

IN THIS ISSUE

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Cover

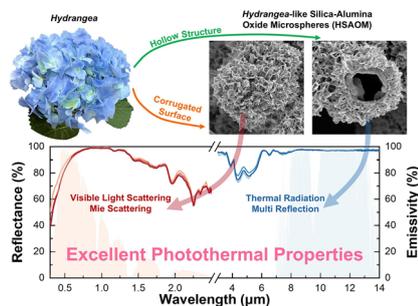
See Chinna Ayya Swamy P et al., pp. 16914–16924. Image reproduced by permission of Chinna Ayya Swamy P from *New J. Chem.*, 2025, 49, 16914.

COMMUNICATION

16909

Preparation and photothermal properties of bio-inspired *Hydrangea*-like silica-alumina oxide microspheres

Rui Sun, Yuzhi Zhang,* Xinyu Wang, Hongyu Gu, Binghao Wang, Jiaqi Wang, Yunsong Zhao, Xinchang Han, Jiayu Ma and Lixin Song

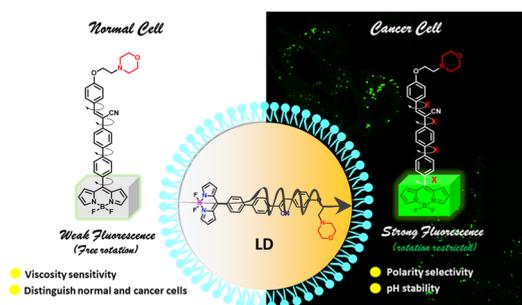


PAPERS

16914

meso-Substituted BODIPY rotors as lipid droplet probes for cell-type differentiation

Charutha Kalarikkal, Anjali, Koyeli Mapa* and Chinna Ayya Swamy P*



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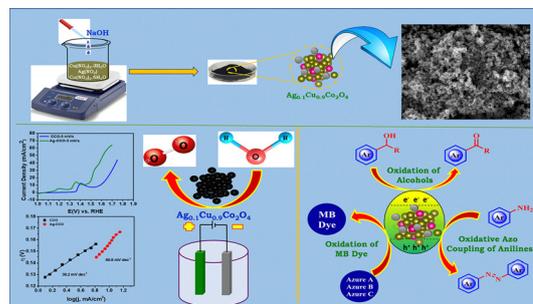
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16925

Unlocking dual functionality: novel Ag-doped CuCo_2O_4 for electro-catalytic and photochemical oxidation reactions

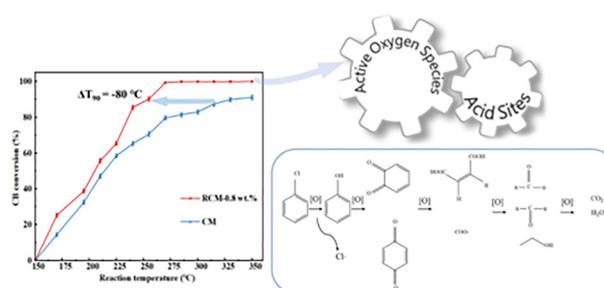
Saumy Sharma, Kumari Anchal, Sameer Kumar Behera, Dhaneshwar Prasad, Gurupada Maity,* Ashish Kumar Singh,* Bijneswar Mondal and Subhash Banerjee*



16937

Ru-doped MOF-templated CeMnO_x catalysts for efficient oxidation of chlorobenzene: synergistic effects of active oxygen species and acid sites

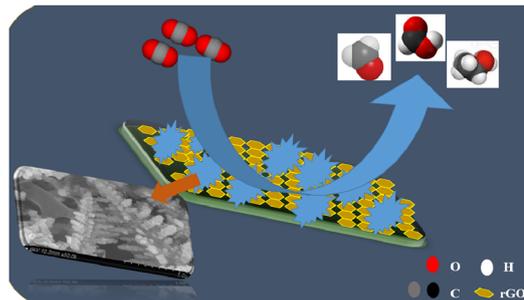
Zhewen Yang, Ke Yin, Lu Cheng, Xiaodong Chen and Bichun Huang*



16950

Soft-template-assisted electrodeposition of reduced graphene oxide–copper nanoelectrocatalysts for the carbon dioxide reduction reaction

