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IN THIS ISSUE

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Cover
See Kensuke Naka *et al.*,
pp. 2747–2752.

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Inside cover
See Srinivasan Natarajan
et al., pp. 2753–2764.

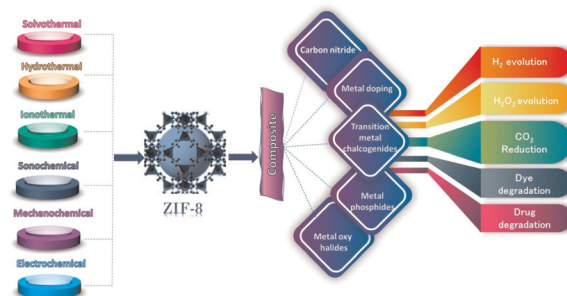
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PERSPECTIVE

2681

ZIF-8 metal–organic frameworks and their hybrid materials: emerging photocatalysts for energy and environmental applications

Diptirani Behera, Priyanka Priyadarshini and
Kulamani Parida*

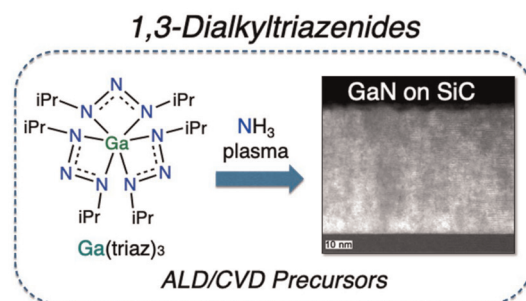


FRONTIERS

2709

Triazenide based metal precursors for vapour deposition

Nathan J. O'Brien* and Henrik Pedersen*



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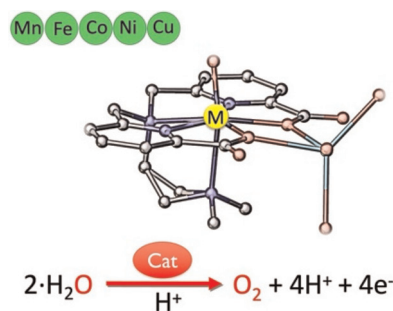
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2718

Chemical design of metal complexes for electrochemical water oxidation under acidic conditions

Zhen-Tao Yu

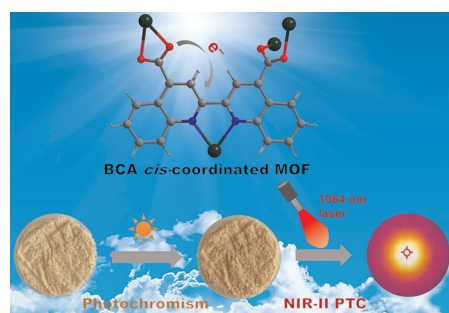


COMMUNICATIONS

2737

NIR-II absorption and photothermal conversion in a photochromic metal–organic framework based on *cis*-2,2'-biquinoline-4,4'-dicarboxylate

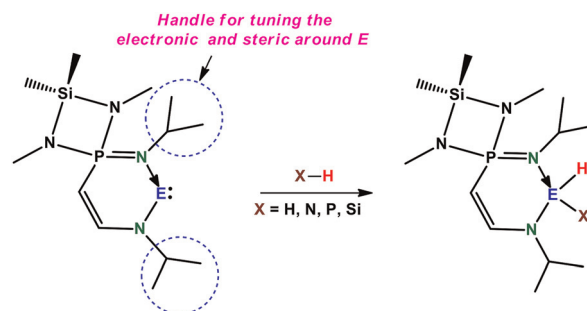
Ning-Ning Zhang, Ya-Ru Li, Li Li, Wei-Li Zheng, Lin-Xu Liu, Zhen-Yu Li, Yunyun Dong, Jinsheng Zhao,* Kong-Gang Qu* and Yong Yan*



