

Dalton Transactions

An international journal of inorganic chemistry incorporating Acta Chemica Scandinavica
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ISSN 1477-9226 CODEN DTARAF 54(37) 13793-14228 (2025)



Cover
See Manabu Hagiwara *et al.*,
pp. 13869–13878.

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Inside cover
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Saurabh Kumar Singh,
Joydeb Goura *et al.*,
pp. 13879–13893.

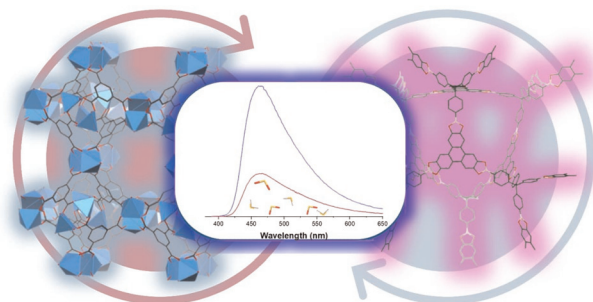
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TUTORIAL REVIEW

13806

Fluorescence spectroscopy: detection and sensing of SO₂ and H₂S using MOFs and other emerging porous materials

Marco L. Martínez, Pablo Marín-Rosas,
Valeria B. López-Cervantes, Ariel Guzmán-Vargas,
Ricardo A. Peralta,* Diego Solís-Ibarra* and
Ilich A. Ibarra*



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Advances in nano-drug delivery systems for metallic compounds in cancer therapy: challenges and future perspectives

Subin Joseph, Rinku Chakrabarty and Priyanka Paira*



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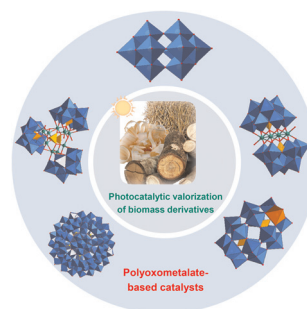


**SAVE
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13851

Recent advances in polyoxometalate-based catalysts for light-driven valorization of biomass derivatives

Zheng Li, Xiaoyi Liu, Mengyun Zhao, Hongjin Lv* and Guo-Yu Yang*

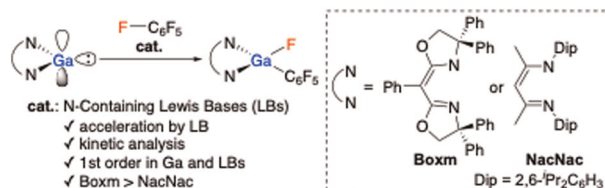


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Cleaving a C–F bond of C₆F₆ at a gallium(III) centre catalyzed by nitrogen-containing Lewis bases and its kinetic analysis

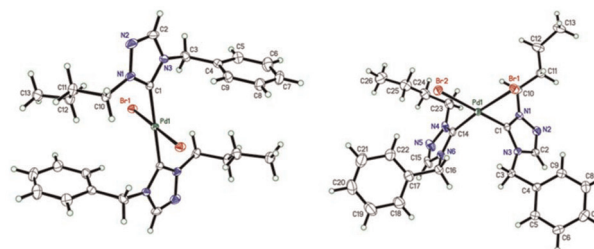
Tao Ding and Makoto Yamashita*



13863

Synthesis of Pd(II)–NHC complexes via C–H oxidative addition of triazolium salts to Pd(0)

Anes Kovacevic,* Sean Parkin and Jay H. Baltisberger

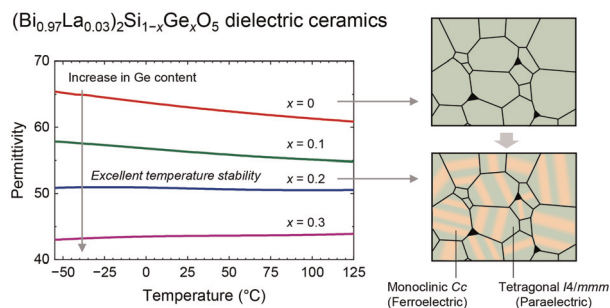


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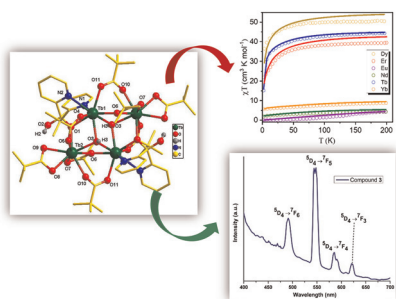
13869

