Journal of Materials Chemistry A

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IN THIS ISSUE

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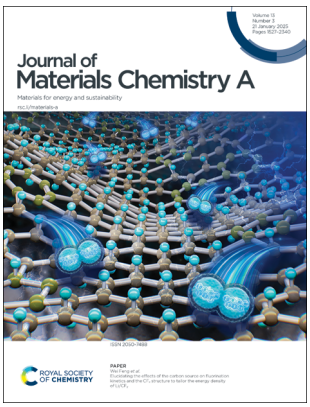
Cover
See Febri Baskoro, Hung-Ju Yen *et al.*, pp. 1552–1589. Image reproduced by permission of Hung-Ju Yen from *J. Mater. Chem. A*, 2025, **13**, 1552.



Inside cover
See Wei Feng *et al.*, pp. 1820–1829. Image reproduced by permission of Wei Feng from *J. Mater. Chem. A*, 2025, **13**, 1820.

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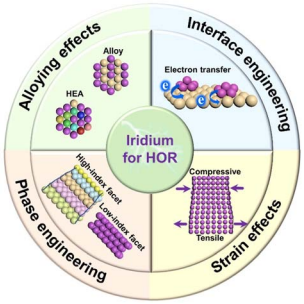
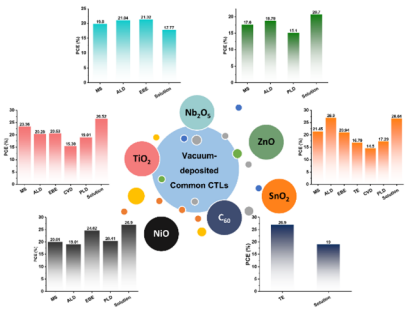


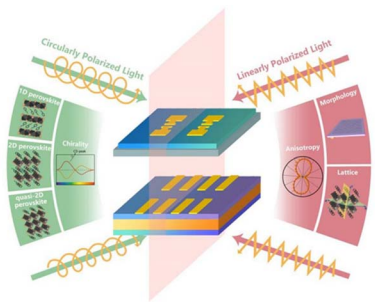
Iridium-based electrocatalysts for the hydrogen oxidation reaction toward alkaline exchange membrane fuel cells

Yaping Chen,* Yuyue Yang, Ziheng Liang, Zhanpeng Tao, Qiao Ni* and Wenping Sun



Vacuum preparation of charge transport layers for perovskite solar cells and modules

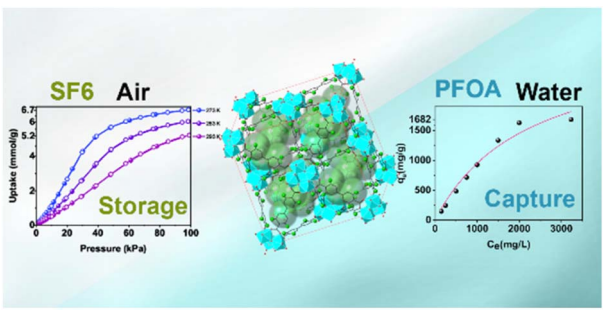
Tian Luo, Lu Liu, Minyong Du, Kai Wang* and Shengzhong Liu*



Progress in and outlook on polarization-sensitive perovskite photodetectors

Hongxu Chen, Guohua Wang, Yufei Wang, Xin Zhao, Xinglu Xu, Luxin Zhang, Wei Wei* and Liang Shen*

COMMUNICATIONS



A fluorinated zirconium-based metal–organic framework as a platform for the capture and removal of perfluorinated pollutants from air and water

Daniel Hedbom, Philipp Gaiser, Tyran Günther, Ocean Cheung, Maria Strømme, Michelle Åhlén* and Martin Sjödin*

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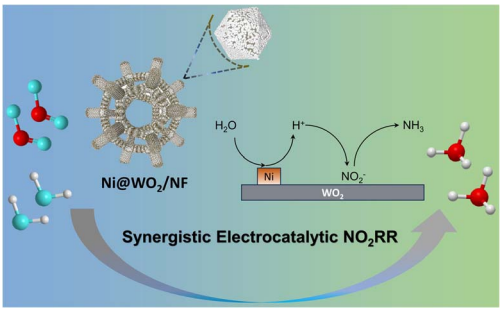

