

Catalysis Science & Technology

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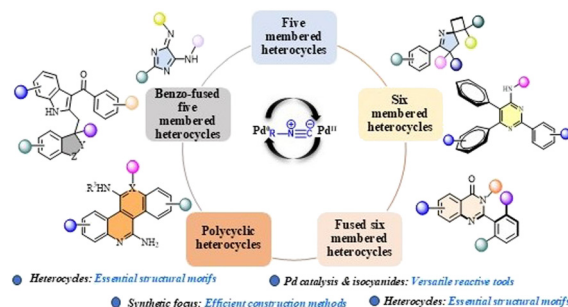
See Takashi Shirai *et al.*, pp. 3150–3159.
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Recent trends in palladium-catalysed isocyanide chemistry: from heterocyclic frameworks to mechanistic understanding

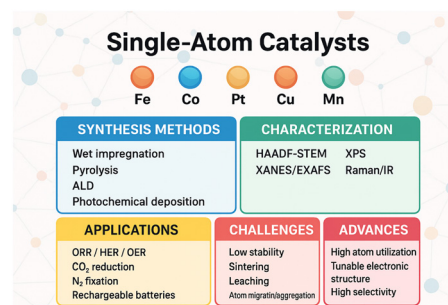
Kirti Singh, Pooja Soam and Vikas Tyagi*



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Development to application in single atom catalysis: a comprehensive review

Rajesh Sahu,* Sakshi Juyal, Fateh Singh Gill and Ankur Jain*





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REVIEWS

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Photoelectrode materials for green hydrogen production: an overview

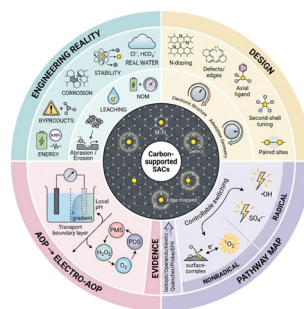
O. S. Obaseki, K. P. Beh, M. D. J. Ooi, K. K. Beh, S. A. M. Samsuri and F. K. Yam*



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Huawen Hu* and Jian Huang

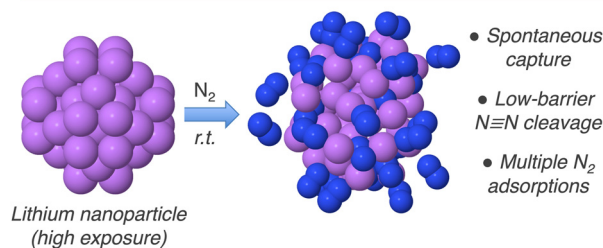


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Enhanced N₂ capture and cleavage promoted by lithium nanoparticles

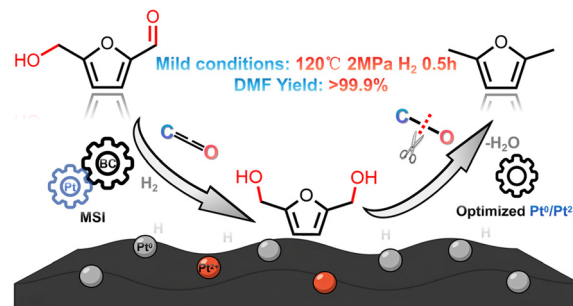
José Miguel Doña-Rodríguez, Raúl Quesada-Cabrera, Douglas R. MacFarlane, Alexandr N. Simonov* and Luis Miguel Azofra*

N₂ capture and cleavage by lithium nanoparticles

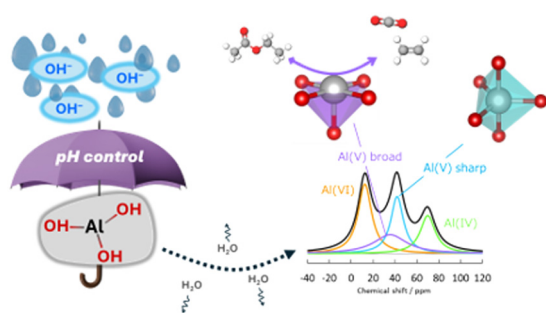
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Interaction between Pt nanoparticles and a bamboo charcoal support regulates hydrodeoxygenation of 5-hydroxymethylfurfural under mild conditions

Dong Guo, Fangtong Chen, Haoran Ming, Xianglong Liu, Changfu Zhuang, Chungang Min,* Xiaoqin Zou* and Ying Wang*



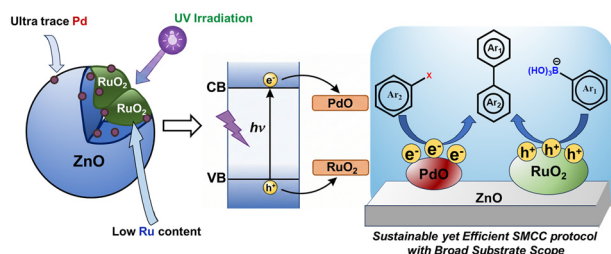
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Tailoring amorphous alumina catalysts with enriched five-coordinated aluminum via pH control