Improving the dielectric temperature stability of Bi₂SiO₅-based ceramics through the spontaneous formation of paraelectric–ferroelectric nanocomposite structures

Yoji Yasumoto, Taro Kuwano, Hiroki Taniguchi, Shinobu Fujihara and Manabu Hagiwara*



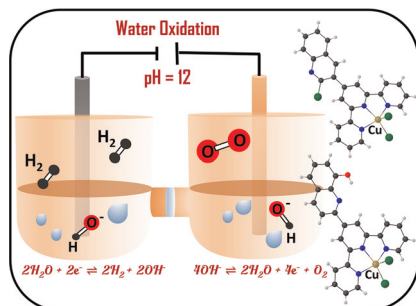
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Tetranuclear $\{\text{Ln}^{\text{III}}\}_4$ complexes possessing homometallic *O*-capped structural subunits: study of magnetic and photoluminescent properties

Purbashree Halder, Nandini Barman, Ibtesham Tarannum, Subrata Mukhopadhyay, Björn Schwarz,* Saurabh Kumar Singh* and Joydeb Goura*

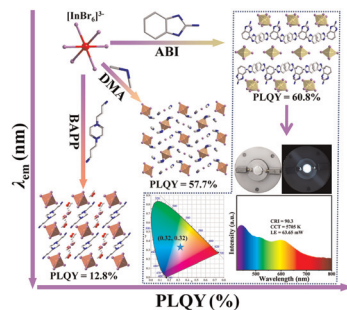
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Electrochemical water oxidation using single-site $\text{Cu}(\text{II})$ molecular complexes: a mechanism elucidated by computational studies

Dev Raj, Koushik Makhal, Manaswini Raj, Aman Mishra, Rohan Mahapatra, Tanya Pattnaik, Bhabani S. Mallik and Sumanta Kumar Padhi*

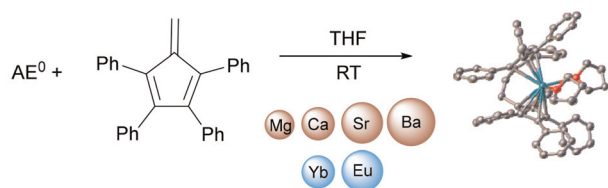
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Stable zero-dimensional hybrid indium-based halides with yellow to orange light emission

Hong-Zhao Zan, Xiao-Zhong Wang, Hai-Xin Zhao, Shou-Wang Wang, Lei Chen, Hao-Yuan Wang, Lai-Zhi Zhao, Xiao-De Zhang and Xiang-Wen Kong*

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Ansa-effects in alkaline earth metal octaphenylmetallocenophanes and a derived *ansa*-ferrocene

Angus C. G. Shephard, Amal Bouammali, Aymeric Delon, Zhifang Guo, Sylviane Chevreux, Claude Niebel, Olivier Dautel, Thomas Simler, Glen B. Deacon, Peter C. Junk* and Florian Jaroschik*

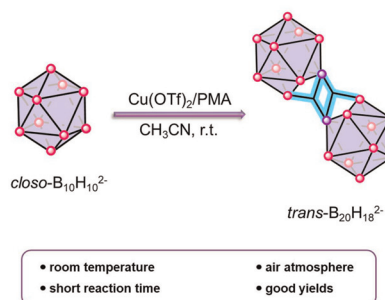


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A simple and efficient method to synthesize metal salts of $M_2[trans-B_{20}H_{18}]$ ($M = Li, Na, K, \text{ and } Cu$)

