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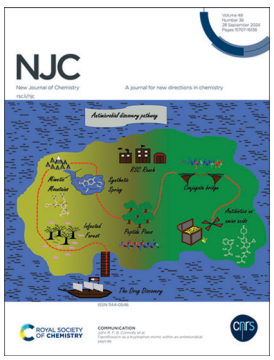
IN THIS ISSUE

ISSN 1144–0546 CODEN NJCHES 48(36) 15707–16136 (2024)



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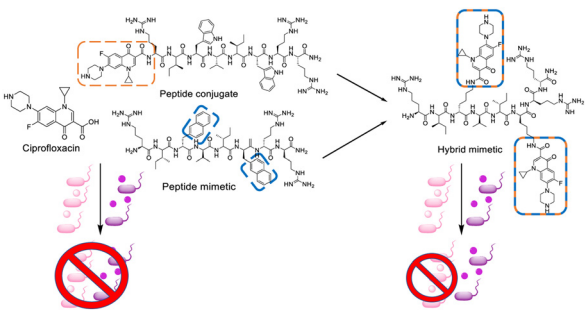
Inside cover
See Björn Schwarz, Enrique Colacio, Gopalan Rajaraman, Joydeb Goura et al., pp. 15735–15746. Image reproduced by permission of Björn Schwarz, Enrique Colacio, Gopalan Rajaraman and Joydeb Goura from *New J. Chem.*, 2024, **48**, 15735.

COMMUNICATIONS

15722

Ciprofloxacin as a tryptophan mimic within an antimicrobial peptide

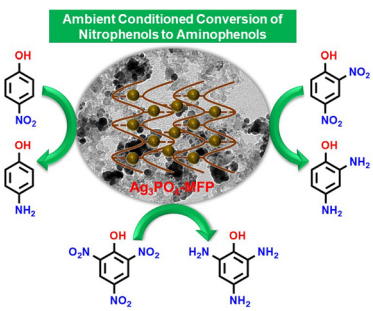
John R. F. B. Connolly,* Deirdre Fitzgerald-Hughes, Marc Maresca, Jimmy Muldoon and Marc Devocelle



15726

Silver phosphate-based melamine–formaldehyde polymer for reduction of mono, di, and tri-nitrophenols under ambient conditions

Anjali Kumari Garg, Vaishali Singh, Nicky Kumar Lamba, Chumki Dalal* and Sumit Kumar Sonkar*



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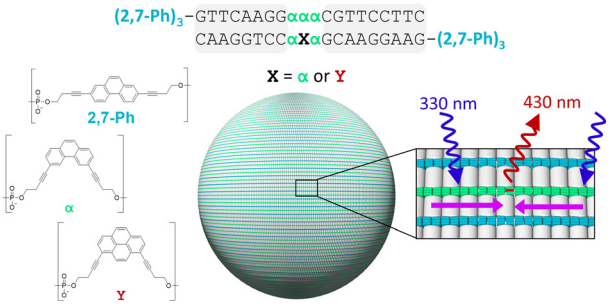
COMMUNICATIONS

15731

Supramolecular assembly of phenanthrene–DNA conjugates into light-harvesting nanospheres

Jan Thiede, Thomas Schneeberger, Ioan Iacovache, Simon M. Langenegger, Benoît Zuber and Robert Häner*

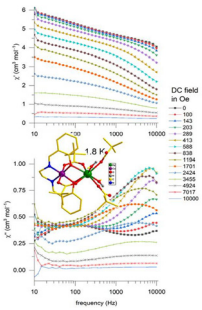


PAPERS

15735

Synthesis, structure, and magnetic properties of diamagnetic Co(III) ion-based heterometallic Co^{III}–Ln^{III} (Ln = Dy, Tb, Ho, Er) complexes

Nandini Barman, Purbashree Halder, Subrata Mukhopadhyay, Björn Schwarz,* Enrique Colacio,* Rajanikanta Rana, Gopalan Rajaraman* and Joydeb Goura*



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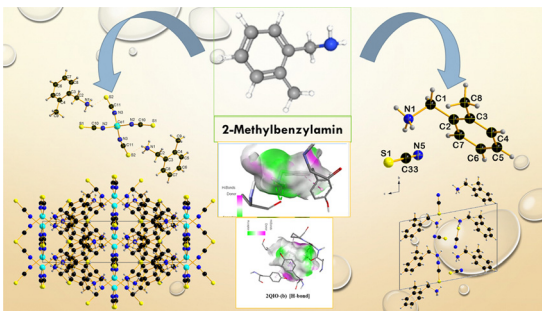
Synthesis, crystal structure, thermal analysis, spectroscopic, optical polarizability, and DFT studies, and molecular docking approaches of novel 2-methyl-benzylammonium derivatives for potential anti-inflammatory control