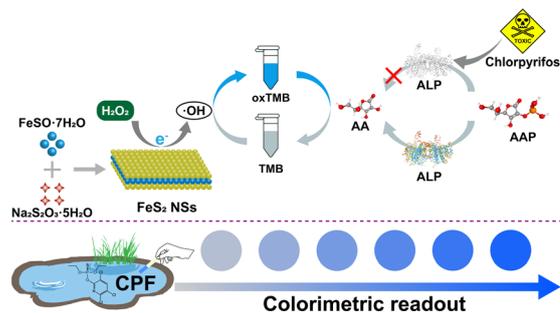
Bommireddy Naveen, Sang-Wha Lee* and Palathedath Suresh Kumar*



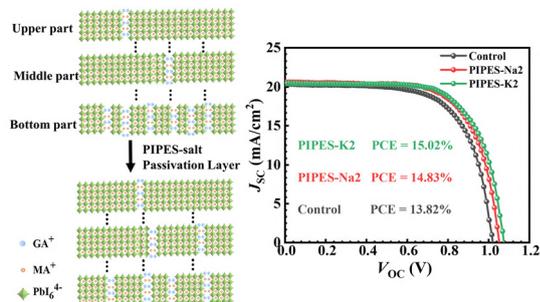
16958

Rapid pesticide detection based on FeS_2 NSs with high practicality in actual environments

Huaizu Zhang, Huangbang Liang, Huipeng Liu, Qinghui Yang, Guangfu Feng* and Jun Fang*



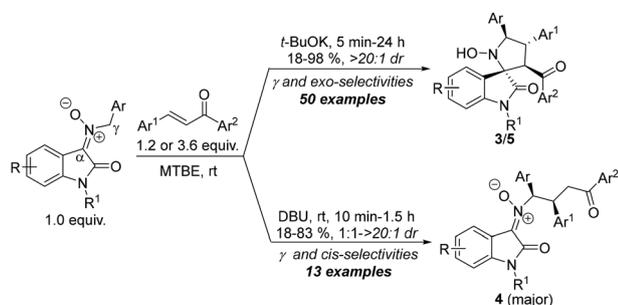
16970



Buried bottom interface defect passivation of alternating cation interlayer phase quasi-two-dimensional perovskite solar cells

Wenchao Xing, Mengtong Yan, Jihao Ma, Mei Lyu and Jun Zhu*

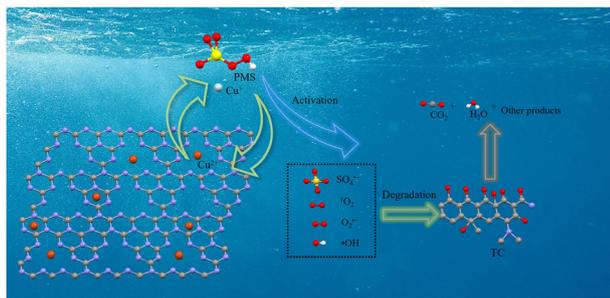
16978



Base-controlled diastereoselective [3+2]-cycloaddition and Michael addition of isatin ketonitrones and chalcones to construct spiropyrrolidine oxindoles and γ -substituted isatin ketonitrones

Silu Chen, Lan Ma, Chao Yue, Biao Du, Cuifen Lu, Chunyan Long, Wanbing Wu, Sicheng Li, Qiao He and Guizhou Yue*

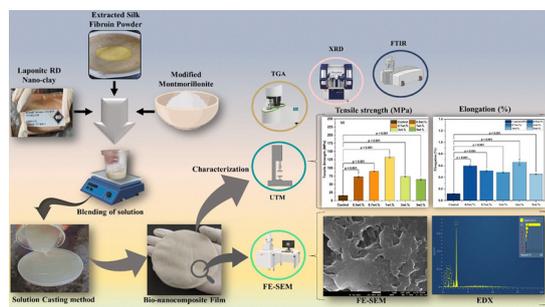
16989



Single atom Cu anchored on porous polymeric carbon nitride toward peroxymonosulfate activation for emerging pollutant degradation

Ziru Shao, Shuangfei Zhang and Deyong Wu*

17005



Synergistic reinforcement of regenerated silk fibroin with LAPONITE® and organomodified montmorillonite for bone tissue engineering

