

ChemComm

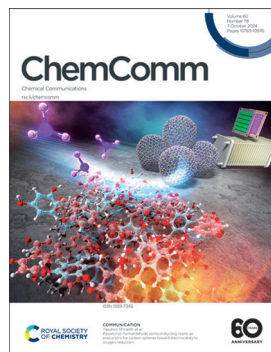
Chemical Communications

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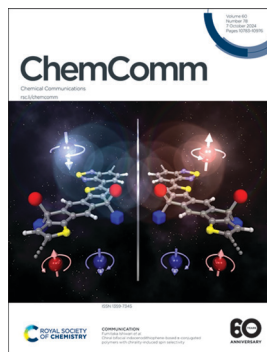
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ISSN 1359–7345 CODEN CHCOFS 60(78) 10783–10976 (2024)



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See Yasuhiro Shiraishi *et al.*, pp. 10866–10869. Image reproduced by permission of Yasuhiro Shiraishi from *Chem. Commun.*, 2024, 60, 10866.



Inside cover

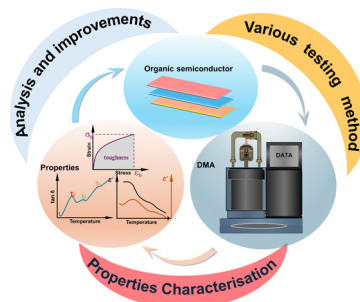
See Fumitaka Ishiwari *et al.*, pp. 10870–10873. Image reproduced by permission of Fumitaka Ishiwari from *Chem. Commun.*, 2024, 60, 10870.

HIGHLIGHTS

10795

Advancing the dynamic mechanical analysis of organic semiconductor materials

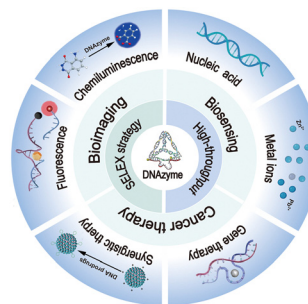
Jintao Feng, Chunlong Sun, Saimeng Li and Long Ye*



10805

Recent advances in DNazymes for bioimaging, biosensing and cancer therapy

Pei Sun, Hongquan Gou, Xinran Che, Guifang Chen* and Chang Feng*



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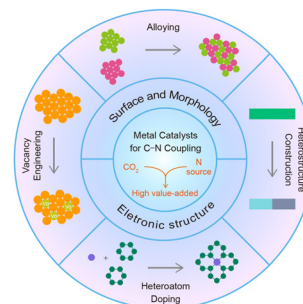
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FEATURE ARTICLES

10822

Recent progress in electrochemical C–N coupling: metal catalyst strategies and applications

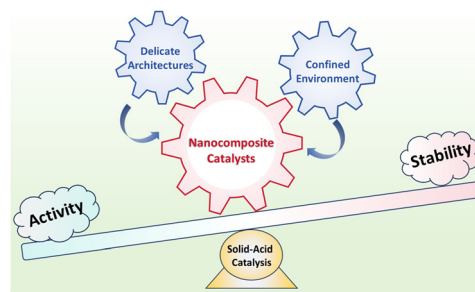
Lekai Xu, Zhuojun Yang, Chao Zhang* and Chen Chen*



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Rational design of metal-based nanocomposite catalysts for enhancing their stability in solid acid catalysis

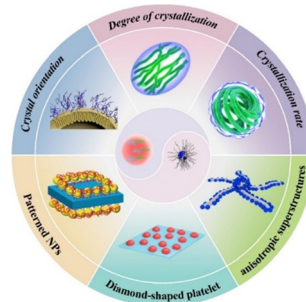
Zhenyu Lei and Mingjun Jia*



10854

Crystallization-dictated assembly of block copolymers and nanoparticles under three-dimensional confinement

