Catalysis Science & Technology

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

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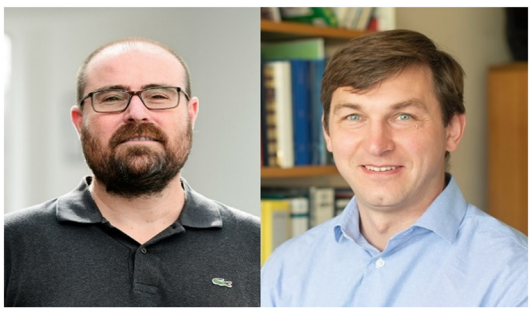
Catalysis on the move

Asier Unciti-Broceta* and Evgeny Rebrov*



REVIEWS

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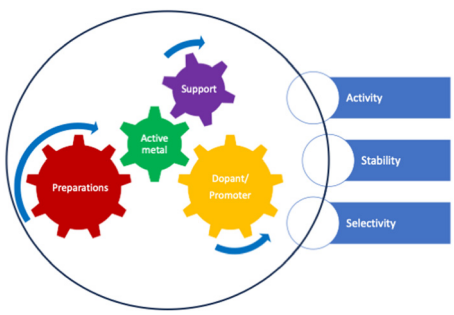
The design and optimization of heterogeneous catalysts using computational methods

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



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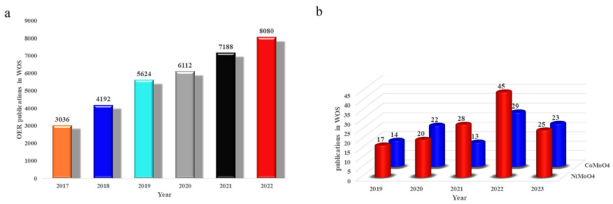
Application progress of $NiMoO_4$ electrocatalyst in basic oxygen evolution reaction

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



COMMUNICATIONS

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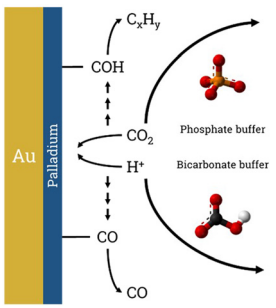
The effect of surface conditions on the electrochemical CO_2 reduction performance of bimetallic AuPd electrocatalysts

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



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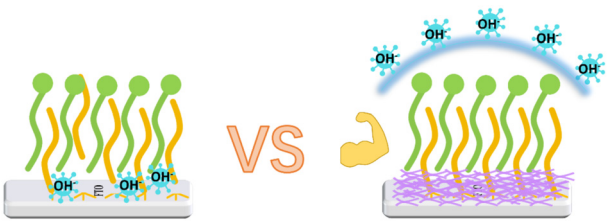
Integration of surface polymerization and self-assembly strategies for heterogenization of copper-based catalysts for water oxidation

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



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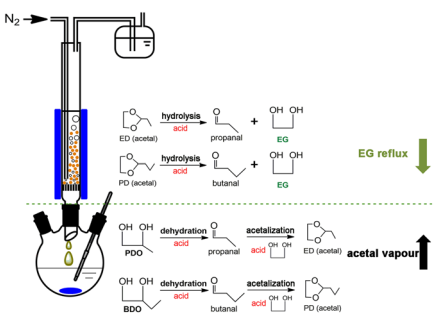
Highly selective conversion of diols into aldehydes for the purification of ethylene glycol with a self-adjusting coupling reactor

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



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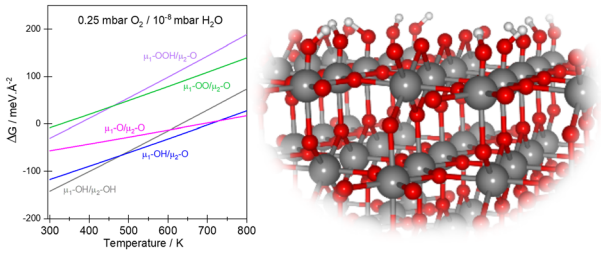