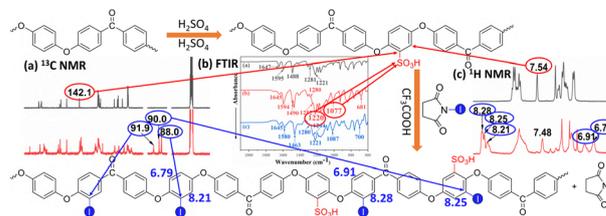
Sushmita Saurav, Prashish Sharma, Anand Mohan, Anil Kumar, Amandeep Heer, Maqsood A. Siddiqui, Abdulaziz A. Al-Khedhairy, Tabarak Malik* and Madhuri Girdhar*



17023

Iodination of sulphonated poly(ether ether ketone) through *N*-iodoimide electrophilic substitution of phenoxy beta-hydrogen

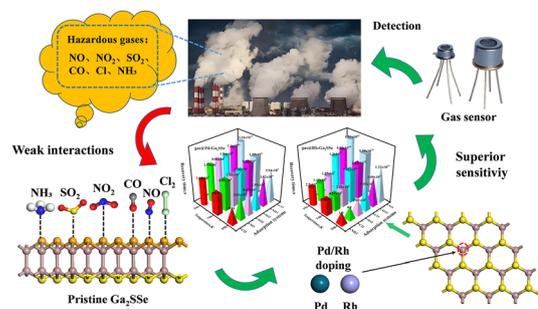
Shiling Yang, Xuesong Gao, Yang Yu, Zheng Zeng, Jiashang Chen, Wensong Du, Ruiyue Liu, Siqi Li, Bowen Chen and Chonggang Wu*



17030

First-principles insights into Pd and Rh functionalization of Janus Ga₂Sse monolayers for enhanced sensing of toxic industrial gases

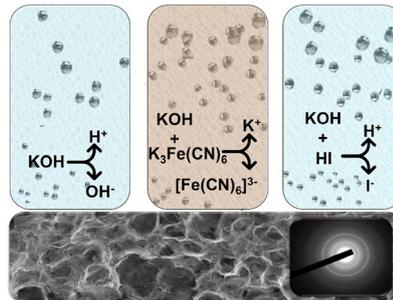
Haojie Huang, Chengcheng Sun, Lei Gan, Huihui Xiong,* Haihui Zhang* and Xiaocong Zhong*



17047

Strategically improving the oxygen evolution reaction performance of ZnCo₂S₄ nanoflakes: role-specific redox-additive electrolytes

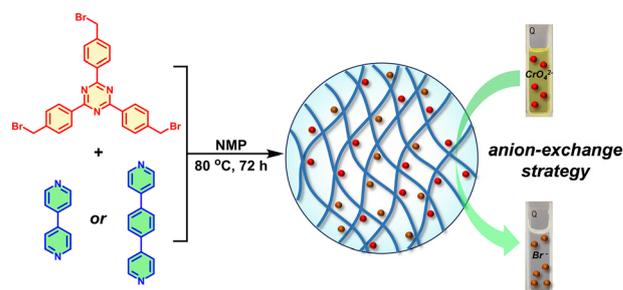
Partha Sarathi Rout, Love Bansal, Bhumika Sahu, Deb Kumar Rath, Nikita Ahlawat, Sharmistha Singh, Saumya Srivastava, Shivam Kumar, Amit Rana, Anjali Chaudhary, Subin Kaladi Chondath* and Rajesh Kumar*



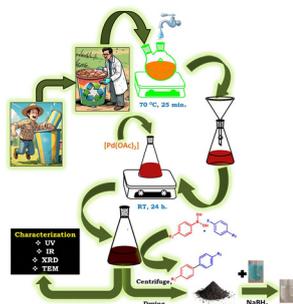
17056

Triazine-based cationic organic networks with anion-exchange dominance for high-capacity chromate remediation

Kejian Chang,* Mingyu Zhang, Wenyan Tang, Shulong Zhang, Nana Yang, Liguang Gao, Yuquan Zhang, Hui Wen, Jinping Ren, Minghu Han, Wenduo Li, Haorui Liu, Ning Mi and Zhi-Jun Li*