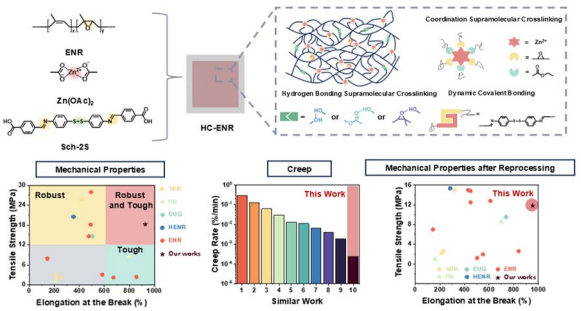

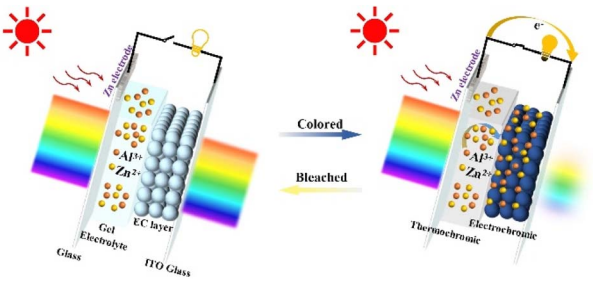

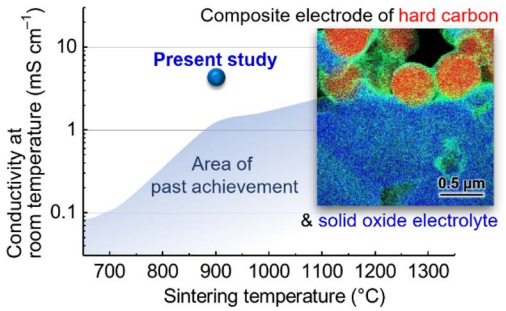

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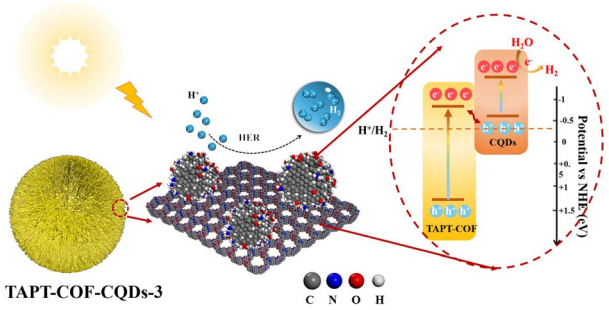
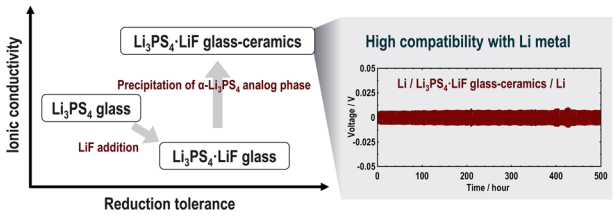
1932



Covalent organic framework spherical nanofibers bearing carbon quantum dots for boosting photocatalytic hydrogen production

Jiyuan Zang, Yuting Zhao, Lei Yu, David J. Young,* Zhi-Gang Ren and Hong-Xi Li*

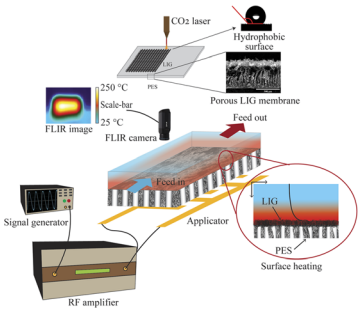
1942



LiF-doped sulfide solid electrolytes with a stabilized α-Li_3PS_4 analog phase for all-solid-state Li metal batteries

Taichi Asakura, Ryo Izawa, Takuya Kimura, Chie Hotehama, Hiroe Kowada, Minako Deguchi, Kota Motohashi, Atsushi Sakuda, Masahiro Tatsumisago and Akitoshi Hayashi*