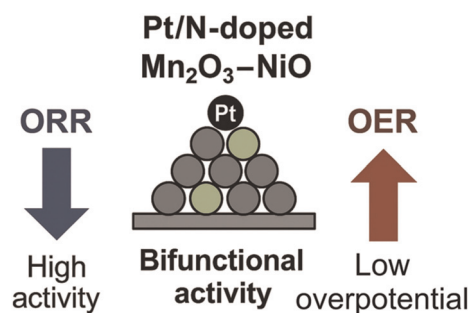
Xin-Ru Yin, Zhi-Wei Lu, Xi-Meng Chen, Li-Qing He* and Xuenian Chen*



13934

Advanced nitrogen-doped transition metal oxides decorated with Pt: synthesis and composition strategies for maximised electrochemical performance

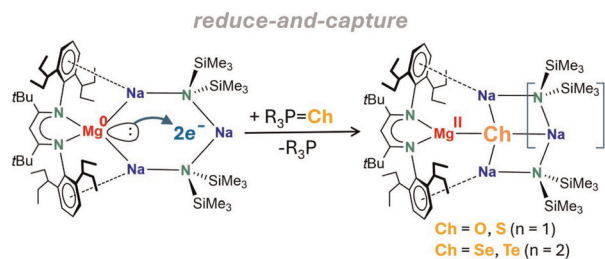
Kristina Gočanin, Yasemin Aykut, Dušan Mladenović,* Diogo M. F. Santos, Ayşe Bayrakçeken, Gulin S. P. Soyulu and Biljana Šljukić



13950

Redox-active inverse crowns – pockets for heavier chalcogenides

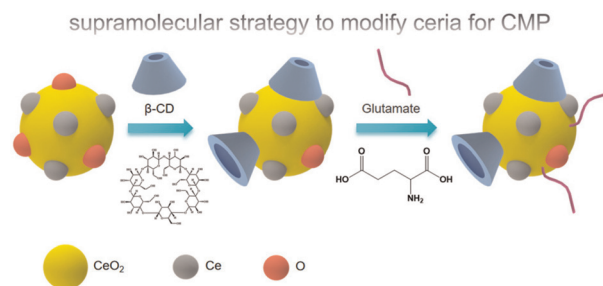
Johannes Maurer, Lukas Klerner, Jens Langer and Sjoerd Harder*



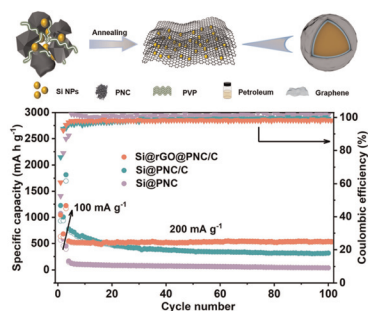
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Supramolecular surface modification of ceria nanoparticles for enhanced chemical mechanical planarization performance in shallow trench isolation

Haining Zhang, Chenyan Zhao, Xueli Sun, Chengrui Xin, Fangwei Lu, Shuming Wu, Xin-Ping Qu, Song Wang,* Simin Li,* Hui Shen* and Fan Zhang



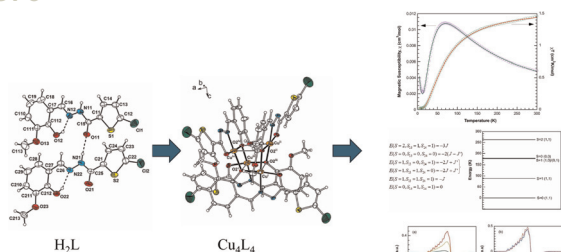
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An enhanced double carbon layer-coated silicon-based anode for lithium-ion batteries

Xingyue Qian, Siqi Hou, Weiyan Li, Dafang He, Junfeng Shi, Jiawei Xia, Guangyu He* and Haiqun Chen*