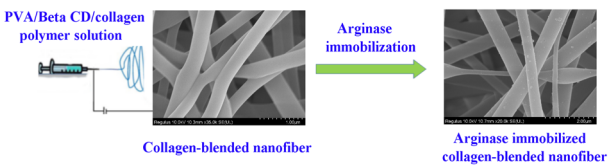
Amal Ferchichi, Jawher Makhlouf,* Kelechi Chukwuemeka, Arto Valkonen, Hatem A. Abuelizz, Rashad Al-Salahi, Youness El Bakri* and Wajda Smirani



15760

Production and characterization of a collagen-blended electrospun nanofiber matrix for arginase immobilization

Ceyhun Işık* and Mustafa Teke



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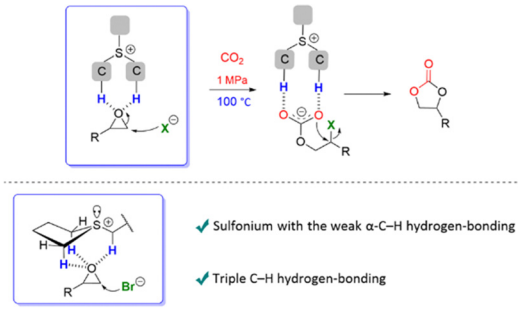
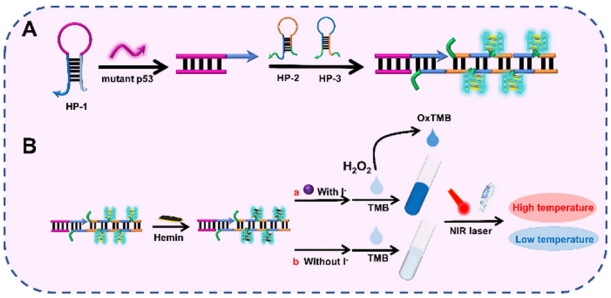


Unconventional sulfonium C–H H-bond donor catalyst in fixation of carbon dioxide

Na Shi, Ming Chen, Zhenjiang Li,* Yongwei Ni, Hui Yu, Daiqing Zhou, Ning Li, Min Zhang, Xin Zou and Kai Guo*

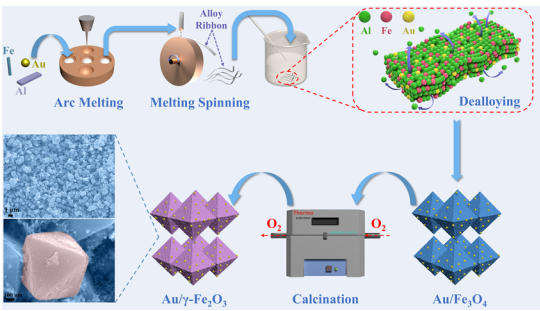
15782



Colorimetric and photothermal dual-modal analysis of a cancer-related gene based on G-quadruplex-hemin cascade signal amplification

Hongling Tao, Yanyue Chen, Jiawen Liu, Jiali Liu, Yunhui Yang and Rong Hu*

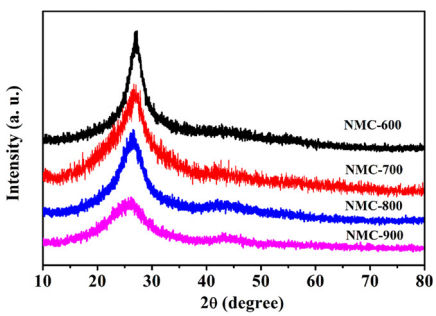
15790



Highly efficient nano-octahedral Au/γ-Fe_2O_3 catalyst synthesized by dealloying combined with calcination for low-temperature CO oxidation

Dong Duan, Chunxi Hao,* Jiangang Jiang and Ying Li

15802



A green method for the preparation of nitrogen-doped mesoporous carbon and its application in adsorptive desulfurization

Huapeng Cui* and Naijin Xing

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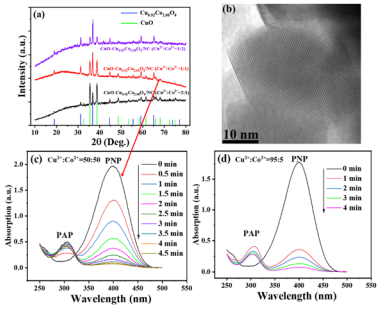
15810