2742

Theoretical prediction of metallomimetic stable cyclic group 13 carbenoids

Ashwini K. Phukan,* Barsha Rani Bora and Barsha Chakraborty

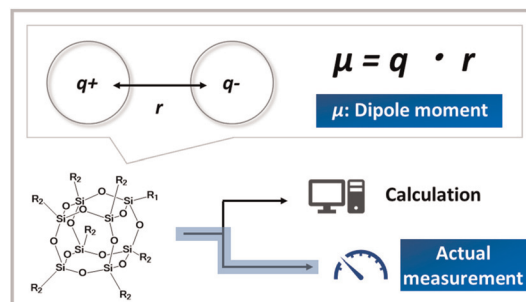


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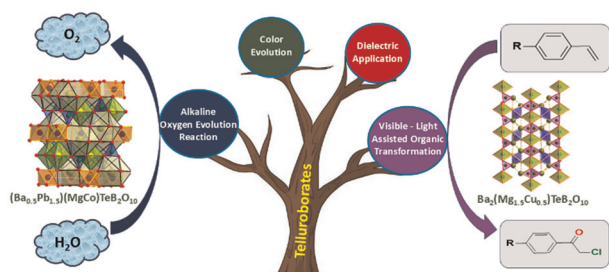
2747

Evaluation of dipole moment of polyhedral oligomeric silsesquioxane compounds

Naoki Watanabe, Hiroaki Imoto and Kensuke Naka*



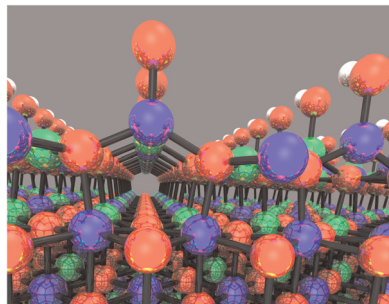
2753



Synthesis, structure, oxygen evolution reaction (OER) and visible-light assisted organic reaction studies on $A_2M_2TeB_2O_{10}$ ($A = Ba$ and Pb ; $M = Mg, Zn, Co, Ni, Cu,$ and Fe)

Indrani G. Shanmugapriya, Shreenibasa Sa and Srinivasan Natarajan*

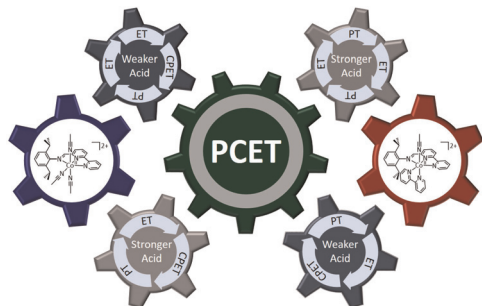
2765



Impact of $-OH$ surface defects on the electronic and structural properties of nickel oxide thin films

Ettore Fois, Chiara Maccato, Davide Barreca,* Cristiano Invernizzi and Gloria Tabacchi*

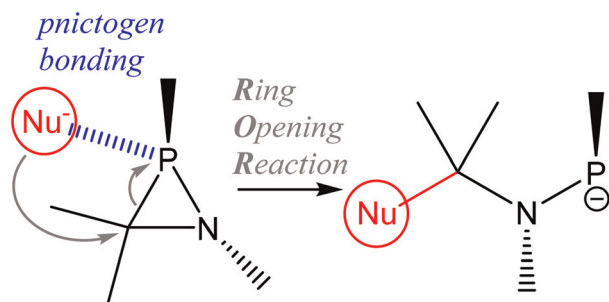
2776



Exploring acidity-dependent PCET pathways in imino-bipyridyl cobalt complexes

Jueun Lee, Daeun Jung and Junhyeok Seo*

2783



A "phosphorus derivative" of aziridines: on the importance of ring strain energy and three heteropolar bonds in azaphosphiridines

Antonio García Alcaraz, Alicia Rey Planells, Arturo Espinosa Ferao* and Rainer Streubel*

