

Dalton Transactions

An international journal of inorganic chemistry incorporating Acta Chemica Scandinavica
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.

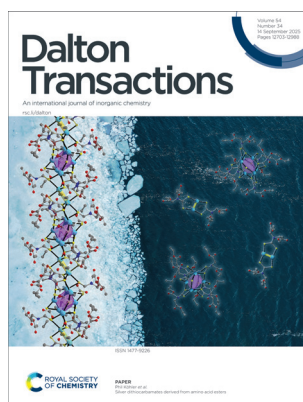
IN THIS ISSUE

ISSN 1477-9226 CODEN DTARAF 54(34) 12703-12988 (2025)



Cover
See Hoa Phan,
Michael Shatruk *et al.*,
pp. 12749–12753.

Image reproduced by
permission of Hoa Phan from
Dalton Trans., 2025, **54**,
12749.



Inside cover
See Phil Köhler *et al.*,
pp. 12772–12783.

Image reproduced by
permission of Vreni Behling
and Phil Köhler from
Dalton Trans., 2025, **54**,
12772.

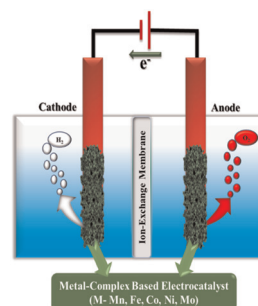
Acknowledgement: Back-
ground image © Curioso.
Photography / Adobe Stock,
used under the educational
licence of Friedrich Schiller
University Jena.

PERSPECTIVE

12714

Engineering of abundant metal complexes for electrochemical water splitting

Naseem Kousar, Gouthami Patil,
Ashwini Chikkabasur Kumbara, Basavesh Nisty,
Rajesh G. H. and Lokesh Koodlur Sannegowda*

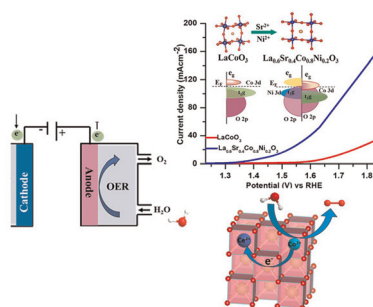


FRONTIER

12737

Metal oxides for the oxygen evolution reaction: tailoring electronic properties through structural modifications

Saraswati Roy and Sounak Roy*



**GOLD
OPEN
ACCESS**

EES Solar

**Exceptional research on solar
energy and photovoltaics**

Part of the EES family

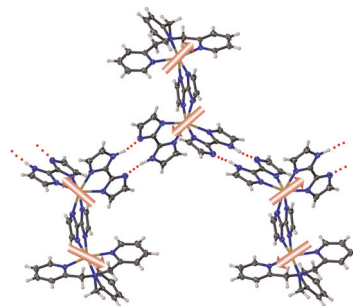
**Join
in** | Publish with us
rsc.li/EESolar

COMMUNICATIONS

12749

A strongly hydrogen-bonded one-dimensional high-spin dinuclear Fe(II) complex

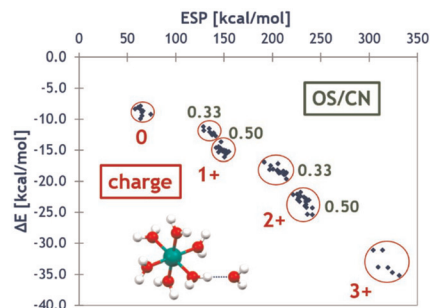
Hoa Phan,* Kieu Thuy Thi Thai, Nobuto Funakoshi, Huyen Thu Thi Tran, Masahiro Yamashita and Michael Shatruk*



12754

Hydrogen bonds in the second coordination sphere of metal complexes in the gas phase – playing by the rules?

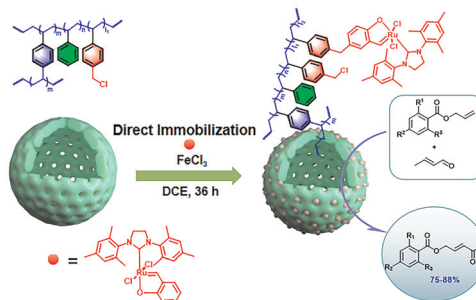
Dušan P. Malenov,* Jelena M. Živković and Snežana D. Zarić*



12760

Direct covalent immobilization of the Hoveyda–Grubbs catalyst without molecular modification for achieving economical and efficient olefin metathesis