Thermal synthesis of electron deficient oxygen species on crystalline IrO_2

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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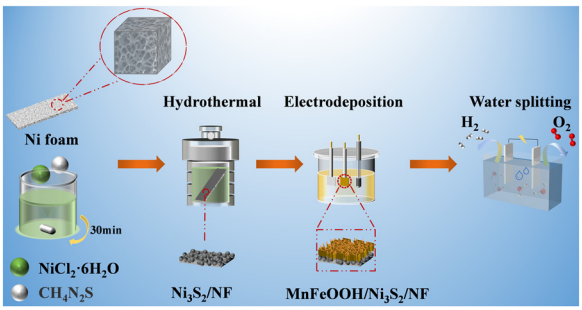

Electronic structure modification of ultrathin MnFeOOH and integration with Ni_3S_2 as bifunctional electrocatalysts for improved alkaline water splitting

Fu-Min Wang and Si-Fu Tang*

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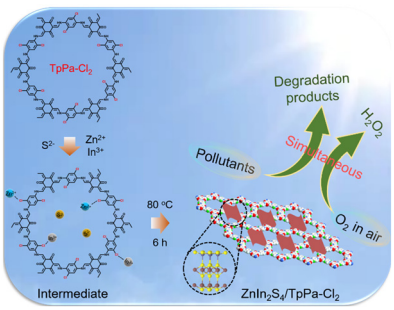

Photocatalytic production of H_2O_2 from wastewater under visible light by chlorine and $ZnIn_2S_4$ co-decorated TpPa-1

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

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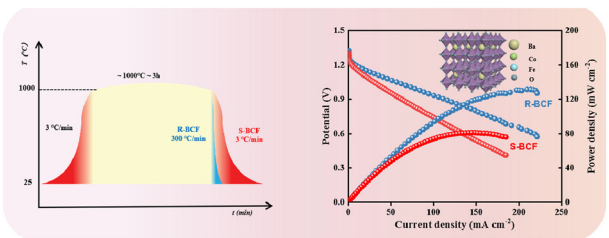

Compositional engineering of perovskite oxide $BaCo_{0.5}Fe_{0.5}O_{3-\delta}$ as an efficient bifunctional electrocatalyst for rechargeable zinc–air batteries

Anqi Xu, Jian Zhou, Tong Liu,* Jing Wang, Yao Wang, Dong Zhang, Dexuan Huang, Yilin Liu and Xuelei Hu*

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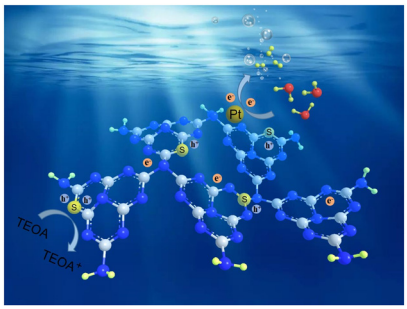
Sulfur-doped g-C_3N_4 photocatalyst for significantly steered visible light photocatalytic H_2 evolution from water splitting

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



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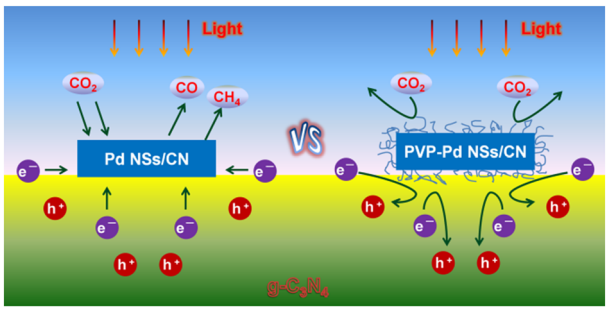
Surfactant-free 2D/2D Pd/g-C_3N_4 for enhanced photocatalytic CO_2 reduction

