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A multidisciplinary journal focussing on all fundamental science and technological aspects of catalysis

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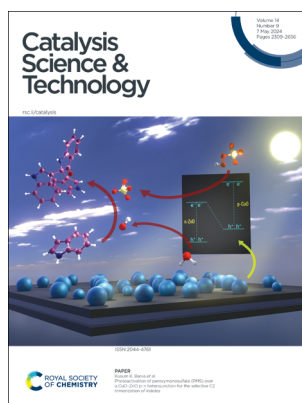
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See Jack W. E. Jeffries, Helen C. Hailes *et al.*, pp. 2390–2399.
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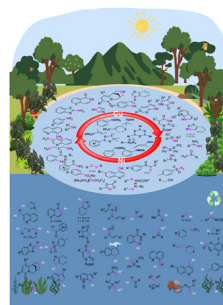
See Kusum K. Bania *et al.*, pp. 2400–2415.
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REVIEWS

2320

Recent advances in Chan–Lam coupling reaction

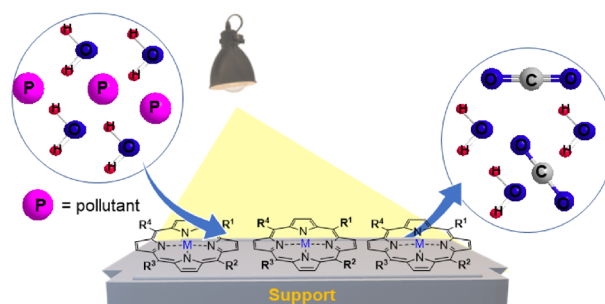
P. S. Devi, Salim Saranya and Gopinathan Anilkumar*



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Porphyrin-containing materials for photodegradation of organic pollutants in wastewaters: a review

Sara R. D. Gamelas, João P. C. Tomé*, Augusto C. Tomé* and Leandro M. O. Lourenço*



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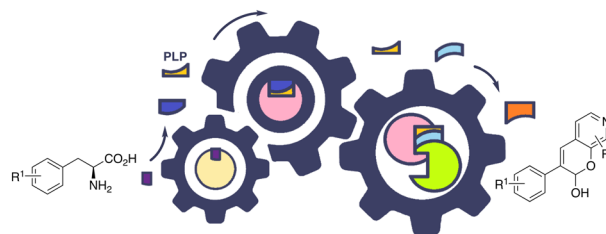
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2390

A transaminase-mediated aldol reaction and applications in cascades to styryl pyridines

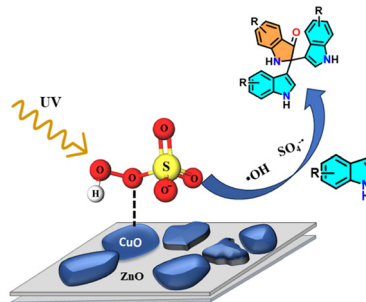
Yu Wang, Yiwen Li, Yeke Ni, Dejan-Krešimir Bučar, Paul A. Dalby, John M. Ward, Jack W. E. Jeffries* and Helen C. Hailes*



2400

Photoactivation of peroxymonosulfate (PMS) over a CuO–ZnO p–n heterojunction for the selective C2 trimerization of indoles

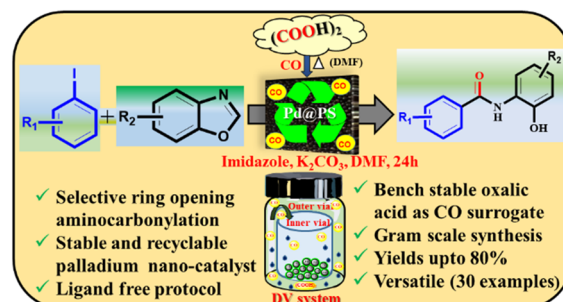
Arpita Devi, Mrinmoy Manash Bharali, Seonghwan Lee, Young-Bin Park, Lakshi Saikia, Rafikul Ali Saha, Tanmoy Kalita, Dhrubajyoti Kalita, Subir Biswas, Tonmoy J. Bora, Salma A. Khanam and Kusum K. Bania*



