

Catalysis Science & Technology

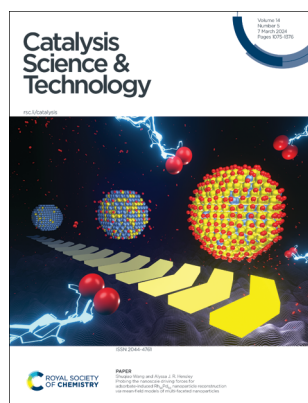
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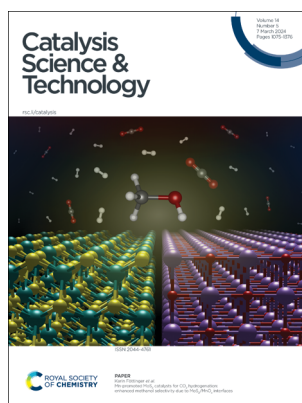
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See Shuqiao Wang and Alyssa J. R. Hensley, pp. 1122–1137.
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Inside cover

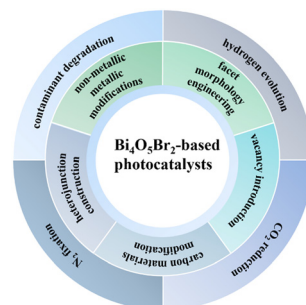
See Karin Föttinger et al., pp. 1138–1147.
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REVIEWS

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Recent progress on $\text{Bi}_4\text{O}_5\text{Br}_2$ -based photocatalysts for environmental remediation and energy conversion

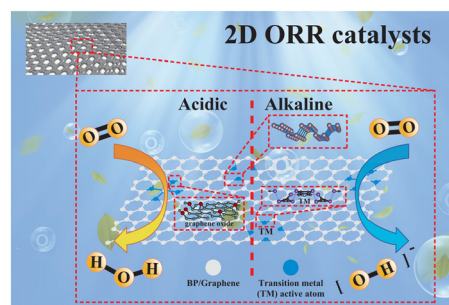
Xingyue Qian, Yu Ma, Xin Xia, Jiawei Xia, Jingrui Ye, Guangyu He* and Haiqun Chen*



1105

A review of research progress and prospects of modified two-dimensional catalysts based on black phosphorus in the oxygen reduction reaction

Tongzhuang He, Lihai Wei, Yao Wang, Huabo Huang,* Qianqian Jiang* and Jianguo Tang*



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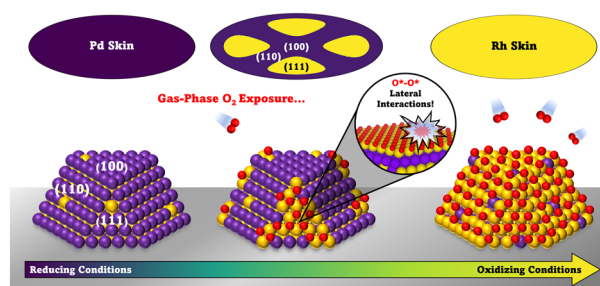


PAPERS

1122

Probing the nanoscale driving forces for adsorbate-induced Rh₅₀Pd₅₀ nanoparticle reconstruction via mean-field models of multi-faceted nanoparticles

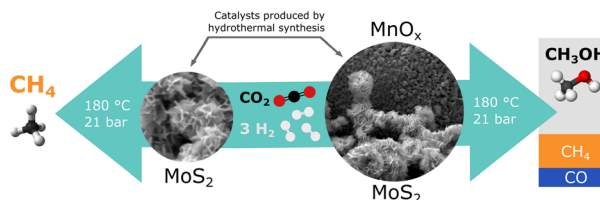
Shuqiao Wang and Alyssa J. R. Hensley*



1138

Mn-promoted MoS₂ catalysts for CO₂ hydrogenation: enhanced methanol selectivity due to MoS₂/MnO_x interfaces

