

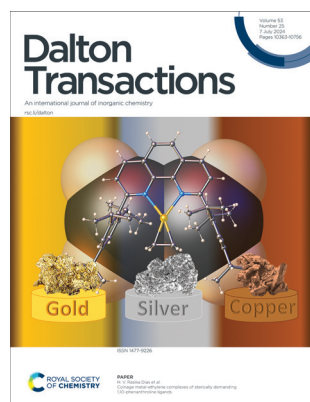
Dalton Transactions

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IN THIS ISSUE

ISSN 1477-9226 CODEN DTARAF 53(25) 10363-10756 (2024)



Cover
See H. V. Rasika Dias *et al.*,
pp. 10426–10433.

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Inside cover
See Jiaji Zhang *et al.*,
pp. 10376–10402.

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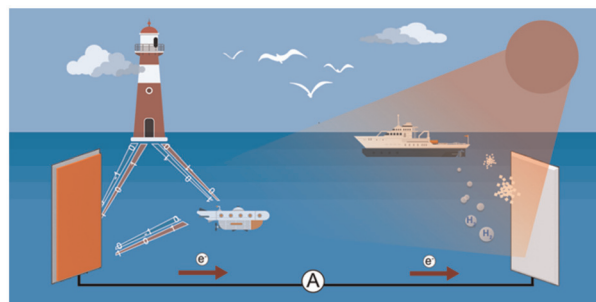
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PERSPECTIVE

10376

Review on synthetic approaches and PEC activity performance of bismuth binary and mixed-anion compounds for potential applications in marine engineering

Jiaji Zhang, Bingchu Mei, Huiyu Chen and Zaichun Sun*

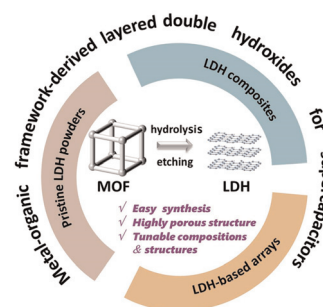


FRONTIER

10403

Layered double hydroxide-based electrode materials derived from metal–organic frameworks: synthesis and applications in supercapacitors

Fujuan Luo, Xiaoguang San,* Yisong Wang, Dan Meng* and Kai Tao*



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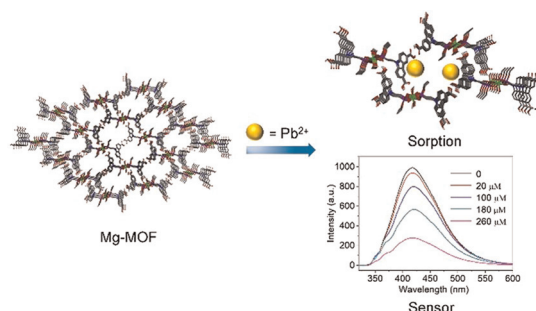
Fundamental questions
Elemental answers

COMMUNICATIONS

10416

A magnesium phosphonate metal–organic framework showing excellent performance for lead(II) sensing and removal from aqueous solutions

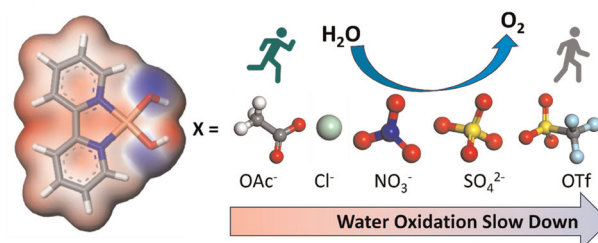
Qiankun Zhou, Ming Chen, Yubo An, Xiaoyan Tang, Ryotaro Matsuda* and Yunsheng Ma*



10421

Non-coordinating counteranion as a powerful tool to tune the activity of copper water oxidation catalysts

Xin Li, Lijuan Wang, Mengjiao Shao, Xueling Song and Lei Wang*

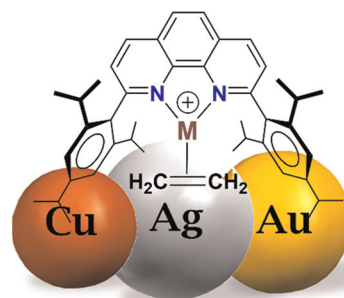


PAPERS

10426

Coinage metal-ethylene complexes of sterically demanding 1,10-phenanthroline ligands