2416

Supported Pd-catalyzed ring opening and chemoselective aminocarbonylative coupling of benzoxazoles with aryl iodides

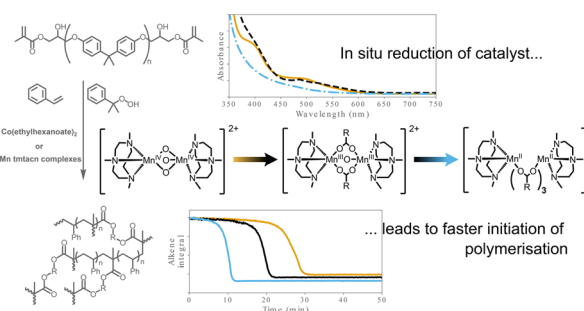
Pushkar Mehara, Ajay Kumar Sharma, Ashish Kumar, Poonam Sharma and Pralay Das*



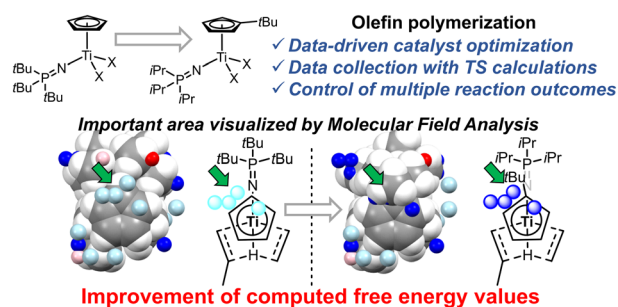
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Activation of alkyl hydroperoxides by manganese complexes of tmtacn for initiation of radical polymerisation of alkenes

Linda E. Eijsink, Andy S. Sardjan, Esther G. Sinnema, Hugo den Besten, Yanrong Zhang, Ronald Hage, Keimpe J. van den Berg, Jitte Flapper, Ben L. Feringa and Wesley R. Browne*



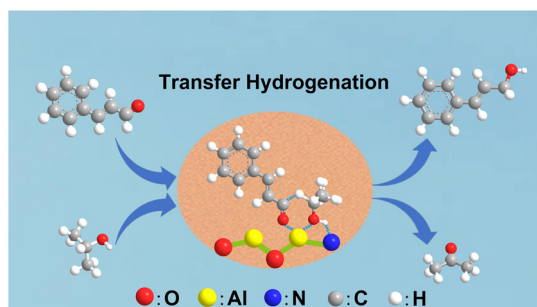
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Molecular field analysis in half-titanocene complexes: computational study towards data-driven *in silico* optimization of single-site olefin polymerization catalysts

Shigeru Yamaguchi,* Takahiro Kikuchi, Kenichi Tanaka and Ikuko Takamiya

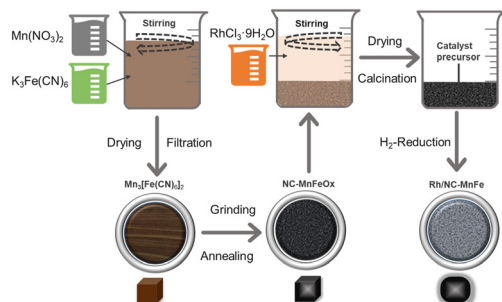
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Construction of intimate Lewis acid and basic sites on an Al_2O_3 -NC composite catalyst with enhanced performance in transfer hydrogenation of cinnamaldehyde