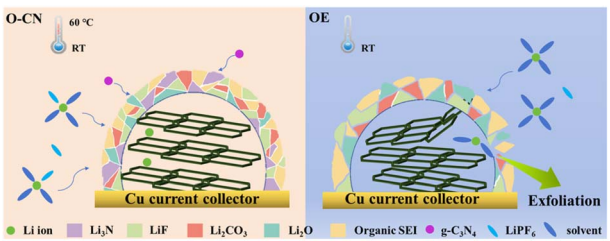
1950



Radiofrequency-triggered surface-heated laser-induced graphene membranes for enhanced membrane distillation

Hasib Mahbub, Fouzia Hasan Nowrin, Mohammad A. Saed and Mahdi Malmali*

1964



Graphitic carbon nitride (g-C_3N_4) as an electrolyte additive boosts fast-charging and stable cycling of graphite anodes for Li-ion batteries

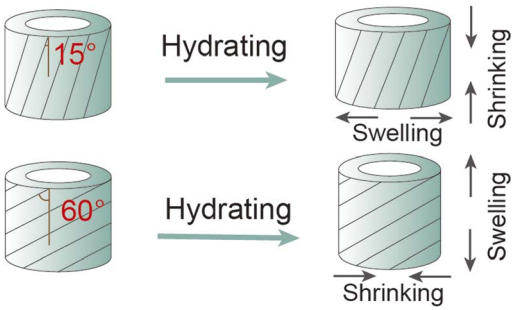
Jinze Song, Haoyu Qi, Wangsheng Yuan, Jiajin Li, Shanbao Zou, Wenlei Wang, Jiaxue Hu, Yunling Wu,* Lijun Fu* and Yuping Wu

PAPERS

1973

Hygromechanical deformation of wood cell walls regulated by the microfibril angle

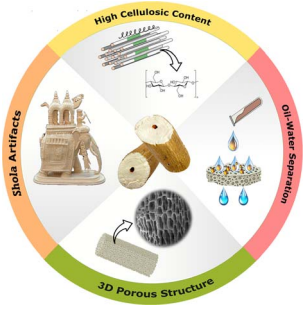
RongZhuang Song, ZeZhou He, JiaHao Li, YuanZhen Hou, HengAn Wu and YinBo Zhu*



1983

Shola: a 3D porous hydrophobic–oleophilic lignocellulosic material for efficient oil/water separation

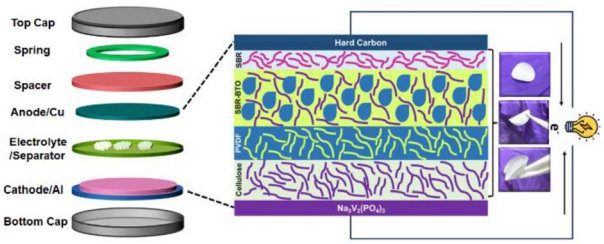
Keya Mondal, Kushagra Advani, Snigdha Ghosh, Kadhiravan Shanmugnathan, Goutam Kulsi, Swaminathan Sivaram* and Sayam Sen Gupta*



1996

Flexible trilayer cellulosic paper separators engineered with the $BaTiO_3$ ferroelectric fillers for high energy density sodium-ion batteries

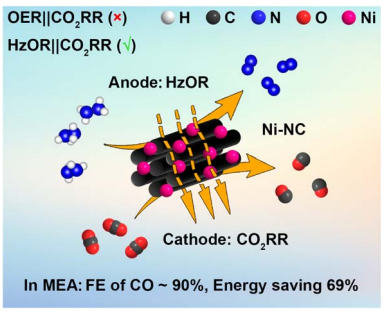
Simranjot K. Sapra, Mononita Das, M. Wasim Raja, Jeng-Kuei Chang and Rajendra S. Dhaka*



2010

Highly graphitized nitrogen-doped ordered mesoporous carbon supported Ni nanocrystals for efficient hydrazine-assisted CO_2 splitting

Kang Lian, Junyang Ding, Jin Zhang,* Quan Zhang,* Yifan Liu, Guangzhi Hu, Jia He and Xijun Liu*



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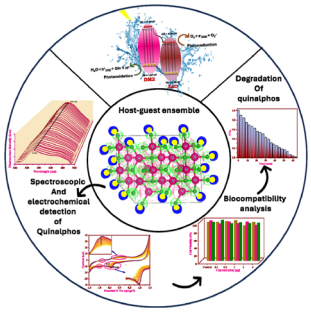
2019