Exploring the high catalytic performances of Cu–Co–O/N-doped carbon materials toward the hydrogenation reduction and advanced oxidation reactions of 4-nitrophenol (PNP)

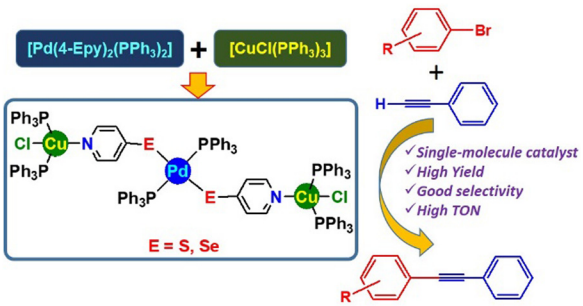
Pingyun Li,* Shiyu Huang, Yanchao Shen, Yadan Wang and Xiaode Guo*



15823

Bimetallic Pd/Cu complexes of pyridylchalcogenolates and their catalytic activity in the Sonogashira reaction

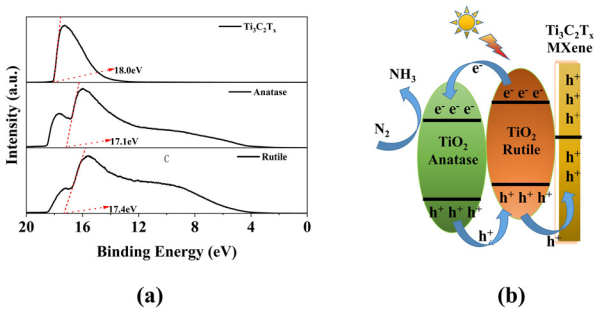
M. K. Pal, A. P. Wadawale and S. Dey*



15830

Regulation of a rutile/anatase TiO_2 heterophase junction *in situ* grown on $Ti_3C_2T_x$ MXenes with remarkable photocatalytic properties

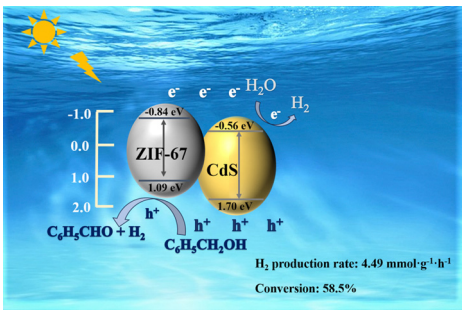
Jiale Zheng, Junhao Cai, Songyuan Li, Ruoping Li* and Mingju Huang*



15839

Functionalized ZIF-67@CdS for photocatalytic oxidation of benzyl alcohol coupled with hydrogen production

Tao Wang, Mengyao Shi, Changyan Guo* and Jide Wang*



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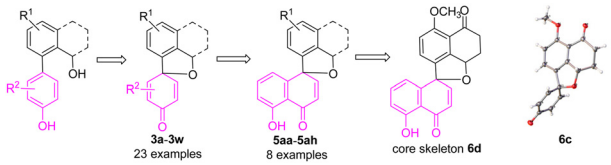
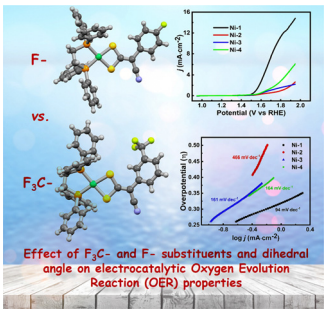


Synthesis of 3′*H*-spiro[cyclohexane-1,1′-isobenzofuran]-2,5-dien-4-one and Skeleton construction of a type D spirobisnaphthalene structure *via* dearomatization by a high-valence iodine reagent and Diels–Alder reaction

Haoyun Ma, Xinkun An, Tingting Zhang, Xie He, Yiyi Li and Mingan Wang*

15856



Supramolecular and electrocatalytic OER properties of new heteroleptic fluoro- and trifluoromethyl-substituted Ni(II)-dithiolates: effects of substituents and dihedral angle on the electrocatalytic performance

Aparna Kushwaha, Devyani Srivastava, Gabriele Kociok-Köhn, Suresh W. Gosavi, Ratna Chauhan, Sarfaraz Ahmed and Abhinav Kumar*