Takumi Watanabe, Haruto Kamiya, Yunzi Xin, Yuping Xu and Takashi Shirai*

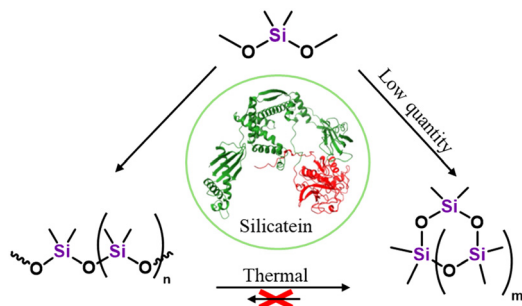
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Tonmoy J. Bora, Donguk Kim, Young-Bin Park, Gaurisankar Phukan, Shamim Islam, Arpita Devi and Kusum K. Bania*

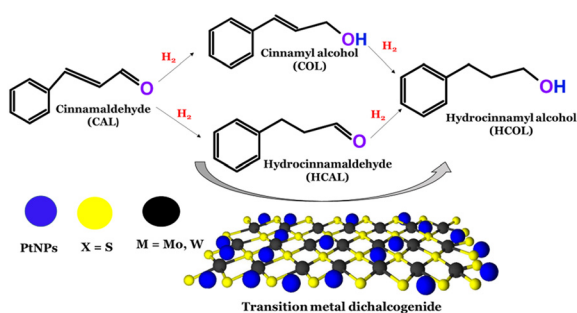
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Product distribution in the silicatein-catalysed synthesis of polydimethylsiloxane

Yuqing Lu and Lu Shin Wong*

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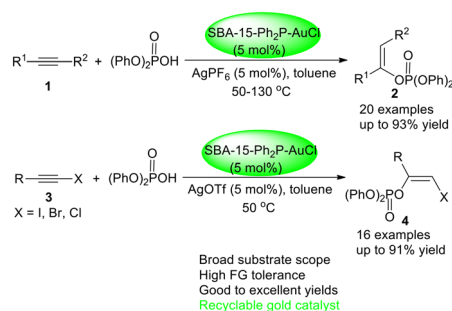
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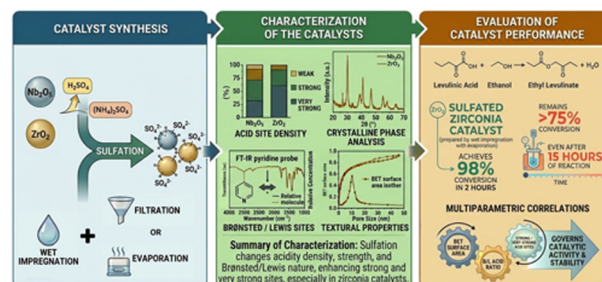
Ling Chen,* Boling Song and Mingzhong Cai*



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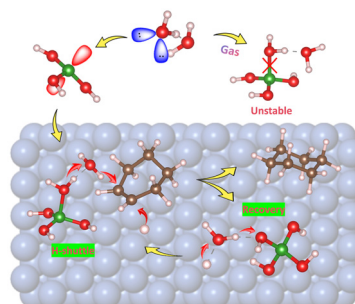
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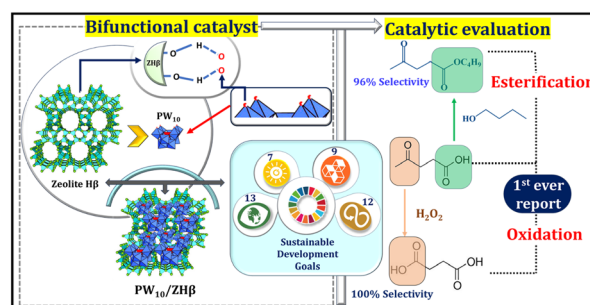
Shoutian Sun, Gengnan Li, Thomas Salas, Daniel E. Resasco and Bin Wang*



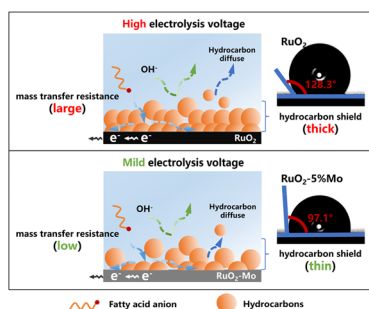
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Redox–acid cooperative bifunctional catalysts comprising dilacunary phosphotungstates and zeolite H β for the synthesis of *n*-butyl levulinate and succinic acid