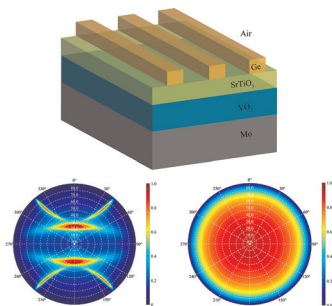
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Structural, spectroscopic, theoretical, and magnetic investigations of a novel cubane-like tetranuclear copper(II)-hydrazone complex

Lucía Santa María de la Parra, Leonardo E. Riafrecha, Gustavo A. Echeverría, Luis Lezama, Oscar E. Piro, Diego M. Gil, Antonio Frontera and Ignacio E. León*

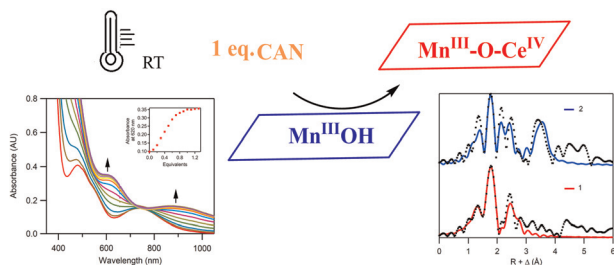
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Angle-robust and tunable mid-infrared absorption in a Ge grating/SrTiO₃/VO₂ hybrid metastructure on a metallic substrate

Xin Cui, Yangyang Dai, Fenglin Xian, Liming Qian and Gaige Zheng*

14001



Formation of a Mn^{III}-O-Ce^{IV} species from a Mn^{III}-hydroxo complex and ceric ammonium nitrate

Anagha Puthiyadath, Patrick Murphy, Delara Mafi, Purni Patel and Timothy A. Jackson*

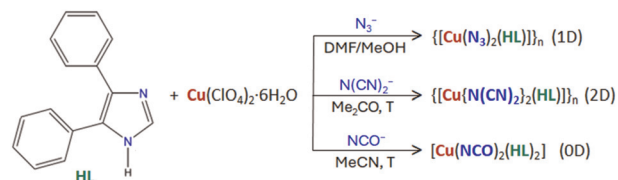


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Structural diversities and magnetic properties of azido- and dicyanamido-bridged coordination polymers with 4,5-diphenylimidazole as a terminal ligand

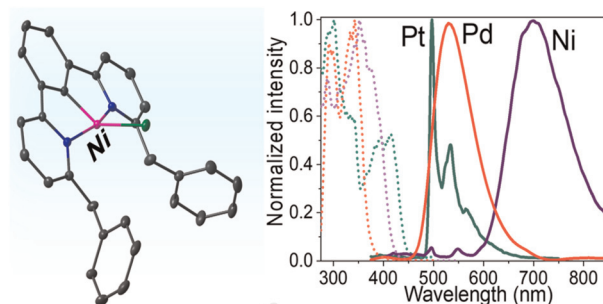
Evangelia-Spyridoula Fotopoulou, Nikos Panagiotou, Anastasios J. Tasiopoulos, Mark M. Turnbull,* Spyros P. Perlepes* and Vassilios Nastopoulos*



14025

A tight binding pocket in photoluminescent N⁴C²N cyclometalated Pt(II), Pd(II), and Ni(II) complexes

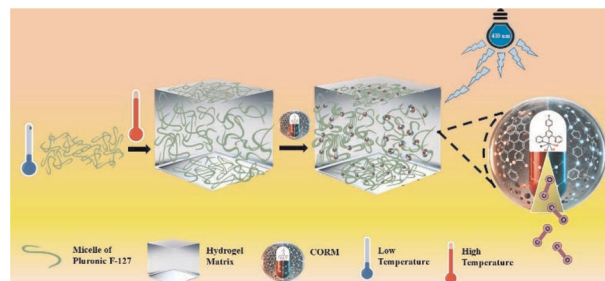
Maryam Niazi, Iván Maisuls, Cristian A. Strassert,* Pablo González-Herrero and Axel Klein*



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Thermoreversible hydrogel containing photoactivatable tricarbonyl Mn(I) terpyridine complexes for therapeutic carbon monoxide (CO) release

