

Journal of Materials Chemistry A

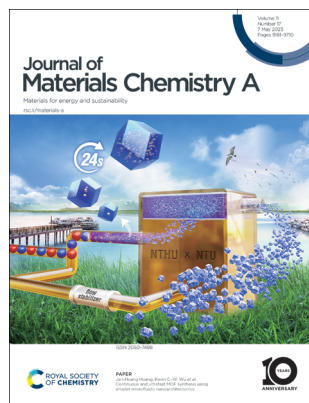
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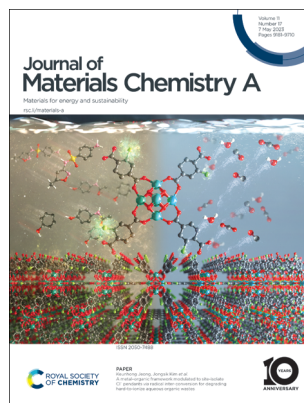
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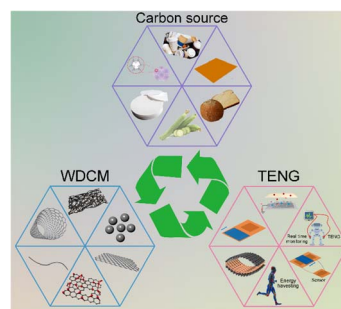
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Turning trash into treasure: recent advances in triboelectric nanogenerator based on waste-derived carbonized materials

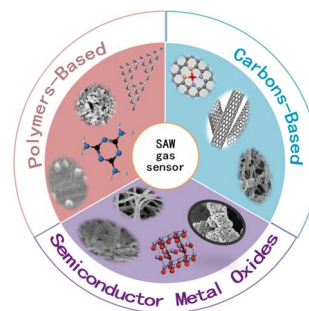
Wenxue Li, Yujia Lv, Dan Luo* and Zhong Lin Wang*



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Advances in sensing mechanisms and micro/nanostructured sensing layers for surface acoustic wave-based gas sensors

Xue Li, Wenfeng Sun, Wei Fu, Haifeng Lv, Xiaotao Zu,* Yuanjun Guo,* Des Gibson and Yong-Qing Fu*



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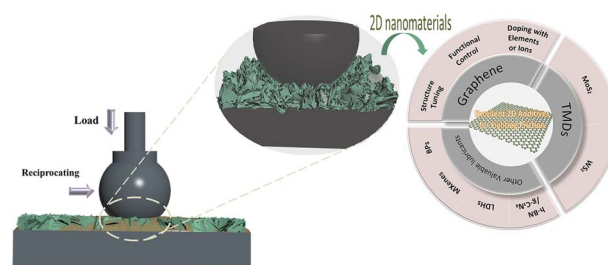


REVIEWS

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Recent advances of two-dimensional lubricating materials: from tunable tribological properties to applications

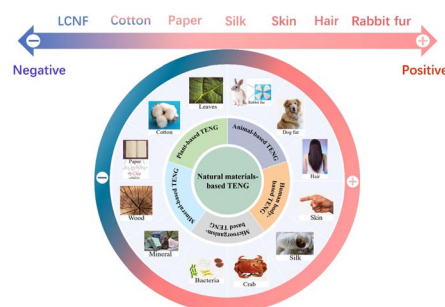
Xiaole Zhang, Tianhui Ren* and Zhipeng Li*



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Environmentally friendly natural materials for triboelectric nanogenerators: a review

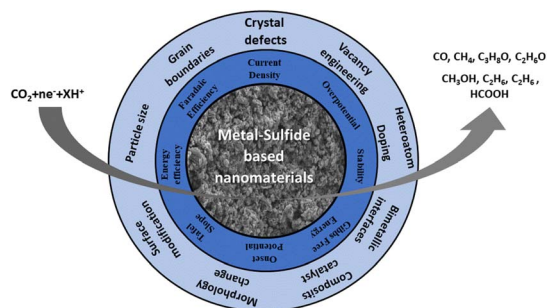
Songling Liu, Wangshu Tong,* Caixia Gao, Yulun Liu, Xinnan Li and Yihe Zhang*



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Metal sulfide-based nanomaterials for electrochemical CO₂ reduction