Anjali Patel* and Margi Joshi



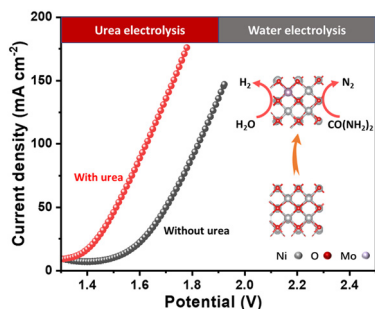
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Modulating hydrocarbon coverage on Mo-doped RuO₂ anodes enables energy-efficient and selective Kolbe electrolysis

Jian Yang, Fan Lin, Shaojie Lei, Zichen Li, Hui Zhang, Zhibao Huo and Dezhang Ren*

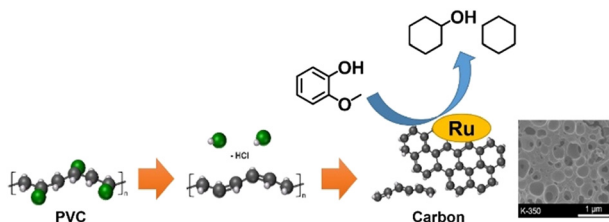
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Electronic structure modulation of a Mo-doped NiO/Ni bifunctional electrocatalyst for efficient urea-assisted water splitting

Shahid Khan, Yang Lina, Yafei Feng, Mingyu Cheng, Nazir Ahmad and Genqiang Zhang*

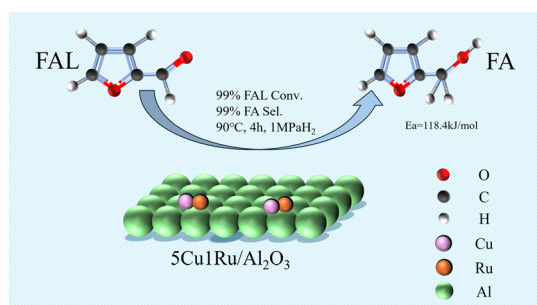
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Thermally treated polyvinyl chloride (PVC)-derived highly microporous carbon support: applications in hydrotreating catalysis

Ju Young Kim, Seung Gun Kim, Jisong Kang, Jae-Wook Choi, Chun-Jae Yoo, Chang Soo Kim, Kyeongsu Kim, Seongmin Jin, Hyunjoon Lee, Kwang Ho Song, Jungkyu Choi, Dalsu Choi* and Jeong-Myeong Ha*

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Bimetallic CuRu/Al₂O₃ catalyst for highly selective hydrogenation of furfural to furfuryl alcohol

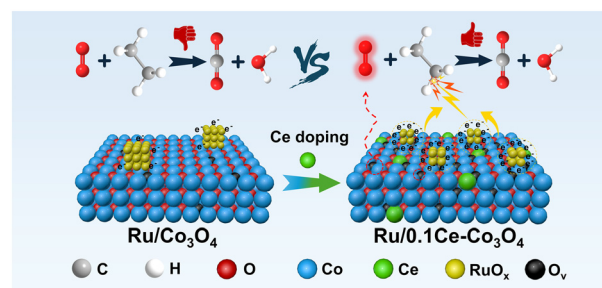
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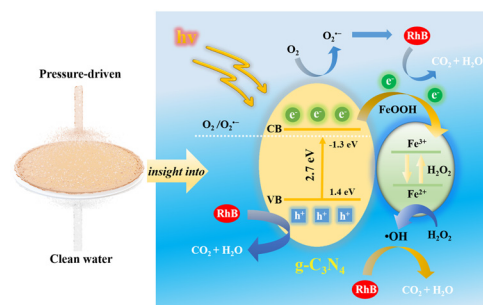
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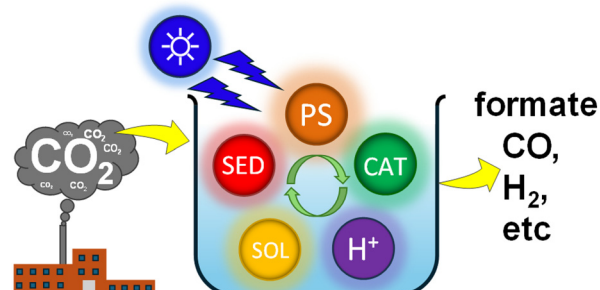
Huanran Ma, Haotong Wei, Xin Qi, Dan Wu, Huixin Yu and Huanxin Zhao*



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Light driven catalytic CO₂ reduction: lessons learnt when low is actually no activity