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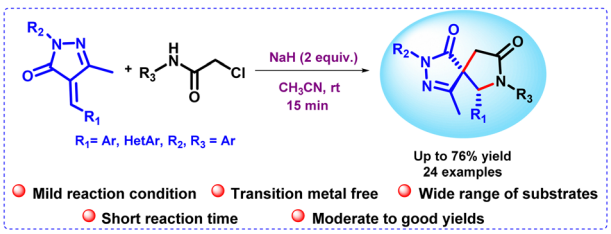
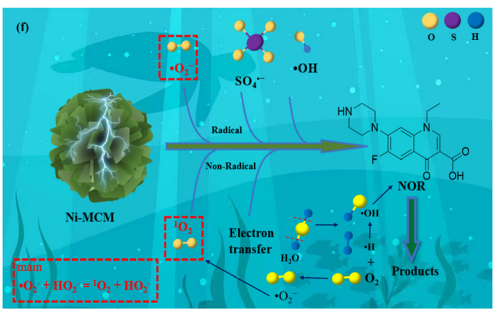


Convenient synthesis of spiro-pyrazolone–pyrrolidinones *via ipso*-cyclization of arylidene pyrazolones with 2-chloro-*N*-phenylacetamides

Kavyashree Kuppayya Gond and Mahagundappa Rachappa Maddani*

15870



The composite metal cluster catalyst Ni–MCM enhances the non-radical pathway for efficient catalytic degradation of norfloxacin

Chuhan Xing, Yaoyao Chen,* Zhi Song,* Boxia Liu, Xiayan Zhang, Jialu Liu, Yeqiong Huang and Dongxu Han

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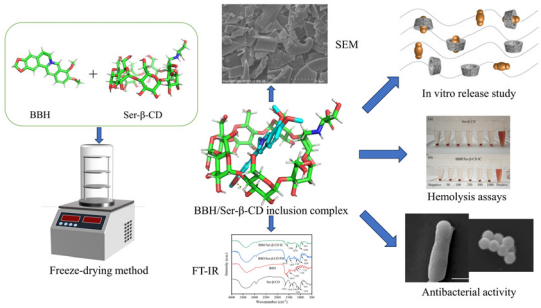
15884

Inclusion complex of berberine hydrochloride with serine-β-cyclodextrin: construction, characterization, inclusion mechanisms, and bioactivity

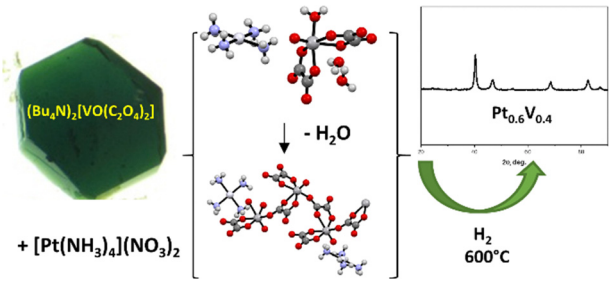
Dong Ju Zhou, Wei Ming Liu, Su Ping Dai, Shuai Qiang Jiang, Yin Wang, Jia Jia Yang, Ya Wei Chen, Jun Liang Chen, Hyun Jin Park and Hui Yun Zhou*



15894

Double complex salts based on tetraamminplatinum(II) and vanadyl(IV) bisoxalate for the preparation of bimetallic Pt–V alloys

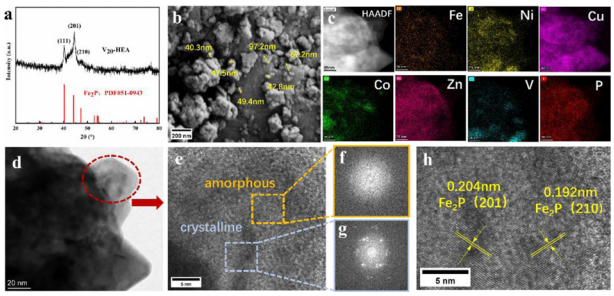
Sofia N. Vorobyeva,* Zakhar V. Rudzis, Taisiya S. Sukhikh, Evgeny Yu. Filatov, Pavel E. Plusnin, Vladimir A. Nadolinny, Artem S. Bogomyakov and Sergey V. Korenev



15904

Noble metal free high entropy alloys with amorphous based heterostructures for the oxygen evolution reaction

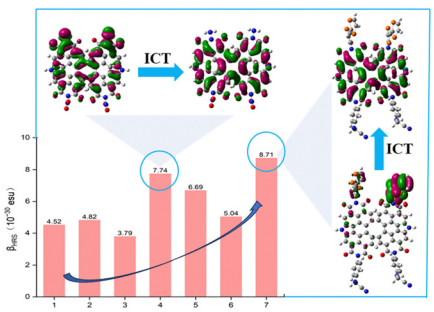
Jia Yao, Yin'an Zhu, Ting Dai, Tao Lu* and Ye Pan*