Dipeptide-functionalized type II heterojunctions: a bioinspired dual functionality for quinalphos detection and photodegradation

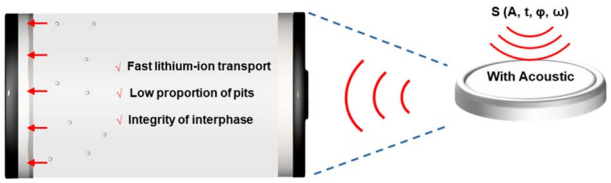
Divya, Sanchit Kalra, Sanjeev Saini, Navneet Kaur* and Narinder Singh*

2032

Elucidating the effect of nanocube support morphology on the hydrogenolysis of polypropylene over Ni/CeO_2 catalysts

Donald R. Inns, Megan Carr, Mounib Bahri, Ajay Tomer, Troy D. Manning, Nigel Browning, Simon A. Kondrat, John B. Claridge, Alexandros P. Katsoulidis and Matthew J. Rosseinsky*

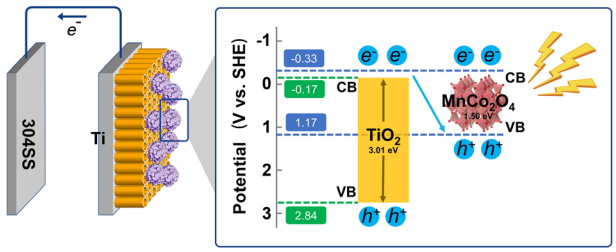
2047



Enhancing performance of lithium metal batteries through acoustic field application

Qipeng Zhang, Luyu Bo, Hao Li, Jiali Li, Teng Li, Zhenhua Tian* and Rui Qiao*

2056



Construction of a Z-scheme heterojunction with camellia-like $MnCo_2O_4/TiO_2$ for photogenerated cathodic protection

Yanan Sun, Xiutong Wang,* Congtao Sun, Shengxun Yao, Mingxing Wang, Jiayan Pu, Youbo Nan, Jingshun He, Xi Chen, Yanliang Huang and Fanglin Du

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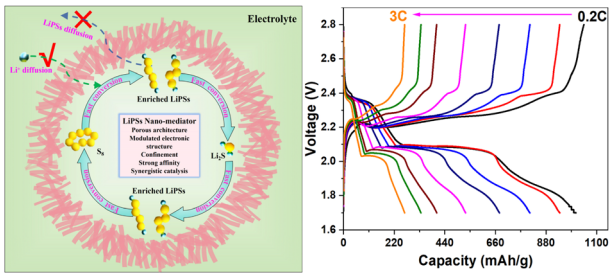

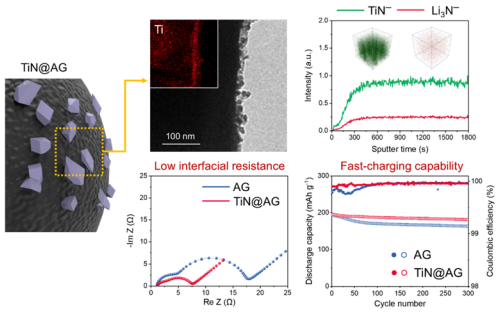

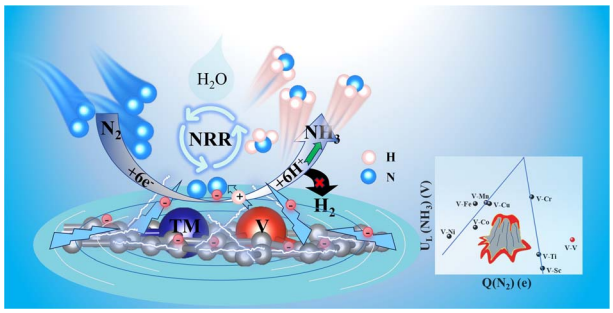

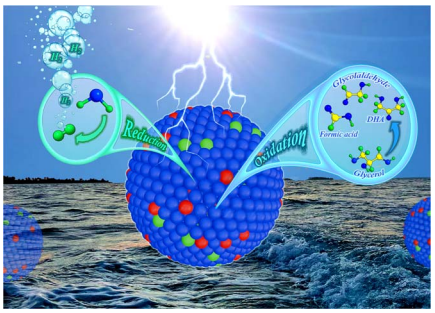

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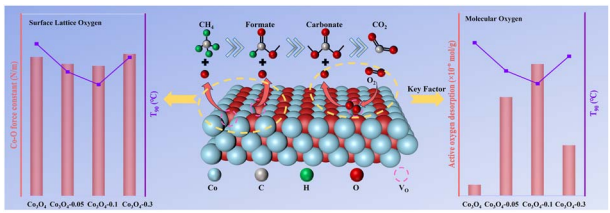