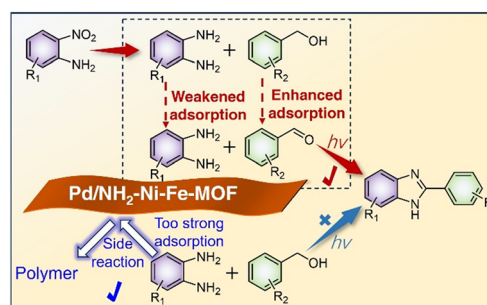
Varinder Singh, Kieran DeMonte, Olivier Schott, Folaranmi S. Akogun, Garry S. Hanan* and Sally Brooker*



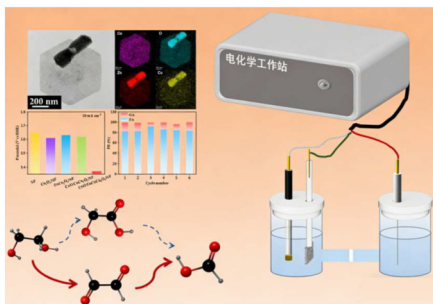
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From multifunctional catalysts to smart substrates: adsorption control for efficient light-driven one-pot benzimidazole synthesis over Pd/NH₂-Ni-Fe-MOF

Hurunqing Liu, Lin Ye, Yun Yuan, Quanyuan Wang, Dengrong Sun* and Zhaohui Li*



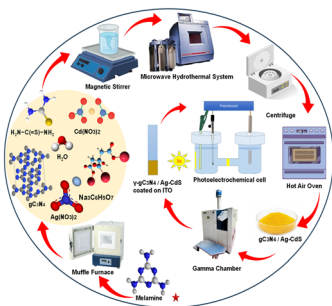
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Green electrochemical upcycling of PET waste via bimetallic catalyst-driven ethylene glycol selective oxidation to formate

Xiaolu Wu, Zhishan Liang, Wensheng Zhang, Youlin Huang, Guanhui Xu, Wei Wang* and Dongxue Han*

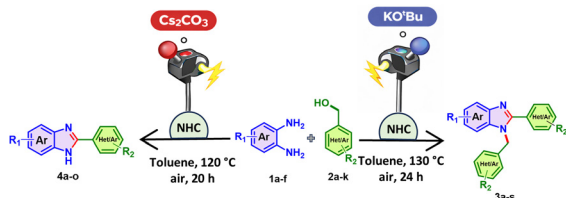
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Efficient hydrogen production by γ -g-C₃N₄/Ag-CdS heterojunction photocatalyst via S-scheme mechanism

K. S. Chandrakantha, H. R. Deepu, Mahesh Itagi, Madhura N. Talwar, Smitha Ankanahalli Shankaregowda, K. Mantelingu, P. Madhusudan, S. Srikantaswamy and K. S. Rangappa*

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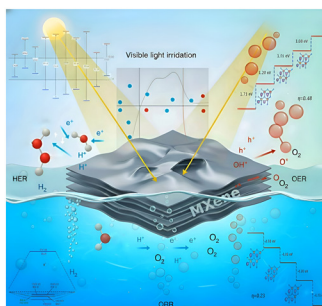


Regioselective direct synthesis of mono- and bis-substituted benzimidazoles via base-switchable aerobic N-heterocyclic carbene organocatalysis

Janmejaya Sen, Richa Sharma, Amol T. Mahajan, Abdul Rahaman T. A., Samir T. Sahu, Alexander S. Novikov and Sandeep Chaudhary*

- ✓ Metal-free and sustainable approach
- ✓ Wide substrate scope
- ✓ Environmentally benign
- ✓ Mild and efficient
- ✓ Atom economic
- ✓ Water as only by-product

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Insights into the OER/ORR/HER activity of a new MXene-family SnSiGeN₄ photocatalyst for water splitting: a first-principles study

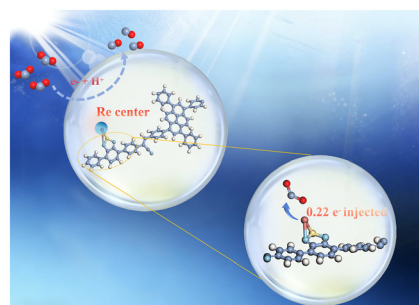
C. B. Subba, B. Chettri, A. Laref, Zeesham Abbas, Amna Parveen,* D. P. Rai* and Z. Pachuau



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Planar ReN_1S_1 sites with dual σ -channels drive high-performance CO_2 photoreduction

Hao Sheng, Shaokui Chen, Guocheng Huang, Jialong Lv, Guiting Huang, Wenjun Yang, Ziyang Chen, Shaoyu Wu, Yueling Chen* and Jinhong Bi*



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Soft selective light absorber for efficient photothermal chemical processes in complex reactor geometries

Fuzhen Hu, Wei Wang, Dachao Yuan, Kai Du, Jiacong Guo, Lin Ma, Yuan Tang,* Yaguang Li* and Jinhua Ye

