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ISSN 1359-7345 CODEN CHCOFS 60(20) 2683-2818 (2024)



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See Sheng Ye *et al.*, pp. 2744–2747. Image reproduced by permission of Sheng Ye from *Chem. Commun.*, 2024, 60, 2744.



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PROFILE

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Contributors to the Pioneering Investigators collection 2023: Part 3

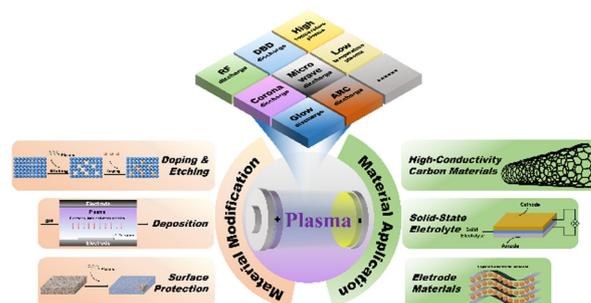


HIGHLIGHTS

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Development of plasma technology for the preparation and modification of energy storage materials

Fengchun Shi, Jiaqi Jiang, Xuan Wang, Yan Gao, Chen Chen, Guorong Chen,* Natallia Dudko, Alena A. Nevar and Dengsong Zhang*



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Fundamental questions
Elemental answers

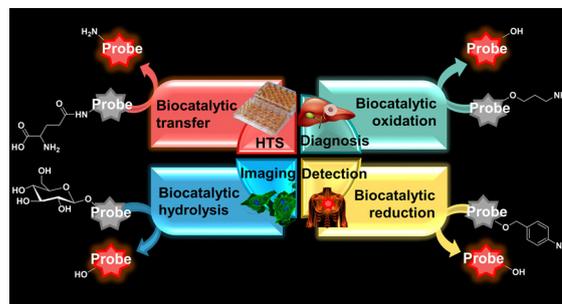


HIGHLIGHTS

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Visual monitoring of biocatalytic processes using small molecular fluorescent probes: strategies-mechanisms-applications

Guang Chen, Jie Xu, Siyue Ma, Xinrui Ji,*
Jared B. Carney, Chao Wang, Xiaoyong Gao, Pu Chen,
Baolei Fan,* Ji Chen, Yanfeng Yue* and Tony D. James*

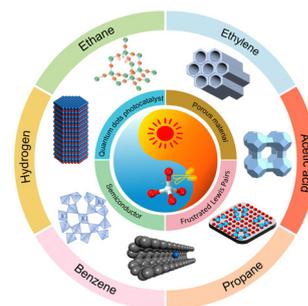


FEATURE ARTICLE

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Photocatalytic non-oxidative conversion of methane

Qingyun Zhan, Yuxiang Kong, Xinhui Wang and Lu Li*

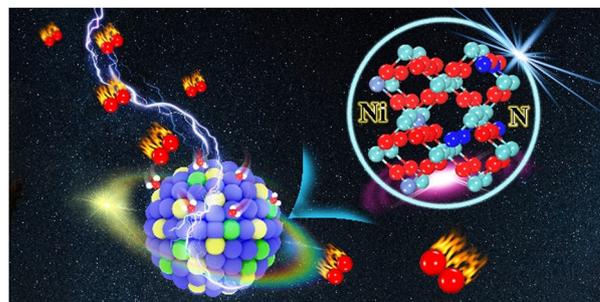


COMMUNICATIONS

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Electronic structure modulation of Mo sites in anion and cation co-doped MoO₂ nanospheres for electrocatalytic water oxidation

Chunyan Zhang, Ling Wang, Zhuwei Cao, Rui Li and Sheng Ye*



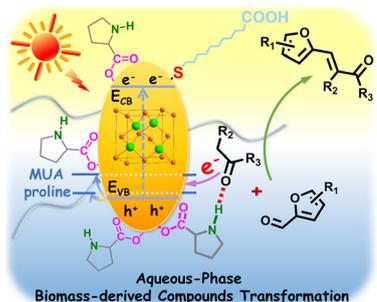
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A model for N-to-C direction in prebiotic peptide synthesis

