

Catalysis Science & Technology

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

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Cover

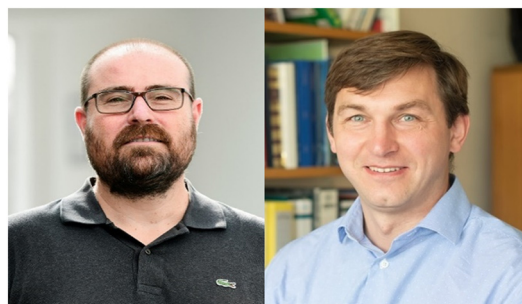
See Ruud Kortlever *et al.*, pp. 555–561.
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EDITORIAL

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Catalysis on the move

Asier Unciti-Broceta* and Evgeny Rebrov*

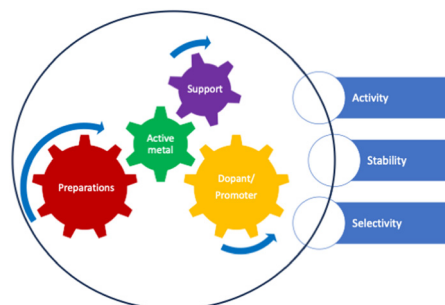


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The design and optimization of heterogeneous catalysts using computational methods

Shambhawi, Ojus Mohan, Tej S. Choksi and Alexei A. Lapkin*



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Fundamental questions
Elemental answers

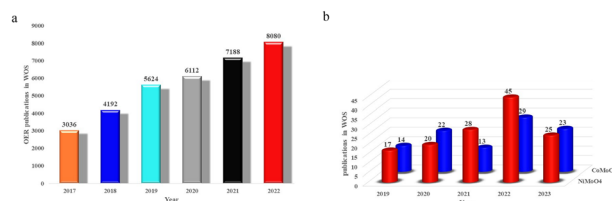


REVIEWS

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Application progress of NiMoO₄ electrocatalyst in basic oxygen evolution reaction

Haibin Wang, Zhaobo Wang, Zihang Feng, Jianguan Qiu, Xuefei Lei,* Biao Wang and Rui Guo*

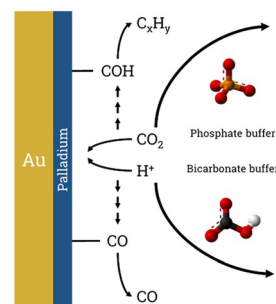


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The effect of surface conditions on the electrochemical CO₂ reduction performance of bimetallic AuPd electrocatalysts

Daniël van den Berg, Boaz Izelaar, Shilong Fu and Ruud Kortlever*



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Integration of surface polymerization and self-assembly strategies for heterogenization of copper-based catalysts for water oxidation

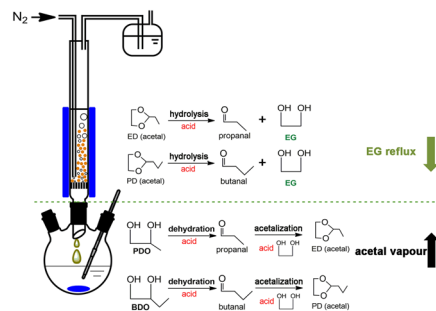
Xin Li, Mengjiao Shao, Xueling Song, Xuesong Jiang, Guisheng Li and Lei Wang*



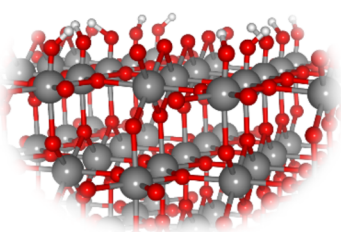
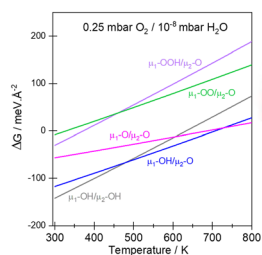
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Highly selective conversion of diols into aldehydes for the purification of ethylene glycol with a self-adjusting coupling reactor