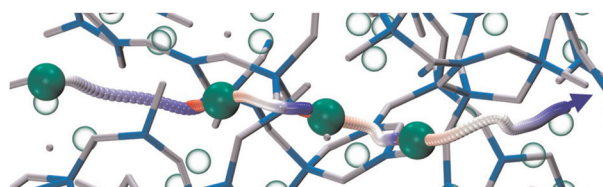
Deepika V. Karade, Vo Quang Huy Phan and H. V. Rasika Dias*



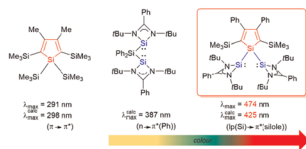
10434

Deciphering the structure and potassium-ion transport mechanism of potassium borate glass

Lulu Song, Alex C. Hannon, Steve Feller, Ruirui Liu, Peyton McGuire, Bo Zhang, Yongquan Zhou, Wu Li* and Fayen Zhu*



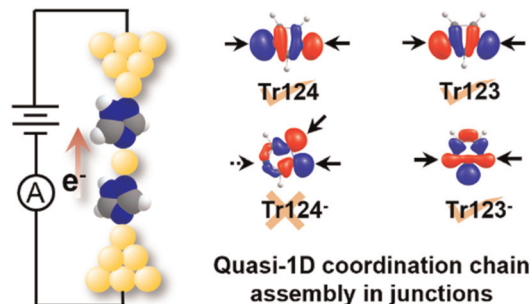
10446



A Bis(silylene)silole – synthesis, properties and reactivity

Chenghuan Liu, Marc Schmidtman and Thomas Müller*

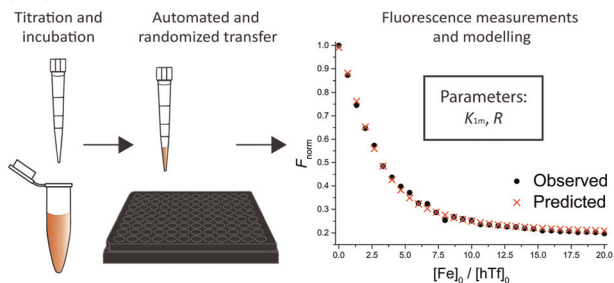
10453



Conductance and assembly of quasi-1D coordination chain molecular junctions with triazole derivatives

Zelin Miao, Xiaoyun Pan and Maria Kamenetska*

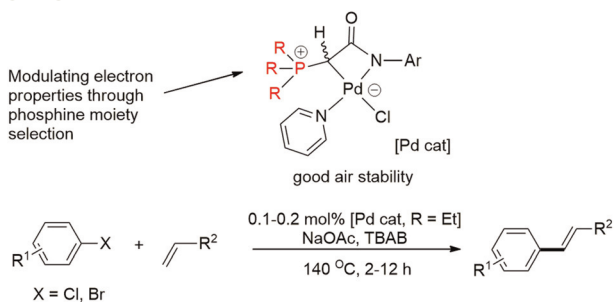
10462



Protein sialylation affects the pH-dependent binding of ferric ion to human serum transferrin

Tomislav Friganović, Valentina Borko and Tin Weitner*

10475



Design and synthesis of versatile ligand precursors based on phosphonium ylides for palladalactam formation and catalytic investigation

Cheng-Po Kao, Jhen-Yi Lee, Min-Cheng Tang and Hon Man Lee*

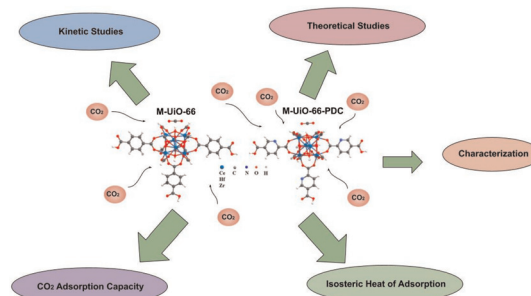


PAPERS

10486

Adsorption properties of M-Uio-66 (M = Zr(IV); Hf(IV) or Ce(IV)) with BDC or PDC linker