15913

Theoretical study on photophysical properties of double helicenes entwined with two perylene diimides

Yanling Si and Guochun Yang*



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PAPERS

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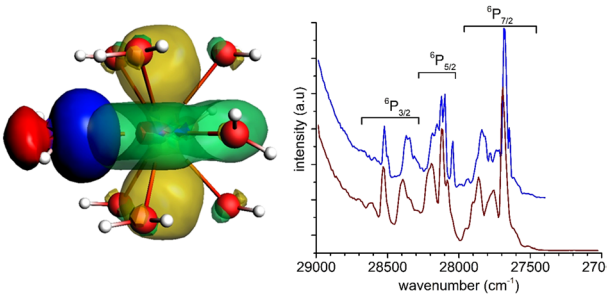
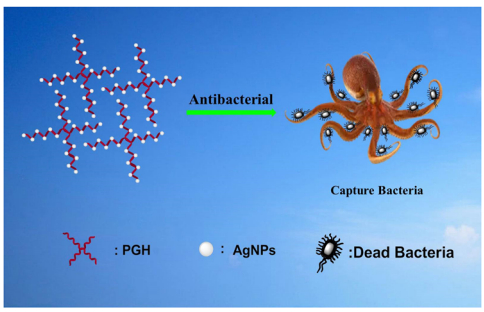


Hydrated halogenides of Eu(II): structure, spectroscopy and charge density analysis

Przemysław Starynowicz

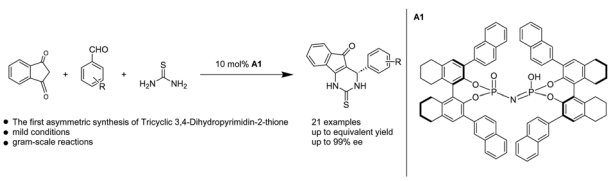
15935



Combating multidrug-resistant bacteria with nanostructured guanidine-based polymers

Jian-Bin Zhen,* Jia-Jia Yi,* Xin-Yi Bu, Yi-Long Yao and En-Peng Meng

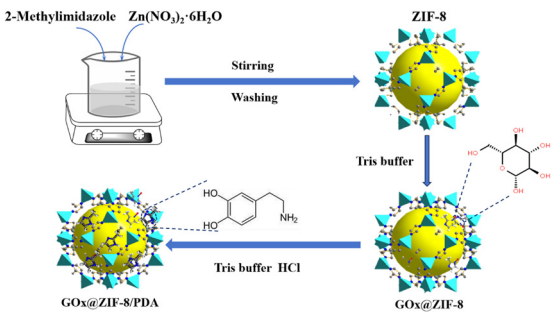
15943



Asymmetric synthesis of chiral tricyclic 3,4-dihydropyrimidin-2-thione derivatives catalyzed by chiral imidodiphosphoric acid

Lingkai Kong, Peng Wang, Chunzhi Ju, Guangliang Zhang* and Suoqin Zhang*

15948



Glucose oxidase intercalation into polydopamine and ZIF-8 as a highly efficient and stable bio-catalyst for H_2O_2 production

Yalin Zhang, Xiaoyue Yang, Xinlong Liu, Zhijie Zhang and Xiaoyuan Liao*

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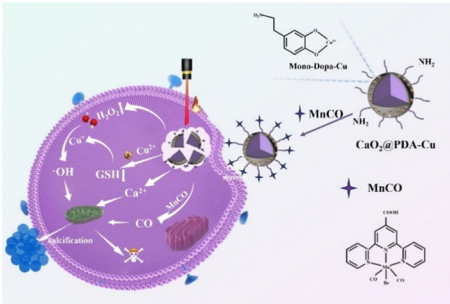
15956

A multifunctional nanoplatform combining self-supplied H_2O_2 production with CO delivery for multimodal anti-tumor therapy

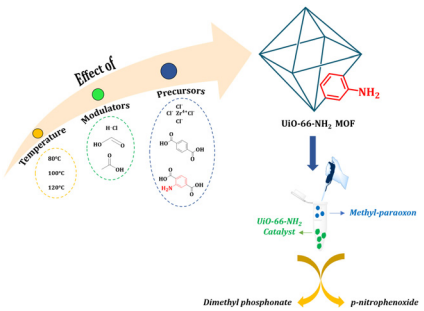
Meng-Jie Chen, Cheng-Bin Wang, Hai-Lin Zhang, Shi-Ping Yang and Jin-Gang Liu*