Jianwei Ji, Shuo Ai,* Wanguo Yu, Linghui Liu and Chengdu Huang



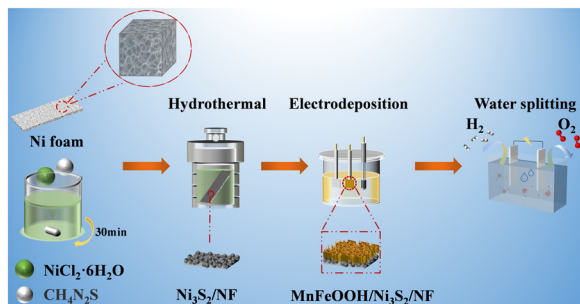
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Thermal synthesis of electron deficient oxygen species on crystalline IrO₂

E. A. Carbonio,* F. Sulzmann, D. Teschner, J. J. Velasco-Vélez, M. Hävecker, A. Knop Gericke, R. Schlögl and T. Jones*

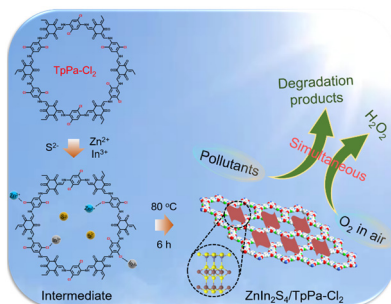
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Electronic structure modification of ultrathin MnFeOOH and integration with Ni₃S₂ as bifunctional electrocatalysts for improved alkaline water splitting

Fu-Min Wang and Si-Fu Tang*

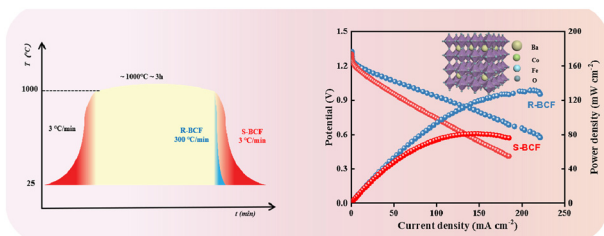
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Photocatalytic production of H₂O₂ from wastewater under visible light by chlorine and ZnIn₂S₄ co-decorated TpPa-1

Guanglu Xia, Jianhao Qiu,* Dingliang Dai, Yong Tang, Zhonghao Wu and Jianfeng Yao*

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Compositional engineering of perovskite oxide BaCo_{0.5}Fe_{0.5}O_{3-δ} as an efficient bifunctional electrocatalyst for rechargeable zinc-air batteries

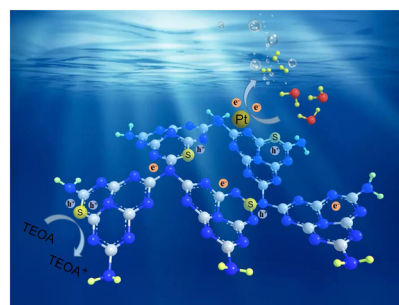
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Sulfur-doped g-C₃N₄ photocatalyst for significantly steered visible light photocatalytic H₂ evolution from water splitting

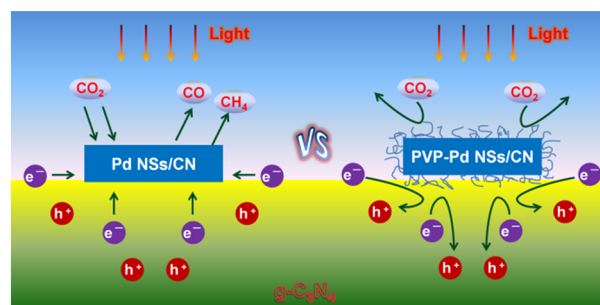
Xiao-Jie Lu, Li Xu, Ikram Ullah, Hong-Bao Li* and An-Wu Xu*



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Surfactant-free 2D/2D Pd/g-C₃N₄ for enhanced photocatalytic CO₂ reduction

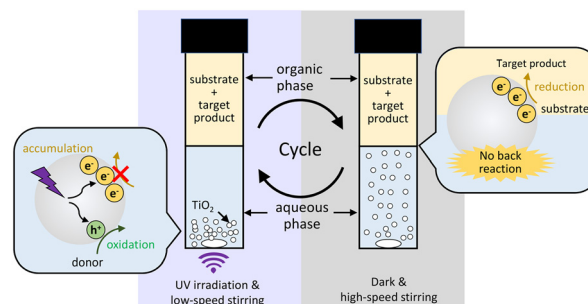
Zhijun Huang,* Jie Wu, Chunliang Yang, Fengwen Yan* and Guoqing Yuan