Dengwen Hu, Xinyu Ji, Jintao Zhu and Jiangping Xu*

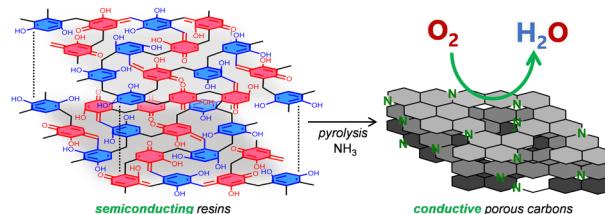


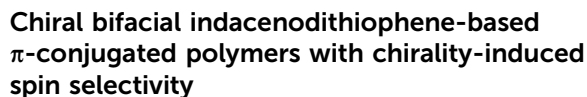
COMMUNICATIONS

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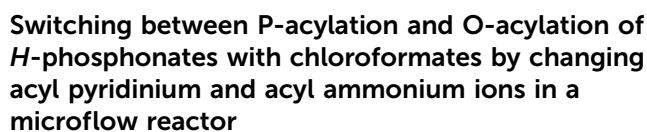
Resorcinol–formaldehyde semiconducting resins as precursors for carbon spheres toward electrocatalytic oxygen reduction

Yasuhiro Shiraishi,* Keisuke Kinoshita, Keisuke Sakamoto, Koki Yoshida, Wataru Hiramatsu, Satoshi Ichikawa, Shunsuke Tanaka and Takayuki Hirai





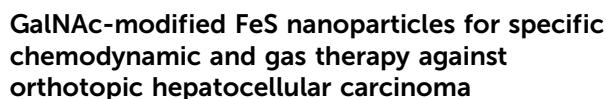
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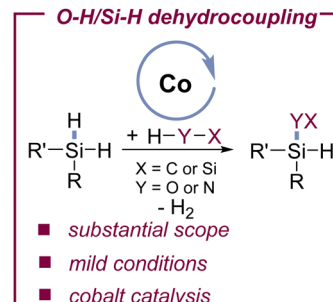


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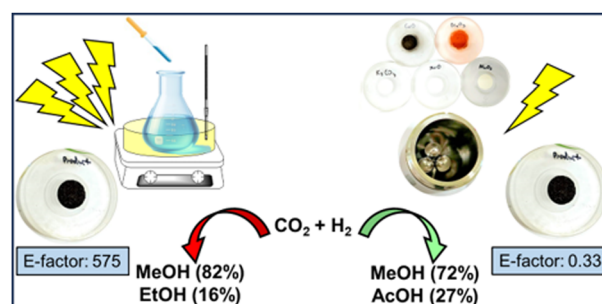
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Ewelina Szafoni, Dariusz Lewandowski,
Marcin Gruszczyński, Konstancja Broniarz,
Hanna Stachowiak-Dtuzińska, Krzysztof Kuciński* and
Grzegorz Hreczycho*



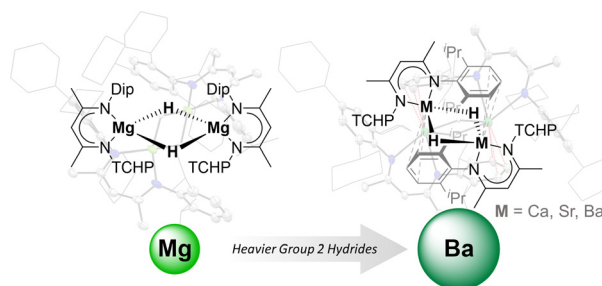
Mechanochemically-based three-way approach for the synthesis of K-doped Cu-Fe/ZnO-Al₂O₃ catalysts for converting CO₂ to oxygenates

Boon Ying Tay, Charmain Kan, Jennet Ong,
Shashikant U. Dighe, Amol M. Hengne, Kuo-Wei Huang,
Lili Zhang, Roong Jien Wong* and Davin Tan*