Gustavo A. S. Alves, Gernot Pacholik, Stephan Pollitt, Tobias Wagner, Raffael Rameshan, Christoph Rameshan and Karin Föttinger*

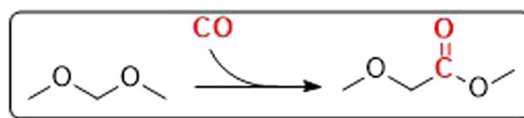


1148

Carbonylation of dimethoxymethane: a study on the reactivity of different solid acid catalysts

Kalim A. Sheikh,* Victor Zaghini Francesconi, Thomas A. Zevaco and Jörg Sauer

Solvent-free Carbonylation in Liquid Phase with Solid Acid Catalysts

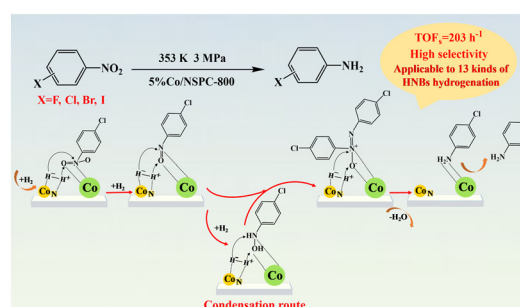


7 Zeolites + 7 Ion exchange Resins
Broad parameter (Catalyst Amount, T, P)

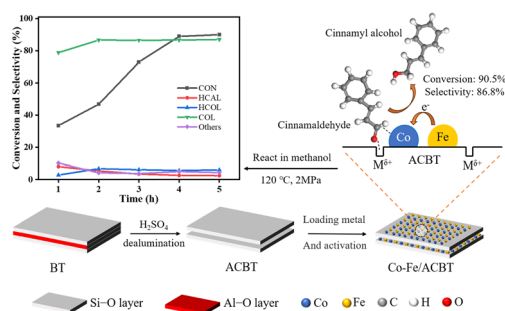
1167

Efficient Co/NSPC catalyst for selective hydrogenation of halonitrobenzenes and mechanistic insight

Jiahui Xu, Xianlang Chen, Jia-qi Bai,* Zhengan Miao, Yuan Tan, Nannan Zhan, Huangfei Liu, Mei Ma, Mengdie Cai, Qin Cheng and Song Sun



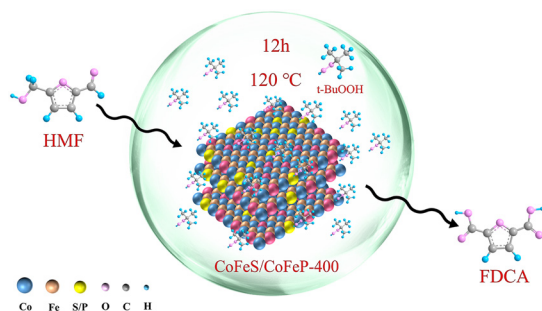
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Co-Fe catalyst supported on acidified bentonite for selective hydrogenation of cinnamaldehyde

Haixiang Shi, Yiyuan Xu, Tongming Su, Xuan Luo, Xinling Xie, Zuzeng Qin* and Hongbing Ji

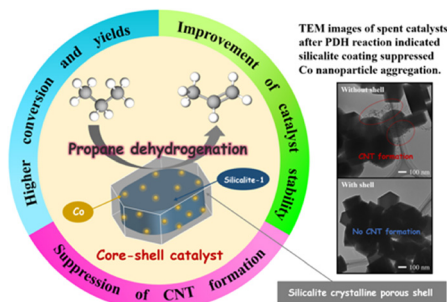
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S, P modified CoFe-LDH derived CoFeS and CoFeP-400 catalysts efficiently catalyze the oxidation of HMF to FDCA