15965

Synergistic ramifications of synthesis criteria and amine functionalization of UiO-66-NH_2 MOFs for the catalytic degradation of a nerve agent simulant, methyl-paraoxon

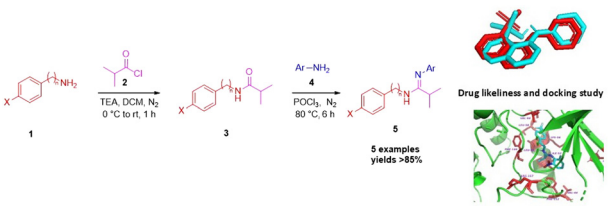
Selva Balasubramanian, Arockia Jayalatha Kulandaisamy and John Bosco Balaguru Rayappan*



15978

Biological evaluation of some novel 1,3-bis substituted-2-isopropylamidines by *in silico* molecular dynamics and simulation studies

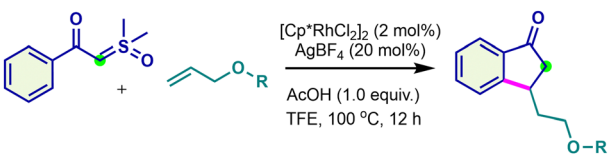
Pradeep Kumar P. S., Jeevan Chakravarthy A. S.,* Shriraksha A and Sunil K*



15989

Rh(III)-catalyzed [4+1] annulation of a sulfoxonium ylide with allyl alkyl ethers: a detailed theoretical study of the anti-inflammatory and antidiabetic activities with DFT

Pakkirisamy Sivakumar, Pothapragada S. K. Prabhakar Ganesh, Perumal Muthuraja, Sarangapani Bharanidharan, Balasubramaniyan Anandhan, Rajaram Rajamohan* and Subramaniyan Kamatchi*



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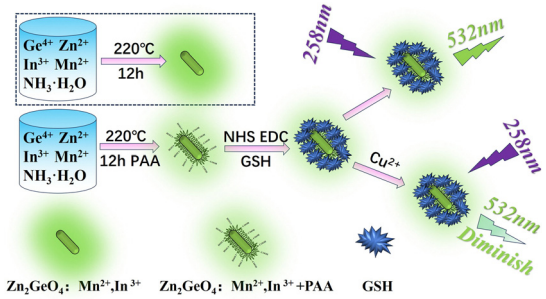
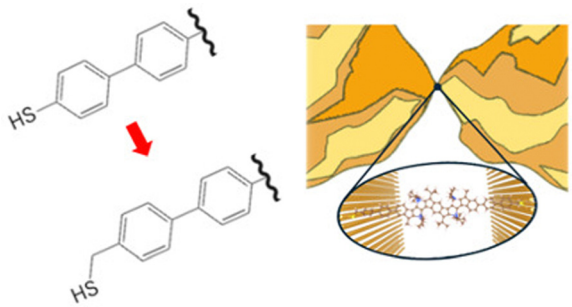


Preparation of Zn_2GeO_4:Mn,In persistent luminescence nanoparticle composites for the detection of copper ions

Yao-Xing Han, Renagul Abdurahman,* Yue Zhang, Shi-Ji Liu, Xiu-Zhen Yang, Xuan-He Guo, Rui Zhang, Xing-Hong Pan and Xue-Bo Yin*

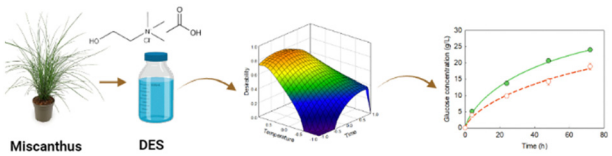
16008



Insertion of methylene groups into functional molecules for high thermal stability and superior functionality of single-molecule transistors: a first-principles study

Miku Furushima,* Mitsuharu Uemoto, Dongbao Yin, Seiichiro Izawa, Ryo Shintani, Yutaka Majima and Tomoya Ono

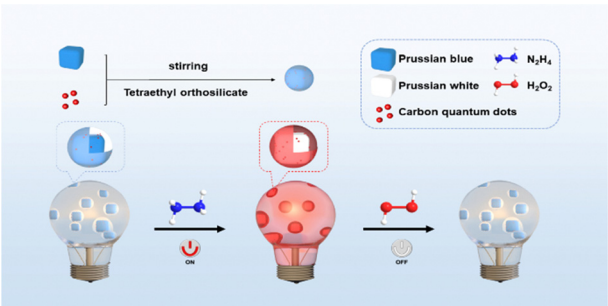
16015



Optimizing deep eutectic solvent pretreatment for enhanced glucan recovery from miscanthus