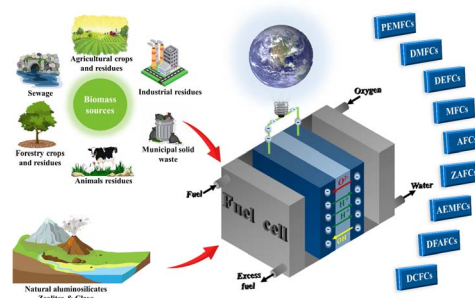
Anirban Mukherjee, Maryam Abdinejad,* Susanta Sinha Mahapatra and Bidhan Chandra Ruidas*



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Application of biowaste and nature-inspired (nano) materials in fuel cells

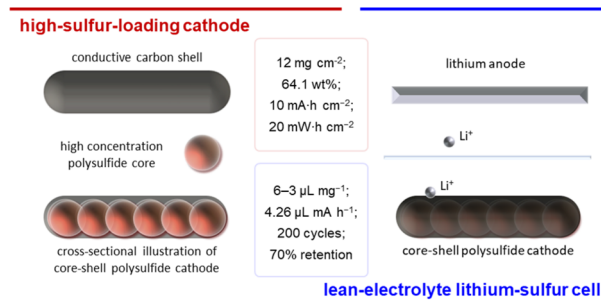
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Integrated high-sulfur-loading polysulfide/carbon cathode in lean-electrolyte cell toward high-energy-density lithium–sulfur cells with stable cyclability

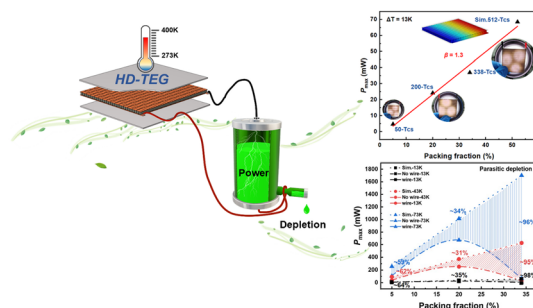
Yun-Chen Wu and Sheng-Heng Chung*



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Optimizing the output performance and parasitic depletion of Bi₂Te₃-based thermoelectric generators by using a high-density approach

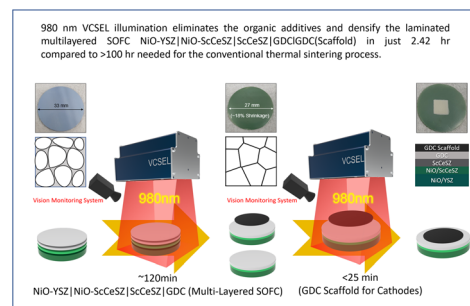
Yu Tian, Guang-Kun Ren,* Zhifang Zhou, Zhijie Wei, Wen Fang, Jiangfeng Song, Yan Shi, Xiaohong Chen* and Yuan-Hua Lin



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Vertical-cavity surface-emitting laser (VCSEL)-based ultrafast photonic sintering of solid oxide fuel cells (SOFCs): prospects for time-efficient/two-dimensional scalability to large-sized SOFCs

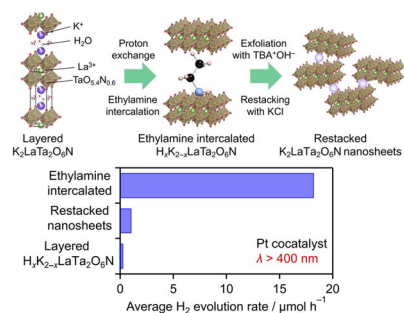
Jaehwan Kim, Saeed Ur Rehman, Myeong-Ill Lee, Amjad Hussain, Youngsu Noh, Jiwon Oh, Wonseck Ku, Na-Eui Kwak, Do-Hyeong Kim, Heesu Hwang, Hee-Sung Yoon, Seungho Park,* Seung-Bok Lee* and Jin-Ha Hwang*



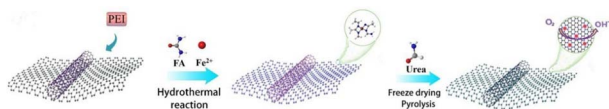
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Interlayer modification and single-layer exfoliation of the Ruddlesden–Popper perovskite oxynitride K₂LaTa₂O₆N to improve photocatalytic H₂ evolution activity

Yuta Shiroma, Hiroto Mogi, Takeaki Mashiko, Shuhei Yasuda, Shunta Nishioka, Toshiyuki Yokoi, Shintaro Ida, Koji Kimoto and Kazuhiko Maeda*