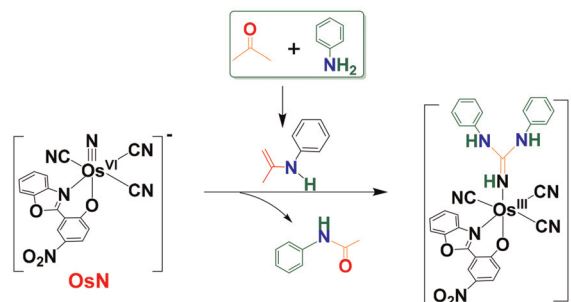
M. Aakshika Sree and D. Amilan Jose*



14052

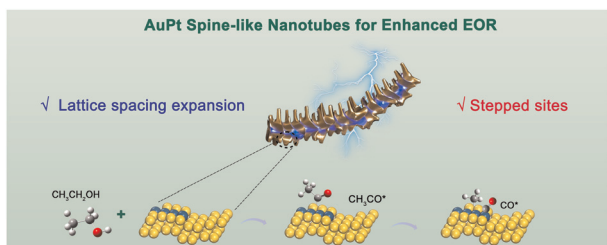
Reaction of an osmium(VI) nitrido complex with enamines generated *in situ* from ketones and anilines

Lei Wang, Li-Xin Wang, Zhao-Long Liu, Fang Xu, Rui-Yue Qi, Wai-Lun Man, Jing Xiang,* Ji-Yan Liu and Tai-Chu Lau*



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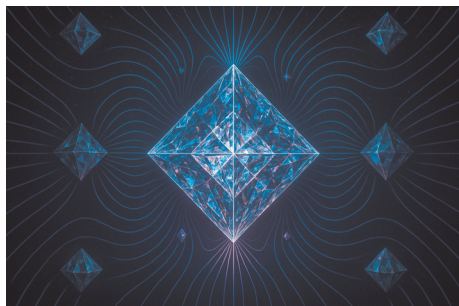
14059



One-pot synthesis of lattice-strained AuPt spine-like nanotubes for high-efficiency ethanol electrooxidation

Li Wang, Fang Sun,* Yuying Sun, Yanyun Ma, Yiqun Zheng* and Yuanyuan Min*

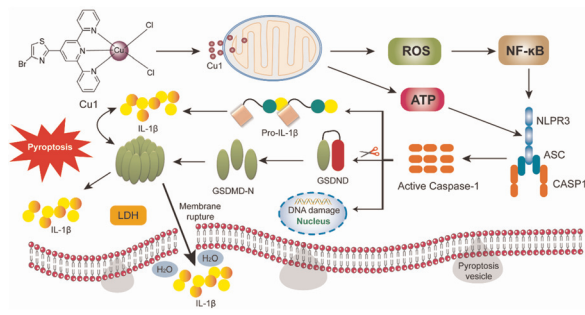
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Leveraging anion selection to modulate crystallographic symmetry in Yb(III) single-molecule magnets

Ethan Lowe, Hamish Hourston, Tanu Sharma, Sarah K. Dugmore, Claire Wilson, Gopalan Rajaraman* and Mark Murrie*

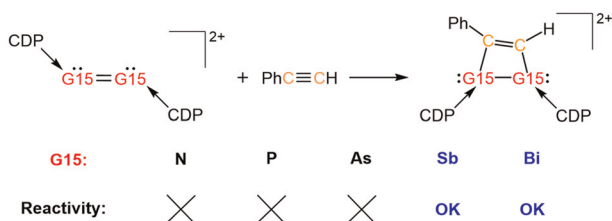
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A copper complex with a thiazole-modified tridentate ligand: synthesis, structural characterization, and anticancer activity in B16-F10 melanoma cells

Bishu Wang, Huishan Zhong, Jiawen Huo, Tao Wang, Fenglin Wu, Kejie Du,* Tao Feng* and Jinquan Wang*

14093



Electronic and mechanistic insights into the role of group 15 elements in the reactivity of dipnictogen dications featuring group 15=group 15 double bonds in [2 + 2] cycloaddition reactions with phenylacetylene