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Cyclic time-separated redox reaction using accumulated electrons in titanium(IV) oxide in a two-phase system

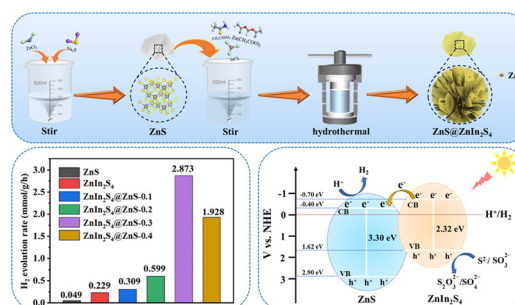
Masato Suenaga and Naoya Murakami*



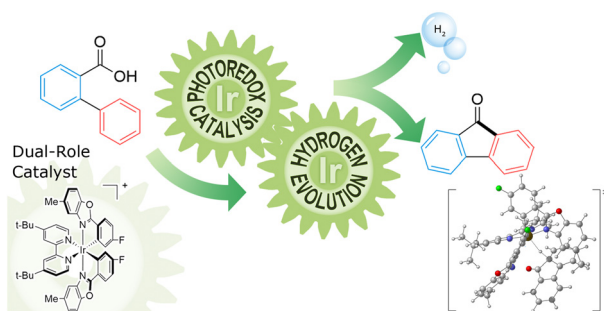
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Facile synthesis of ZnIn₂S₄@ZnS composites for efficient photocatalytic hydrogen precipitation

Xixi Yuan, Peng Li,* Siyu Wang, Puyu Liu, Jianwei Zhao,* Tao Wang and Kun Chang*



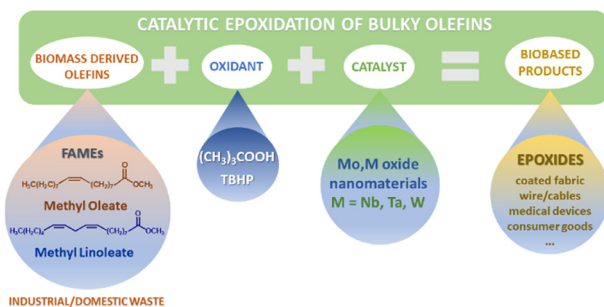
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Dual-role catalysis of iridium in photo-irradiation synthesis of 9-fluorenone through intramolecular cyclization *via* hydrogen evolution

Xi Hong, Yi-Wen Zhang, Bing Zhan, Xue-Juan Chen, De-Jun Hu, Zhi-Ming Li* and Xiu-Feng Hou*

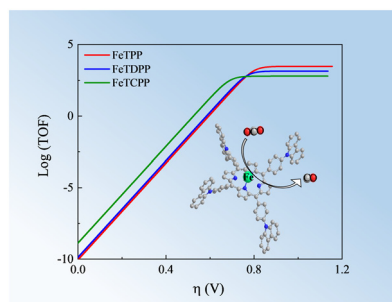
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Bulky olefin epoxidation under mild conditions over Mo-based oxide catalysts

Diana M. Gomes, Xingyu Yao, Patrícia Neves,* Nicola Pinna, Patrícia A. Russo and Anabela A. Valente*

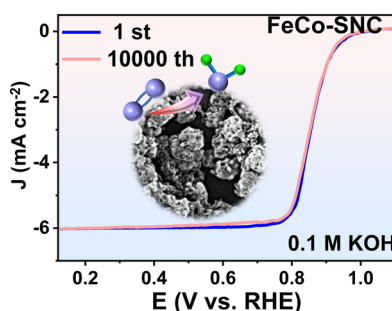
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Electrocatalytic reduction of CO_2 to CO by Fe(III) carbazole-porphyrins in homogeneous molecular systems

Hai Sun, Jiahui Wu, Fengkun Tian, Guodong Zhang, Zixiang Xia, Jiabin Rong, Jun-Sheng Qin* and Heng Rao*