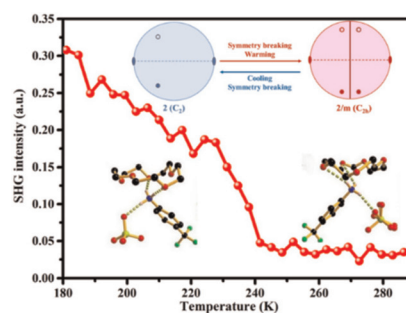


PAPERS

2793

Anionic modulation induces molecular polarity in a three-component crown ether system

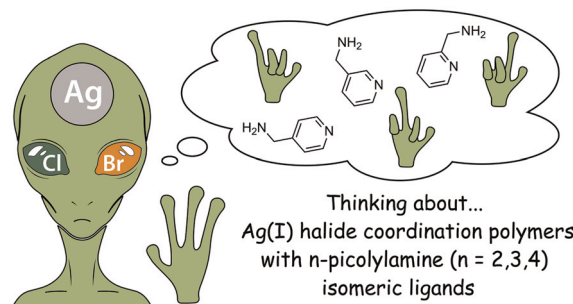
Feiyan Liu, Guoyong Chen, Xiao Liu, Ting Jiang, Wenjing Guo,* Xiancai Li* and Zhenhong Wei*



2799

Rationalization of the structural, electronic and photophysical properties of silver(I) halide *n*-picolyamine hybrid coordination polymers

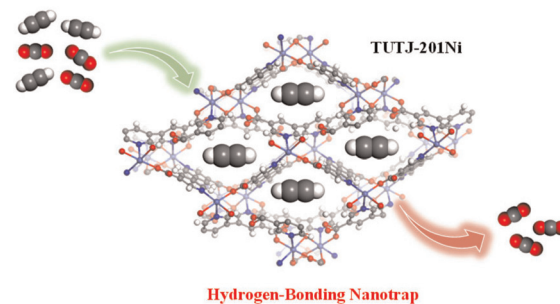
Caterina Zuffa, Daniele Veclani, Marianna Marchini, Filippo Monti,* Chiara Cappuccino, Lucia Maini* and Barbara Ventura



2812

A Lewis basic site rich metal–organic framework featuring a hydrogen-bonded acetylene nano-trap for the efficient separation of C₂H₂/CO₂

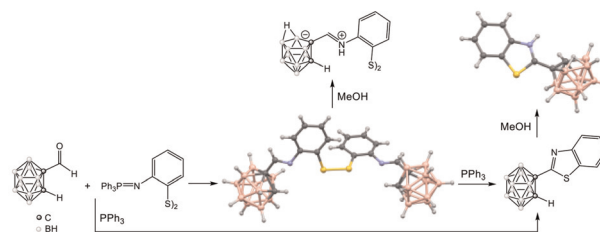
Mengyue Lu, Zhiwei Zhao, Yuhao Tang, Yating Wang, Feifei Zhang,* Jinping Li and Jiangfeng Yang*



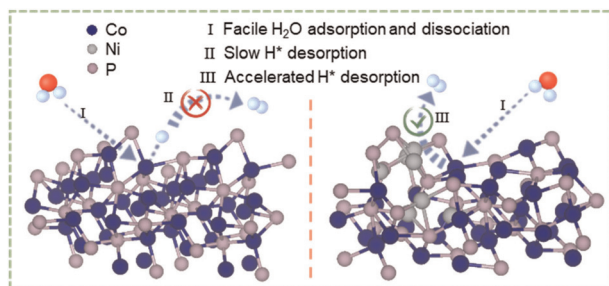
2819

Application of the aza-Wittig reaction for the synthesis of carboranyl Schiff bases, benzothiazoles and benzoselenazoles