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



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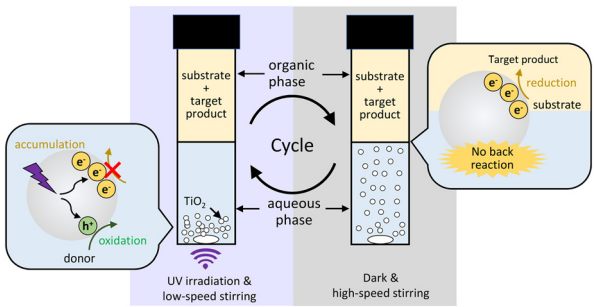
Cyclic time-separated redox reaction using accumulated electrons in titanium(IV) oxide in a two-phase system

Masato Suenaga and Naoya Murakami*



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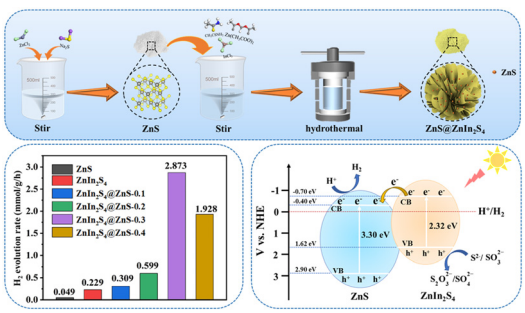
Facile synthesis of $ZnIn_2S_4$@ZnS composites for efficient photocatalytic hydrogen precipitation

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



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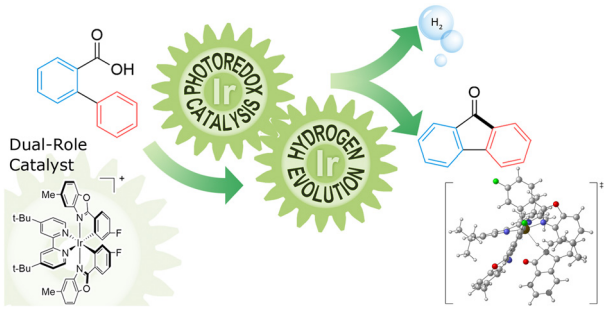

Dual-role catalysis of iridium in photo-irradiation synthesis of 9-fluorenone through intramolecular cyclization *via* hydrogen evolution

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

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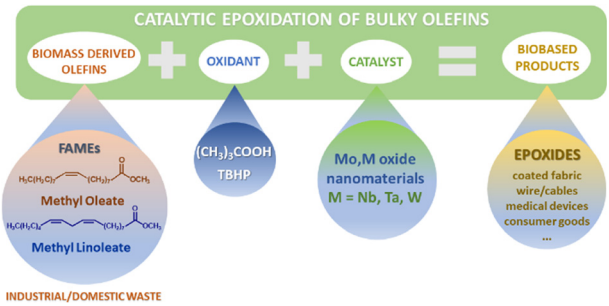

Bulky olefin epoxidation under mild conditions over Mo-based oxide catalysts

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

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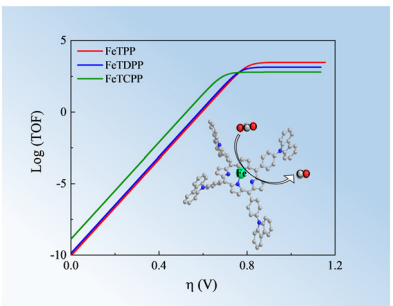

Electrocatalytic reduction of CO_2 to CO by Fe(III) carbazole–porphyrins in homogeneous molecular systems

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

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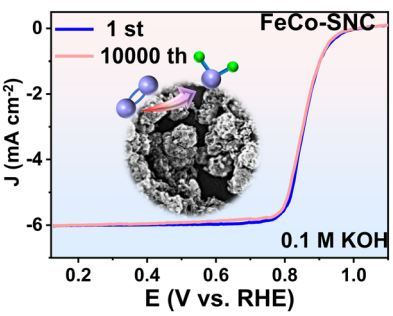