Zheng-Feng Zhang and Ming-Der Su*

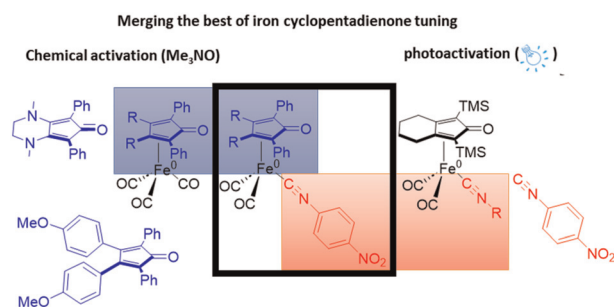


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Merging cyclopentadienone tuning and CO to isonitrile substitution to develop photo-activated iron cyclopentadienone catalysts

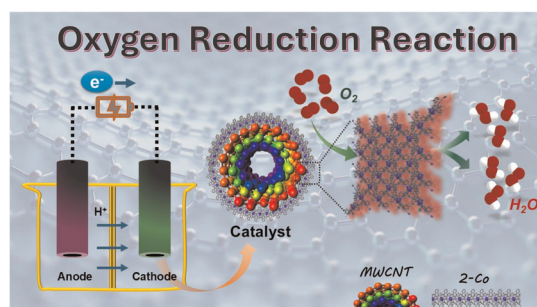
Clémence Gounon, Gaëtan Quintil, Jacques Pécaut, Martin Clémancey, Ragnar Bjornsson, Adrien Quintard* and Amélie Kochem*



14123

2D self-assembly of twisted porphyrins appended on multiwalled carbon nanotubes for the oxygen reduction reaction

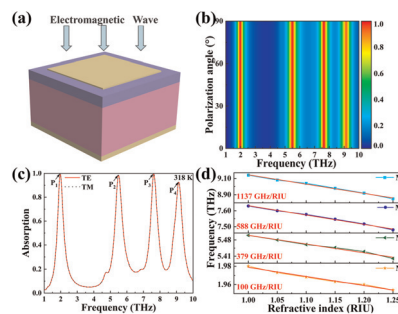
Varusha Bhardwaj, Varsha Singh, Vellaichamy Ganesan* and Muniappan Sankar*



14132

A temperature-controlled switching terahertz perfect absorption device based on a VO_2 phase change metamaterial

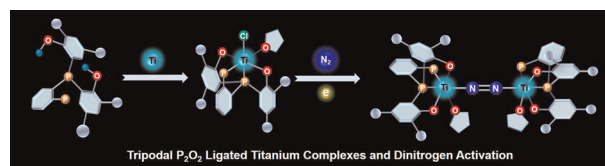
Zhuoyu Zheng, Chenyu Gong, Huafeng Zhang,* Mengsi Liu, Shubo Cheng and Zao Yi*



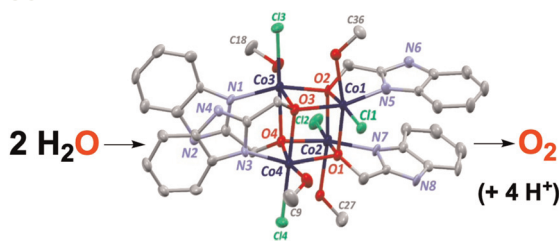
14142

Tripodal bisphenolate–bisphosphine ligands with hybrid hard/soft donors: titanium complexes and dinitrogen activation

Chunyan Xiong, Jinwei Zhang, Jingyi An, Zhiqiang Yuan, Zhaoxin Li, Yanhong Liu and Shaowei Hu*