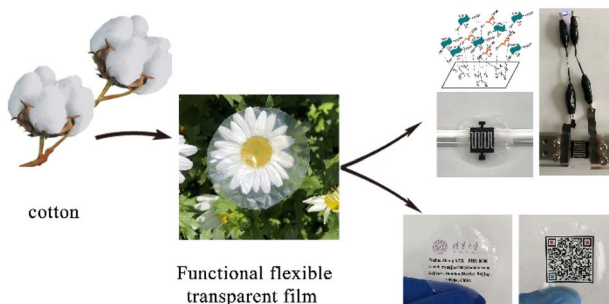
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Strengthening oxygen reduction activity based on the cooperation of pyridinic-N and graphitic-N for atomically dispersed Fe sites

Gengyu Xing, Guangying Zhang, Baoluo Wang, Miaomiao Tong, Chungui Tian, Lei Wang* and Honggang Fu*

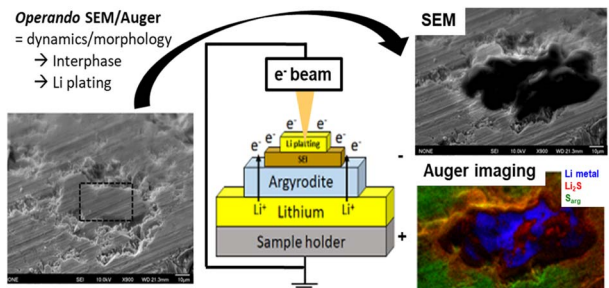
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From cotton to functional flexible transparent film for printable and flexible microsupercapacitor with strong bonding interface

Wenjie Zhang,* Bohan Li, Ruitao Lv, Huaming Li, Yuqing Weng, Wanci Shen, Feiyu Kang and Zheng-Hong Huang*

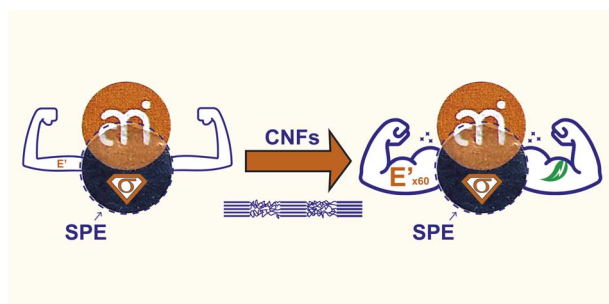
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Operando Auger/XPS using an electron beam to reveal the dynamics/morphology of Li plating and interphase formation in solid-state batteries

Julien Morey,* Jean-Bernard Ledeuil, Hervé Martinez and Lénaïc Madec*

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Cellulose nanofiber-reinforced solid polymer electrolytes with high ionic conductivity for lithium batteries

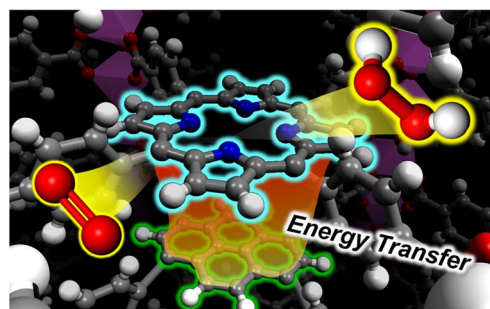
Cristina Prado-Martinez, Preston Sutton, Isabella Mombrini, Aristotelis Kamtsikakis, Worarin Meesorn, Christoph Weder, Ullrich Steiner and Ilja Gunkel*



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Photosynthesis of hydrogen peroxide from dioxygen and water using aluminium-based metal–organic framework assembled with porphyrin- and pyrene-based linkers

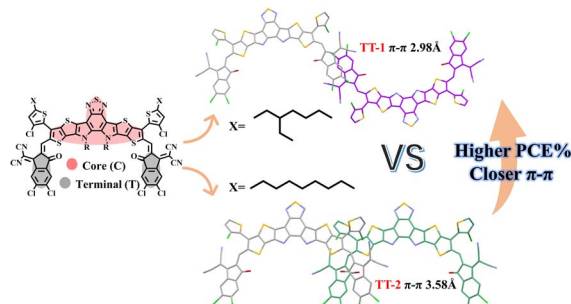
Yoshifumi Kondo, Kenta Hino, Yasutaka Kuwahara, Kohsuke Mori and Hiromi Yamashita*



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Achieving high performance organic solar cells with a closer π – π distance in branched alkyl-chain acceptors