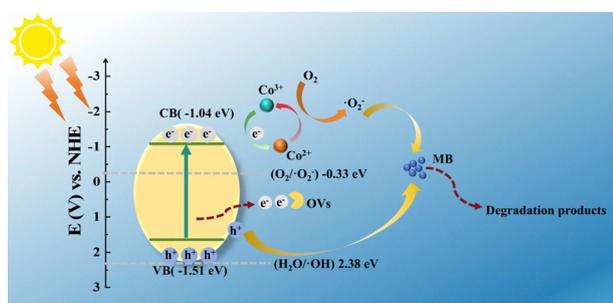
17062



Peanut skin extract facilitated phytofabrication of PdNPs for dual catalytic applications: Suzuki–Miyaura coupling and methylene blue reduction

Rahul A. Kalel,* Pranali A. Patil and Prakash B. Rathod

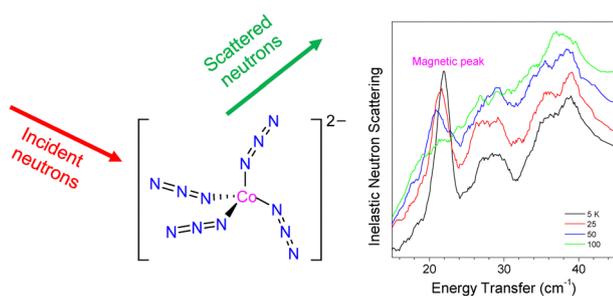
17074



Synergistic enhancement of photocatalytic activity of $\text{Bi}_4\text{O}_5\text{Br}_2$ via cobalt doping and oxygen vacancy engineering

Huanxia Lin, Wensong Lin,* Yeheng Zhang, Ran Gao and Yong He

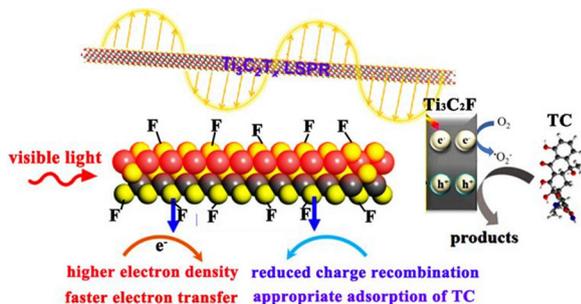
17084



Advanced spectroscopic studies of $(\text{PPh}_4)_2[\text{Co}(\text{N}_3)_4]$, a field-induced single-ion magnet

Adam T. Hand, Adiat A. Fakolujo, J. Krzystek, Mykhaylo Ozerov, Luke L. Daemen, Jie Xing, Zheng Gai, Rongying Jin, Joshua Telser, Andrey A. Podlesnyak and Zi-Ling Xue*

17099



Plasmonic $\text{Ti}_3\text{C}_2\text{T}_x$ MXene tuned by T_x terminal groups for boosting the visible-light photocatalytic degradation of tetracyclines

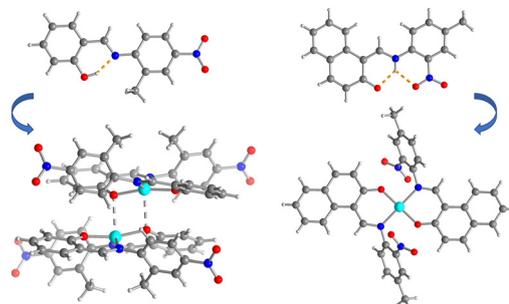
Rui Jiao, Qiyue Jia, Wentao Liang, Hongyu Gao, Xintong Zheng and Zhanli Chai*



17106

Dinuclear vs. mononuclear copper(II) complexes with nitrophenylimino-benzylal- vs. -naphthyl-based Schiff base ligands

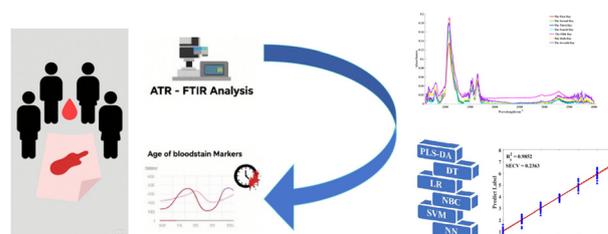
Mohammed Enamullah,* Imdadul Haque, Galib Abdullah, Fahad Hossain Sourav, Nisat Taslum Jhumur, Mohammad Khairul Islam, Takin Haj Hassani Sohi, Peter Ferber and Christoph Janiak*



