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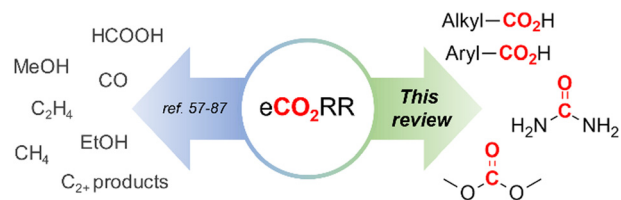
Fundamental questions  
Elemental answers

## REVIEWS

753

# A comparative overview of the electrochemical valorization and incorporation of CO<sub>2</sub> in industrially relevant compounds

Jef R. Vanhoof, Sander Spittaels and Dirk E. De Vos\*

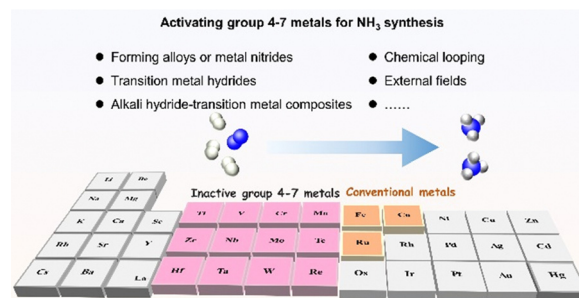


## MINIREVIEW

780

# Revisiting group 4–7 transition metals for heterogeneous ammonia synthesis

Wenbo Gao, Yawei Wang, Qianru Wang, Zhaolong Sun, Jianping Guo\* and Ping Chen

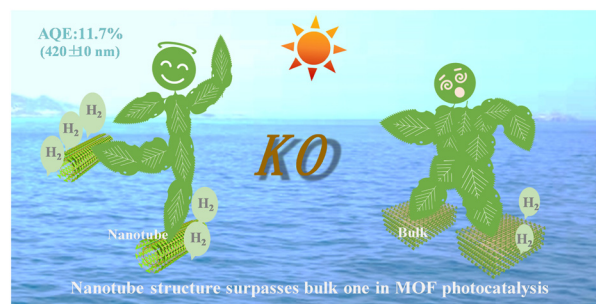


## COMMUNICATIONS

789

# One-dimensional nanotube of a metal–organic framework boosts charge separation and photocatalytic hydrogen evolution from water: synthesis and underlying understanding

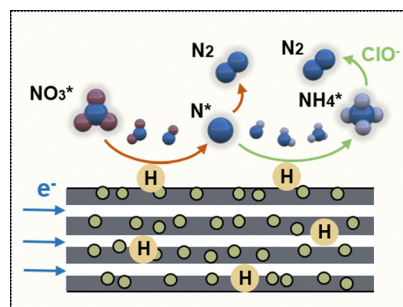
Lifang Liu, Yejun Xiao, Xiangyang Guo, Wenjun Fan, Nengcong Yang, Chunmei Jia, Shengye Jin and Fuxiang Zhang\*



795

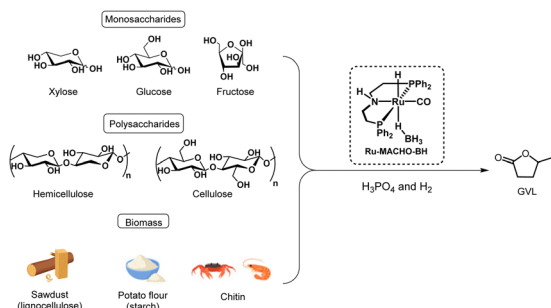
# Multichannel nitrogen-doped carbon fiber confined Fe<sub>3</sub>C nanoparticles for efficient electroreduction of nitrate

Fangzhou Zhang, Zhangsheng Shi, Junliang Chen, Hongxia Luo, Jun Chen\* and Jianping Yang\*





