

# EES Catalysis

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eISSN 2753–801X CODEN ECEACE 1(6) 787–1026 (2023)



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See Shaotang Song, Bin Liu, Chenliang Su *et al.*, pp. 794–809. Image reproduced by permission of Shaotang Song, Bin Liu, Chenliang Su *et al.* from *EES Catal.*, 2023, 1, 794.



### Inside cover

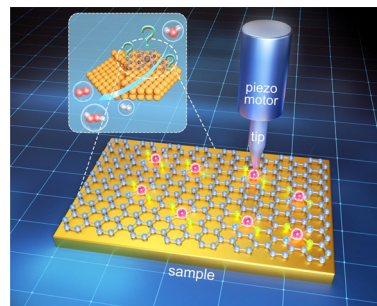
See Rebecca K. Pittkowski, Kirsten M. Ø. Jensen, Matthias Arenz *et al.*, pp. 950–960. Image reproduced by permission of Rebecca K. Pittkowski from *EES Catal.*, 2023, 1, 950.

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### Atomically imaging single atom catalysts and their behaviors by scanning tunneling microscopy

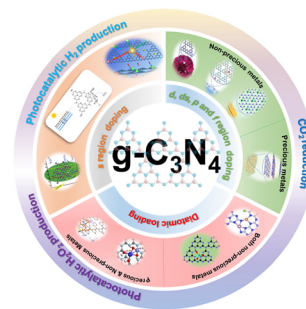
Hongli Sun, Like Sun, Yanglong Liao, Zirui Zhou, Jie Ding, Shaotang Song,\* Bin Liu\* and Chenliang Su\*



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### Metal-doped carbon nitride: an all-in-one photocatalyst

Yamei Pang, Pengfei Li, Xiaobao Ma, Lu Sun, Yichang Liu, Dan Qu, Li An\* and Zaicheng Sun\*



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EES Catalysis (electronic: ISSN 2753-801X) is published 6 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WF.

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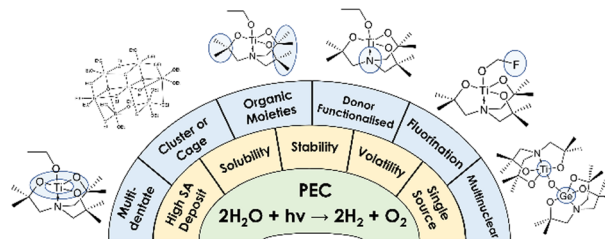


## REVIEWS

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### A chemist's guide to photoelectrode development for water splitting – the importance of molecular precursor design

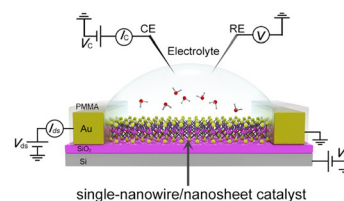
Thom R. Harris-Lee, Frank Marken, Cameron L. Bentley, Jie Zhang\* and Andrew L. Johnson\*



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### Emerging on-chip microcells in electrocatalysis: functions of window and circuit

Jinbo Wang, Mengyi Qiu, Yubin Jiang, Hang Xia, Xiuyun An, Shuangyin Wang\* and Yongmin He\*



#### Reaction window:

- Identifying active sites
- Monitoring active sites evolution

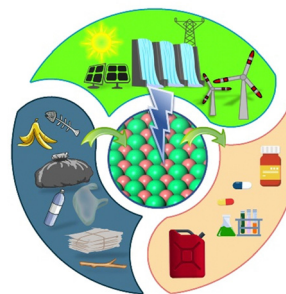
#### Circuit:

- External electrical field modulation
- Charge injection
- *In-situ* conductance measurement

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### Electroreforming injects a new life into solid waste

Yingxin Ma, Yu Zhang,\* Wenfang Yuan, Mengmeng Du, Sailei Kang and Bocheng Qiu\*

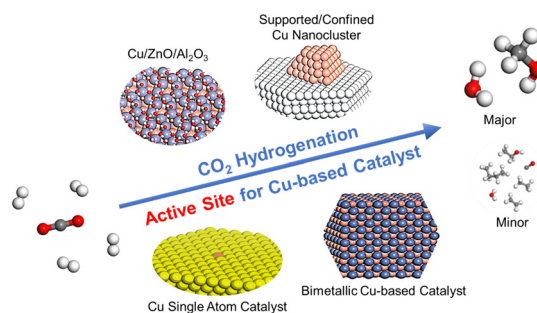


## PERSPECTIVES

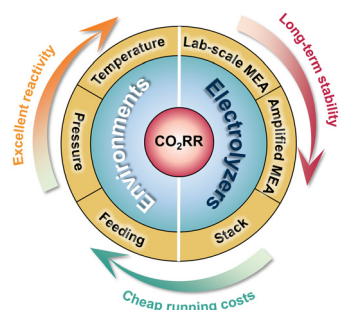
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### Copper-based catalysts for CO<sub>2</sub> hydrogenation: a perspective on active sites