Patrícia J. Piedade, Michał M. Nowotarski, Gabriela Dudek and Rafal M. Lukasik*

16026



A reversible redox-fluorescence switch based on Prussian blue and carbon quantum dots for dual-spectral detection of N_2H_4 and H_2O_2

Jiayu Gao, Yuan Zhang, Ying Sun, Siyue Wang, Zhelin Liu,* Bo Zhao,* Xiangting Dong and Shouhua Feng

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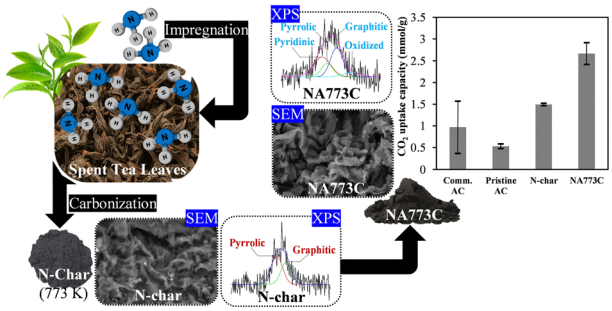
16034

Nitrogen configuration enriched N-doped activated carbon from spent tea leaves through an ammonia impregnation approach for CO_2 adsorption

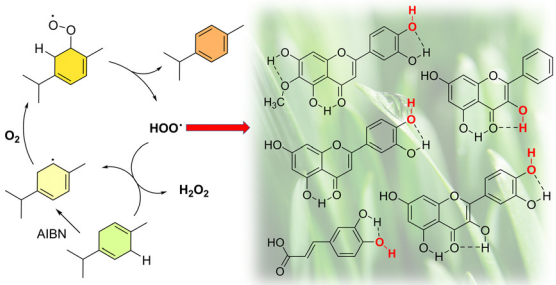
Amirul Hafiiz Ruhaimi and Muhammad Arif Ab Aziz*



16047

Rate constants for H-atom abstraction by HOO• from H-donor compounds of antioxidant relevance

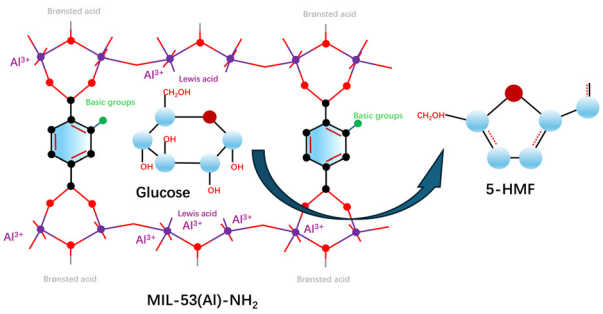
Mario C. Foti,* Concetta Rocco, Zongxin Jin and Riccardo Amorati



16057

Preparation of MIL-53(Al) with different ligands for application in the glucose transformation to 5-hydroxymethylfurfural

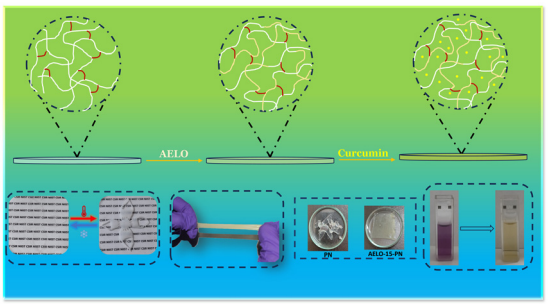
Yongzhao Zhang,* Xuzheng Chen, Yunlei Zhou, Tao Feng, Zhenya Zhu, Luping Lv and Yifan Liu



16065

Dual responsive curcumin loaded *N*-isopropylacrylamide/acrylated linseed oil copolymeric hydrogel films: tuned LCST with value-added properties

P. A. Parvathy, Victor A. Ajisafe, Ashok M. Raichur and Sushanta K. Sahoo*



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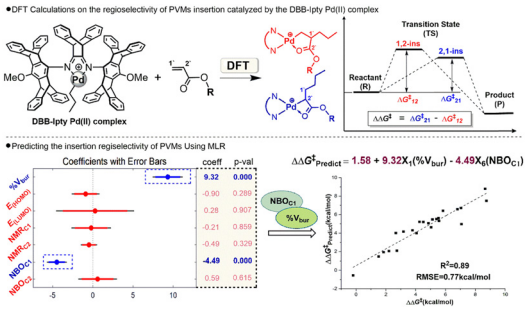
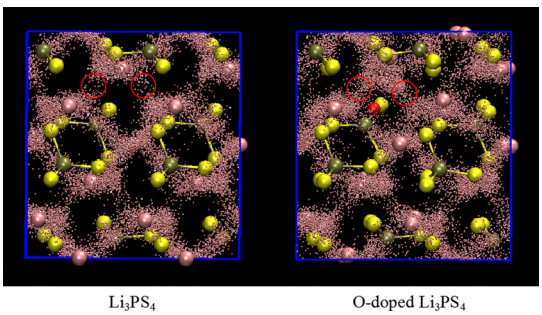
16080



