,3-dione and pyruvic acid

Claudio Evangelisti,\* Werner Oberhauser,\* Francesco Poggialini, Emanuela Pitzalis, Xuan Trung Nguyen, Esther Punzi, Serena Coiai, Nicola Scotti, Lorenzo Poggini and Alessandro Mandoli



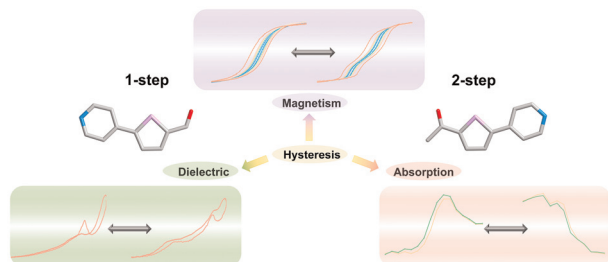
2691



### Tuning reactivity through implementation of the HSAB concept in oxygen- and sulphur-bridged Al/P and Ga/P FLPs

Julian Buth, Yury V. Vishnevskiy, Jan-Hendrik Lamm, Beate Neumann, Hans-Georg Stammler and Norbert W. Mitzel\*

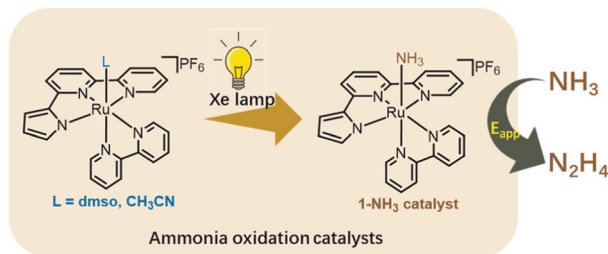
2702



### Modulating multi-channel bistability in cyanide-bridged {Fe<sub>2</sub>Fe} spin-crossover coordination polymers

Xin-Feng Li, Hao Wang, Du-Yong Chen, Qiang Liu, Jingyi Xiao, Wen Wen,\* Wen-Jing Jiang, Liang Zhao, Yin-Shan Meng\* and Tao Liu

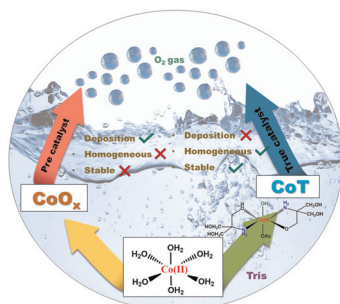
2709



### Ruthenium complex bearing pyrrolbipyridine and dimethyl sulfoxide ligands: syntheses, structures, substitution reactions, and catalytic ammonia oxidation behavior

Si-Dan Zhong, Shan Zhao, Chen Zhou, Xi Zhang, Zai-Chao Zhang, Piao He and Xiao-Yi Yi\*

2718



### A Co-tris coordination complex as a stable homogeneous electrocatalyst for aqueous water oxidation

Debu Jana, Kalipada Paul and Samar K. Das\*