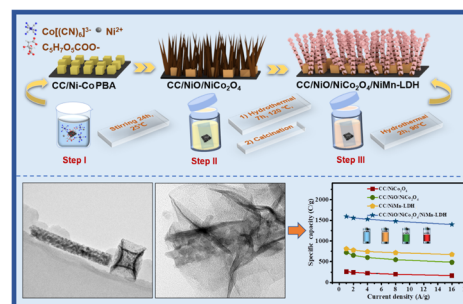
Pu Tan, Congcong Cao, Yue Cheng, Hui Chen, Hanjian Lai, Yulin Zhu, Liang Han, Jianfei Qu, Nan Zheng, Yuanzhu Zhang and Feng He*



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Constructing Ni–Co PBA derived 3D/1D/2D NiO/NiCo₂O₄/NiMn-LDH hierarchical heterostructures for ultrahigh rate capability in hybrid supercapacitors

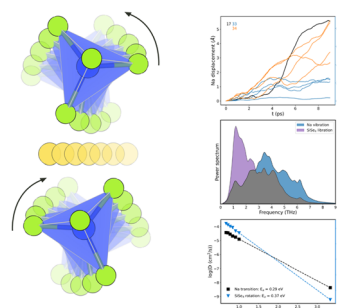
Dongyan Gao, Renning Liu, Dandan Han,* Pengcheng Xu, Ping Wang and Yen Wei*



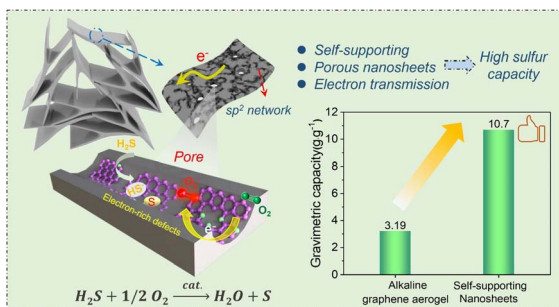
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Activating the paddle-wheel effect towards lower temperature in a new sodium-ion solid electrolyte, Na_{3.5}Si_{0.5}P_{0.5}Se₄

Yu Yang, Zhenming Xu, Chaohong Guan, Runxin Ouyang, Huirong Jing and Hong Zhu*



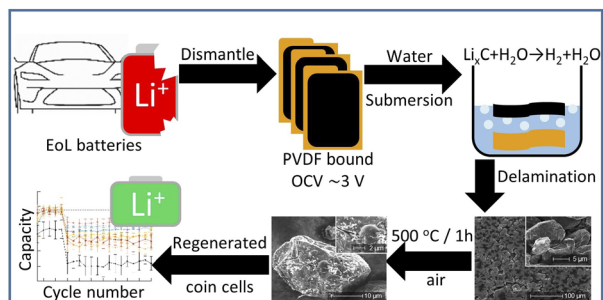
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Self-supporting nano-porous carbon nanosheet with organized sp^2 -C network for unprecedented catalytic performance in room-temperature H_2S oxidation

Feng Hu, Huan Chen, Zhengliang Zhang, Bo Niu, Yayun Zhang* and Donghui Long*

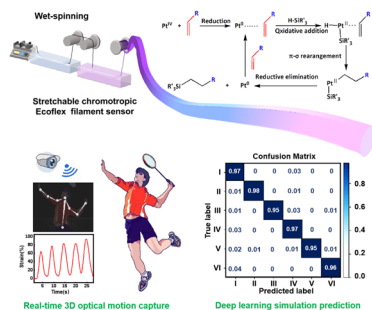
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Reclamation and reuse of graphite from electric vehicle lithium-ion battery anodes via water delamination

Alexander T. Sargent*, Zoë Henderson, Alex S. Walton, Ben F. Spencer, Luke Sweeney, Wendy R. Flavell, Paul A. Anderson, Emma Kendrick, Peter R. Slater* and Phoebe K. Allan*

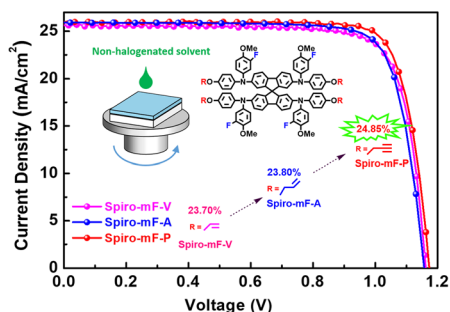
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Conductive chromotropic fiber filament sensors with ultrahigh stretchability for wearable sensing textiles toward 3D optical motion capture

