

Catalysis Science & Technology

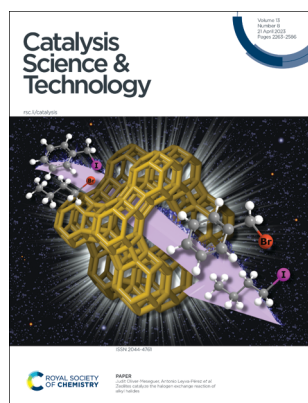
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See Judit Oliver-Meseguer, Antonio Leyva-Pérez *et al.*, pp. 2308–2316.
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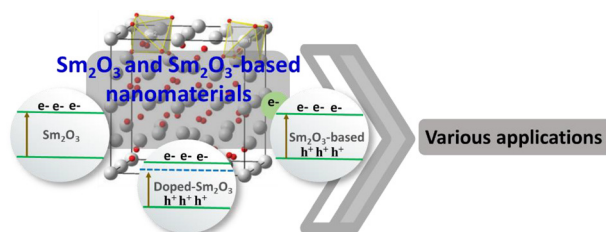
See Melek Sermin Ozer, Önder Metin *et al.*, pp. 2317–2329.
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PERSPECTIVE

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Sm₂O₃ and Sm₂O₃-based nanostructures for photocatalysis, sensors, CO conversion, and biological applications

Mohammad Mansoob Khan* and Shaidatul Najihah Matussin

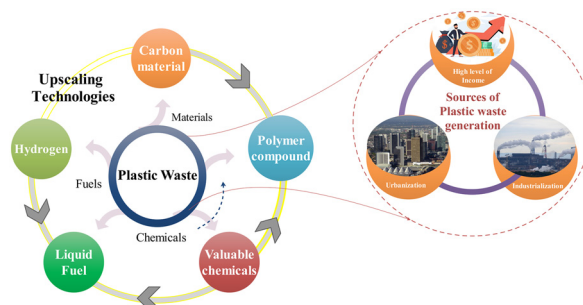


MINI REVIEW

2291

A systematic review on plastic waste conversion for a circular economy: recent trends and emerging technologies

Rajesh Banu J and Godvin Sharmila V*



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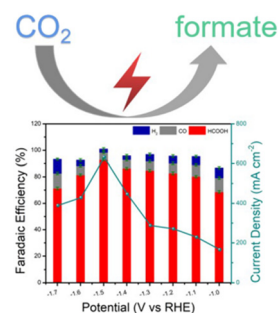


COMMUNICATION

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In situ formation of Cu–Sn bimetallic catalysts for CO₂ electroreduction to formate with high efficiency

Xue Dong, Xiaofu Sun, Shuaiqiang Jia, Shitao Han, Ting Yao, Dawei Zhou, Yijun Xie, Wei Xia, Haihong Wu* and Buxing Han*

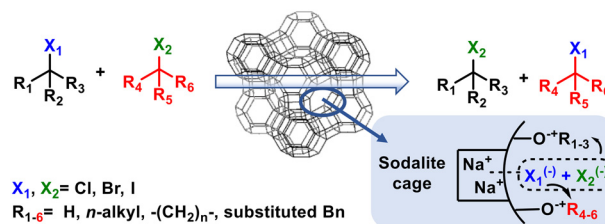


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Zeolites catalyze the halogen exchange reaction of alkyl halides

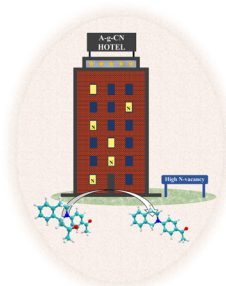
Paloma Minguez-Verdejo, Juan Carlos Hernández-Garrido, Alejandro Vidal-Moya, Judit Oliver-Meseguer* and Antonio Leyva-Pérez*



2317

The effect of N-vacancy on the photocatalytic activity of graphitic carbon nitride in the oxidative Mannich reaction

