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

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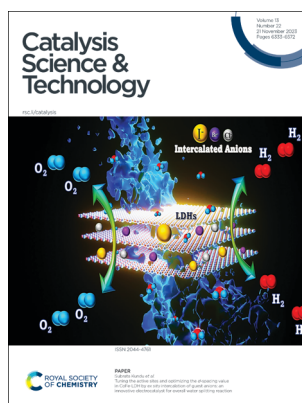
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ISSN 2044-4761 CODEN CSTAGD 13(22) 6333–6572 (2023)



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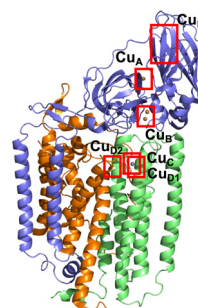
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REVIEW

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Methane monooxygenases; physiology, biochemistry and structure

Yasuyoshi Sakai,* Hiroya Yurimoto and Seigo Shima*

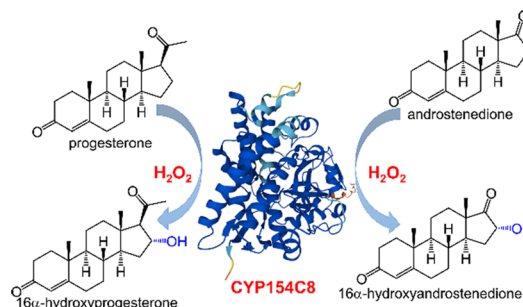


COMMUNICATIONS

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Efficient regio- and stereo-selective C–H bond hydroxylation of steroids using an engineered heme-thiolate peroxygenase biocatalyst

Jinia Akter, Eva F. Hayball and Stephen G. Bell*



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Catalysis Science & Technology electronic: ISSN 2044-4761

is published 24 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK.

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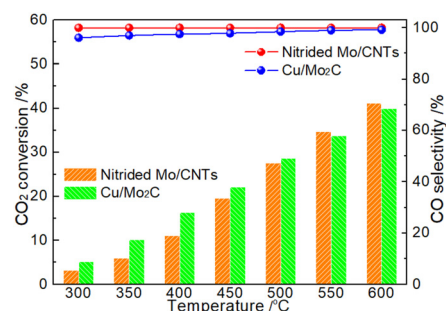


COMMUNICATIONS

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First comparison of catalytic CO₂ reduction to CO over molybdenum carbide, nitride and phosphide catalysts

Qingshan Rong, Wei Ding, Guogang Liu, Zhiqiang Zhang* and Zhiwei Yao*

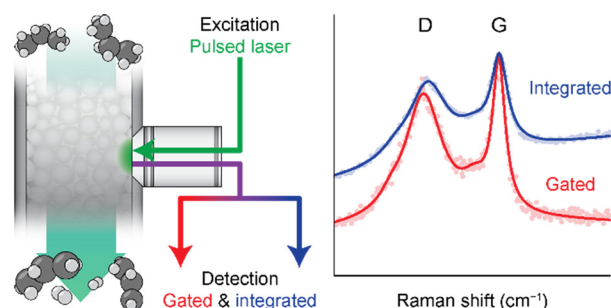


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Operando time-gated Raman spectroscopy of solid catalysts

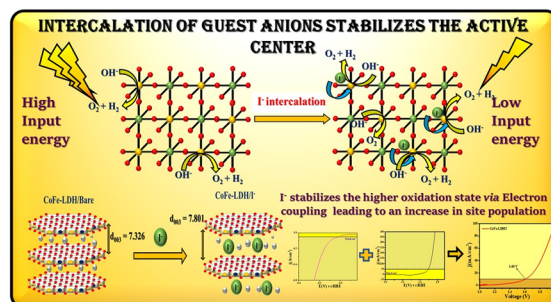
Robin Vogel, P. Tim Prins, Freddy T. Rabouw and Bert M. Weckhuysen*



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Tuning the active sites and optimizing the *d*-spacing value in CoFe-LDH by *ex situ* intercalation of guest anions: an innovative electrocatalyst for overall water splitting reaction