De Gao, Fengyan Fang, Geoffrey I. N. Waterhouse, Feng Han and Yan Li*

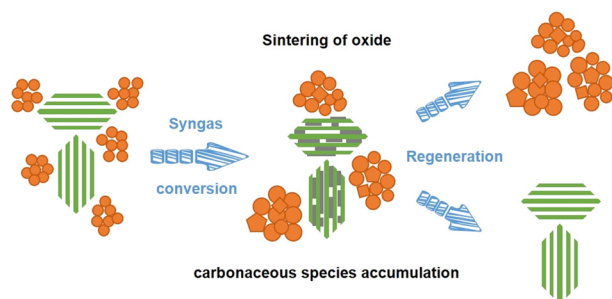
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Promoted propane dehydrogenation over Co confined within core-shell silicalite-1 zeolite crystals

Shohei Kubota, Tomoka Sumi, Haruna Kitamura, Koji Miyake,* Yoshiaki Uchida and Norikazu Nishiyama

1209



Stability of ZnMO_x-SAPO-11 (OXZEO) composite catalysts for syngas conversion to gasoline

Jingyao Feng, Dengyun Miao,* Yilun Ding, Feng Jiao, Xiulian Pan* and Xinhe Bao

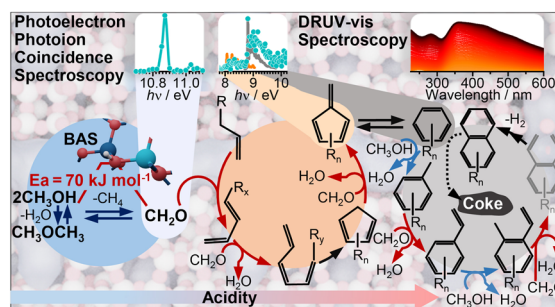


PAPERS

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The formation, reactivity and transformation pathways of formaldehyde in the methanol-to-hydrocarbon conversion

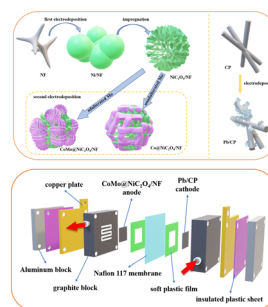
Vladimir Paunović,* Xiangkun Wu, Luca Maggiulli, Davide Ferri, Patrick Hemberger, Andras Bodi and Jeroen A. van Bokhoven*



1229

A CoMo@NiC₂O₄/NF anode and a Pb/CP cathode for a novel direct sodium borohydride-maleic acid fuel cell

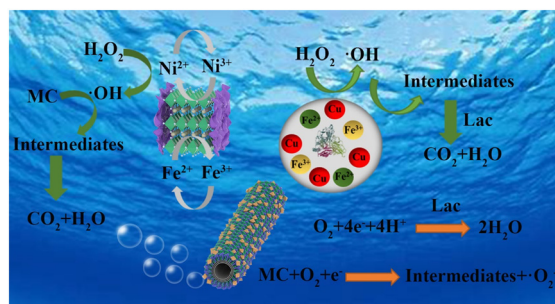
Ya Li, Fuhu Zhang, Tong Sun, Youzhi Liu, Weizhou Jiao, Jing Gao and Dongming Zhang*



1239

New synthetic strategy toward a natural enzyme-nanozyme hybrid dual-function nanomotor and its application in environmental remediation

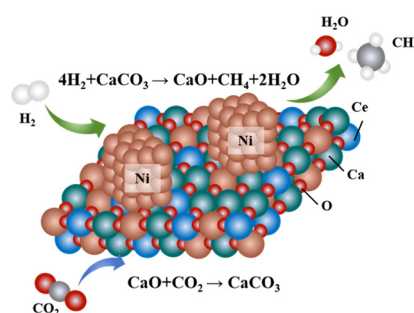
Shuo Gao, Chenzhang Liu, Xiaohan Yang, Ziwei Lan, Min Zuo, Ping Yang and Jia Li*