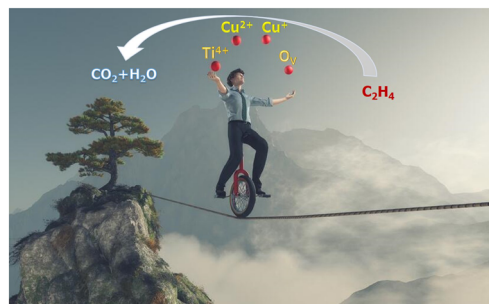
Temirlan Kubanaliev, Zafer Eroglu, Melek Sermin Ozer* and Önder Metin*



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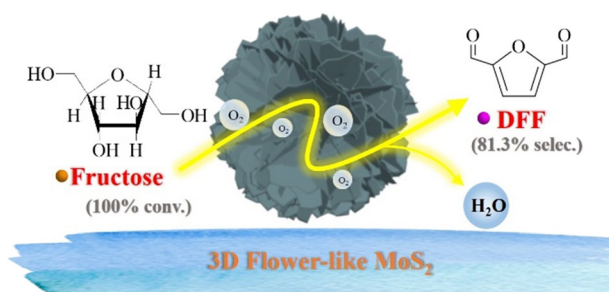
Oxidation of ethylene by Cu/TiO₂: reducibility of Cu²⁺ in TiO₂ as a possible descriptor of catalytic efficiency

K. Rajendran, Mandeep Sharma, Augustine Jaison, Menon Ankitha, Ankit D. Tiwari, C. P. Vinod and Dinesh Jagadeesan*



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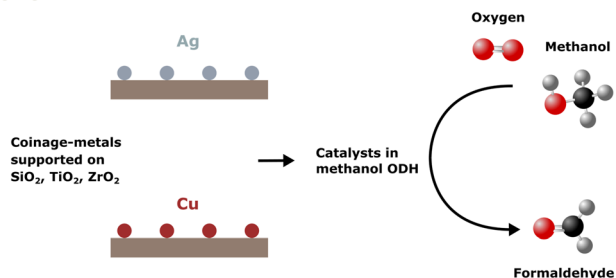
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Oxygen-incorporated 3D flower-like MoS₂ microsphere as a bifunctional catalyst for effective synthesis of 2,5-diformylfuran from fructose

Zhenzhen Yang, Yuhan He, Pengfei Tang, Chenhui Xu, Genlei Zhang* and Jianbo He*

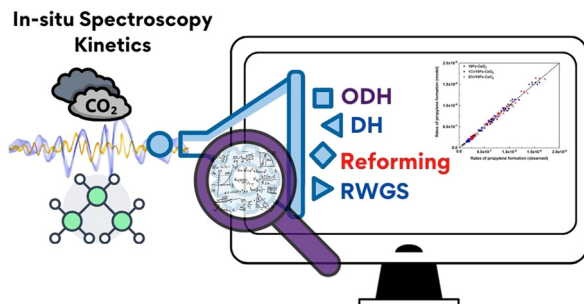
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Supported silver and copper catalysts in the oxidative dehydrogenation of methanol to formaldehyde: a comparative study under industrially relevant conditions

Fabian Eichner, Emre Turan, Jörg Sauer, Michael Bender and Silke Behrens*

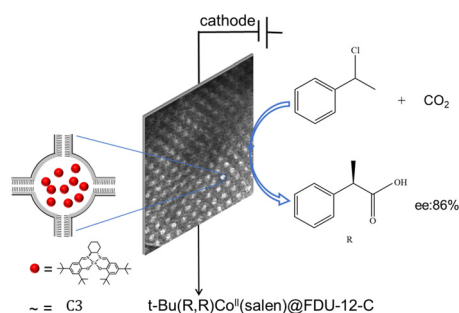
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Propane oxidative dehydrogenation using CO₂ over CrO_x/Fe–CeO₂ catalysts

Hedun Wang, Thu D. Nguyen and George Tsilomelekis*

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FDU-12-C encapsulated *t*-Bu(*R,R*)Co^{II}(salen) as a cathode catalyst for asymmetric electrocarboxylation of 1-phenylethyl chloride with CO₂