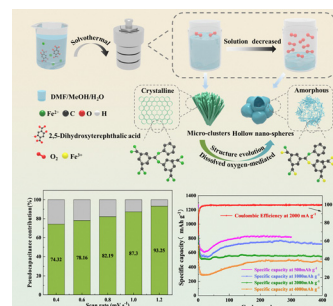
A series of neutral alkaline earth metal hydride complexes supported by a bulky, unsymmetrical β -diketiminate ligand, $[(\text{Dip}^{\text{TCHP}}\text{Nacnac})\text{M}(\mu\text{-H})_2]$ ($\text{M} = \text{Mg}, \text{Ca}, \text{Sr}$ or Ba)

Dominic B. Kennedy, Matthew J. Evans,
Dafydd D. L. Jones, Joseph M. Parr,
Michael S. Hill* and Cameron Jones*



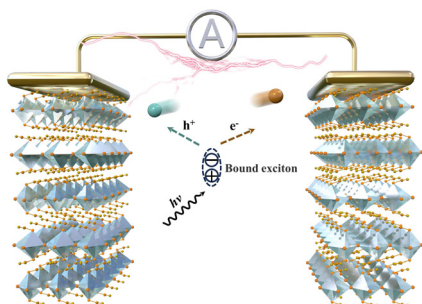
Controllable amorphization and morphology engineering on mixed-valence MOFs for ultra-fast and high-stability near-pseudocapacitance Li⁺ storage

Junjie Yu, Yan Wu, Tianlang Peng, Qi Qi, Xinyu Ma,
Yafei Gu, Xinguang Li, Jianshen Ding, Shiang Chen,
Xiaoshi Hu,* Yanling Wang, Qinqin Xiong, Yongjun Yuan
and Haiying Qin



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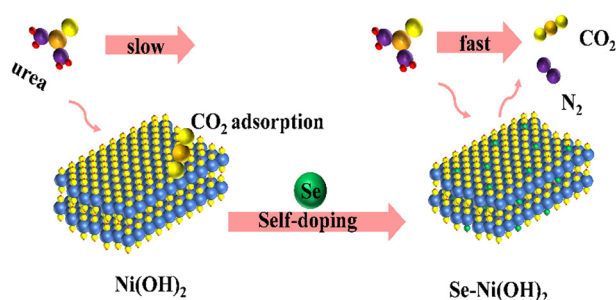
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Enhanced exciton–phonon coupling in pseudohalide 2D perovskite for X-ray to visible light detection

Wei Wu, Yang Liu,* Jia Xu,* Jianxi Yao, Chuang Shi and Xiang Wang

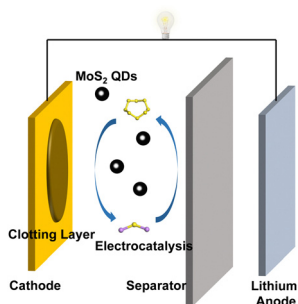
10906



Se self-doped Ni(OH)₂ for an efficient urea oxidation reaction

Shenyi Song, Xingyu Huang, Yun Yang* and Ligang Feng*

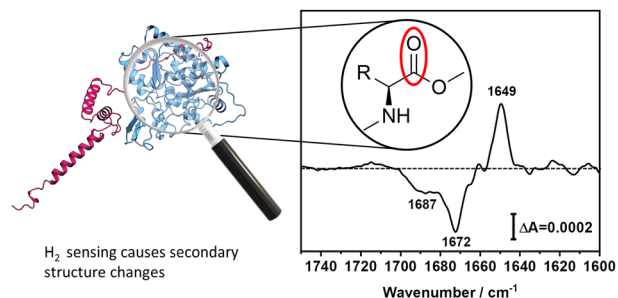
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Soluble inorganic quantum dots as an electrolyte additive to boost lithium–sulfur battery performance

Liwei Liu, Ziyao Song, Zhihao Qi, Lijun Yang, Xizhang Wang,* Zheng Hu* and Qiang Wu*