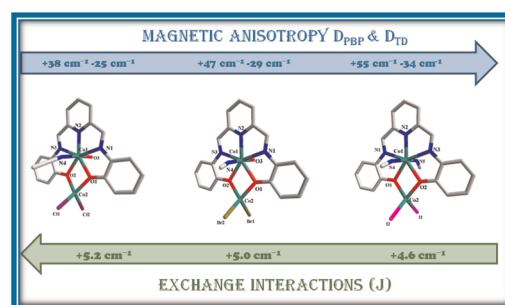
Diego González, Cesar Pazo-Carballo,* Esteban Camú, Yoan Hidalgo-Rosa, Ximena Zarate, Néstor Escalona and Eduardo Schott*



10499

Halide mediated modulation of magnetic interaction and anisotropy in dimeric Co(II) complexes

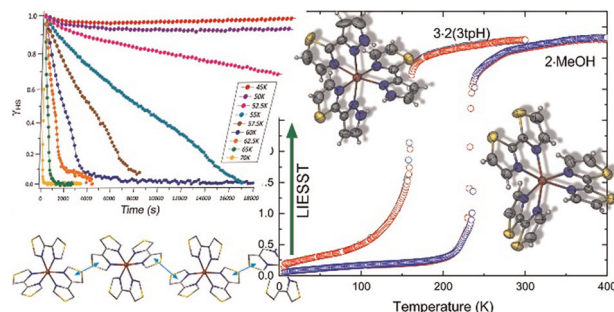
Ezhava Manu Manohar, Soumalya Roy, Xiao-Lei Li, Srinu Tothadi, Jun-Gwi Mok, Jinkui Tang,* Radovan Herchel,* Junseong Lee,* Atanu Dey* and Sourav Das*



10511

Light-induced spin-state switching in Fe(II) spin-crossover complexes with thiazole-based chelating ligands

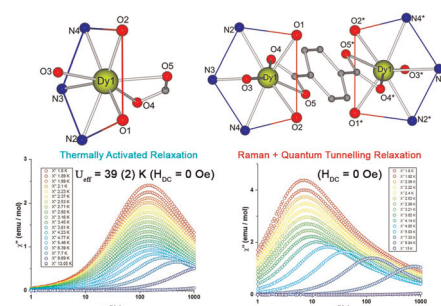
Minyoung Jo, Botagoz Amanzayova, Sandugash Yergeshbayeva, Miguel Gakiya-Teruya, Ökten Üngör, Paola Lopez Rivera, Natalie Jen, Evgeny Lukyanenko, Alexander V. Kurkin, Rakhmetulla Erkasov, Mark W. Meisel, Andreas Hauser, Pradip Chakraborty* and Michael Shatruk*



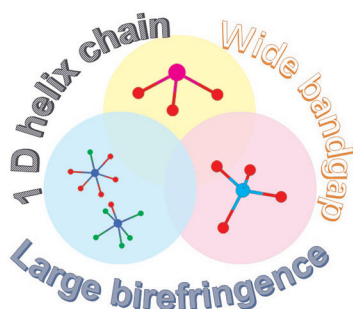
10521

Eight-coordinate mono- and dinuclear Dy(III) complexes containing a rigid equatorial plane and an anisobidentate carboxylate ligand in the axial position: synthesis, structure and magnetism

Pankaj Kalita,* Kusum Kumari, Pawan Kumar, Vierandra Kumar, Saurabh Kumar Singh,* Guillaume Rogez* and Vadapalli Chandrasekhar*



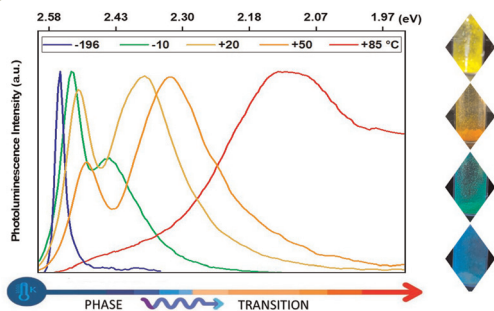
10536



Ba₂Ga₂F₆(IO₃)(PO₄): the first fluoride-containing iodate-phosphate with a 1D [Ga₂F₆(IO₃)(PO₄)]⁴⁻ helix chain