Ying Wang, Rui Xiong, Le-Ting Wang, Hua Liu, Jia-Xing Lu and Huan Wang*

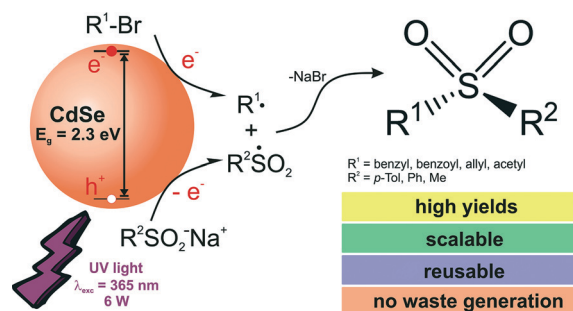


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Sulfonylation reactions photocatalyzed by quantum dots: rule of band-position and surface chemistry

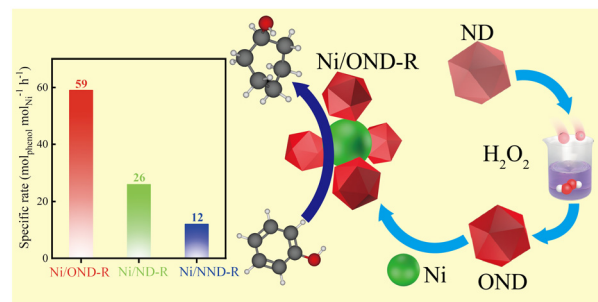
Jadielson Costa, Danilo Galdino, Felipe L. N. Sousa, Denilson V. Freitas, Paula M. Jardim, Paulo H. Menezes and Marcelo Navarro*



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Ni-based catalysts supported on nanodiamonds for phenol hydrogenation: the effect of support surface treatment on the catalytic performance

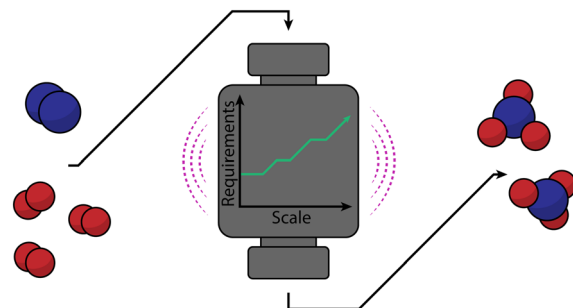
Huafan Li, Nan Zhou, Tianli Zhu, Hailian Tang* and Guoyi Bai*



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Developing a microwave-driven reactor for ammonia synthesis: insights into the unique challenges of microwave catalysis

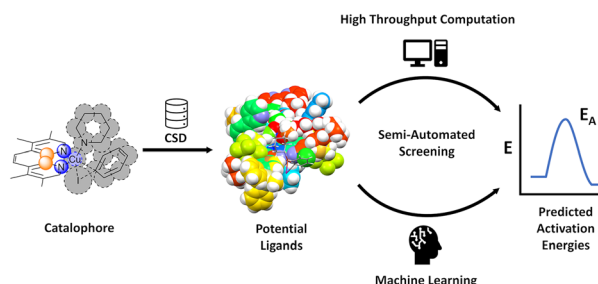
Sunjay G. Melkote,* Pranjali Muley, Biswanath Dutta, Christina Wildfire, Robert Weiss and Jianli Hu



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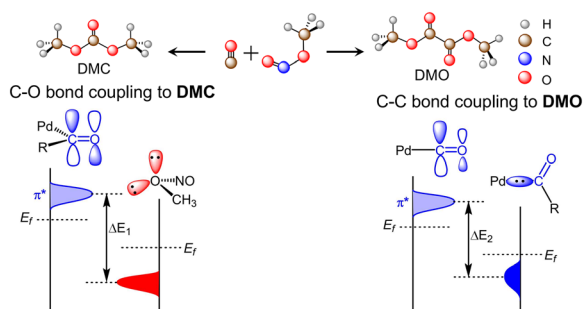
High-throughput computational workflow for ligand discovery in catalysis with the CSD