Li Zhang, Min Zhang, Xiaofan Guo, Dingwei Gan,
Yong Ye, Yufen Zhao and Jianxi Ying*



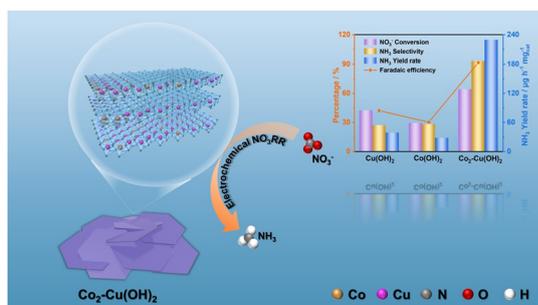
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Bi-ligand-fabricated CdS quantum dots to photo-induce aqueous-phase aldol condensation for biomass-derived carbonyl compounds

Dong-Dong Wei, Liu-Meng Mo, Jing-Yu Zhang, Yong-Shuai Zhang, Hui-Min Duan, Bin Zhang and Hong-Yan Wang*

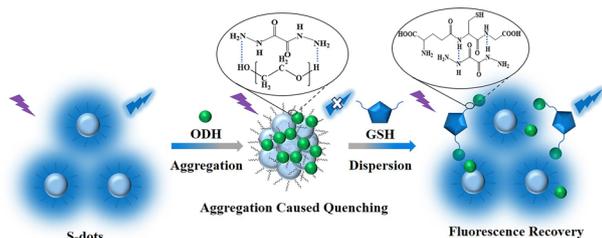
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Interfacial Co–O–Cu bonds prompt electrochemical nitrate reduction to ammonia in neutral electrolyte

Kai Yao, Zhaobin Fang, Weijie Yan, Yawu Wang, Zhenyong Song, Wenhai Wang, Jieyue Wang, Xianwen Wei, Yiwei Tan, Dehong Wu,* Konglin Wu* and Binbin Jiang*

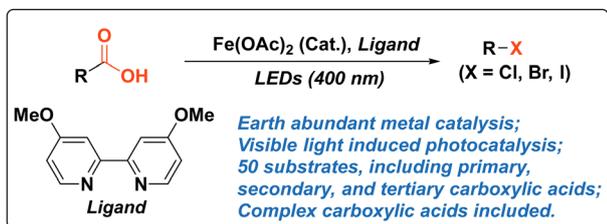
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Detection and discrimination of glutathione among biological thiols based on oxalyl dihydrazide decorated sulfur nanodots

Yifei Xing, Sha Zhu, Jiayue Li, Wei Li, Zhenguang Wang* and Yu-e Shi*

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Decarboxylative halogenation of aliphatic carboxylic acids catalyzed by iron salts under visible light

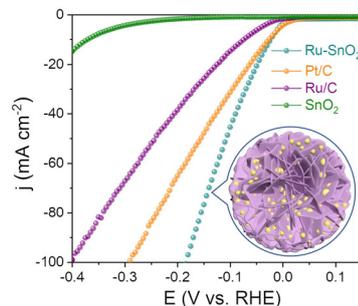
Jiahui Qian, Yu Zhang, Weining Zhao and Peng Hu*



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Low-loaded Ru on hollow SnO₂ for enhanced electrocatalytic hydrogen evolution

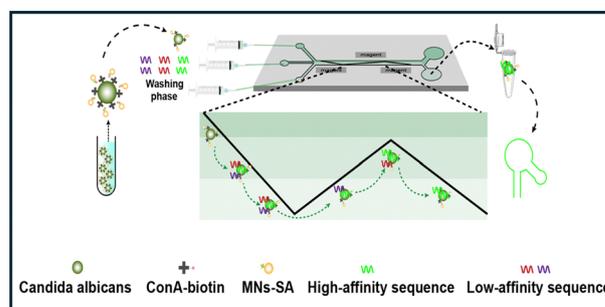
Yousaf Saira, Zhijuan Li,* Yu Zhu, Qicheng Liu, Wenkai Luo, Yu Wang, Mingxing Gong, Gengtao Fu* and Yawen Tang*