17124

Estimation of the age of bloodstains from a simulated crime scene using ATR-FTIR spectroscopy and machine learning

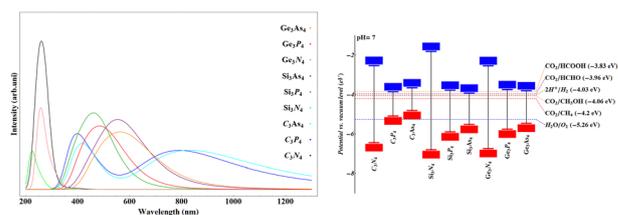
Zhenqing Zhang, Sheng Liu, Yun Jiang, Shouqing Liu,* Xinhua Wang* and Feng Chen



17131

A comparative DFT evaluation of the photocatalytic activity and NLO properties of monolayer two-dimensional M_3X_4 ($M = C, Si, Ge; X = N, P, As$) quantum dots

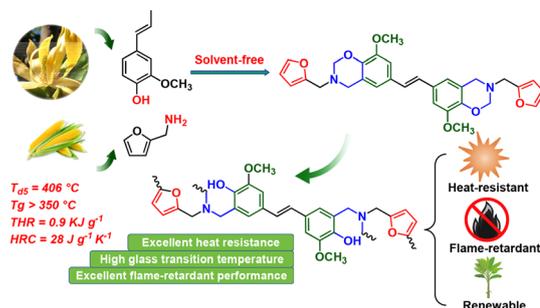
Hossein Farrokhpour,* Ashkan Riahi and Hamidreza Jouypazadeh*



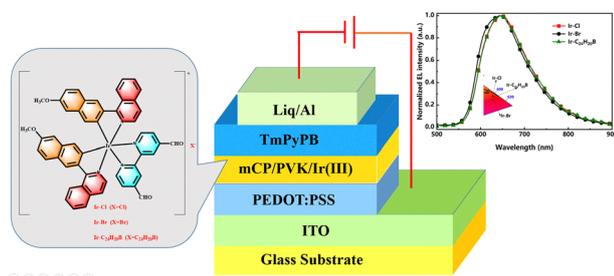
17149

Furan-derived biobased polybenzoxazines with intrinsic flame retardancy and high thermal stability

Lijun Chen, Yuanjun Hu and Jiajia Wang*



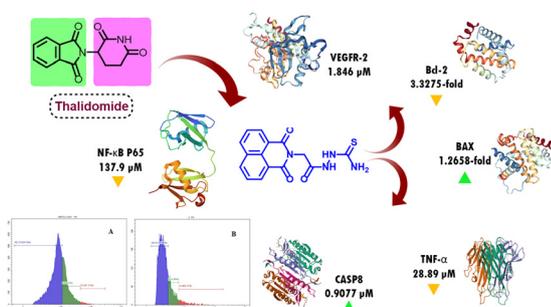
17159



Counterion-engineered ionic iridium(III) complexes for solution-processed red OLEDs

Jie Tang, Rui Liu, Kai Peng, Jianguyu Zhu and Song Guo*

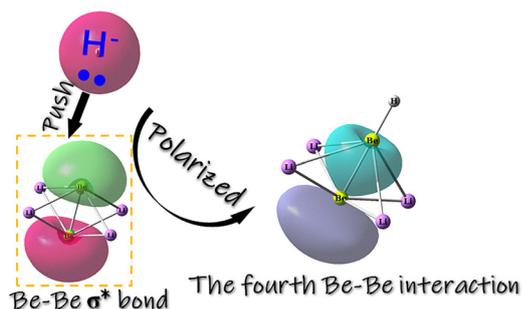
17168



Naphthalimide derivatives as thalidomide analogs; design, synthesis, and molecular docking of novel anticancer immunomodulatory agents

Yahia A. Amin, Mohamed M. Khalifa,* Wafa A. Bawazir, Ahd A. Mansour, Helmy Sakr, Mariam K. Alamoudi and Mohamed Ayman El-Zahabi*