Miao-Bin Xu, Jia-Jia Li, Huai-Yu Wu, Nan Ma, Ning Yu, Mo-Fan Zhuo, Jin Chen* and Ke-Zhao Du*

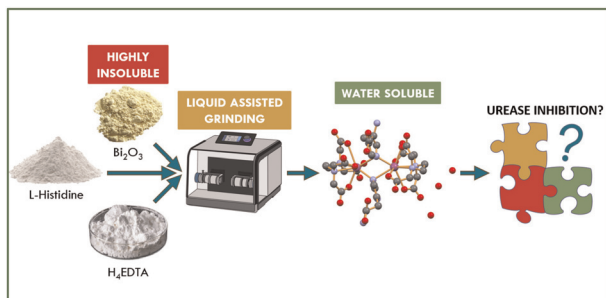
10544



Temperature-dependent excited states for detecting reversible phase transitions in 2D lead(II) iodide perovskites

Mahboubeh Jamshidi* and James M. Gardner*

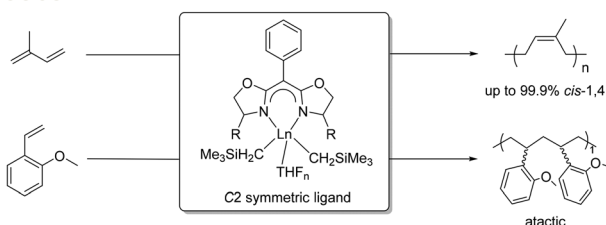
10553



Is bismuth(III) able to inhibit the activity of urease? Puzzling results in the quest for soluble urease complexes for agrochemical and medicinal applications

Laura Contini, Arundhati Paul, Luca Mazzei, Stefano Ciurli,* Davide Roncarati,* Dario Braga and Fabrizia Grepioni*

10563



Synthesis of bis(oxazoline)-based rare-earth metal complexes and their catalytic performance in the polymerization of isoprene and polar *ortho*-methoxystyrene

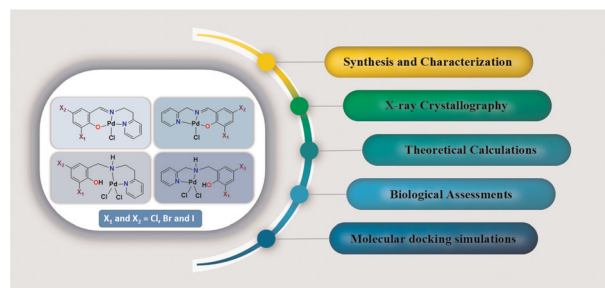
Shuhao You, Wenyu Shi, Ruoxue Ouyang, Yang Wang and Xiaochao Shi*



10571

Structural features and antiproliferative activity of Pd(II) complexes with halogenated ligands: a comparative study between Schiff base and reduced Schiff base complexes

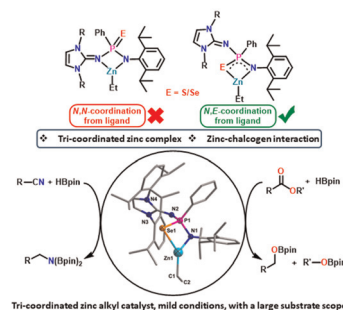
Kimia Forooghi, Hadi Amiri Rudbari,* Claudio Stagno, Nunzio Iraci, José V. Cuevas-Vicario, Nazanin Kordestani, Tanja Schirmeister, Thomas Efferth, Ejlal A. Omer, Nakisa Moini, Mahnaz Aryaeifar, Olivier Blacque, Reza Azadbakht and Nicola Micale*



10592

Tri-coordinated zinc alkyl complexes with N^ΛS/Se coordination of imino-phosphanamidinate chalcogenide ligands as precursors for efficient hydroboration of nitriles and esters