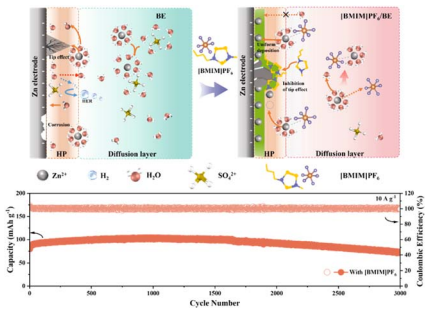

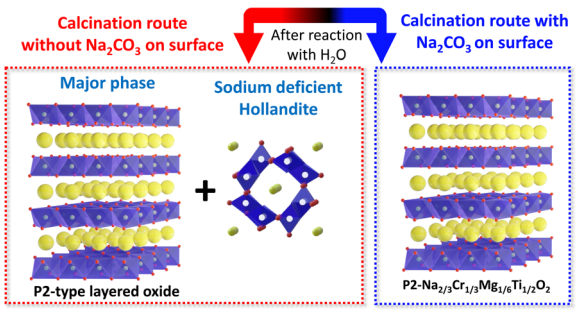

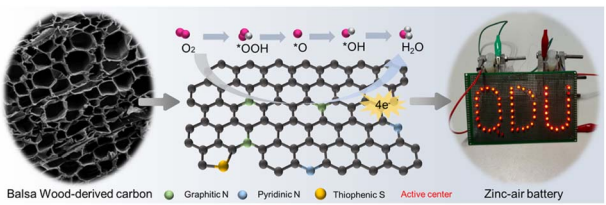

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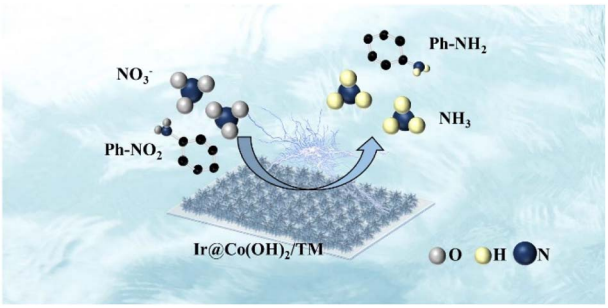