Yun-Fei Shi, Sicong Ma\* and Zhi-Pan Liu\*



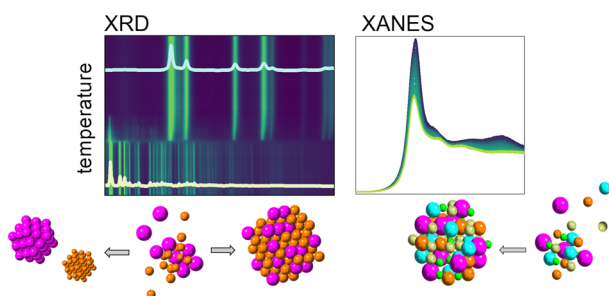
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## Advances and challenges in scalable carbon dioxide electrolysis

Ji Wei Sun, Huai Qin Fu, Peng Fei Liu, Aiping Chen, Porun Liu, Hua Gui Yang\* and Huijun Zhao\*

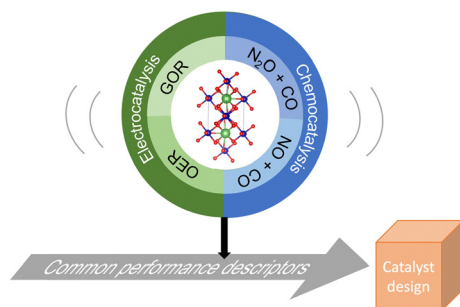
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## The more the better: on the formation of single-phase high entropy alloy nanoparticles as catalysts for the oxygen reduction reaction

Rebecca K. Pittkowski\*, Christian M. Clausen, Qinyi Chen, Dragos Stoian, Wouter van Beek, Jan Bucher, Rahel L. Welten, Nicolas Schlegel, Jette K. Mathiesen, Tobias M. Nielsen, Jia Du, Asger W. Rosenkranz, Espen D. Bøjesen, Jan Rossmel, Kirsten M. Ø. Jensen\* and Matthias Arenz\*

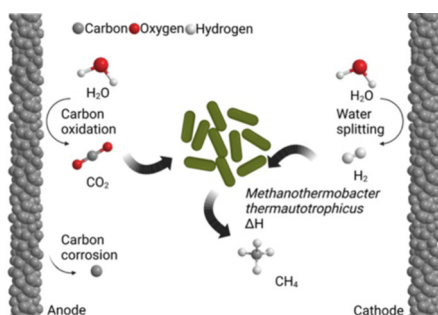
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## Elucidating the validity of electronic characteristics of transition metal perovskites as descriptors bridging electro- and chemocatalysis

Sonja D. Mürtz, Johannes Simböck, Feng Zeng, Mahnaz Ghiasi, Simon Schönebaum, Ulrich Simon, Frank M. F. de Groot and Regina Palkovits\*

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## Carbon oxidation with sacrificial anodes to inhibit O<sub>2</sub> evolution in membrane-less bioelectrochemical systems for microbial electrosynthesis

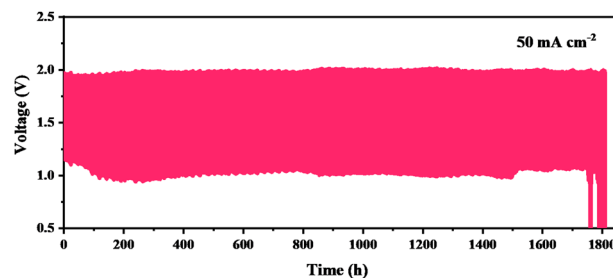
Nils Rohbohm, Tianran Sun, Ramiro Blasco-Gómez, James M. Byrne, Andreas Kappler and Largus T. Angenent\*



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### OER highly active encapsulants to improve the electrochemical anticorrosion of Fe–N–C for ultralong-lifespan and high-rate rechargeable zinc–air batteries

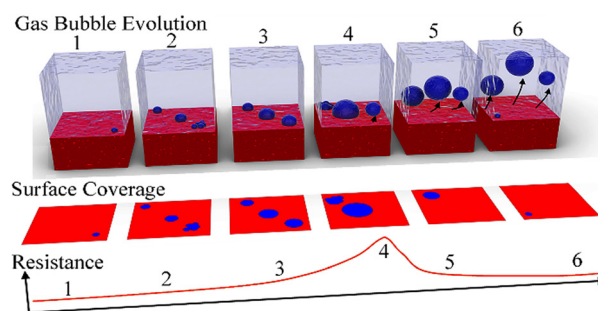
Jiale Li, Niu Huang,\* Minghui Lv, Na Su, Chao Li, Yingping Huang, Yongye Wang, Yong Zheng, Wei Liu, Tianyi Ma\* and Liqun Ye\*



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### Operando monitoring of gas bubble evolution in water electrolysis by single high-frequency impedance

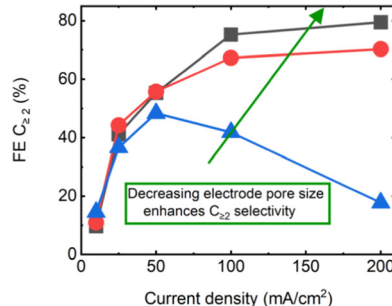
Kamran Dastafkan, Shuhao Wang, Shuang Song, Quentin Meyer, Qiang Zhang, Yansong Shen and Chuan Zhao\*



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Francesco Bernasconi, Alessandro Senocrate,\* Peter Kraus and Corsin Battaglia



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Bao Zhang,\* Jia Yao, Jia Liu, Tao Zhang, Houzhaoh Wan\* and Hao Wang