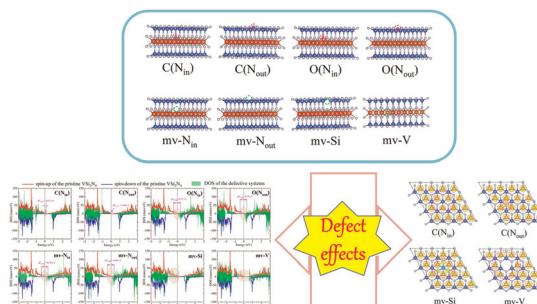
Himadri Karmakar, Gobilla Sai Kumar, Kuntal Pal, Vadapalli Chandrasekhar* and Tarun K. Panda*



10603

Defect effects on the electronic, valley, and magnetic properties of the two-dimensional ferrovalley material VSi₂N₄

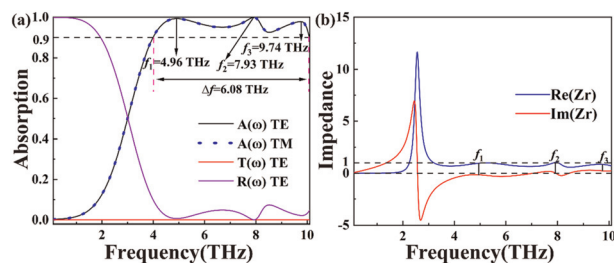
Ming-Yang Liu,* Guang-Qiang Li, Yao He and Kai Xiong



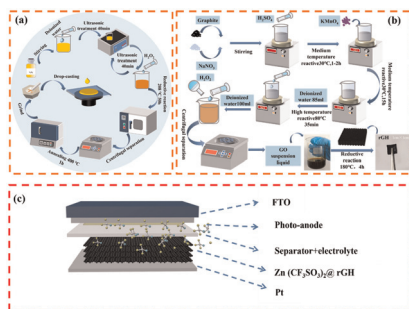
10618

Tunable bandwidth terahertz perfect absorption device based on vanadium dioxide phase transition control

Bin Shui, Yingting Yi, Can Ma,* Zao Yi,* Gongfa Li, Liangcai Zeng, Qingdong Zeng, Pinghui Wu and Yougen Yi



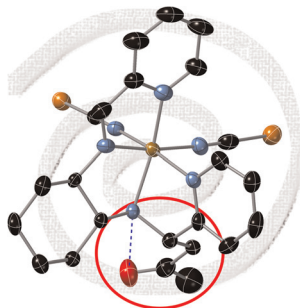
10626



Preparation of an aqueous zinc ion rGH/V₂O₅ photorechargeable supercapacitor

Lan-xiang Wu, Jia-ke Li,* He-dong Jiang, Xin Liu, Ping-chun Guo, Hua Zhu and Yan-xiang Wang

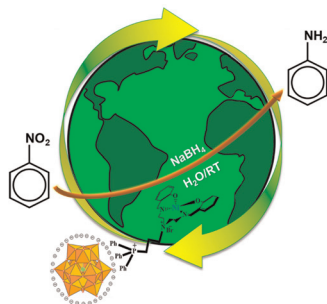
10637



Chiral spin-crossover complexes based on an enantiopure Schiff base ligand with three chiral carbon centers

Alejandro Regueiro, Víctor García-López, Alicia Forment-Aliaga and Miguel Clemente-León*

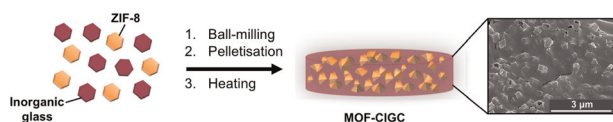
10644



A stable hybrid catalyst (POM-PPPh₃/L/Ni) for the reduction of toxic nitroarene compounds in water

Shima Aghajani and Maryam Mohammadikish*

10655



Loading and thermal behaviour of ZIF-8 metal-organic framework-inorganic glass composites

Ashleigh M. Chester, Celia Castillo-Blas, Roman Sajzew, Bruno P. Rodrigues, Giulio I. Lampronti, Adam F. Sapnik, Georgina P. Robertson, Matjaž Mazaj, Daniel J. M. Irving, Lothar Wondraczek, David A. Keen and Thomas D. Bennett*