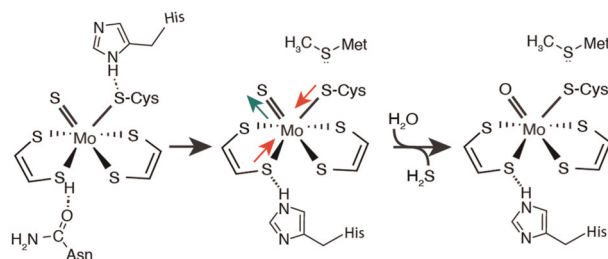
Chuangchuang He, Jincheng Duan, Yang Zhou, Junling Cui and Xuebing Ma*



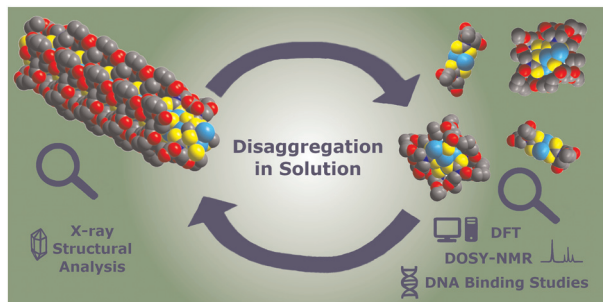
12766

Impact of the second coordination sphere of the molybdopterin cofactor on the mechanism of formate dehydrogenase from *Cupriavidus necator*

Matthew J. Kapelis and Jarett Wilcoxon*



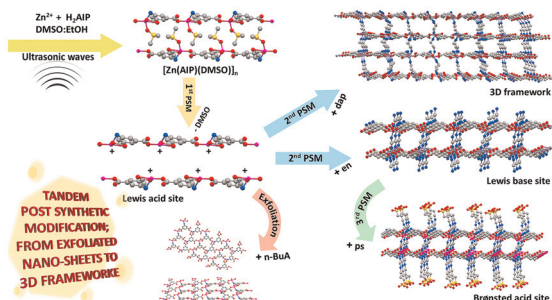
12772



Silver dithiocarbamates derived from amino acid esters

Vreni Behling, Jakob Heinrich, Dolores Díaz, Elias H. P. Brohmer, Julian Heinrich, Nils Schlörer, Stephan Kupfer, Nora Kulak and Phil Köhler*

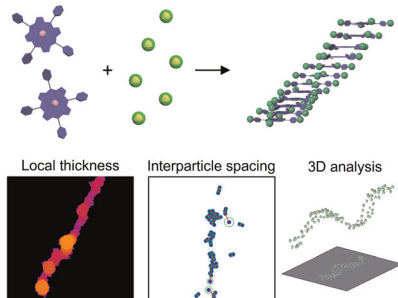
12784



Post-synthetic modification approach for tandem functionalization of a 2D-layered Zn-coordination polymer: from exfoliated nanosheets to a 3D supramolecular structure with enhanced dye adsorption efficiency

Qasem Maleki, Valiollah Nobakht* and Sepideh Samiee

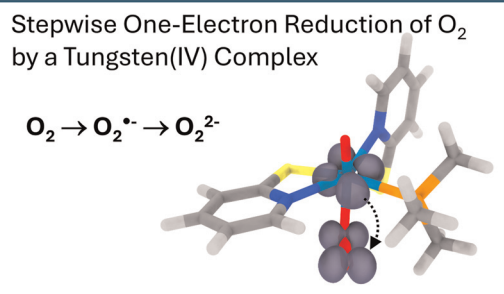
12799



Supramolecular assemblies and nanoparticle integration studied through quantitative image analysis and 3D reconstruction

Daeun Jeong, Hyoung Wook Kang, Seojeong Woo, Semi Kim, Soo Ryeon Yoon, Jaedeok Lee, Cheongwon Bae, Ho-Jun Cho, Mingyu Gu, Jong Hwa Jung, Ju Hyun Kim, Kwang Seob Jeong, Sung Ho Jung* and Juyeong Kim*

12806



DFT insights into the bifunctional nature of a bioinspired tungsten complex

Miljan Z. Ćorović, Maria José Calhorda, Nuno A. G. Bandeira* and Nadia C. Mösch-Zanetti*