Pablo Crujeiras, Irene Vázquez-Carballo and Antonio Sousa-Pedrares*



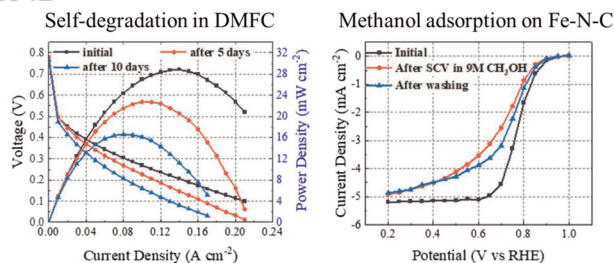
2833



Achieving advanced hydrogen evolution under large current density using an amorphous/crystalline core–shell electrocatalyst of a-NiCoP/Co₂P

Xiaodong Chen, Zhi Cheng, Jiao Li, Hongyu Chen, Siyuan Liu, Shuxian Wei, Zhaojie Wang* and Xiaoqing Lu*

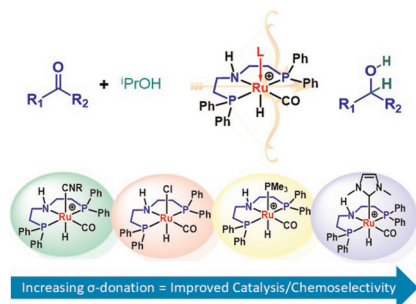
2842



Study of the self-degradation performance of a passive direct methanol fuel cell with an Fe–N–C catalyst

Chenjun Hou, Weijian Yuan,* Shilong Gao, Yujun Zhang, Yufeng Zhang and Xuelin Zhang*

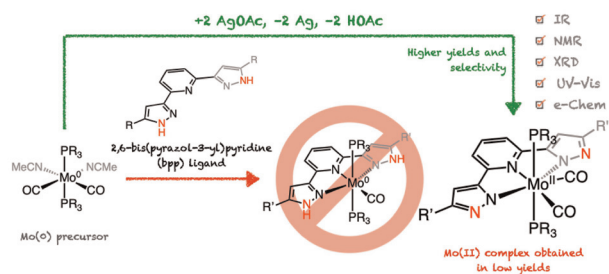
2851



Catalysis activity and chemoselectivity control with the *trans* ligand in Ru–H pincer complexes

Mita Halder, Diana Castillo Cardenas, Angela M. Chartouni and Damien B. Culver*

2860



Synthesis and characterization of heptacoordinated molybdenum(II) complexes supported with 2,6-bis(pyrazol-3-yl)pyridine (bpp) ligands

Arno Estival, Luis E. Blancarte, Loïc Pinto, Romane Pointis, Nathan Galas, Alix Sournia-Saquet, Laure Vendier, Rosa Santillan, Norberto Farfán, Jean-Baptiste Sortais, Mary Grellier and Antoine Simonneau*

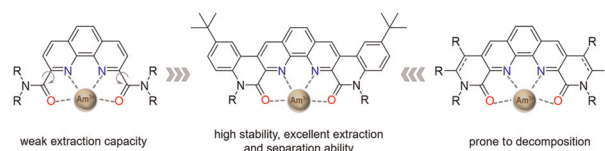


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2871

Completely preorganized bis-lactam-1,10-phenanthroline ligands with high stability for efficient separation of Am(III) over Eu(III)

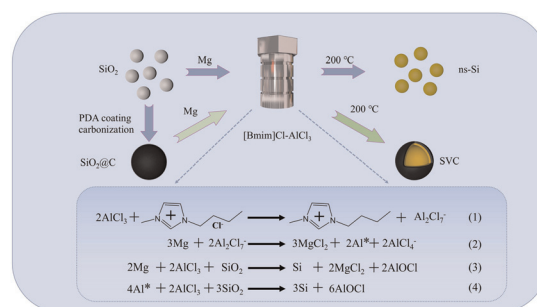
Fengxin Gao, Xiaocheng Xu, Xiaofan Yang, Hong Cao, Dong Fang,* Lei Xu, Chao Xu* and Chengliang Xiao*