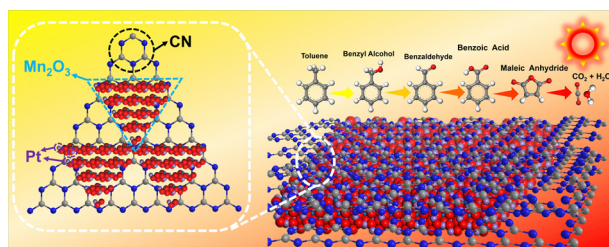
803



## Direct biomass valorisation to $\gamma$ -valerolactone by Ru-PNP catalysed hydrogenation in acid

Sakhitha Koranchalil and Martin Nielsen\*

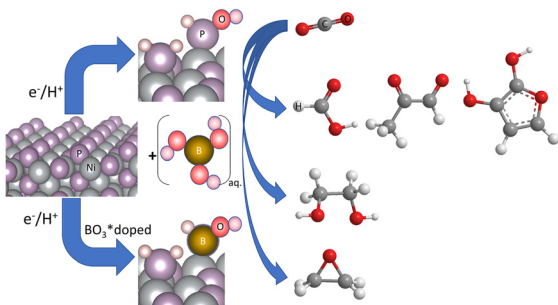
811



## Photothermal catalytic oxidation of toluene over the Pt-Mn<sub>2</sub>O<sub>3</sub>/CN nanocomposite catalyst

Xiao Yu, Chuang Zhao, Lixia Yang,\* Jian Zhang\* and Chunlin Chen\*

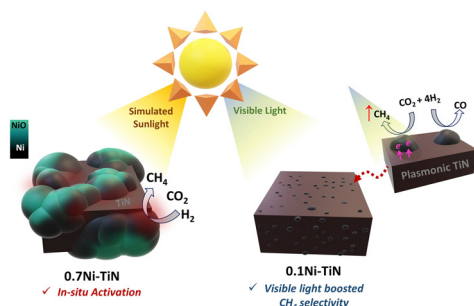
823



## Tunable product selectivity on demand: a mechanism-guided Lewis acid co-catalyst for CO<sub>2</sub> electroreduction to ethylene glycol

Yifei Li, Karin U. D. Calvino, Mahak Dhiman, Anders B. Laursen, Hengfei Gu, Dominick Santorelli, Zachary Clifford and G. Charles Dismukes\*

834



## Making light work: designing plasmonic structures for the selective photothermal methanation of carbon dioxide

Yi Fen Zhu, Bingqiao Xie, Jodie A. Yuwono, Priyank Kumar, Abhinav S. Sharma, Michael P. Nielsen, Avi Bendavid, Rose Amal, Jason Scott\* and Emma C. Lovell\*

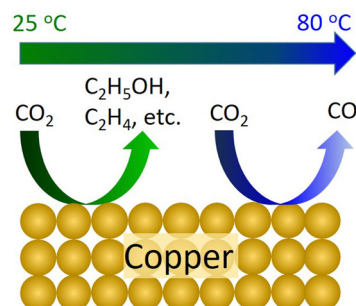


## PAPERS

850

**Insights into zero-gap CO<sub>2</sub> electrolysis at elevated temperatures**

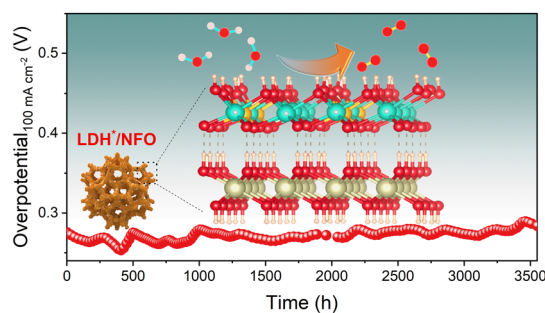
Carlos A. Giron Rodriguez, Nishithan C. Kani, Asger B. Moss, Bjørt Oladottir Joensen, Sahil Garg, Wanyu Deng, Terry Wilson, John R. Varcoe, Ib Chorkendorff and Brian Seger\*



862

**Epitaxial heterointerfacial electron bridge synchronizes oxygen evolution activity and stability on a layered double hydroxide surface**

Jia Wang, Zelin Zhao, Min Guo, Liang Xiao, Haolin Tang, Jiantao Li,\* Zongkui Kou\* and Junsheng Li\*



## CORRECTION

874

**Correction: Advanced bifunctional catalyst design for rechargeable zinc–air batteries**

Tao Wang, Zezhong Shi, Faxing Wang, Jiarui He, Yiren Zhong, Yuan Ma, Zhi Zhu, Xin-Bing Cheng, Kenneth I. Ozoemena\* and Yuping Wu\*