10914



Secondary structure changes as the potential H₂ sensing mechanism of group D [FeFe]-hydrogenases

Ivan Voloshyn, Conrad Schumann, Princess R. Cabotaje, Afridi Zamader, Henrik Land and Moritz Senger*

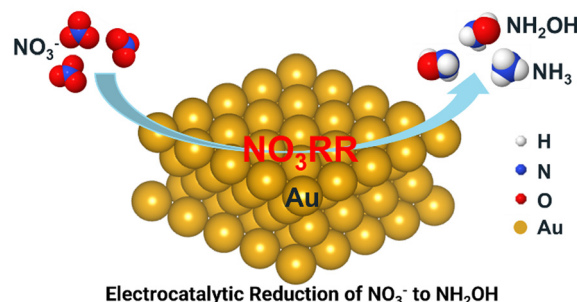


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Electrochemical reduction of nitrate to hydroxylamine on gold electrode

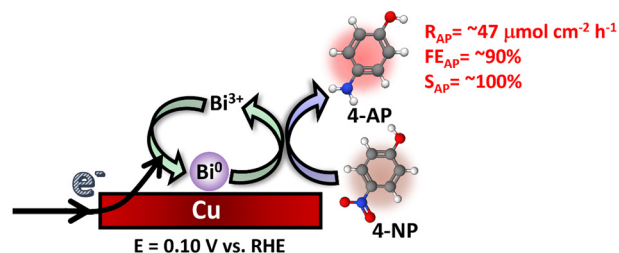
Yangshan Xie, Michiel De Ras, Jiwu Zhao, Tianxi Liu, Feili Lai, Johan Hofkens and Maarten B. J. Roelfsaers*



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Bismuth-based electrocatalytic scheme enabling efficient and selective electrosynthesis of 4-aminophenol in acidic media

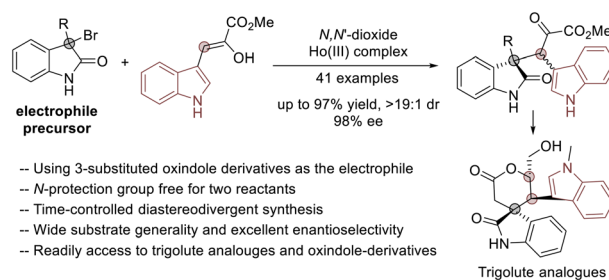
Fitri Nur Indah Sari, Cheng-Yi Su, Shih-Ching Huang and Chia-Yu Lin*



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Asymmetric catalytic concise synthesis of 3-(3-indolomethyl)-oxindoles for the construction of trigolite analogs

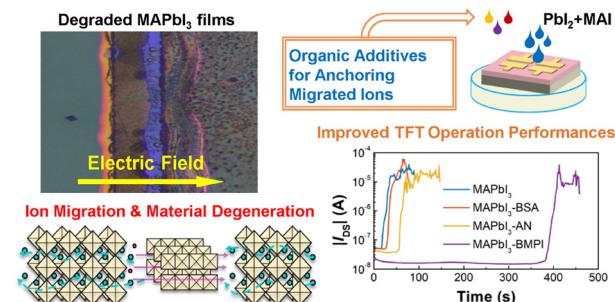
Zun Yang, Zheng Jiang, Zheng Tan, Han Yu, Xiaoming Feng* and Xiaohua Liu*



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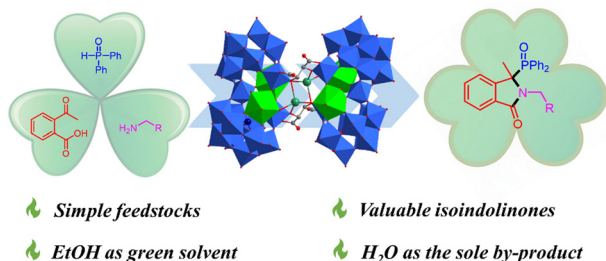
Ion migration in p-type perovskite MAPbI_3 films under an electric field and thin-film transistor device failure