Co, Fe decorated N, S co-doped porous carbon enables high stability for the oxygen reduction reaction

Qiulan Huang, Ruiqin Ren, Jia Li, Muhammad Waqas, Pan Chen, Xiaotian Liu, Dujuan Huang, Zhongyun Yang, Xinglan Peng, Du-Hong Chen,* Youjun Fan* and Wei Chen*

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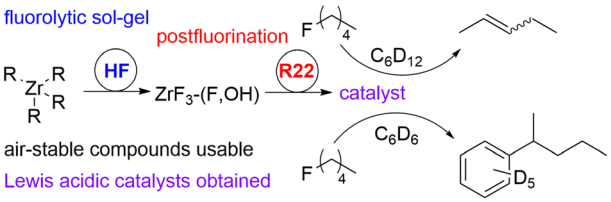
A fluorolytic sol–gel route to access an amorphous Zr fluoride catalyst: a useful tool for C–F bond activation

Christian Heinekamp, Sönke Kneiske, Ana Guilherme Buzanich, Mike Ahrens, Thomas Braun* and Franziska Emmerling*



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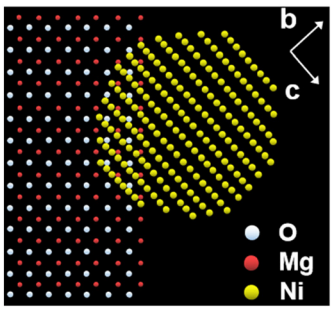
Stable Ni nanocrystals on porous single-crystalline MgO particles for enhanced dry reforming activity and durability of CH_4/CO_2

Suning Zhang, Fangyuan Cheng* and Kui Xie*



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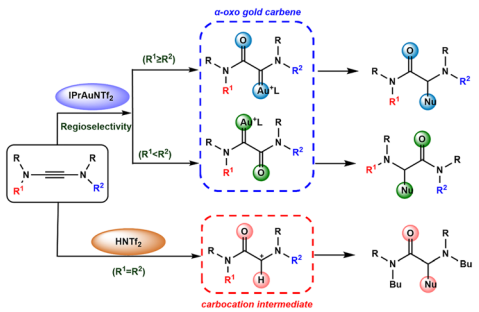
Oxidative functionalization of yndiamides catalyzed by gold(I) or Brønsted acid systems: computational study of mechanism, selectivity patterns, and effects of substituents

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



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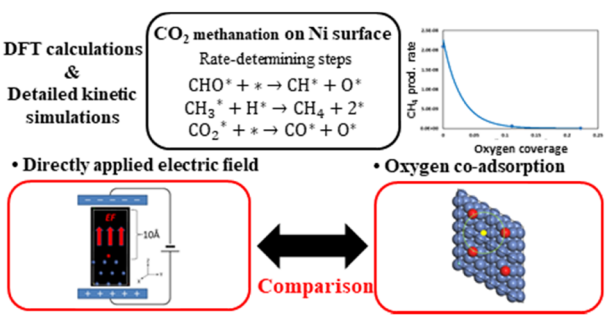
Theoretical study of catalytic activity modifications in CO_2 methanation induced by an electric field in solid-oxide cells

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



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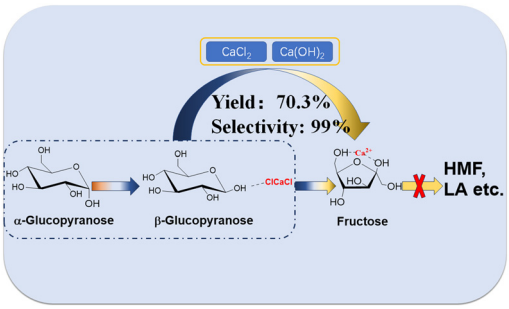