Marc A. S. Short, Clare A. Tovee, Charlotte E. Willans and Bao N. Nguyen*



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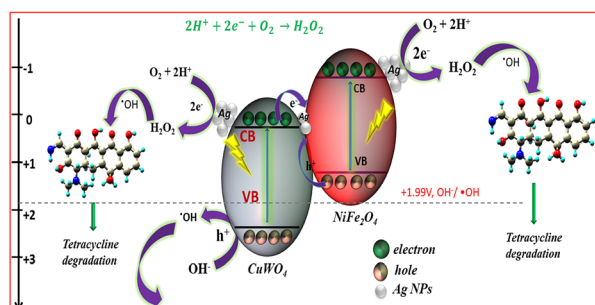
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Theoretical exploration of the origin of selectivity for the oxidative carbonylation reaction catalyzed by a single Pd atom embedded on graphene

Shujuan Lin, Zhong-Ning Xu, Jing Lin and Guo-Cong Guo*

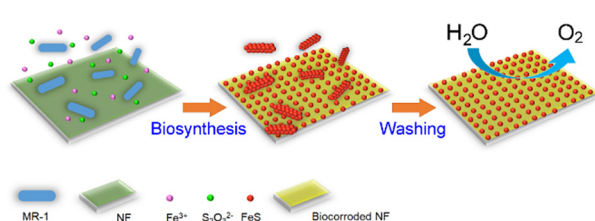
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Fenton reaction by H_2O_2 produced on a magnetically recyclable $\text{Ag}/\text{CuWO}_4/\text{NiFe}_2\text{O}_4$ photocatalyst

Uttam Kumar, Anshu Shrivastava, Arup Kumar De, Mrinal R. Pai and Indrajit Sinha*

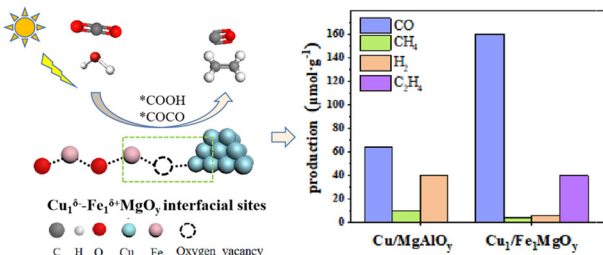
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In situ modification of metal electrode by integrated microbial corrosion and microbial mineralization using *Shewanella oneidensis* for efficient oxygen evolution

Si-Yuan Jia, Qian-Cen Shen, Yang-Chun Yong* and Jian-Li Mi*

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Construction and engineering of an interfacial structure in a $\text{Cu}_x/\text{FeMgO}_y$ catalyst for the photoreduction of CO_2 to ethylene

He Yu, Baoai Fu, Fengzhi Fu, Yanfei Zhu, Yanan Liu,* Juntong Feng* and Dianqing Li

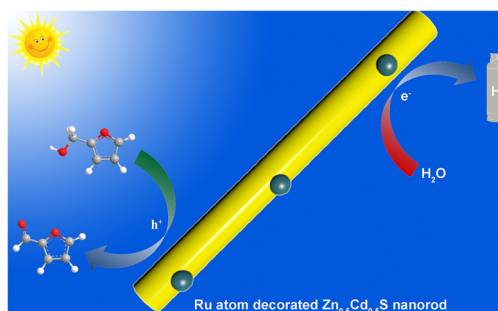


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Visible-light driven H_2 evolution coupled with furfuryl alcohol selective oxidation over Ru atom decorated $\text{Zn}_{0.5}\text{Cd}_{0.5}\text{S}$ nanorods

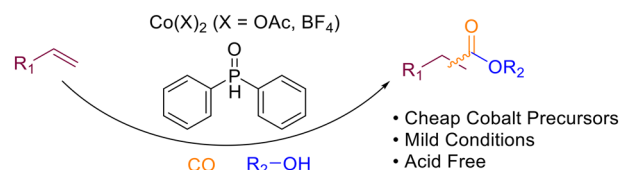
Fan Yang, Shengqiang Liu, Ting Tang, Shuang Yao and Changhua An*