Jiale Su, Zhenxin Yang, Xuanhe Li, Fushun Li, Juntao Hu, Nan Chen, Tao Zhang, Dengke Wang, Zheng-Hong Lu and Qiang Zhu*



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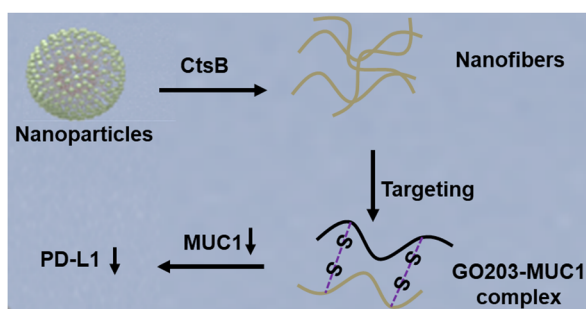
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Dy/Ho-encapsulated tartaric acid-functionalized tungstoantimonates: heterogeneous catalysts for isoindolinone synthesis

Guoping Yang,* Haoqi Liu, Jincao Chen, Xiaoling Lin, Kexin Tan, Yayu Dong,* Yufeng Liu* and Yongge Wei*

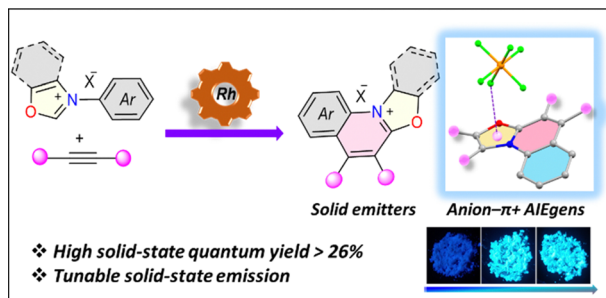
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Biosynthesis of multifunctional transformable peptides for downregulation of PD-L1

Yufei Di, Zhiwen Yang, Gang Song, Qi Shen, Haotian Bai, Yiming Huang, Fengting Lv* and Shu Wang*

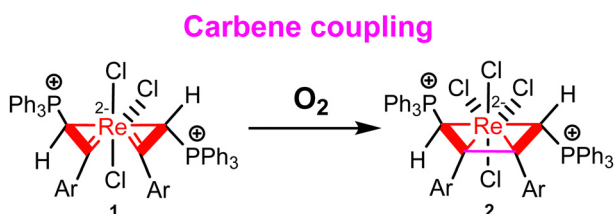
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Annulated oxazolium anion- π^+ AIEgens

Samim Sohel Rana, Surajit Manna and Joyanta Choudhury*

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Oxidation-induced coupling reactions of bi(metallacycloprop-1-ene) complexes

Long Yiu Tsang, Lam Cheung Kong, Herman H. Y. Sung, Ian D. Williams* and Guochen Jia*

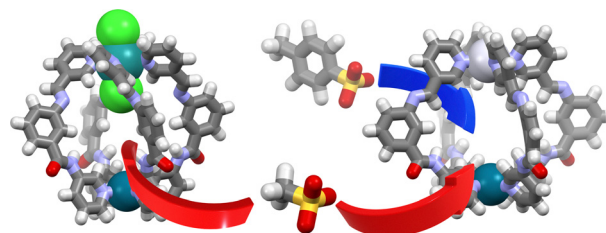


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Modulating the guest binding ability within mixed-coordination geometry $[\text{Pd}(\mu\text{-L})_4\text{RuCl}_2]^{2+}$ and $[\text{Pd}(\mu\text{-L})_4\text{Pt}]^{4+}$ cage architectures