2877

A low-temperature ionic liquid system for topochemical synthesis of Si nanospheres for high-performance lithium-ion batteries

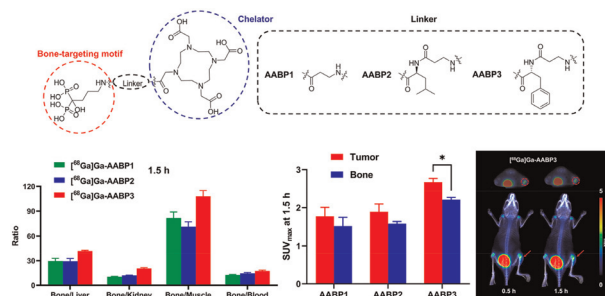
Yanan Xu, Shiyue Zhang, Yu Zhang, Qing Hu, Hao Li, Wenkai Wang and Hongbin Du*



2886

Preparation and preclinical evaluation of ⁶⁸Ga-labeled alendronate analogs for diagnosis of bone metastases

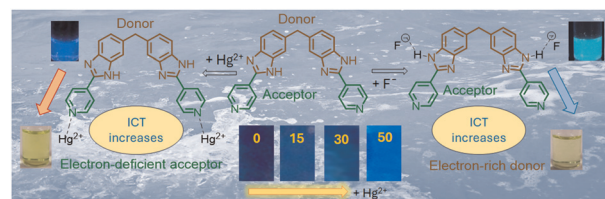
Yixiang Lin, Yuan Pan, Jinglin Zhang, Bo Zhou, Guihua Hou and Feng Gao*



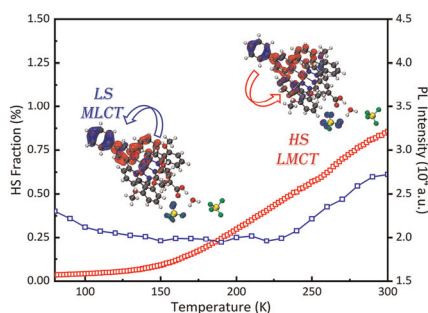
2896

Modulation in the charge transfer characteristics of flexible bis-benzimidazole probes: independent sensing mechanisms for Hg²⁺ and F⁻

Suraj Pise and Nilanjan Dey*



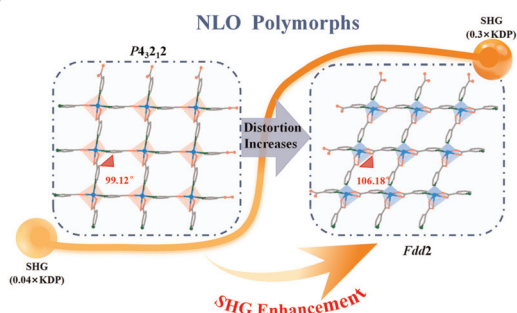
2908



A mononuclear iron(II) complex constructed using a complementary ligand pair exhibits intrinsic luminescence–spin-crossover coupling

Du-Yong Chen, Cheng Yi, Xin-Feng Li, Ren-He Zhou, Li-Yan Zhang, Rui Cai, Yin-Shan Meng* and Tao Liu*

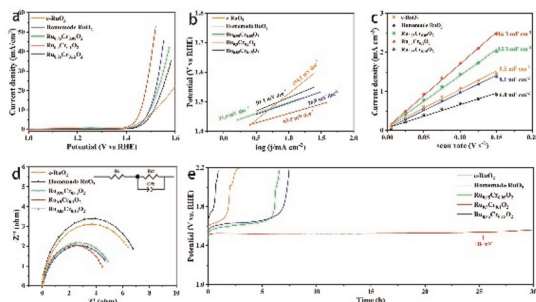
2916



Enhanced second harmonic generation in a *Fdd2* polymorph of $C_{12}H_8N_2O_4Zn$ for UV nonlinear optical applications