Insight into the alkaline earth metal salt promotion for alkali-catalyzed glucose isomerization

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

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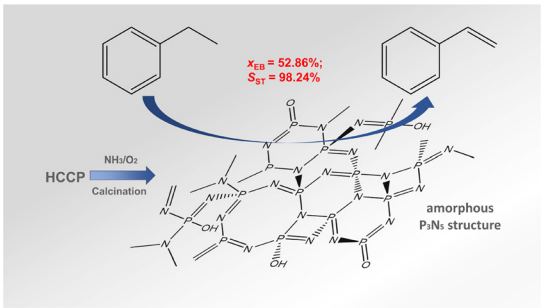

Amorphous phosphorus oxynitride as a robust catalyst for steam-free direct dehydrogenation of ethylbenzene to styrene: effect of calcination temperature

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

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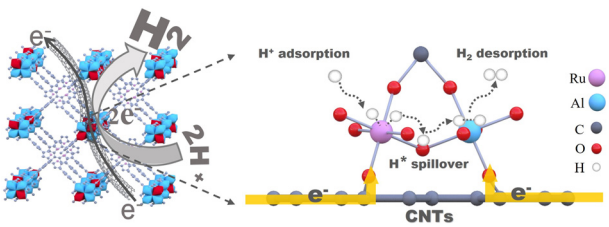

Steering the electronic communication between Al/Ru bimetallic clusters in metal–organic framework composites for accelerating hydrogen evolution kinetics

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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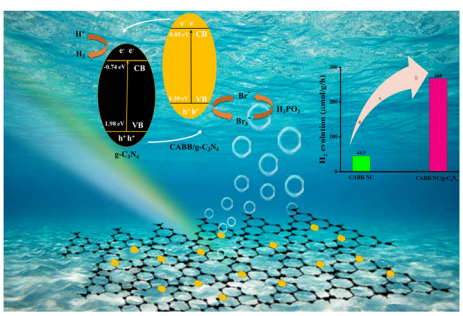

Enhanced photocatalytic hydrogen evolution through suppressed electron–hole recombination in $Cs_2AgBiBr_6$-NC/g-C_3N_4 nanocomposites

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

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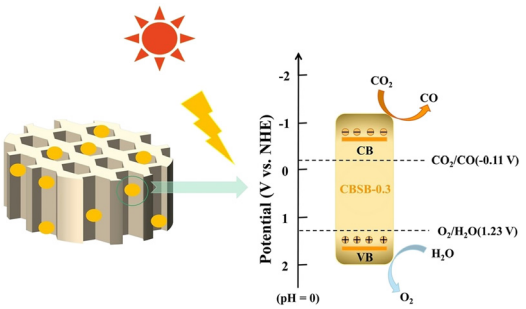
Synthesis of small size lead-free $Cs_3Bi_{2x}Sb_{2-2x}Br_9$ solid-solutions using a spatially confined growth method for efficient photocatalytic CO_2 reduction

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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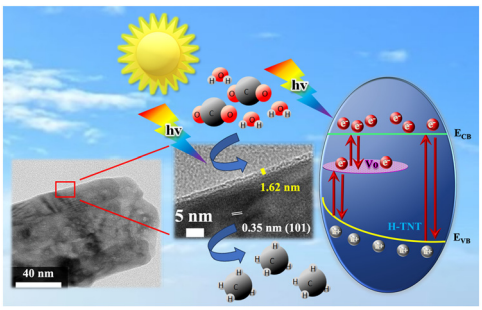
Engineered CO_2 conversion performance of nanostructured TiO_2 photocatalysts *via* electrochemical hydrogenation

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 Pattisson, Rebecca V. Engel, Robert L. Jenkins, Keith Whiston, Stuart H. Taylor and Graham J. Hutchings*