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An improved cobalt-catalysed alkoxy carbonylation of olefins using secondary phosphine oxide promoters

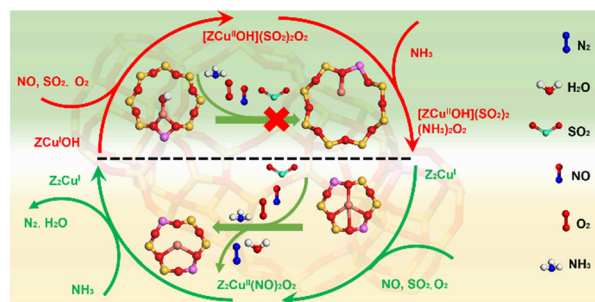
Weiheng Huang, Ralf Jackstell, Anke Spannenberg and Matthias Beller*



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SO_2 -resistant NO_x reduction over Cu-SAPO-34 catalysts via creating sulfur-phobic Cu sites

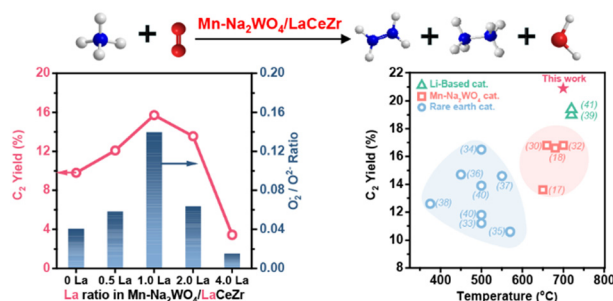
Jiebing He, Jiang Deng, Jin Zhang, Lupeng Han, Yongjie Shen, Xin Chen, Xiaonan Hu, Junan Wang* and Dengsong Zhang*



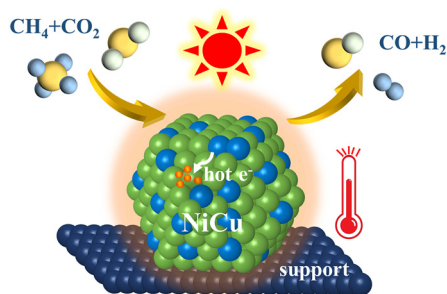
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Low-temperature oxidative coupling of methane over LaCeZr ternary oxide supported $\text{Mn-Na}_2\text{WO}_4$

Junxing Wang, Fangwei Liu, Jianzhou Wu,* Shihui Zou* and Jie Fan*



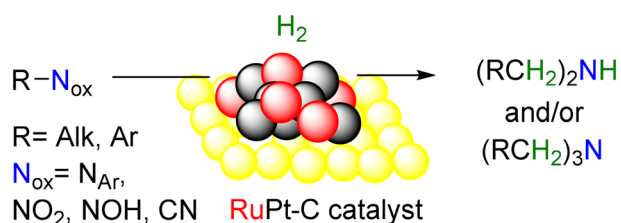
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High fuel production rate and excellent durability for photothermocatalytic CO₂ reduction achieved via the surface plasma effect of NiCu alloy nanoparticles

Guanrui Ji, Shaowen Wu* and Jian Tian*

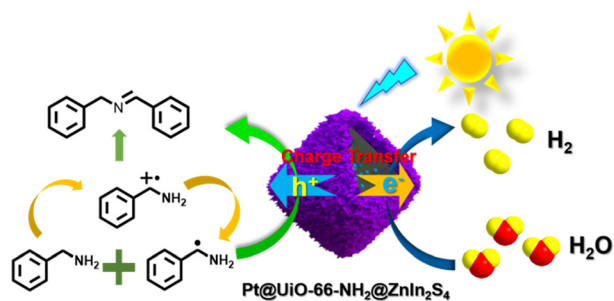
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Intimate ruthenium–platinum nanoalloys supported on carbon catalyze the hydrogenation and one-pot hydrogenation-coupling reaction of oxidized amino derivatives