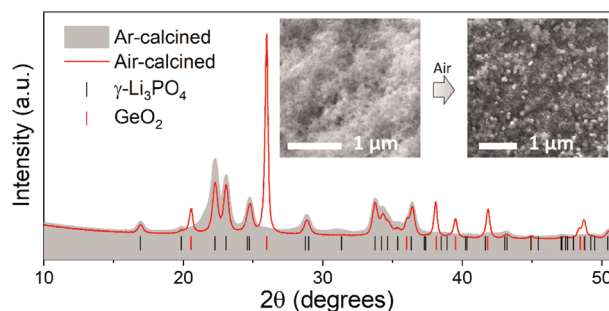


PAPERS

10666

A new nanostructured γ - $\text{Li}_3\text{PO}_4/\text{GeO}_2$ composite for all-solid-state Li-ion battery applications

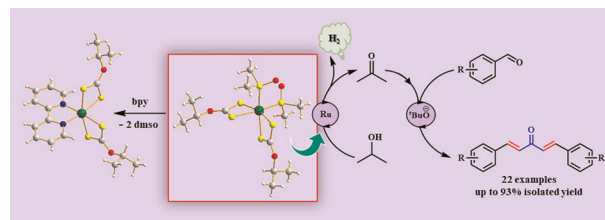
Hany El-Shinawi,* Edmund J. Cussen and Serena A. Cussen



10675

Development of ruthenium complexes with S-donor ligands for application in synthesis, catalytic acceptorless alcohol dehydrogenation and crossed-aldol condensation

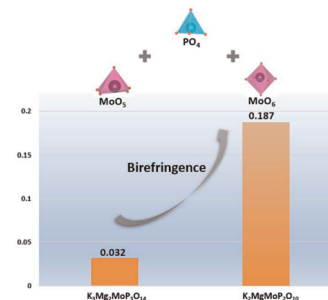
Anushri Chandra, Pousali Basu, Shreya Raha, Papu Dhibar and Samaresh Bhattacharya*



10686

$\text{K}_2\text{MgMoP}_2\text{O}_{10}$ and $\text{K}_3\text{Mg}_2\text{MoP}_3\text{O}_{14}$: two new molybdophosphates exhibiting different optical anisotropies induced by variable dimensionality of the anion framework

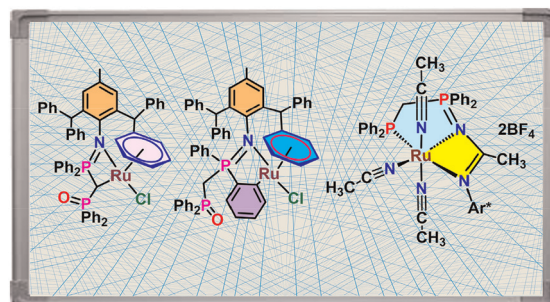
Zhixia Gao, Qiuyuan Feng, Juanjuan Lu and Hong Du*



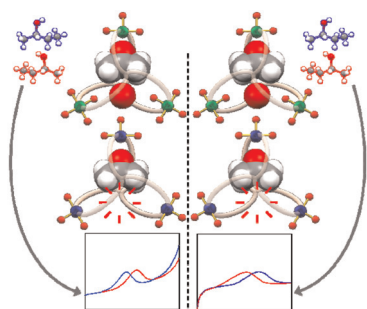
10693

Arene displacement, C–H activation and acetonitrile insertion reactions enabled by coordination of a functionalized iminophosphorane to a Ru^{II} -*p*-cymene scaffold

Rani Gourkhede, Bhupinder Kaur, Basvaraj S. Kote and Maravanji S. Balakrishna*



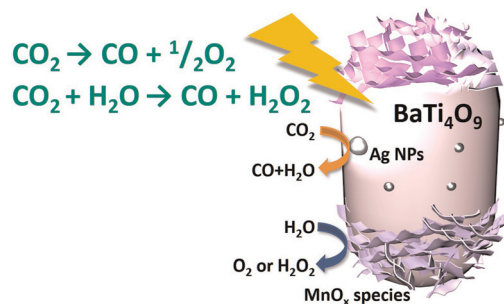
10704



M(II) effect on encapsulation of guests into a series of M_3L_2 chiral cages: enantio-recognition

Dongwon Kim, Gyeongmin Kim, Gyeongwoo Kim, Junmyeong Park, Jihun Han, Mohammad Mozammel Hossain, Ok-Sang Jung* and Young-A. Lee*