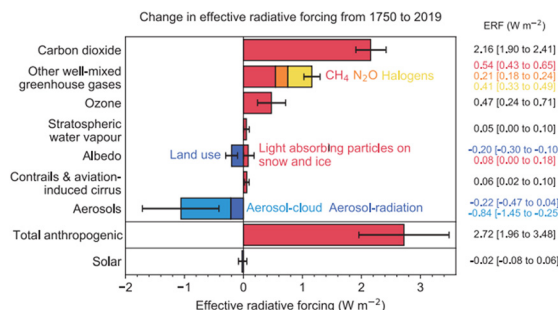
Sreenivasan Nagappan, Arun Karmakar, Ragunath Madhu, Hariharan N. Dhandapani, Suprobat Singha Roy and Subrata Kundu*



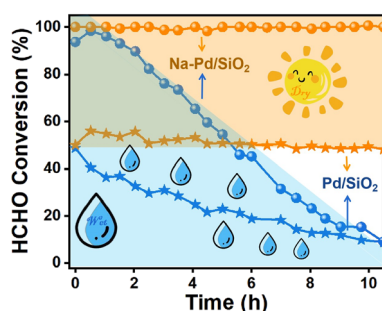
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Low-concentration methane removal: what can we learn from high-concentration methane conversion?

Yun Wang, Haiyuan Zhang, Jie Zhang, Yijie Fu, Yuyin Wang, Yang Bai, Xin Feng, Jiahua Zhu, Xiaohua Lu, Liwen Mu* and Wei Li*



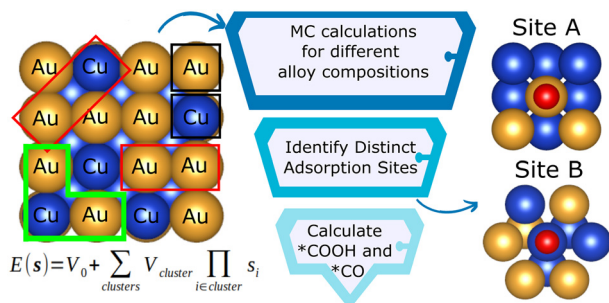
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Abnormal inhibiting effect of H₂O on Pd/SiO₂ and Na-Pd/SiO₂ catalysts for HCHO oxidation

Chunying Wang, Jingyi Wang, Xiaofeng Liu, Yaobin Li,^{*} Changbin Zhang, Yuming Zheng and Wenpo Shan^{*}

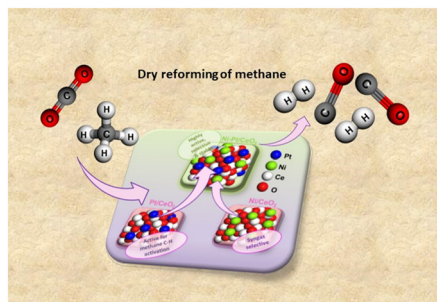
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The effects of near-surface atomic order on the catalytic properties of Cu₃Au and CuAu₃ intermetallics for the CO₂ reduction reaction

Lucas G. Verga, Yunzhe Wang, Tanmoy Chakraborty, Juarez L. F. Da Silva and Tim Mueller^{*}

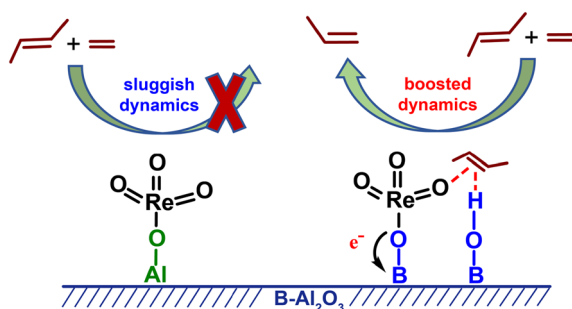
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Low temperature reforming of methane with CO₂ over Pt/CeO₂, Ni/CeO₂ and Pt-Ni/CeO₂ catalysts prepared by a solution-combustion method

Rubina Khatun, Nazia Siddiqui, Rohan Singh Pal, Sonu Bhandari, Tuhin Suvra Khan, Shivani Singh, Mukesh Kumar Poddar, Chanchal Samanta and Rajaram Bal^{*}

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Enhancing the activity of a supported rhenium catalyst for cross-metathesis of ethene and 2-butene via promotion of boron