14150

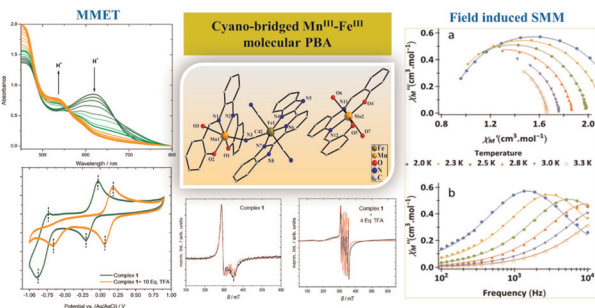


Self-assembled, bench stable
Co(II) water oxidation catalysts

Electrocatalytic water oxidation with bioinspired cubane-type Co^{II} complexes

Roberto Favela-Mendoza, Elizabeth Rul-Ramírez, Ana Cristina García-Alvarez, Eduardo Sánchez-Lara, Stefani Gamboa-Ramírez, Marcos Flores-Álamo, Sylvain Bertaina, Maylis Orio, Isabel Guerra-Tschuschke and Ivan Castillo*

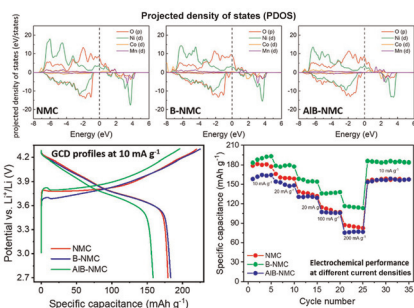
14161



Investigation of protonation induced metal-to-metal electron transfer in a cyano-bridged Mn^{III}-Fe^{III} dinuclear complex

Prashurya Pritam Mudoi, Niku Ahmed, Anup Choudhury, Yanling Li, Rodrigue Lescouëzec, Benjamin Kintzel, Oluseun Akintola, Winfried Plass, Marimuthu Rajendiran and Nayanmoni Gogoi*

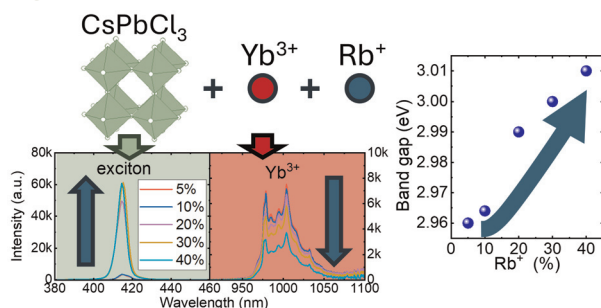
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Co-doping aluminum and boron enhances the stability and electrochemical properties of nickel-rich cathode materials for lithium-ion batteries

Nguyen To Van, Nguyen Vo Anh Duy, Nguyen Hoang Hieu, Quy Quyen Ngo, Trung Son Luong, Thi Lan Ngo, Yohandys A. Zulueta, Minh Tho Nguyen, An-Giang Nguyen, Phi Long Nguyen, Chan-Jin Park and Minh Triet Dang*

14191



Effect of Rb⁺ co-doping on the optical properties in VIS and NIR emitting CsPbCl₃:Yb³⁺ perovskite powder

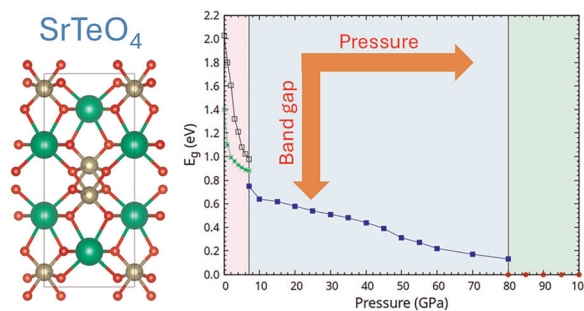
Weronika Jagietowicz, Bartosz Bondzior, Kamila Rajfur, Maciej Ptak and Mariusz Stefanski*



14199

Engineering the crystal structure and band gap of SrTeO₄: inducing bonding changes and metallization through compression

Ertuğrul Karaca and Daniel Errandonea*



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Controllable synthesis of *ortho*-hexagonal ZnAl-LDHs nanosheets for high-performance room-temperature ethanol gas sensing

Kun Li, Xia Zhao, Yalin Zhang, Zhen Sun, Wanru Xu, Lanxiang Yao and Xueli Yang*