Jie Gou, Can Yang, YunJie Wang, Yaolong Zhu, Qingwen Zhu, Xin Su* and Qi Wu*

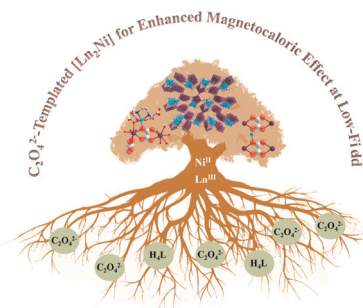
2922



Uncovering the role of the Cr dopant in RuO_2 in highly efficient acid water oxidation

Hui Liu,* Maolin Li, Zhizhao Zhang, Ying Li, Qiuyan Hao, Limin Liang and Wen Zhang

2930



$C_2O_4^{2-}$ -templated $[Ln_2Ni]$ heterometallic compounds for enhanced magnetocaloric effects at low fields

Qin Wang, Lingxi Xu, Jilei Wang, Yating Yu, Xu Bai, Chutian Jiang, Qiaoling Chen* and Yan Xu*

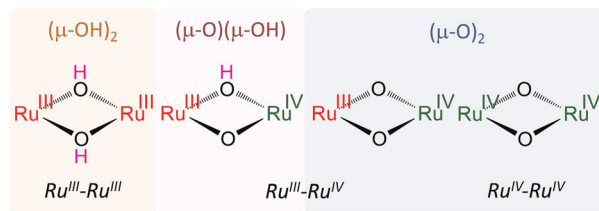


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2937

Ru(IV)–Ru(IV), Ru(III)–Ru(IV), and Ru(III)–Ru(III) complexes having a sulfato bridging ligand on the doubly oxido-/hydroxido-bridged core, and their crystallographic and electronic structures

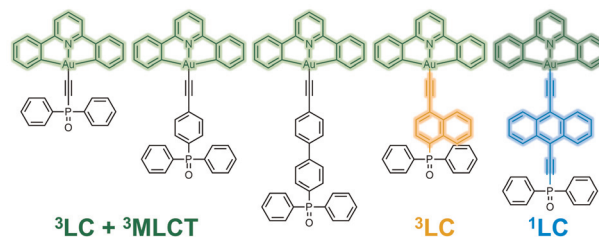
Tomoyo Misawa-Suzuki,* Yusuke Kataoka, Sota Mafune, Teresa Niwa and Hirotaaka Nagao



2950

Cyclometalated Au(III) complexes with alkynylphosphine oxide ligands: synthesis and photophysical properties

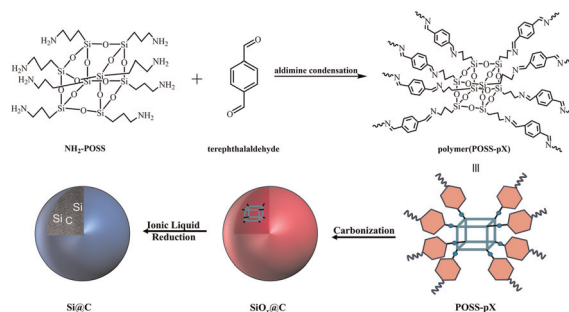
Maksim Luginin, Dmitry Snetkov, Anastasia Sizova, Aleksandra Paderina, Vladimir Sizov and Elena Grachova*



2964

Nano-confined Si@C composites with excellent lithium-ion storage performance derived from a POSS-based covalent framework and low-temperature reduction method

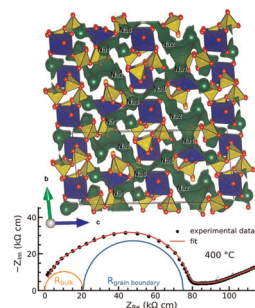
Yu Zhang, Yanan Xu, Shupeng Zhao, Shiyue Zhang, Hao Li, Qing Hu, Wenkai Wang and Hongbin Du*