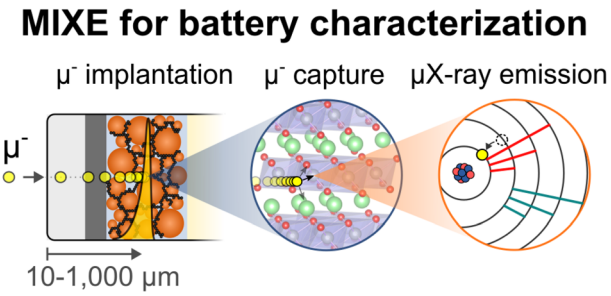

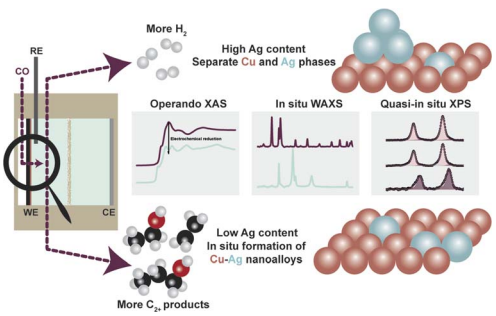

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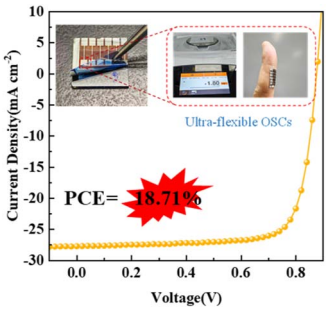
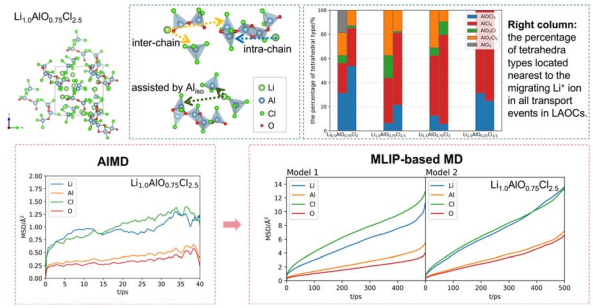


Ultra-flexible organic solar cells based on eco-friendly cellulose substrate with efficiency approaching 19%

Zheng Xiao, Jian Liu, Xin Chen, Zhaochen Suo, Xiangjian Cao, Nuo Xu, Zhaoyang Yao, Chenxi Li, Xiangjian Wan* and Yongsheng Chen*

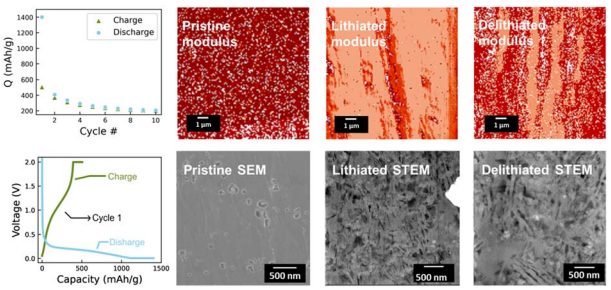
2309



Atomic insight into Li$^+$ ion transport in amorphous electrolytes $Li_xAlO_yCl_{3+x-2y}$ ($0.5 \leq x \leq 1.5$, $0.25 \leq y \leq 0.75$)

Qifan Yang, Jing Xu, Xiao Fu, Jingchen Lian, Liqi Wang, Xuhe Gong, Ruijuan Xiao* and Hong Li*

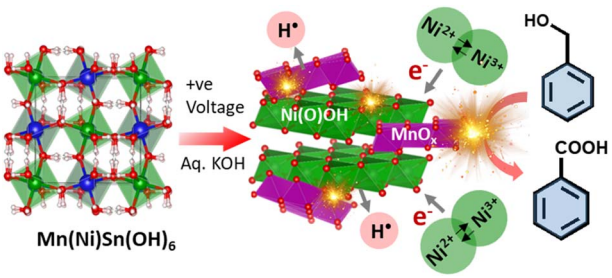
2316



Mechanical and electrical changes in electrochemically active polyimide binders for Li-ion batteries

Zoey Huey, Joseph Quinn, Marco-T. F. Rodrigues, Sathish Rajendran, Chongmin Wang, Steven DeCaluwe and Chun-Sheng Jiang*

2327



A MnNi-heterometallic perovskite hydroxide (pre) catalyst for electrochemical alcohol oxidation: insight into the active phase

Anisha Mondal, Subhash Chandra Shit and Indranil Mondal*

CORRECTIONS

2335

Correction: Atomic-scale structure and thermoelectric properties in medium-entropy PbSnTeSe alloy

Shuwei Zhang, Liqing Xu,* Xinxiu Cheng, Wei Liu, Zhanxiang Yin, Xiangdong Ding, Xiang Gao, Tao Hong* and Yu Xiao*

2336

Correction: Raman spectroscopy study of K-birnessite single crystals

Dong Han Ha,* Gichang Noh, Hakseong Kim, Dong Hwan Kim, Jeongho Kim, Suyong Jung, Chanyong Hwang, Ha Young Lee, Yong Ju Yun, Joon Young Kwak, Kibum Kang and Sam Nyung Yi*

2337

Correction: Growth of p/n-type $BiFeO_3$ thin films for construction of a bilayer p–n junction for photodegradation of organic pollutants

Hao-Yun Tu and Xiaoding Qi*

2338

Correction: H_2O assisted in improving the electrochemical performance of a deep eutectic electrolyte formed by choline chloride and magnesium chloride hexahydrate

Kaixiang Zou, Xiao Wang and Yuanfu Deng*