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Dynamic selection of high-affinity aptamers using a magnetically activated continuous deflection microfluidic chip

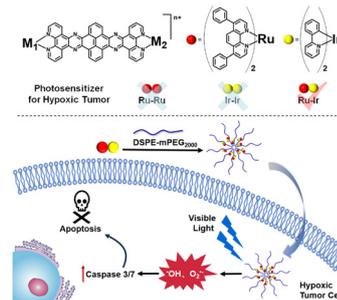
Ke-Zhu Yang, Meng Wang, Ming-Yue Gao, Yong-Tao Wang and Zhi-Ling Zhang*



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A hetero-bimetallic Ru(II)–Ir(III) photosensitizer for effective cancer photodynamic therapy under hypoxia

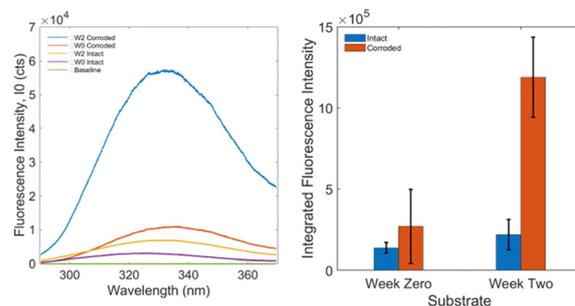
Mengsi Zheng, Xinlin Lin, Kai Xiong, Xiting Zhang,* Yu Chen,* Liangnian Ji and Hui Chao*



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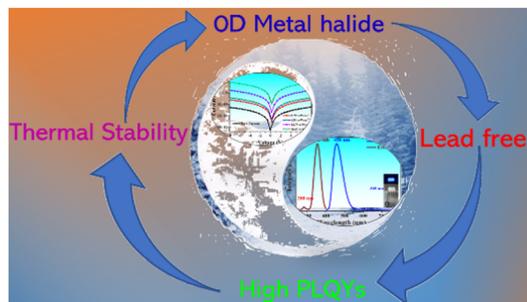
Corrosion-enabled tryptophan biosensing enhancement on commercially available Mg alloy surfaces

Mohammad Mohammadi, Bo Zhao, Seyyednial Salehi, Owen Kingstedt, Yunshan Wang* and Shuaihang Pan*



COMMUNICATIONS

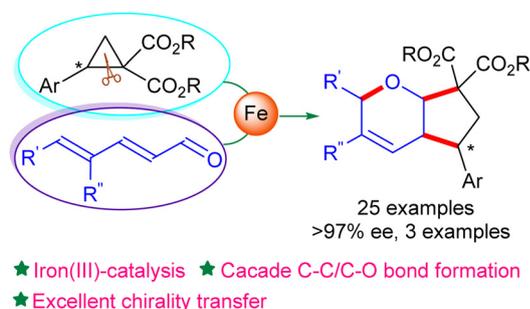
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Exploring OD lead-free metal halide with highly efficient blue light emission and high-sensitivity photodetection

Yu-Yin Wang, Huai-Yuan Kang, Shao-Ya Zhang, Hao Qu, Lin Zhu, Dan Zhao, Xian-Feng Li,* Xiao-Wu Lei and Cheng-Yang Yue*

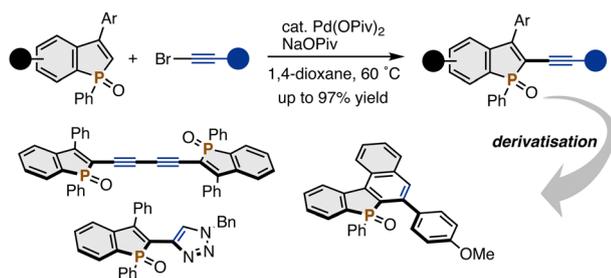
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Iron-catalyzed cascade C–C/C–O bond formation of 2,4-dienals with donor–acceptor cyclopropanes: access to functionalized hexahydrocyclopentapyrans