Peng Zhang, Lele Bai, Yao Wang,* Zhichao Sun, Ying-Ya Liu and Anjie Wang*

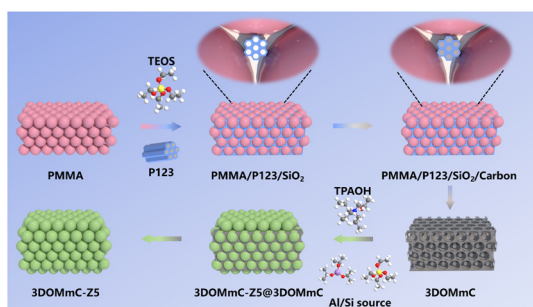
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Low-temperature direct decomposition of NO over Rh/NC-MnFe catalyst: activity, stability and mechanism

Xiao Tan, Suitao Qi,* Guangxu Cheng, Chunhai Yi and Bolun Yang

2461



Novel-ordered hierarchical ZSM-5 zeolite with interconnected macro-meso-microporosity for the enhanced methanol to aromatics reaction

Youhe Wang,* Tingting Li, Yuqing Ouyang, Jie Zhong, Yu Zhang, Xiaoyun Xiong, Qingxun Hu, Jiacheng Deng, Hongman Sun* and Zifeng Yan*

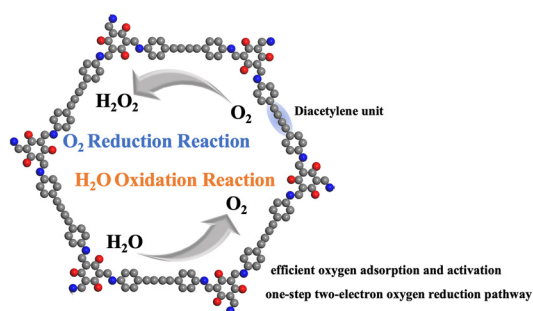


PAPERS

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A diacetylene covalent organic framework through a one-step two-electron O₂ reduction pathway for efficient photosynthesis of H₂O₂

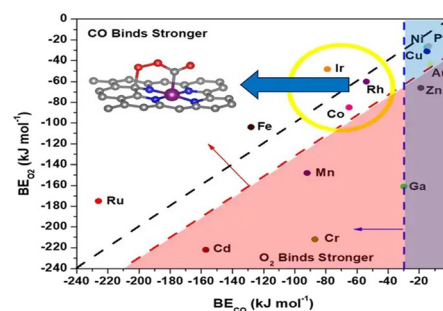
Pengken Li, Hui Zhao, Rong Ji, Wenwen Chi, Xinyu Sun, Yuming Dong* and Yongfa Zhu



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Low temperature CO oxidation over Rh supported on N-doped carbon

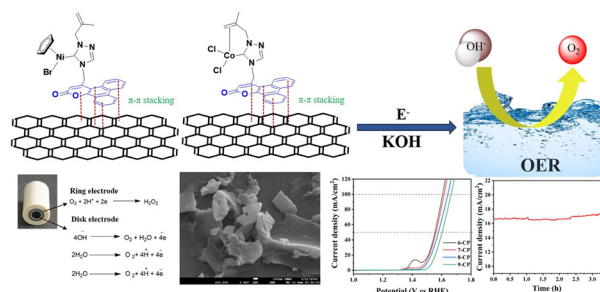
Colby A. Whitcomb, Anukriti Shrestha, Christopher Paolucci* and Robert J. Davis*



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Comprehensive enhancement in electrocatalytic oxygen evolution performance of nickel and cobalt complexes derived from π -conjugated N-heterocyclic carbene ligands through carbon composite strategy

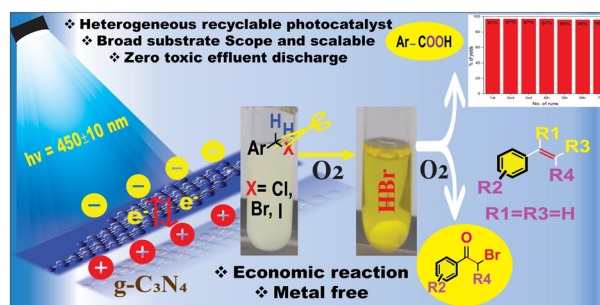
Monica Vijayakumar, Zhoveta Yhobu, Jan Grzegorz Matecki, Dodahali H. Nagaraju, Rangappa S. Keri and Srinivasa Budagumpi*