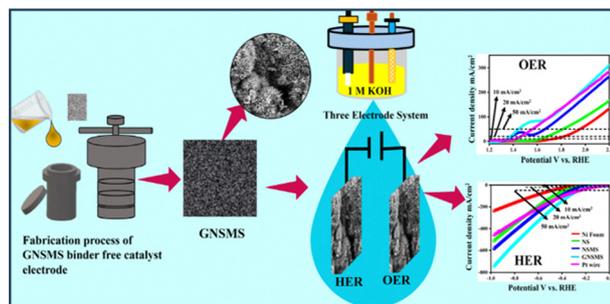
17178



Theoretical prediction of Be-Be multiple bonding in a hydride-stabilized $\text{Be}_2\text{Li}_4\text{H}^-$ cluster

Lifang Yan, Xingman Liu,* Min Zhang,* Xiaomeng Wang, Shuixing Wu, Jianyu Wei* and Zhongmin Su

17184



Synergistic influence of GNP-tuned morphology in binary metal sulfide binder-free electrocatalysts for enhanced bifunctional water splitting

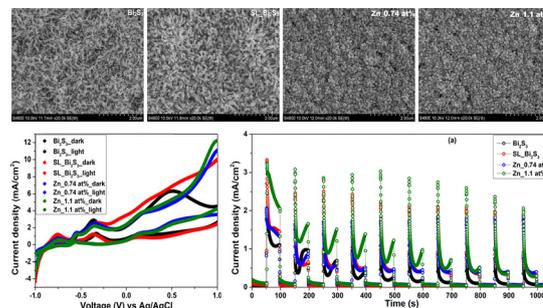
Arun Tamilselvan* and Aravinth Karuppanan



17196

Enhanced photoelectrochemical performance of Zn-doped Bi₂S₃ thin films via seed-layer-assisted growth

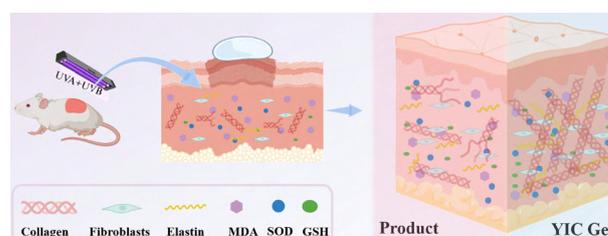
Y. B. Kishore Kumar, Chaitanya Kumar Kunapalli, Vasudeva Reddy Minnam Reddy, Athipalli Divya, Radhalayam Dhanalakshmi, Venkateswarlu Gonuguntla, Talat Ali, Sambasivam Sangaraju* and U. Chalapathi*



17207

Highly stable and bioactive yak type I collagen hydrogels for accelerated healing of photoaging skin

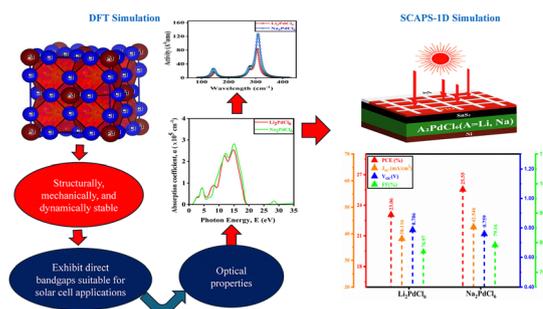
Yi Yang, Bei Tian, Xinyu Tian, Linyan Yao* and Jianxi Xiao*



17221

Comprehensive investigation of the structural, mechanical, optical, and thermoelectric properties and photovoltaic performance of lead-free novel Li₂PdCl₆ and Na₂PdCl₆ using DFT and SCAPS-1D simulations

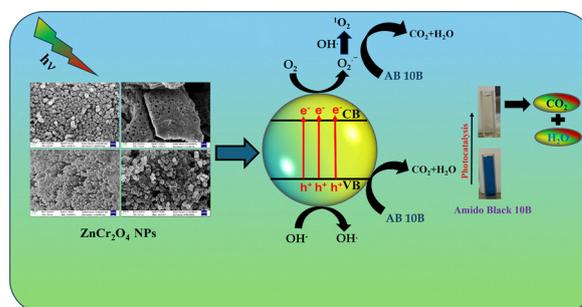
Md. Sakib Hasan Saikot, Rifat Rafiu, Imed Boukris, Md. Azizur Rahman,* Imtiaz Ahamed Apon, Riyad Kawzar, Mohd Taukeer Khan, Hanane Etabti, Jothi Ramalingam Rajabathar and Hind Albalawi