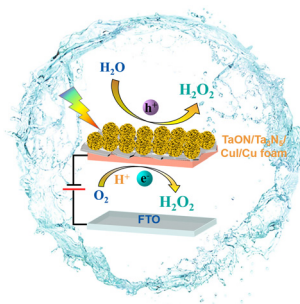
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Effects of Ni loading and Ce doping on a CaO-based dual function material for integrated carbon capture and *in situ* methanation

Yiran Zhang, Linjia Li, Shu Zhao, Jiaqi Feng, Ke Li, Zhen Huang and He Lin*



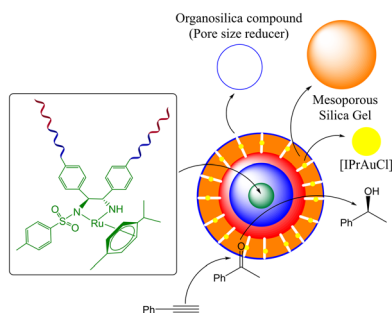
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Dual-channel synthesis of H_2O_2 via photoelectrocatalytic water oxidation and oxygen reduction over a $\text{TaON}/\text{Ta}_3\text{N}_5/\text{CuI}/\text{Cu}$ foam electrode

Shaomang Wang, Jie Wang, Haokang Wu, Yuan Guan, Zhongyu Li,* Shicheng Yan* and Zhigang Zou

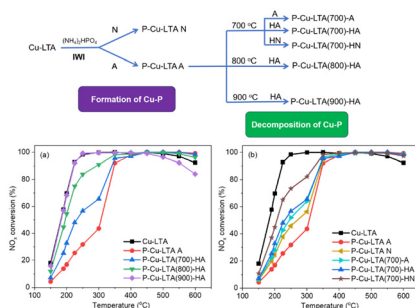
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A hybrid Au/Ru catalyst for sequential alkyne hydration/asymmetric transfer hydrogenation reactions

Bengi Ozgun Ozturk,* Burcu Durmuş Ağlamaz, Mina Aşkun, Zeynep Tunalı, Halenur Özer, Kutay Sagdic and Fatih Inci

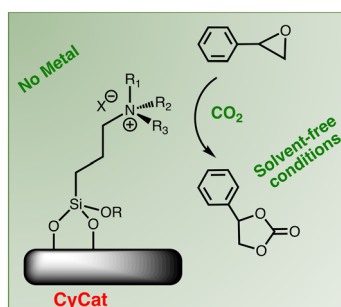
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Phosphorus poisoning and regeneration of the Cu-LTA catalyst for the selective catalytic reduction of NO_x with NH_3

Xueyang Hu, Jinhan Lin,* Xuechao Tan, Yingjie Li, Xiaofeng Liu, Yan Zhang and Wenpo Shan*

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Towards metal-free supported quaternary ammonium halide catalysts for an optimized cycloaddition of CO_2 onto styrene oxide

Miguel Alonso de la Peña, Matthieu Balas, Julie Kong, Richard Villanneau,* Lorraine Christ, Alain Tuel* and Franck Launay*

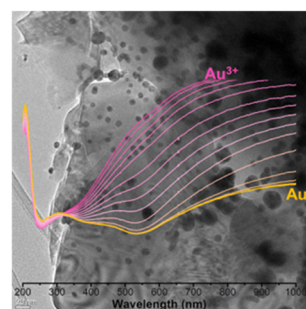


PAPERS

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Operando UV-vis spectroscopy for real-time monitoring of nanoparticle size in reaction conditions: a case study on *r*WGS over Au nanoparticles