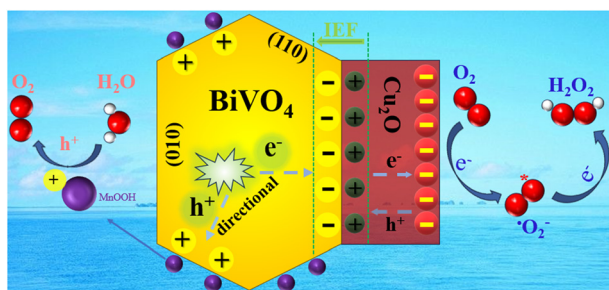
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g-C₃N₄ catalysed sustainable synthesis of (hetero) aryl acids and regioselective α -bromo ketones in one pot under visible light catalysis

Sangita Bishi, Mahuya Kar, Tarun K. Mandal and Debayan Sarkar*



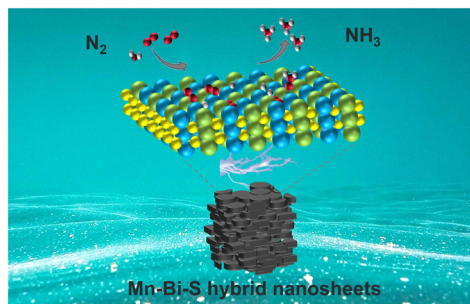
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Dual built-in spontaneous electric fields in an S-scheme heterojunction for enhanced photocatalytic H₂O₂ production

Junxian Huang, Haiyang Shi, Xuefei Wang,* Ping Wang, Feng Chen and Huogen Yu*

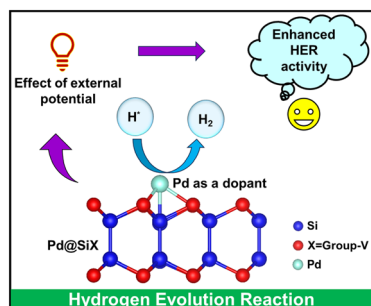
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Novel Mn–Bi–S hybrid mesoporous nanosheets as an efficient electrocatalyst for nitrogen reduction reaction

Yining Ban, Zizai Ma,* Zihao Wan, Hefeng Yuan and Xiaoguang Wang*

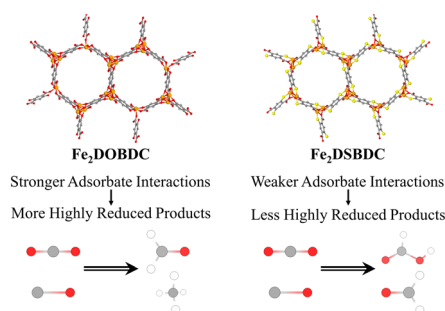
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Palladium-decorated SiX (X = N, P, As, Sb, Bi) catalysts for hydrogen evolution

Trilokchand L. Kumavat, Radha N Somaiya* and Yogesh Sonvane*

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Sulfur substitution in Fe-MOF-74: implications for electrocatalytic CO₂ and CO reduction from an *ab initio* perspective

Gavin A. McCarver,* Taner Yildirim and Wei Zhou

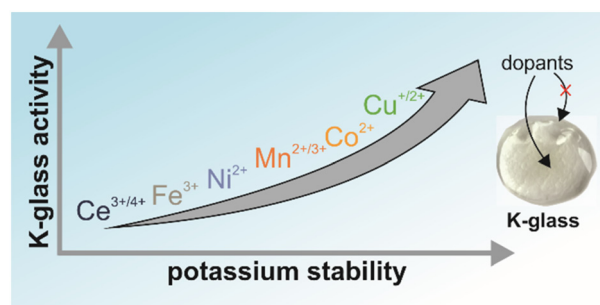


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Catalytic removal of soot particles over potassium glasses – the effect of doping with aliovalent redox metals