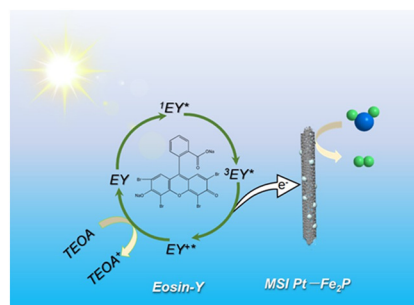
Yibo Yang, Gaolei Qin, Anping Yin, Yuhang Cai, Ziyu Zhou, Nengfeng Gong, Xiangjie Zhang, Tao Yan, Gengzhe Song, Xiaodong Sun, Hongliu Wan,^{*} Yong Yang, Yongwang Li and Zhi Cao^{*}



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Metal-support interactions in Pt-embedded porous Fe₂P nanorods for efficient hydrogen production

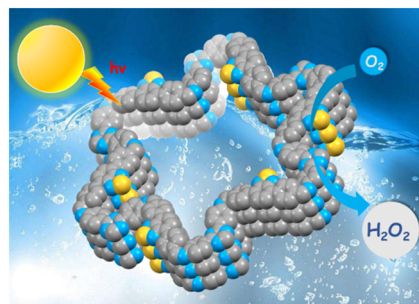
Ahmed Mahmoud Idris, Song Zheng, Meng Zhang, Xinyan Jiang, Guocan Jiang, Jin Wang, Sheng Li and Zhengquan Li*



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Understanding photocatalytic hydrogen peroxide production in pure water for benzothiadiazole-based covalent organic frameworks

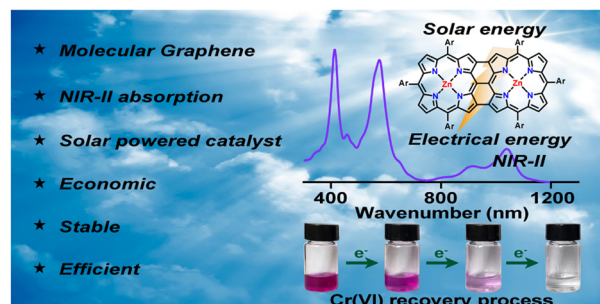
Linyang Wang, Jiamin Sun, Maojun Deng, Chunhui Liu, Servet Ataberk Cayan, Korneel Molken, Pieter Geiregat, Rino Morent, Nathalie De Geyter, Jeet Chakraborty* and Pascal Van Der Voort*



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Sewage remediation using solar energy and a triply fused Zn-porphyrin dimer molecular graphene photocatalytic agent

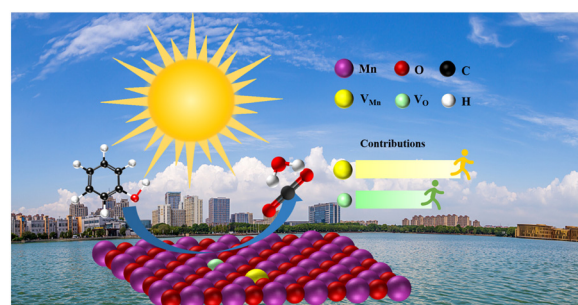
Fei Cheng, Taotao Qiang,* Mingli Li and Tony D. James*



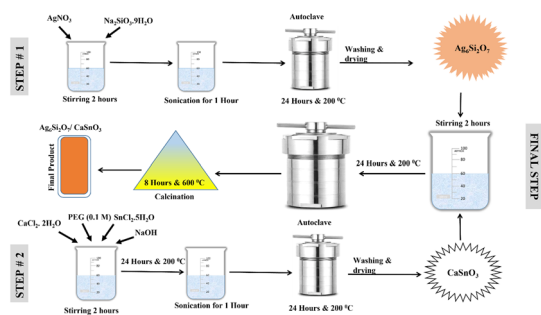
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The quantitative contribution of interfacial coexisting Mn and O vacancies to MnO₂ photocatalytic degradation of phenol

Yahui Zhou, Xingxin Lei, Dali Yan, Jian Ye, Bo Deng* and Weilin Xu



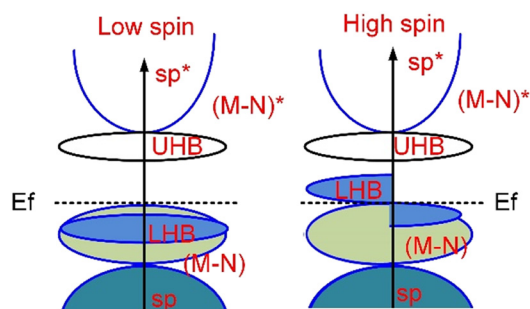
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Tuning the catalytic performance of CaSnO_3 by developing an S-scheme p–n heterojunction through $\text{Ag}_6\text{Si}_2\text{O}_7$ doping