Miguel A. Rivero-Crespo, Paula Rubio-Marqués, Juan Carlos Hernández-Garrido, Marta Mon, Judit Oliver-Meseguer and Antonio Leyva-Pérez*

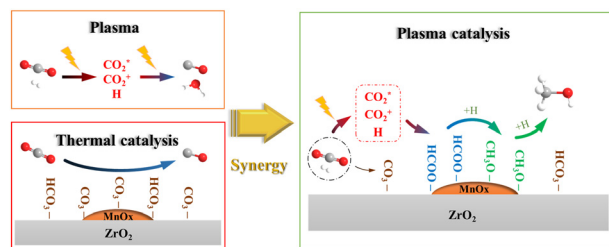
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Spatial separation of redox centers for boosting cooperative photocatalytic hydrogen evolution with oxidation coupling of benzylamine over Pt@UiO-66-NH₂@ZnIn₂S₄

Lianlian Wang, Yujie Zhao, Bin Zhang, Gaigai Wu, Jie Wu* and Hongwei Hou*

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Boosting methanol production via plasma catalytic CO₂ hydrogenation over a MnO_x/ZrO₂ catalyst

Xuming Zhang, Zhi Sun, Yun Shan, Hua Pan, Yuzhen Jin, Zuchao Zhu, Liancheng Zhang and Kai Li*

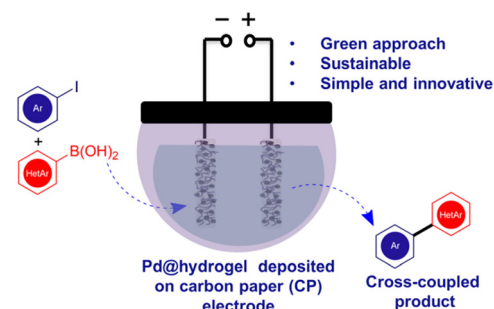


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Electrochemical Suzuki–Miyaura cross-coupling using peptide bolaamphiphile hydrogel-supported Pd NPs as heterogeneous electrocatalyst

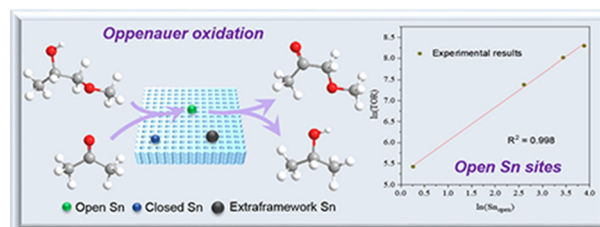
Deepak K. K. Kori, Tapas Ghosh and Apurba K. Das*



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Catalytic Oppenauer oxidation of secondary alcohols over post-synthesized Sn-Beta

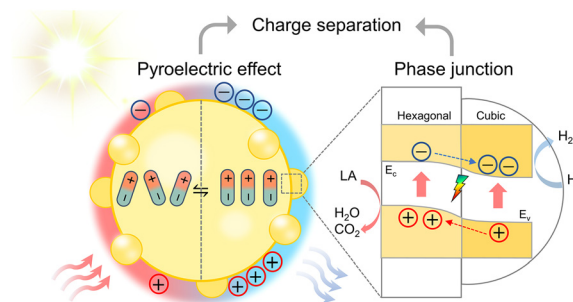
Xianfeng You, Yongming Xu, Tianliang Lu,* Nanfang Tang,* Wenhao Luo,* Xiaomei Yang and Zhongyi Liu



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Pyroelectric effects in CdS phase junctions for dual-enhanced photocatalytic hydrogen production

Zhiwei Li, Guangxue Huang, Yuebing Wang, Chunhua Lu, Hengming Huang* and Jiahui Kou*



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Advancement of modification engineering in lean methane combustion catalysts based on defect chemistry

Ruishan Qiu, Wei Wang, Zhe Wang and Haiwang Wang*