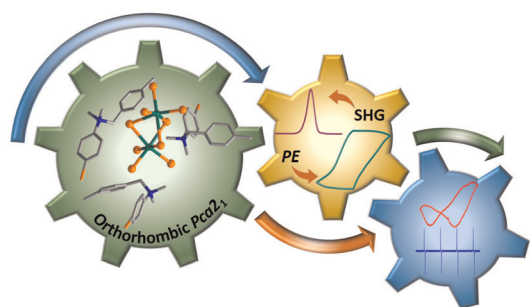
2974

Open frameworks in the Na_xMn_y(P₂O₇)_mF_n fluoro-pyrophosphates system

Feifan Li, Yaping Li, Victor Duffort, Olivier Mentré, Claire Minaud, Qingqing Huang, Xiedong Cheng, Rui Cui and Minfeng Lü*



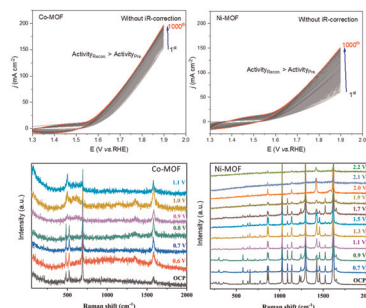
2985



Ferroelectricity and piezoelectric energy harvesting of an $A_3M_2X_9$ -type 0D bromobismuthate hybrid with a bulky organic quaternary amine

Namonarayan Meena, Supriya Sahoo, Nilotpal Deka, Vinayak B. Gadagin, Jan K. Zaręba* and Ramamoorthy Boomishankar*

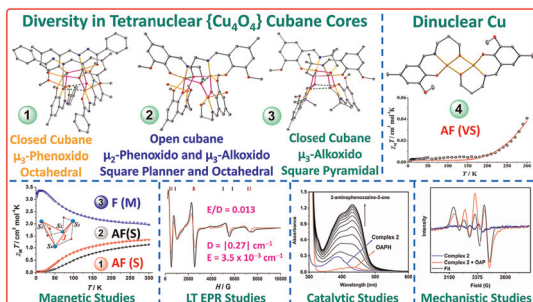
2991



Controlled reconstruction of metal–organic frameworks *via* coordination environment tuning as oxygen evolution electrocatalysts

Jiangli Gong, Qianglong Qi, Zhiyuan Wang, Guangxin Zhao, Jianliang Yuan, Chengxu Zhang* and Jue Hu*

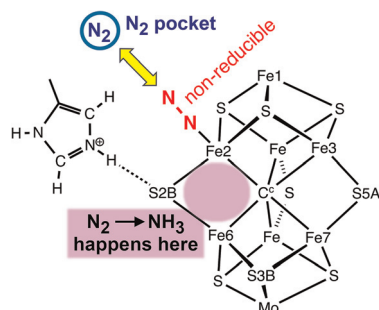
3000



Exploring structural, magnetic, and catalytic diversity in tetranuclear $\{Cu_4O_4\}$ cubane cores and a dinuclear complex derived from closely related ligand systems

Narayan Ch. Jana, Albert Escuer, Paula Brandão and Anangamohan Panja*

3013



Understanding non-reducible N_2 in the mechanism of Mo–nitrogenase

Ian Dance

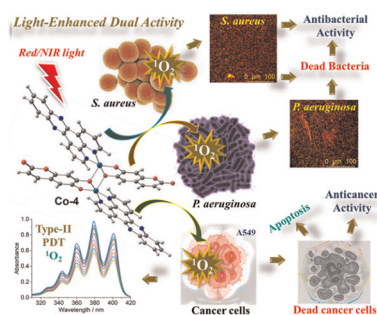


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3027

Red and NIR light-triggered enhancement of anticancer and antibacterial activities of dinuclear Co(II)-catecholate complexes