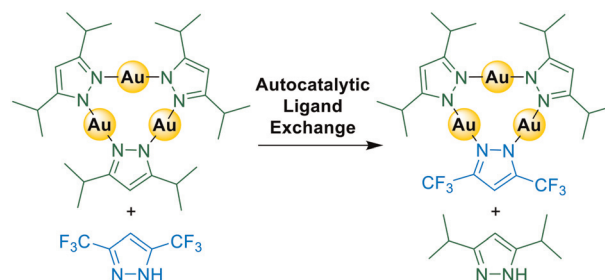


PAPERS

12818

The constitutional dynamic chemistry of $Au_3(\text{pyrazolate})_3$ complexes

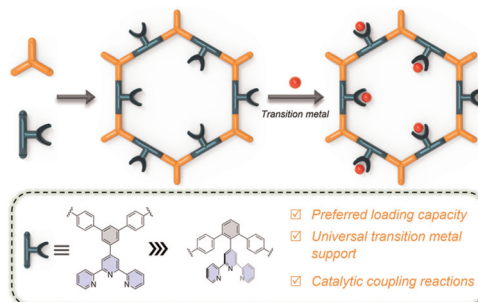
Noga Eren, Renata Svecova, Farzaneh Fadaei-Tirani, Rosario Scopelliti and Kay Severin*



12824

Construction of 2,2':6',2''-terpyridine-modified porous organic polymers *via* building unit engineering: preferred and universal transition metal carrier and catalytic application

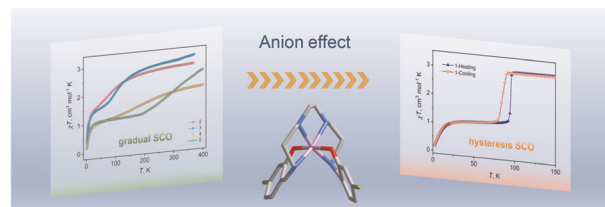
Zhengguang Li, Yaqin Li, Yongxin Liu, Kaixiu Li, Fan Fu, Mingliang Liu, Jie Yuan, Tao Zhang, Jun Wang, Yiming Li, Fenghua Shen, Hui Liu, Pingshan Wang* and Die Liu*



12831

Unveiling the relationship between counterion size and spin crossover dynamics in hexadentate Schiff-base manganese(III) complexes

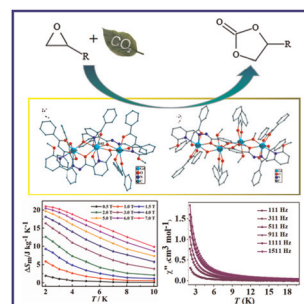
Meng-Jia Shang, Du-Yong Chen, Ren-He Zhou, Han-Han Lu, Lin Ma, Jingyi Xiao, Liang Zhao, Yin-Shan Meng* and Tao Liu*



12841

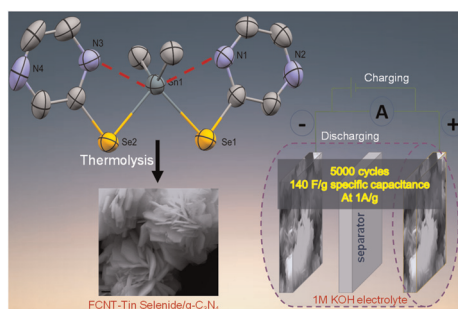
Linear trinuclear and tetranuclear Ln(III) compounds aggregated by multidentate Schiff base ligands: insights into the magnetocaloric effect, slow magnetic relaxation behavior and catalytic CO_2 conversion

Xiao-Fen Guan, Na Qiao, Zhi-Lei Wu,* Wen-Min Wang* and Jian-Zhong Cui



PAPERS

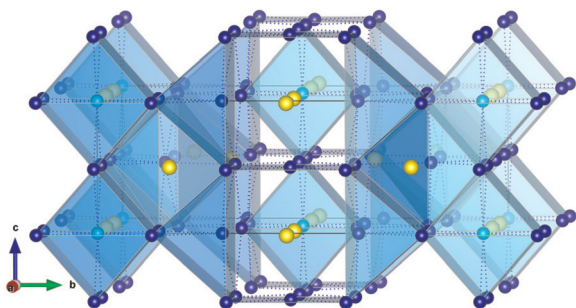
12849



Template-driven synthesis of tin selenide nanosheets and their composites for supercapacitor applications

Nisha Kushwah, Divya Nechiyil, Jyoti Prakash, Suresh M. Chopade, Sushil Swaroop Pathak, Amey Wadawale, Sanjay Kumar and Gotluru Kedarnath*

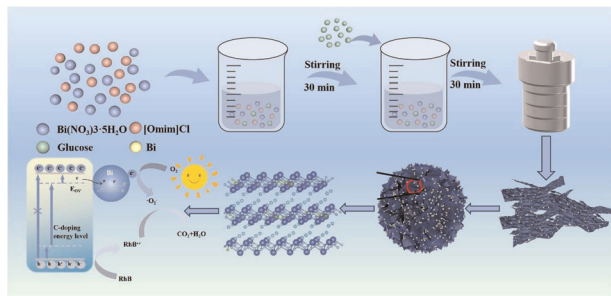
12859



On the structure of heptalithium distannide: Li_7Sn_2 or $\text{Li}_{7-x}\text{Sn}_2$ ($0.3 < x < 0.5$)

