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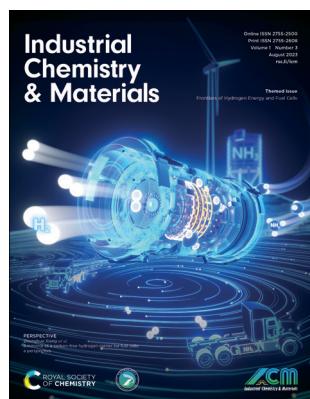
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IN THIS ISSUE

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Cover

See Zhonghua Xiang et al.,

pp. 332–342.

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EDITORIAL

280

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

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



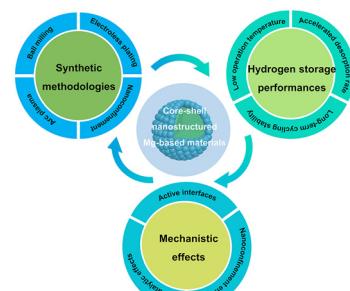
THEMED ISSUE ARTICLES

MINI REVIEWS

282

Core–shell nanostructured magnesium-based hydrogen storage materials: a critical review

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



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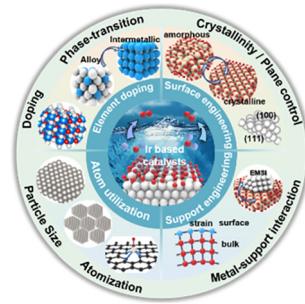
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MINI REVIEWS

299

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

Zijie Lin, Tanyuan Wang* and Qing Li*

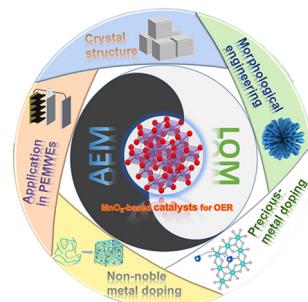


REVIEW

312

Recent progress of manganese dioxide based electrocatalysts for the oxygen evolution reaction

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

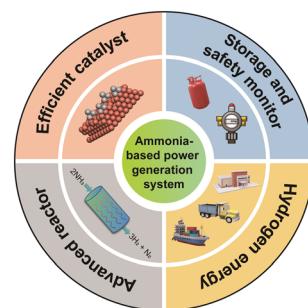


PERSPECTIVE

332

Ammonia as a carbon-free hydrogen carrier for fuel cells: a perspective

Lingling Zhai, Shizhen Liu and Zhonghua Xiang*

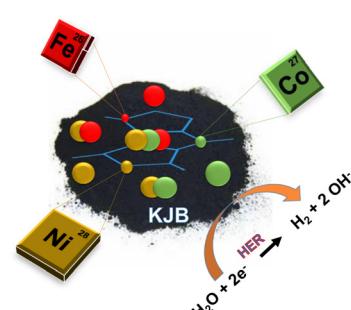


PAPERS

343

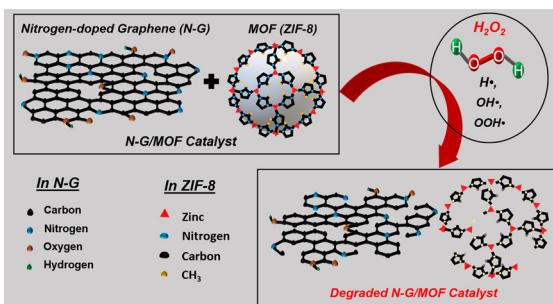
Mono-, bi- and tri-metallic platinum group metal-free electrocatalysts for hydrogen evolution reaction following a facile synthetic route

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*



PAPERS

360



Investigation on electrocatalytic performance and material degradation of an N-doped graphene-MOF nanocatalyst in emulated electrochemical environments

Niladri Talukder, Yudong Wang, Bharath Babu Nunna, Xiao Tong, Jorge Anibal Boscoboinik and Eon Soo Lee*

REGULAR RESEARCH ARTICLES

MINI REVIEW

376

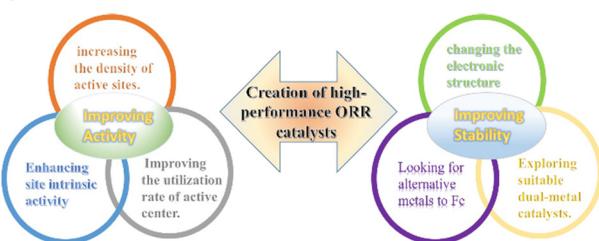


Hierarchically microporous membranes for highly energy-efficient gas separations

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

REVIEWS

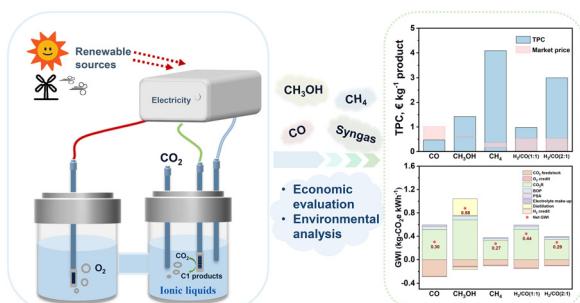
388



Non-noble metals as activity sites for ORR catalysts in proton exchange membrane fuel cells (PEMFCs)

Jinjing Tao, Xian Wang,* Mingjun Xu, Changpeng Liu, Junjie Ge* and Wei Xing*

410



Electrochemical CO₂ reduction with ionic liquids: review and evaluation

Yangshuo Li, Fangfang Li, Aatto Laaksonen, Chuan Wang, Paul Cobden, Per Boden, Yanrong Liu, Xiangping Zhang and Xiaoyan Ji*

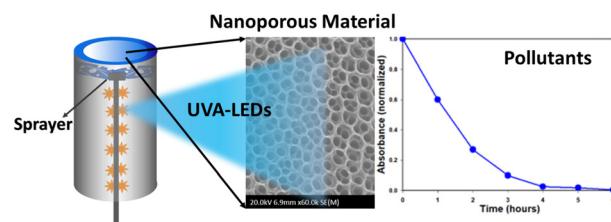


PAPERS

431

A highly efficient photocatalytic system for environmental applications based on TiO_2 nanomaterials

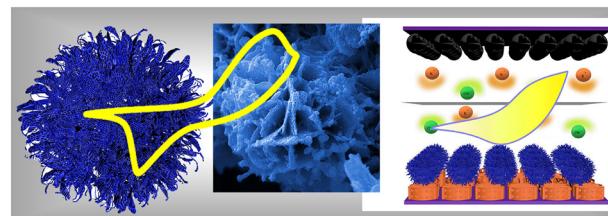
Sapanbir S. Thind, Mathias Paul, John B. Hayden, Anuj Joshi, David Goodlett and J. Scott McIndoe*



443

Tunable construction of CuS nanosheets@flower-like ZnCo -layered double hydroxide nanostructures for hybrid supercapacitors

Akbar Mohammadi Zardkhoshouei,* Ramtin Arian and Saeed Saeed Hosseini Davarani*



458

Polyaniline-derived carbon nanofibers with a high graphitization degree loading ordered PtNi intermetallic nanoparticles for oxygen reduction reaction

Yujuan Zhuang, Jiao Yang, Lingwei Meng, Chuanming Ma, Lishan Peng,* De Chen* and Qingjun Chen*