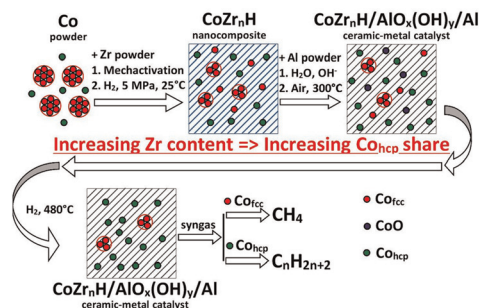
10712



Barium titanate photocatalysts with silver–manganese dual cocatalyst for carbon dioxide reduction with water

Shuwei Liu, Hongxuan Qiu, Akira Yamamoto and Hisao Yoshida*

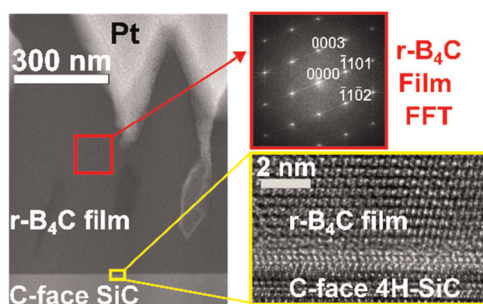
10720



CoZr nanocomposites in a ceramic–metal $AlO_x(OH)_y/Al$ matrix with a different Co/Zr ratio and its potential for syngas processing

Eugene V. Dokuchits,* Serguei F. Tikhov, Konstantin R. Valeev, Tatyana Yu. Kardash, Vladimir A. Rogov, Aleksei N. Salanov, Iliya V. Yakovlev, Olga B. Lapina and Tatyana P. Minyukova

10730



On the origin of epitaxial rhombohedral- B_4C growth by CVD on 4H-SiC

Sachin Sharma, Laurent Souqui, Justinas Palisaitis, Duc Quang Hoang, Ivan G. Ivanov, Per O. Å. Persson, Hans Högberg and Henrik Pedersen*

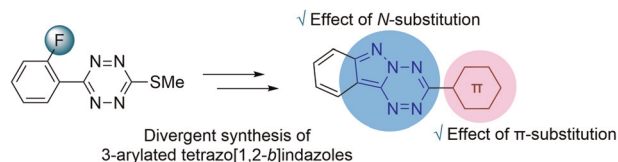


PAPERS

10737

Molecular engineering of 3-arylated tetrazo[1,2-*b*]indazoles: divergent synthesis and structure–property relationships

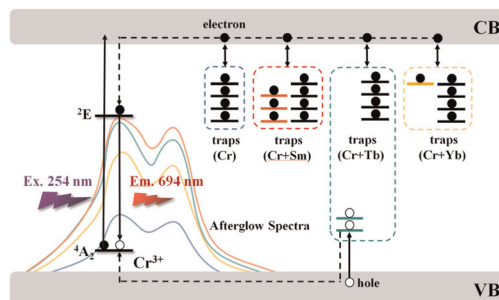
Asmae Bousfiha, Oumaima Abidi, Louis Lemetayer, Navya Sood, Iogann Tolbatov, Fabien Barrois, Ahmad Daher, Hélène Cattey, Marie Cordier, Muriel Hissler, Jean-Cyrille Hierso, Paul Fleurat-Lessard,* Pierre-Antoine Bouit* and Julien Roger*



10744

Near-infrared afterglow enhancement of ZnGa₂O₄:Cr³⁺ via regulating trap distribution guided by the VRBE diagram

Shuyu Huang, Xinxin Han,* Chuanyu Zeng, Anxian Liang and Bingsuo Zou*



CORRECTION

10753

Correction: Molybdenum-maltolate as a molybdopterin mimic for bioinspired oxidation reaction

Swapnil S. Pawar, Rohit N. Ketkar, Pranav B. Gaware, Kaustubh U. Jagushte, Divyani Dhawne, Shreyada N. Save, Shilpy Sharma, Ganga Periyasamy, Niyamat Chimthanawala, Sadhana Sathaye, Shreerang V. Joshi and Nabanita Sadhukhan*