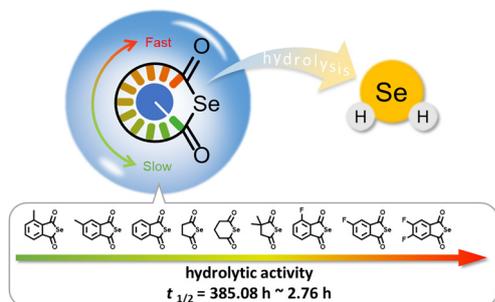
17246

Nanoarchitectonics of ZnCr₂O₄ nanoparticles and studies on their morphology-dependent magnetic and photocatalytic properties for sustainable removal of Amido Black 10B

Anirban Chakraborty and Pethaiyan Jeevanandam*



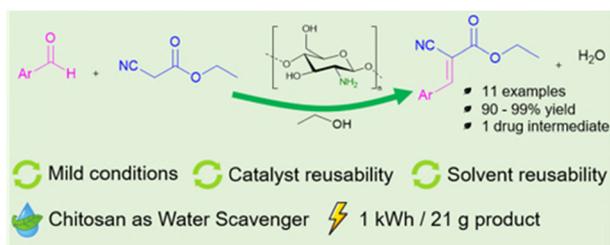
17263



Exploring the large-scale regulation of hydrogen selenide release rate by selenoanhydride structures and their cytotoxic effects toward 4T1 cells

Yuquan Zou, Yu Xiang, Yumei An, Hanliang He,*
Jian Yuan, Jiandong Zhang, Mingyang Zhang,
Guoqing Jin,* Jiajia Li, Jian Zhu and Xiangqiang Pan*

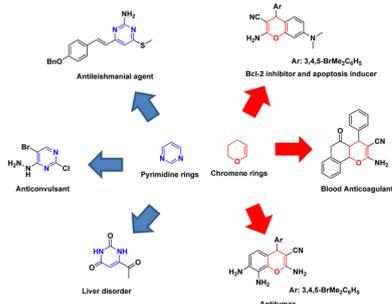
17271



Chitosan as a solid catalyst for the one-pot Knoevenagel condensation in the context of sustainable chemistry

Usman Ali, Friedemann Dressler, Lysander Q. Wagner,
Paul P. Debes, Jaime Gallego, Peter R. Schreiner* and
Bernd M. Smarsly*

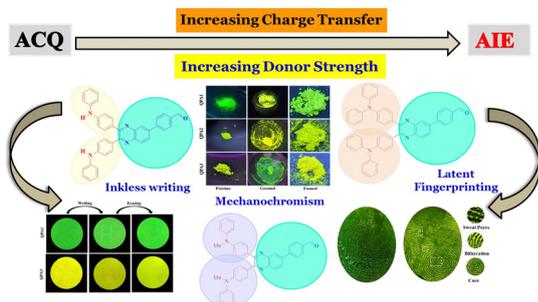
17285



Introduction of $[C_4(DABCO)_2] \cdot (CuCl_4)$ as an efficient catalyst for the green synthesis of pyrano[2,3-*d*]pyrimidinones and dihydropyrano[3,2-*c*]chromenes and dual pathway synthesis of 2,3-dihydroquinazolinone derivatives

Fatemeh Mirzaei Eslamlou, Maryam Mousapour and
Farhad Shirini*

17300



Mechanochromism and aggregation-induced emission directed by donor strength in quinoxaline-based D–A molecules with application in latent fingerprinting and inkless writing

Surendra Kumar, Ankit Kumar Srivastava,
Ashish Kumar Kushwaha, Anjani Kumar and
Roop Shikha Singh*

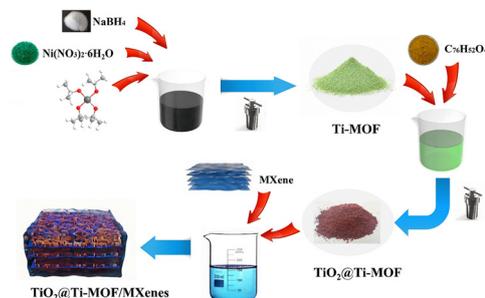


PAPERS

17313

Three-dimensional covalent nanochannels in TiO₂@Ti-MOF/MXene heteroarchitectures enable selective 4-aminophenol detection in complex aqueous systems