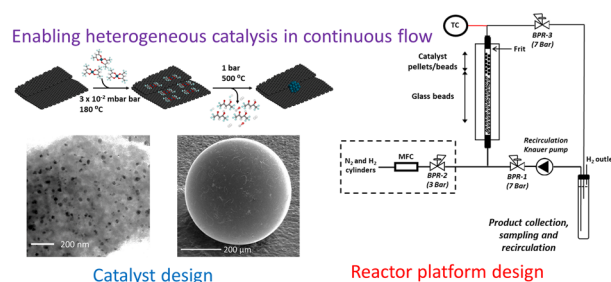
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Palladium nanoparticle deposition on spherical carbon supports for heterogeneous catalysis in continuous flow

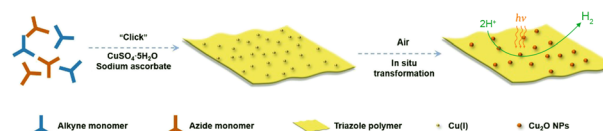
Sarah L. Boyall, Phoebe Berman, Anthony Griffiths, Alexander Massey, Thomas Dixon, Thomas Shaw, Joanna Miller, Jonathan P. White, Robert Menzel, Kevin Leslie, Graeme Clemens, Frans L. Muller, Richard A. Bourne and Thomas W. Chamberlain*



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One-pot synthesis of an ultrafine Cu₂O nanocrystal/porous polymer heterostructure for photocatalytic hydrogen production

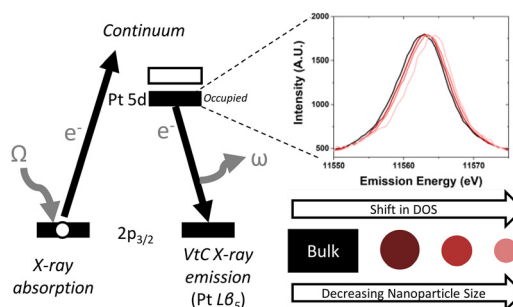
Qianru Wu, Rui Ma, Yao Wang, Juan Li, Huiwen Xue, Zhixuan Zhang, Linhan Xu, Hongbing Fu, Li-Zhu Wu, Xu-Bing Li* and Huaping Wang*



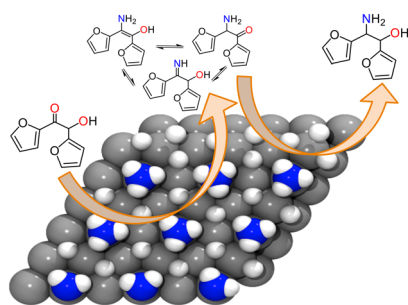
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Valence-to-core X-ray emission spectroscopy to resolve the size-dependent valence electronic structure of Pt nanoparticles

David P. Dean, Gaurav S. Deshmukh, Christopher K. Russell, Kuixin Zhu, Christina W. Li, Jeffrey P. Greeley, Denis Leshchev,* Eli Stavitski* and Jeffrey T. Miller*



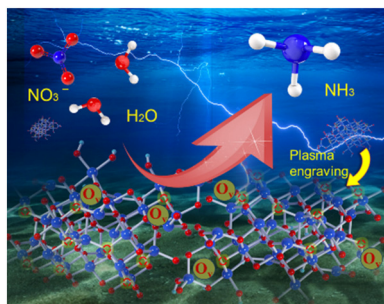
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Synthesis of amine derivatives from furoin and furil over a Ru/Al₂O₃ catalyst