Navid Hussain Shah, Muhammad Abbas, Muhammad Qasim, Muhammad Sulman, Muhammad Imran, Sohail Azmat, Yanyan Cui* and Yaling Wang*

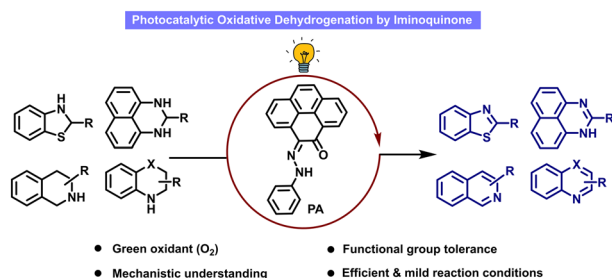
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Spin-state reconfiguration of single-atom dimers *via* superexchange interactions enables nitrate reduction to ammonia

Yun Shan,* Tinghui Li* and Lizhe Liu*

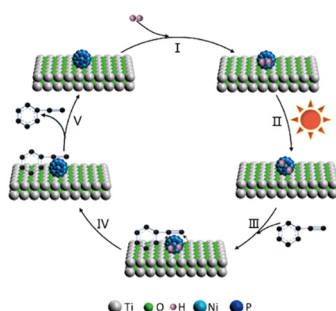
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Photochemical oxidative dehydrogenation of saturated N-heterocycles by an iminoquinone

Baishanal Mandal, Amreen K. Bains, Monojit Roy and Debashis Adhikari*

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Selective hydrogenation of phenylacetylene over TiO_2 supported Ni_2P nanoparticles under visible light irradiation

Xincheng Li, Ruiyi Wang,* Jin Zhang, Jing Wang, Yunwei Wang* and Zhanfeng Zheng*

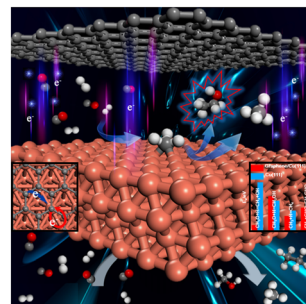


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Mechanistic exploration of syngas conversion at the interface of graphene/Cu(111): identifying the effect of promoted electron transfer on the product selectivity

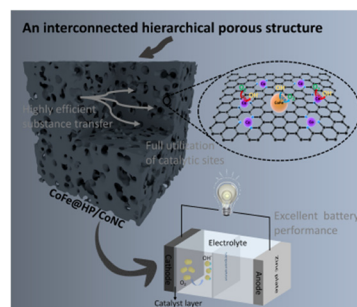
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Amorphous zeolite imidazole framework-derived hierarchically porous and multi-catalytic active site bifunctional catalysts for zinc–air batteries

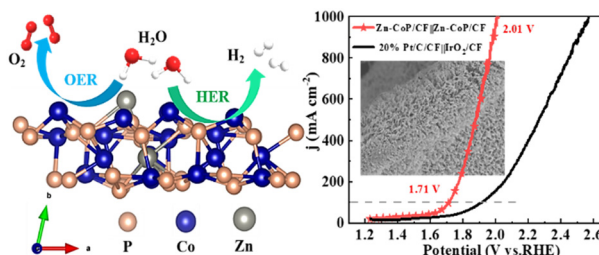
Supeng Ye, Yunxian Zhang, Fei Lin, Yingjian Huang, Xuelong Zhou, Qixing Wu and Fang Wang*



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Electronic modulation of CoP nanosheets array by Zn doping as an efficient electrocatalyst for overall water splitting

Xiaoyi Li, Jianfeng Huang,* Zixuan Liu, Qian Chen, Guanjun Chen, Yifei Zhang, Koji Kajiyoshi, Yong Zhao, Yijun Liu, Liyun Cao* and Liangliang Feng*



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Efficient depolymerization of PET over Ti-doped SBA-15 with abundant Lewis acid sites *via* glycolysis

Songlei Mo, Yong Guo, Xiaohui Liu and Yanqin Wang*