Salina Rahman, Kowsik Ghosh, Alexander Ovchinnikov, Anirudh Nandakumar, Candace K. Chan and Svilen Bobev*

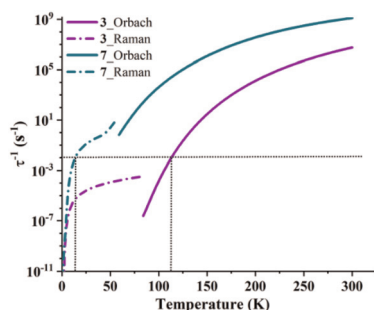
12868



One-step synthesis of Bi/C-BiOCl composites: double defect regulation, band structure modulation, and visible light photocatalytic enhancement mechanisms

Daoying Wang, Yanhua Song, Zhibo Zheng, Xiaozhen Zhang, Yong Wang* and Haifeng Zou*

12881



Magnetic anisotropy of dysprosium encapsulated metallofullerene molecules: a theoretical study

Dong-Mei Zhu, Fang Lu, Qi Ma, Xiao-Le Zhang and Yi-Quan Zhang*

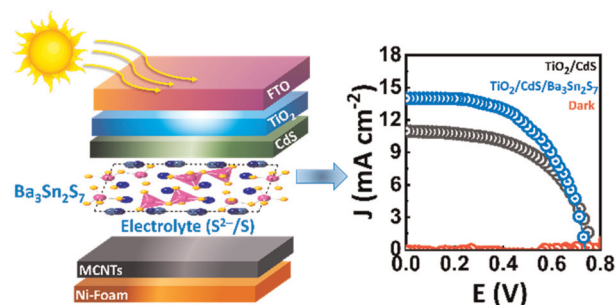


PAPERS

12890

Two ternary chalcostannates $Ba_3Sn_2Q_7$ ($Q = S$ and Se): syntheses, crystal structures, and photovoltaic studies

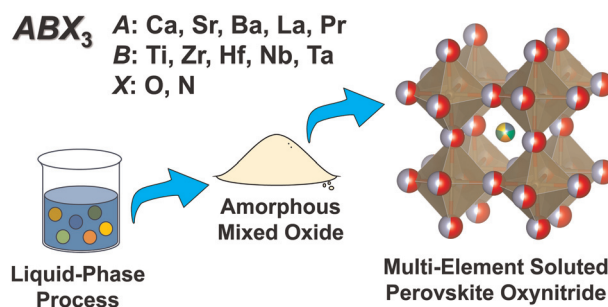
Swati, Akshay K. Ray, Sweta Yadav, Mamindla Ramesh, Sayani Barman, Melepurath Deepa, Manish K. Niranjan and Jai Prakash*



12902

Preparation of multi-element soluted metal oxynitrides with a perovskite structure using precursors synthesized through a liquid-phase process

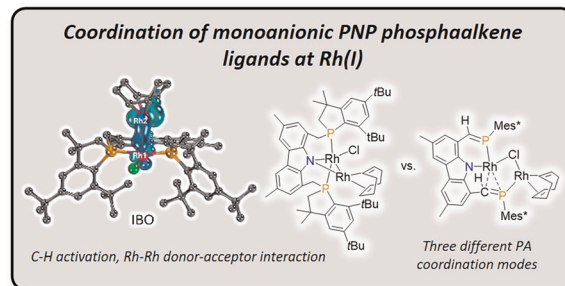
Tom Matsunaga, Naoki Tarutani, Kiyofumi Katagiri,* Kei Inumaru, Takuya Sakata, Zi Lang Goo, Kuniyoshi Sugimoto and Sayako Inoue



12913

Coordination and C–H activation of an amidobis(phosphaalkene) ligand at rhodium(I)

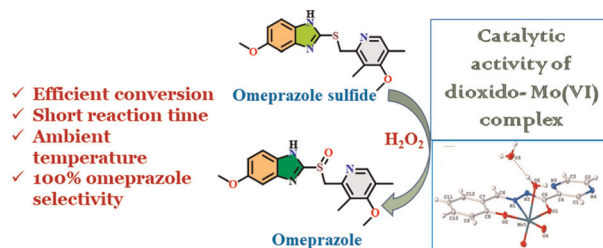
Kushik, Mirko Rippke, Hans-Joachim Drexler, Fabian Dankert, Christian Hering-Junghans* and Torsten Beweries*