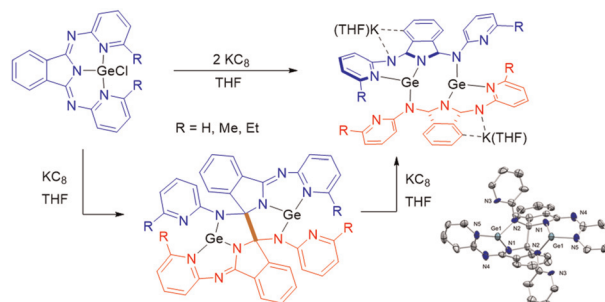
Jyotirmoy Dutta, Are Varshini, Sri Ganga Padaga, Arpan Bera, Tukki Sarkar,* Swati Biswas* and Akhtar Hussain*



3039

Carbon-carbon bond formation and cleavage at redox active bis(pyridylimino)isoindole (BPI) germylene compounds

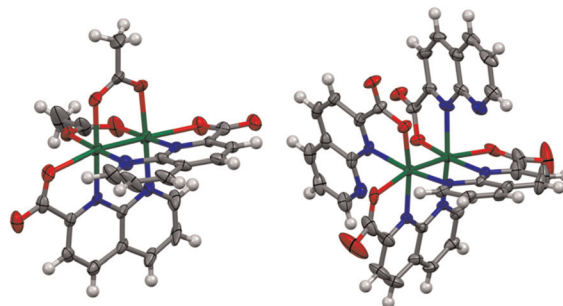
Antonio I. Nicasio, Rosie J. Somerville, Pablo Sahagún, Enrique Soto, Joaquín López-Serrano and Jesús Campos*



3047

Paddlewheel-type and half-paddlewheel-type diruthenium(II,II) complexes with 1,8-naphthyridine-2-carboxylate

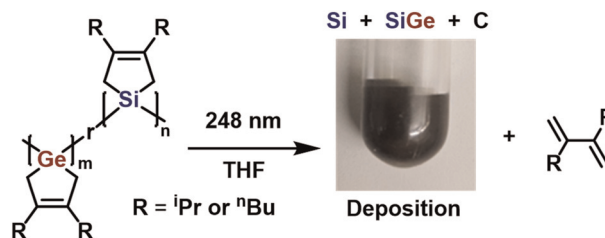
Yusuke Kataoka,* Nozomi Tada, Naoki Masamori, Natsumi Yano, Chikako Moriyoshi and Makoto Handa*



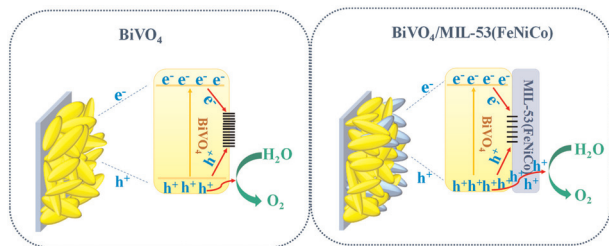
3057

Towards the photodeposition of Si_xGe_y-type materials via oligomers of cyclogermapentenes and cyclosilapentenes

William Medroa del Pino, Andres Forero Pico, Abhishek V. Muralidharan, Manisha Gupta and Eric Rivard*



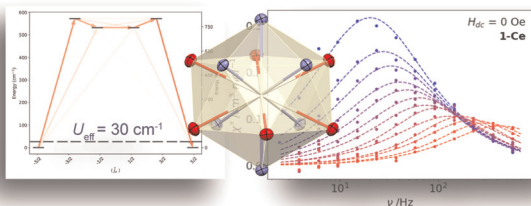
3065



An MIL-53(FeNiCo) decorated BiVO₄ photoanode for efficient photoelectrochemical water oxidation

Leiting Si,^{*} Jiawei Yang and Guang Liu^{*}

3071



A rare case of a zero-field single-ion magnet in a cerium(III) pseudo-icosahedral complex

Jarrod R. Thomas, Marcus J. Giansiracusa,^{*} Jonathan T. Mifsud, Richard A. Mole and Scott A. Sulway^{*}