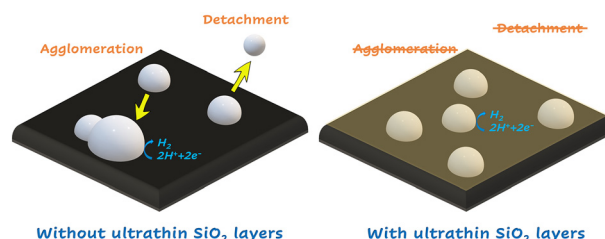
Chiara Negri, Riccardo Colombo, Mauro Bracconi, Cesare Atzori, Alessandro Donazzi, Andrea Lucotti, Matteo Tommasini and Matteo Maestri*



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Enhancing the durability of Pt nanoparticles for water electrolysis using ultrathin SiO₂ layers

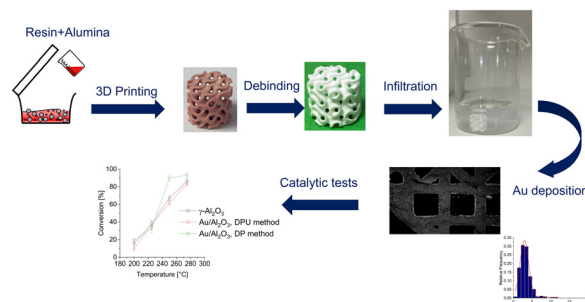
Ming Li, Saeed Saedy, Shilong Fu, Teise Stellema, Ruud Kortlever* and J. Ruud van Ommen



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Towards unconstrained catalyst shaping: high accuracy DLP printing of porous γ -Al₂O₃-based catalysts

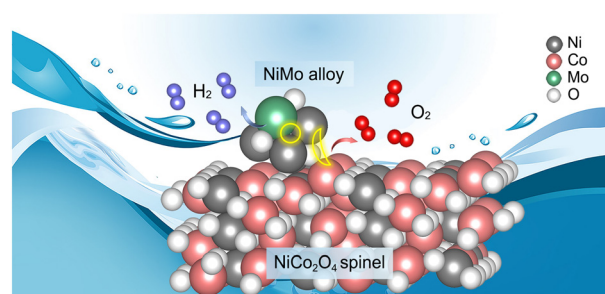
Luca Mastroianni, Vincenzo Russo, Kari Eränen, Martino Di Serio, Dmitry Yu. Murzin* and Tapio Salmi



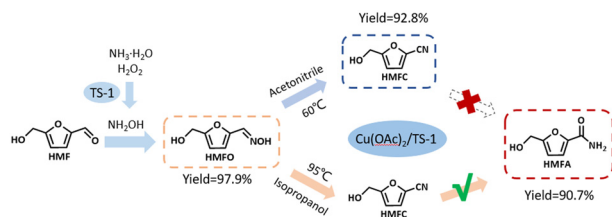
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Interface engineering towards overall water electrolysis over NiCo₂O₄/NiMo hybrid catalysts

Shan Gao, Lijing Wang, Xuxin Kang, Linxia Wang, Xiangmei Duan and Weichao Wang*



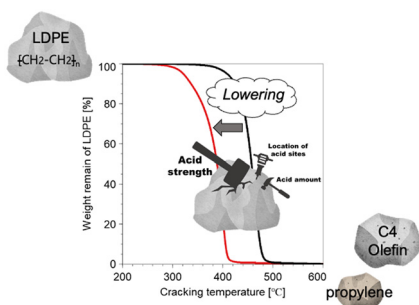
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Selectivity controlled synthesis of furan-ring nitrogenous compounds from 5-hydroxymethylfurfural, ammonia and hydrogen peroxide

Xuan Gao, Zhihui Li,* Dongsheng Zhang, Xinqiang Zhao and Yanji Wang*

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Exploring the effect of Brønsted acidity of MFI-type zeolites on catalytic cracking temperature of low density polyethylene

Soshi Tsubota, Shinya Kokuryo,* Kazuya Tamura, Koji Miyake,* Yoshiaki Uchida, Atsushi Mizusawa, Tadashi Kubo and Norikazu Nishiyama