Li Gao, Massimo Delle Piane, Marta Corno, Fan Jiang, Robert Raja and M. Pera-Titus*

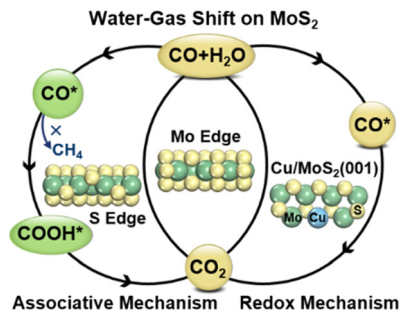
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Plasma-engraved Co₃O₄ nanorods with enriched oxygen vacancies for efficient electrocatalytic ammonia synthesis

Bingru Lan, Jieying Wan, Chuang Guan, Ji Yang,* Na Yang, Jiageng Zheng, Xiaodong Li* and Hao Zhang*

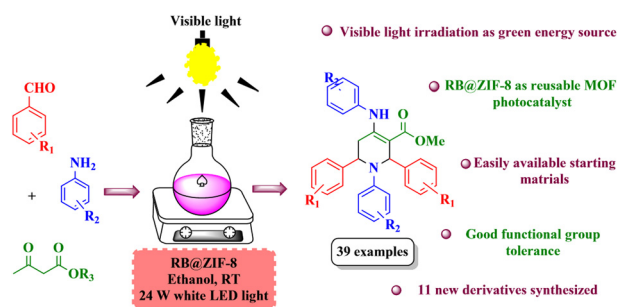
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Synergistic effect and coordination environment tuned water-gas shift reaction on MoS₂ catalyst

Hai-Yan Su, Wenbo Liao* and Keju Sun*

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Photocatalytic activity of Rose Bengal encapsulated in zeolitic imidazolate framework-8 (RB@ZIF-8): an innovative approach for the one pot synthesis of highly functionalized tetrahydropyridines and study of their anti-tubercular activity

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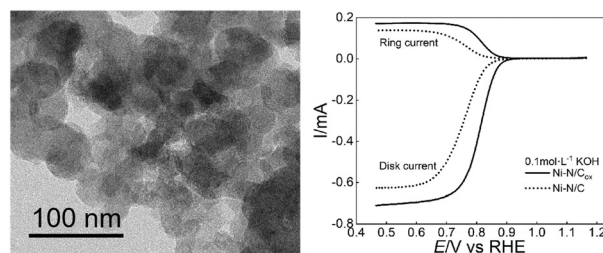


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Electrocatalytic synthesis of hydrogen peroxide based on multi-doped carbon-based nanocatalyst

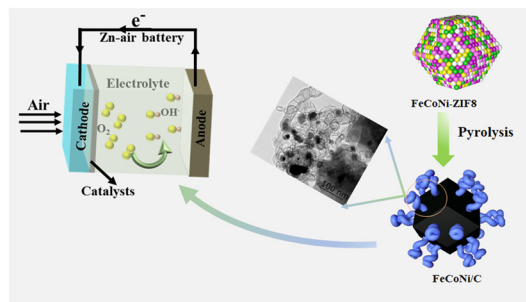
Peng Hu,* Qijing Zhang, Xiaodong Lu and Zihao Zuo



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Carbon-coated FeCoNi nanocatalysts for the electrocatalytic oxygen reduction reaction

Haitao Huang, Chengcheng Zhang, Haijin Li,*
Jianmin Wang, Zhijie Chen, Yitao He, Yongtao Li,*
Jing Hu, Xiaofang Liu,* Xiaolong Deng and Shaochun Shi



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In situ laser-assisted synthesis of MoS₂ anchored on 3D porous graphene foam for enhanced alkaline hydrogen generation

Ling Zhang, Wenxiang Fu, Jie Yang, Junchao Yang,
Chuan Zhou, Jiang Zhao* and Qibin Huang*