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Co, Fe decorated N, S co-doped porous carbon enables high stability for the oxygen reduction reaction

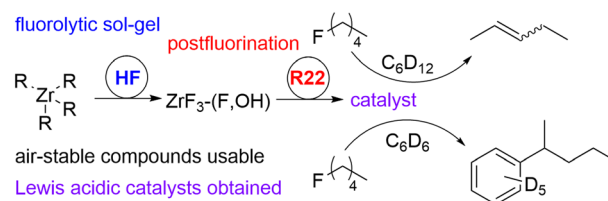
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A fluorolytic sol-gel route to access an amorphous Zr fluoride catalyst: a useful tool for C-F bond activation

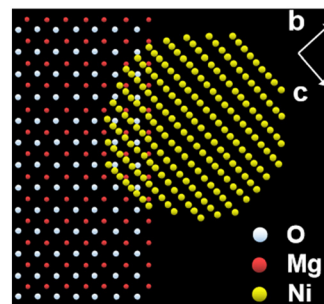
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Stable Ni nanocrystals on porous single-crystalline MgO particles for enhanced dry reforming activity and durability of CH₄/CO₂

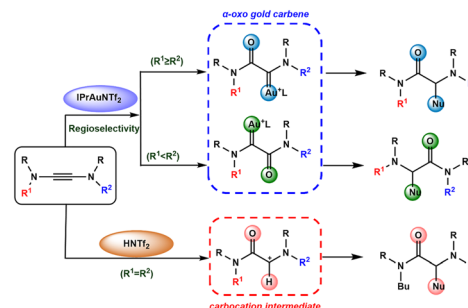
Suning Zhang, Fangyuan Cheng* and Kui Xie*



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Oxidative functionalization of yndiamides catalyzed by gold(i) or Brønsted acid systems: computational study of mechanism, selectivity patterns, and effects of substituents

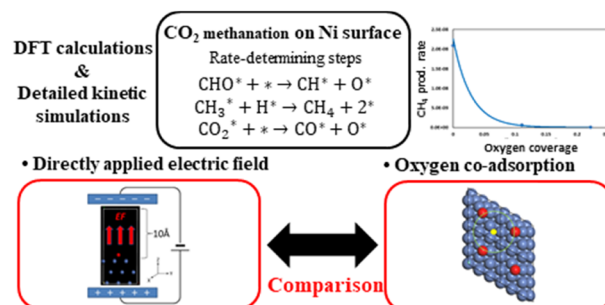
Guowei Yan, Ji Ma, Simeng Qi, Alexander M. Kirillov, Lizi Yang and Ran Fang*



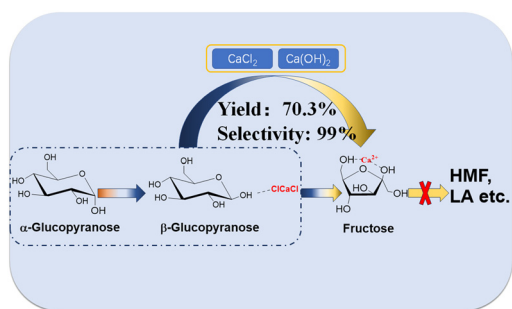
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Theoretical study of catalytic activity modifications in CO₂ methanation induced by an electric field in solid-oxide cells

Katsuhiko Wakamatsu,* Takaaki Yasuda, Masato Aratani and Teppei Ogura*



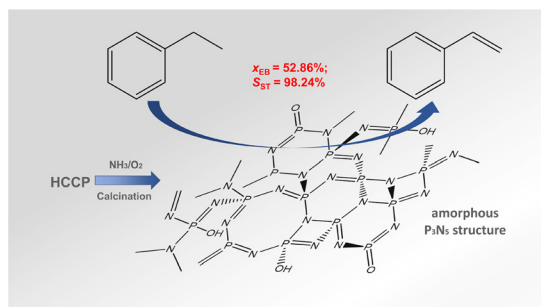
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Insight into the alkaline earth metal salt promotion for alkali-catalyzed glucose isomerization