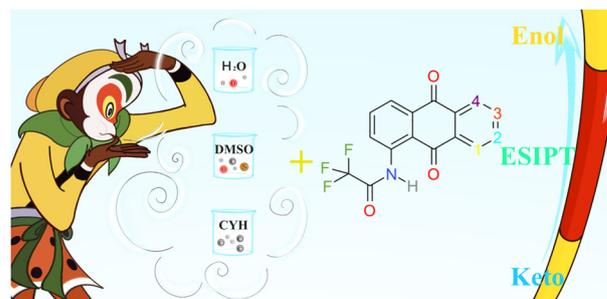
Tianying Peng,* Wenyong Mei, Jin Zhang and Saiwen Liu*



17323

Synergetic effect of atomic electronegativity, substitution position and solvent polarity on the ES IPT process of 1-(trifluoroacetyl amino)anthraquinone derivatives: a DFT study

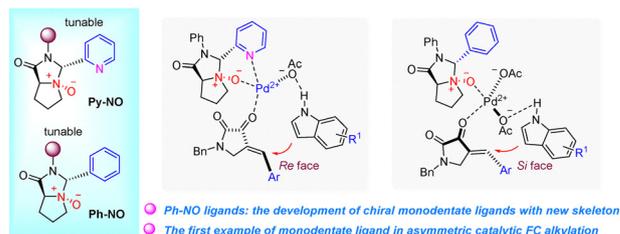
Xi Chen, Yan Leng, He Sun, Chun-Gang Min* and Ai-Min Ren*



17335

Monodentate/bidentate chiral Ph/Py-NO ligands: an unexpected switch of enantioselectivity in Friedel–Crafts alkylation of indoles and 2,3-dioxopyrrolidines

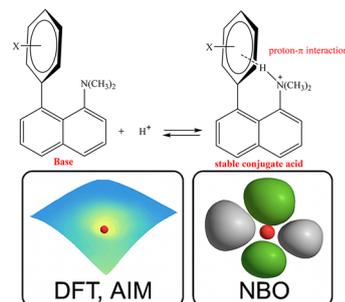
Jing Lou, Xian-Qiao Zhu, Di-Cheng Pan, De-Wu Liu,* Hui-Xian Jing, Xiong-Li Liu,* Wen-Jing Zhang, Hong-Xing Cen and Guo-Dong Deng*



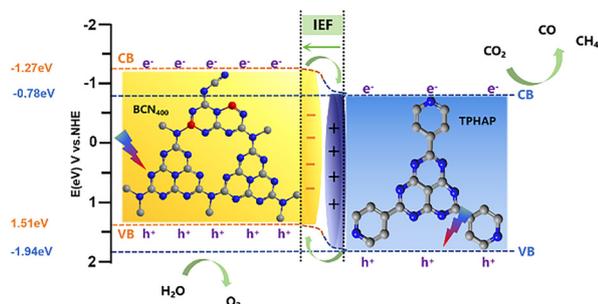
17350

DFT investigation of proton affinity and intramolecular proton- π interactions in *N,N*-dimethylnaphthylamine derivatives: insights from aromaticity, AIM, and NBO analyses

Hamid Saeidian, Zohreh Mirjafary* and Ashkan Ghiasi



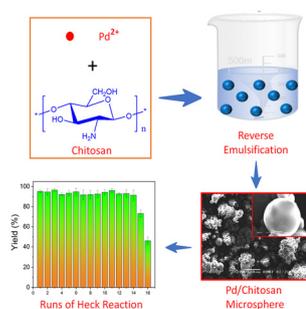
17362



Band structure engineering for a graphitic carbon nitride-based hybrid with improved photocatalytic CO₂ reduction performance

Yanrui Li,* Xuehao Li, Bozhan Li, Ruyu Guo and Xiang Gao*

17370



Palladium-incorporated chitosan microspheres *via* inverse emulsion: a highly active and stable heterogeneous catalyst for Heck reactions

Ling Yang, Jing Zou, Zheng Yin, Linjun Shao,* Guiying Xing* and Xian-Man Zhang