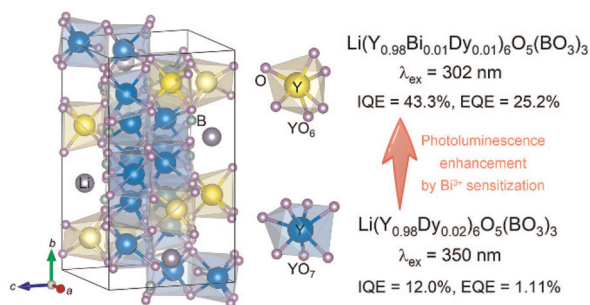
12919

Hydrazone-based dioxidomolybdenum(VI) complexes: catalytic oxidation of omeprazole sulfide

Nafisa, Kuldeep Mahiya and Lata Rana*



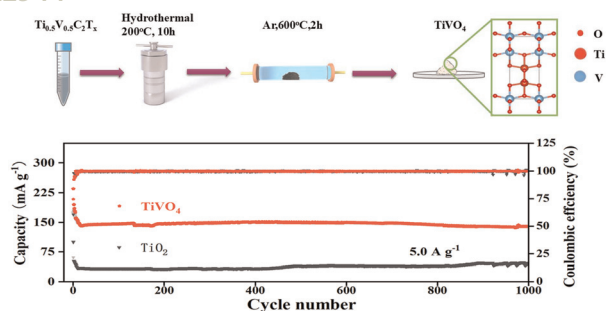
12933



Bi^{3+} -sensitized Dy^{3+} emission for tunable luminescence and efficiency enhancement in $\text{LiY}_6\text{O}_5(\text{BO}_3)_3$ phosphors

Liang Xiong, Rihong Cong* and Tao Yang*

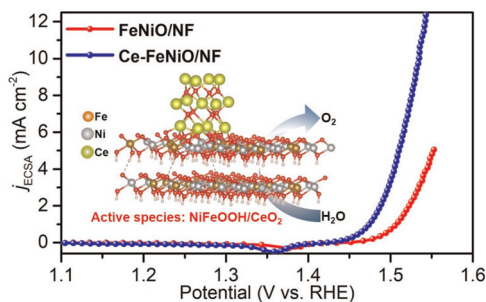
12944



Anatase bimetallic oxide TiVO_4 : toward superior lithium-ion storage performance

Tianhao Li, Jiahui Wang, Xudong Sun, Yang Li, Wolong Li, Qi Jin, Sheng Wang, Chao Liu* and Junpeng Xiao*

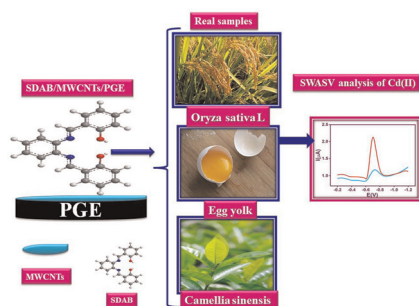
12951



Unraveling Ce dopant evolution: the formation of $\text{NiFeOOH}/\text{CeO}_2$ for enhanced water oxidation

Kailu Guo,* Huijiao Wang, Xiaoning Gao, Yanyu Li, Mingli Guo and Jinzhi Jia*

12960



A novel synthesized SDAB/MWCNTs sensor to investigate $\text{Cd}(\text{II})$ in *Oryza sativa* L., egg yolk and *Camellia sinensis* of real samples using SWASV technique

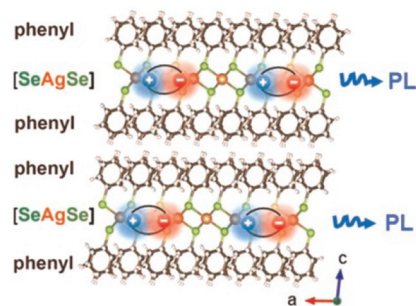
Jayagopi Gayathri,* Sivakumar Sivalingam and Kumar Sangeetha Selvan



12970

Area-scalable film preparation and blue excitonic photoluminescence of organic–inorganic hybrid 2D semiconductor AgSePh (Ph = C₆H₅)

Guowei Yang, Yike Liu, Tingting Wang, Yipeng Wu and Junli Wang*



12979

Silver-loaded hollow copper sulfide particles for antibacterial therapy

Yue Hou, Fanling Zhang, Hong Sun, Tong Liang, Zhaogang Sun,* Bei Liu* and Hongqian Chu*