Theoretical studies on the regioselectivity of polar vinyl monomer insertion catalyzed by an α-diimine Pd(II) complex

Kaipai Ren, Xin Wen, Yanfeng Jiang, Xiaohui Kang* and Yi Luo*

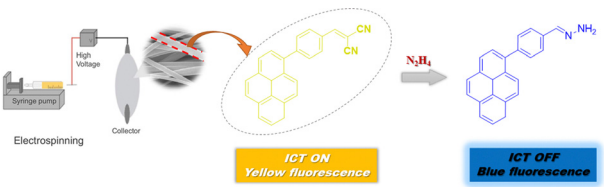
16088



Investigation of the effect of O doping on the Li-ion mobility of Li_3PS_4 solid-state electrolytes: an *ab initio* molecular dynamics study

Leijuan Ma,* Kai Yuan, Jifang Zhang, Chen Wu* and Xiaoyang Zhao*

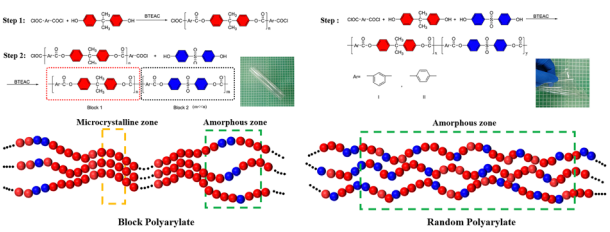
16095



Novel pyrenylbenzylidene-malononitrile derivative mixed with cellulose acetate electrospun nanofibrous sheets for hydrazine detection

Pipattra Mayurachayakul, Jirawan Thianchai, Naraporn Attakul, Kornkanya Pratumyot, Mongkol Sukwattanasinitt, Kittiwat Srikittiwanna and Nakorn Niamnont*

16107



Reaction strategies of bisphenol A derivatives to regulate the microstructure of polyarylates: synthesis of bisphenol S/bisphenol A random polyarylates and block polyarylates

Zhoufeng Wang,* Bolin Wang, Yingying Liu, Xiubo Long and Wenlong Yao

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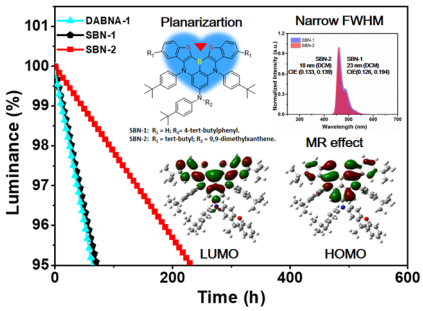
PAPERS

16119

Constructing highly efficient multiple resonance fluorescence materials by inserting benzothiophene within B/N-skeletons

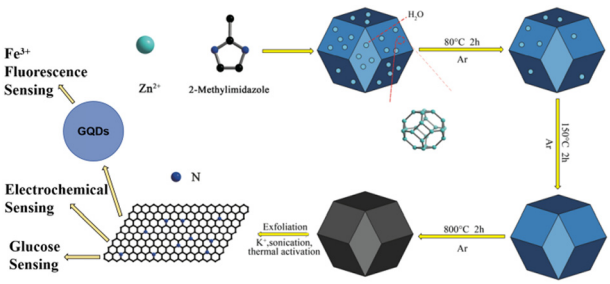
He Zhao, Wenkun Han,* Jianan Xu, Yan Bi, He Li, Tianyu Yang, Xiaoyu Ma* and Chunhui Su*



16127

A multifunctional nanoporous carbon platform derived from a zeolitic imidazolate framework for sensing and enzyme-like catalysis

Lin Lu,* Xiaojing Li, Junsong Mou, Xiyue Cao and Jianfei Xia*



CORRECTION

16134

Correction: A zinc–porphyrin–peptide conjugate *via* "click-chemistry": synthesis and amyloid-β interaction

Rita Tosto, Stefania Zimbone, Giuseppe Di Natale, Maria Laura Giuffrida, Tiziana Campagna, Giuseppe Pappalardo* and Giuseppina Sabatino*