Manmath Mishra, Kshitiz Verma, Sonbidya Banerjee and Tharmalingam Punniyamurthy*

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Pd-catalysed C–H alkylation of benzophospholes

Yu Tokura, Shibo Xu, Kosuke Yasui, Yuji Nishii and Koji Hirano*

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Light-induced arylation (alkylation) of *N*-sulfonylhydrazones with boronic acids

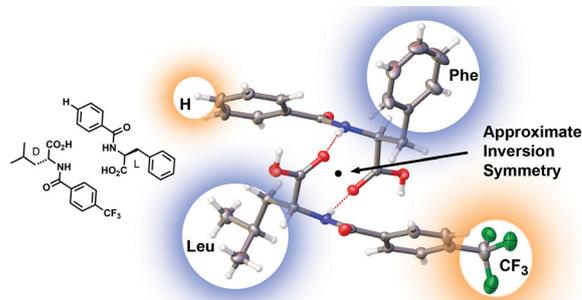
Mohammad Junaid, Sharma Happy and Dongari Yadagiri*



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Dual space divergence in small molecule quasiracemates: benzoyl leucine and phenylalanine assemblies

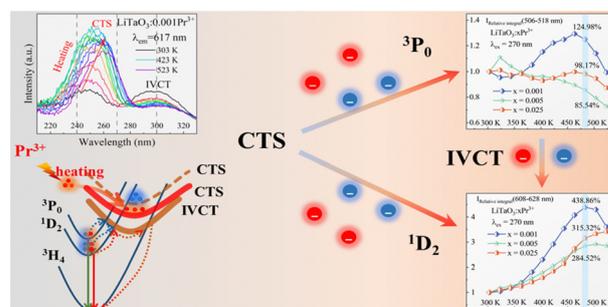
Katelyn N. Koch, Aaron J. Teo and Kraig A. Wheeler*



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Thermal activation induced charge transfer state absorption redshift realizes strong anti-thermal quenching in Pr³⁺-activated phosphor

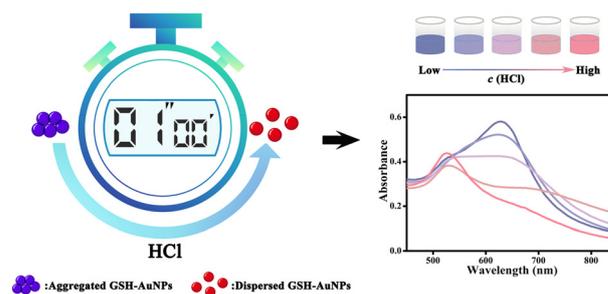
Xiang Lv, Ning Guo,* Song Qu, Yanmei Xin, Mei Yang, Baiqi Shao and Ruizhuo Ouyang



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Ultra-rapid and highly selective colorimetric detection of hydrochloric acid via an aggregation to dispersion change of gold nanoparticles

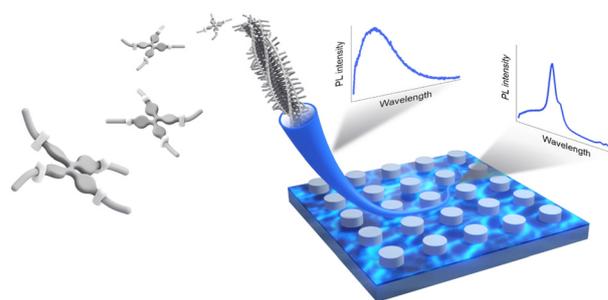
Kehui Zhang, Mingyue Luo, Honghong Rao, Haile Liu, Ruibin Qiang, Xin Xue, Jianying Li, Xiaoquan Lu and Zhonghua Xue*



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Tunable emission from H-type supramolecular polymers in optical nanocavities

Giulia Lavarda,* Anton M. Berghuis, Kripa Joseph, Joost J. B. van der Tol, Shunsuke Murai, Jaime Gómez Rivas and E. W. Meijer*



CORRECTION

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Correction: How fast do defects migrate in halide perovskites: insights from on-the-fly machine-learned force fields

Mike Pols, Victor Brouwers, Sofia Calero and Shuxia Tao*

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