Changqu Lin, Yunlin Shi, Lulu Xu, Zhengyue Wang, Lili Zhao, Hongli Wu,* Fei Cao and Ping Wei

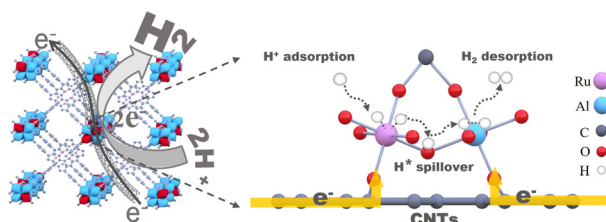
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Amorphous phosphorus oxynitride as a robust catalyst for steam-free direct dehydrogenation of ethylbenzene to styrene: effect of calcination temperature

Lukai Luo, Yuan Ma, Yuwei Liu, Baining Lin, Chaojun Guo, Jun Gong, Yating Xie and Yonghua Zhou*

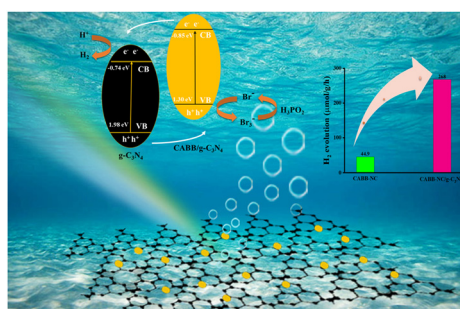
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Steering the electronic communication between Al/Ru bimetallic clusters in metal-organic framework composites for accelerating hydrogen evolution kinetics

Xueting Song, Haifeng Yang, Chenghua Zhang,* Guizhi Zhang, Hong Wu, Youzhou He, Min Fu, Xingyan Liu,* Siqi Li and Siping Wei*

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Enhanced photocatalytic hydrogen evolution through suppressed electron-hole recombination in $Cs_2AgBiBr_6$ -NC/g- C_3N_4 nanocomposites

C. Vidhya, B. Meera, Revathy B. Nair and Sajith Kurian*

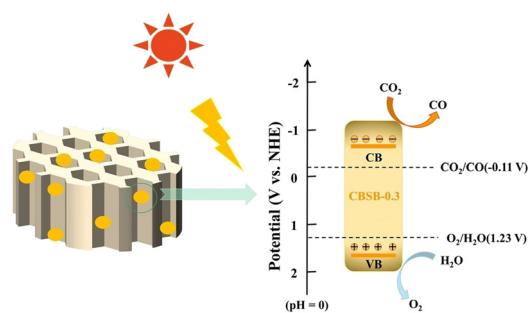


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Synthesis of small size lead-free $\text{Cs}_3\text{Bi}_{2x}\text{Sb}_{2-2x}\text{Br}_9$ solid-solutions using a spatially confined growth method for efficient photocatalytic CO_2 reduction

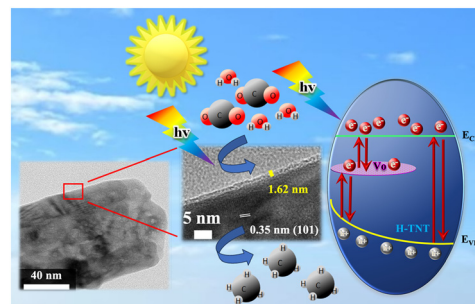
Miaomiao Gao, Xiaolei Liu,* Liwen Yin, Jinghang Chen, Zeyan Wang, Zhaoke Zheng, Yuanyuan Liu, Hefeng Cheng, Ying Dai, Baibiao Huang, Zehui Zhang* and Peng Wang*



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Engineered CO_2 conversion performance of nanostructured TiO_2 photocatalysts via electrochemical hydrogenation

Jacky Chen-Chin Lee, Hossam A. E. Omr, Po-Wei Lai and Hyeonseok Lee*



CORRECTION

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Correction: Adipic acid formation from cyclohexanediol using platinum and vanadium catalysts: elucidating the role of homogeneous vanadium species

Owen Rogers, Samuel Patisson, Rebecca V. Engel, Robert L. Jenkins, Keith Whiston, Stuart H. Taylor and Graham J. Hutchings*