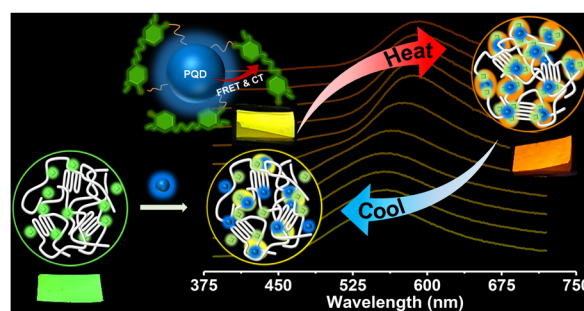
Hayden B. Gearing, Tilo Söhnle, Paul Young, Lynn Lisboa, L. James Wright, James D. Crowley and Christian G. Hartinger*



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Proximity-induced FRET and charge-transfer between quantum dots and curcumin enable reversible thermochromic hybrid polymeric films

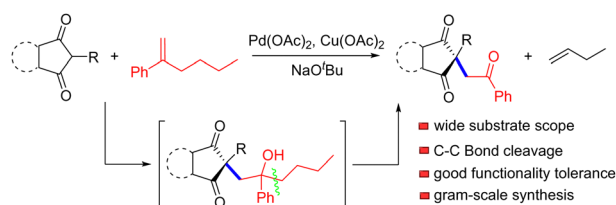
Jefin Parukoor Thomas, R. B. Amal Raj, G. Virat, Amarjith V. Dev, Chakkooth Vijayakumar and E. Bhoje Gowd*



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Construction of quaternary alkyl motifs through palladium-catalyzed oxidative coupling of 1,3-dicarbonyl compounds with alkenes followed by C–C bond cleavage

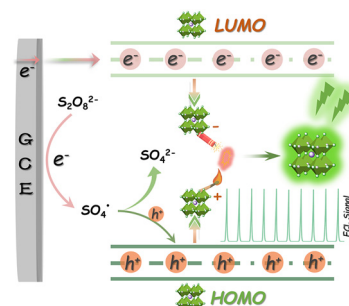
Xu Zhang,* Mengfan Chang, Tongtong Ni, Xuefeng Xu, Luyi Zong and Ting Li*



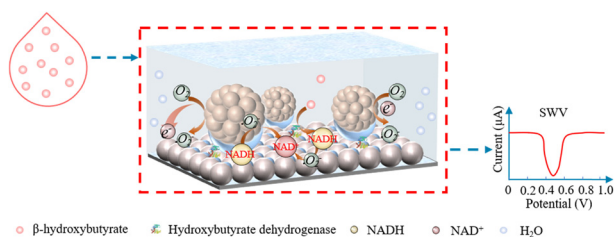
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Long-term stable electrochemiluminescence of perovskite quantum dots in aqueous media

Zhong-Xia Wang, Kai-Qi Liu, Feng Li, Heng-Ye Li, Wei Wang* and Hang Gao*



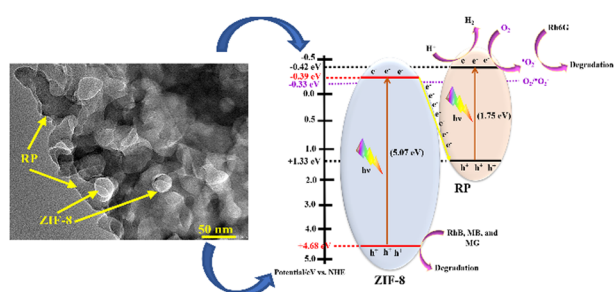
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Amorphous PtO_x-engineered Pt@WO₃ nanozymes with efficient NAD⁺ generation for an electrochemical cascade biosensor

Xinting Liu, Wanyi Zhang, Minghui Yang* and Xingxing Jiang*

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Enhanced performance of dual-functional ZIF-8/red phosphorus photocatalysts for concurrent degradation of organic dyes and hydrogen generation under natural solar light irradiation

Shafali Singh and Sushil Kumar Kansal*

