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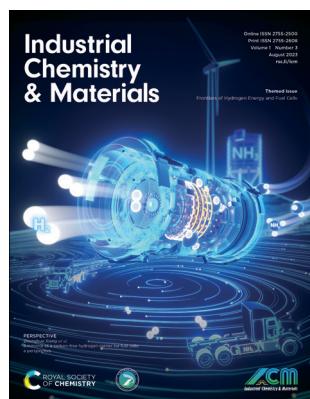
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EDITORIAL

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Introduction to the themed issue on frontiers of hydrogen energy and fuel cells

Lior Elbaz,* Minhua Shao,* Jianglan Shui* and Carlo Santoro*



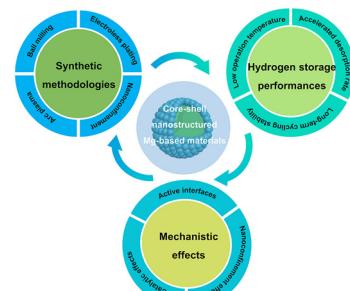
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Yinghui Li, Qiuyu Zhang, Li Ren, Zi Li, Xi Lin, Zhewen Ma, Haiyan Yang, Zhigang Hu and Jianxin Zou*



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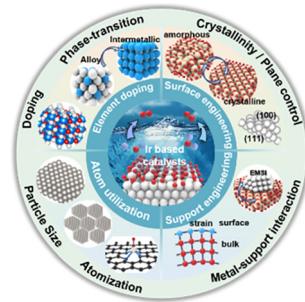


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Designing active and stable Ir-based catalysts for the acidic oxygen evolution reaction

Zijie Lin, Tanyuan Wang* and Qing Li*

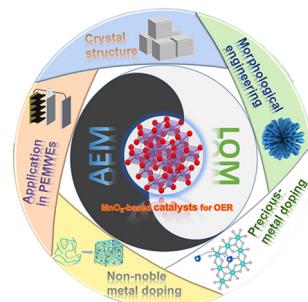


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Yunlong He, Zhenye Kang,* Jing Li, Yawei Li* and Xinlong Tian*

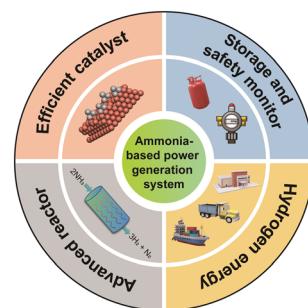


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Lingling Zhai, Shizhen Liu and Zhonghua Xiang*

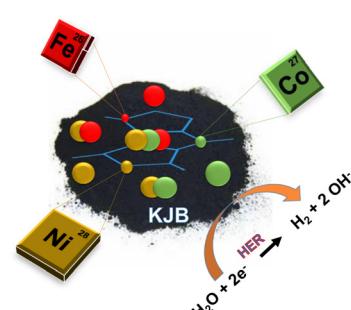


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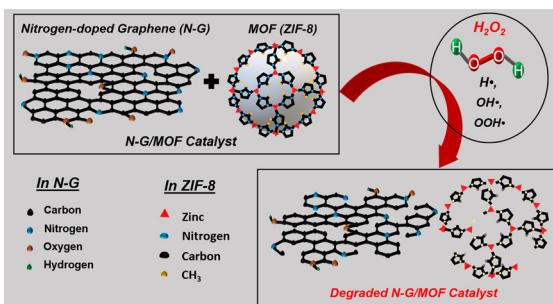
Mono-, bi- and tri-metallic platinum group metal-free electrocatalysts for hydrogen evolution reaction following a facile synthetic route

Seyed Ariana Mirshokraee, Mohsin Muhyuddin, Jacopo Orsilli, Enrico Berretti, Laura Capozzoli, Alessandro Lavacchi, Carmelo Lo Vecchio, Vincenzo Baglio, Anna Galli, Andrea Zaffora, Francesco Di Franco, Monica Santamaria, Luca Olivi, Simone Pollastri and Carlo Santoro*



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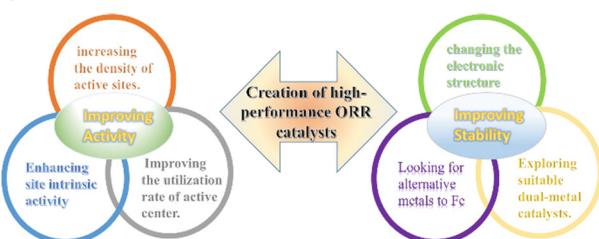


Hierarchically microporous membranes for highly energy-efficient gas separations

Shuangjiang Luo, Tianliang Han, Can Wang, Ying Sun, Hongjun Zhang, Ruilan Guo* and Suojiang Zhang*

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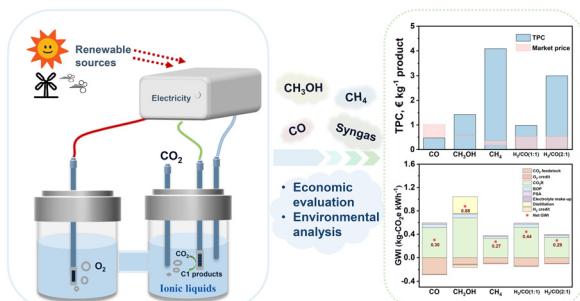
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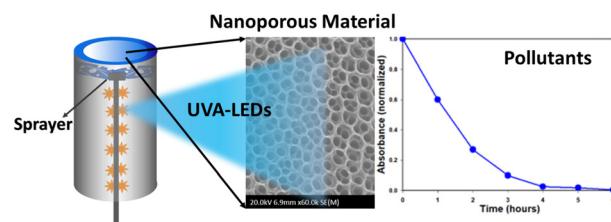


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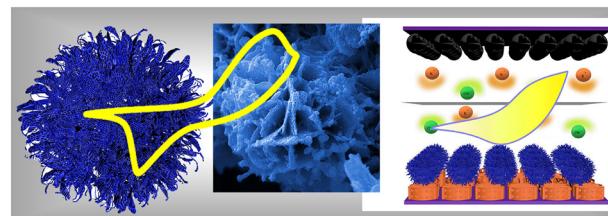
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