Yufei Guo, Yongshi Guo, Jiawei Wu, Liying Wei, Shuhui Xia, Chuang Zhu* and Jianhua Yan*

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Perovskite solar cells approaching 25% PCE using side chain terminated hole transport materials with low concentration in a non-halogenated solvent process

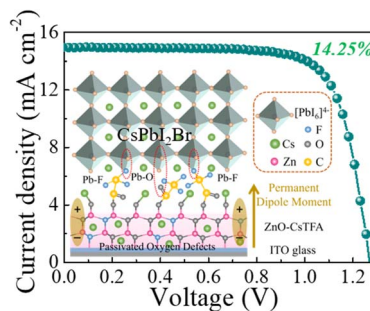
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Targeting the imperfections at the ZnO/CsPbI₂Br interface for low-temperature carbon-based perovskite solar cells

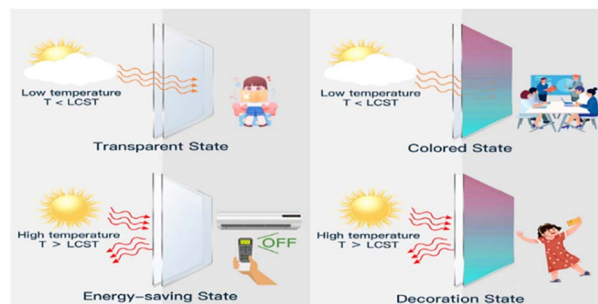
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Ionic liquid–polymer thermochromic electrolytes with a wide and tunable LCST for application in multi-stimuli-responsive optical modulation

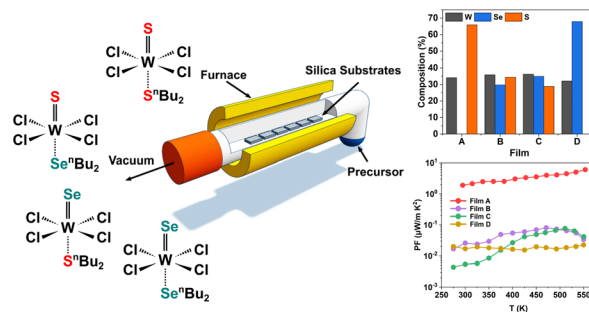
Hao Wu, Mi Wang,* Wanbao Wu, De Bai, Yihong Liang, Shunyou Hu, Wen Yu, Peng He* and Jiaheng Zhang*



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Tungsten dichalcogenide WS₂Se_{2-2x} films via single source precursor low-pressure CVD and their (thermo-)electric properties

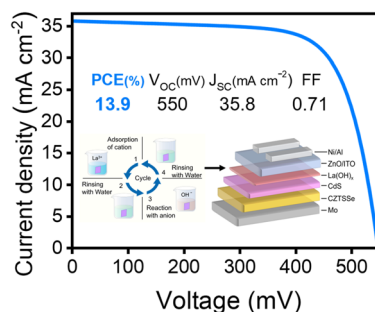
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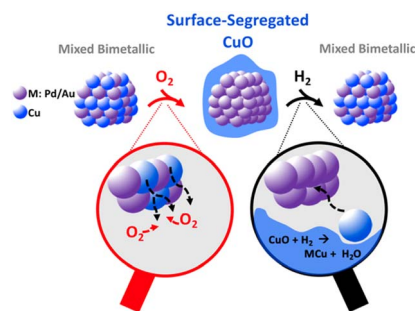
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Lanthanum-induced synergetic carrier doping of heterojunction to achieve high-efficiency kesterite solar cells

Kang Yin, Licheng Lou, Jinlin Wang, Xiao Xu, Jiazheng Zhou, Jiangjian Shi,* Dongmei Li, Huijue Wu, Yanhong Luo* and Qingbo Meng*



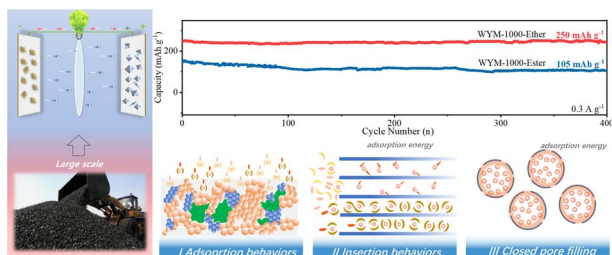
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Exploring the mobility of Cu in bimetallic nanocrystals to promote atomic-scale transformations under a reactive gas environment

Jette K. Mathiesen,^{*} Sofie Colding-Fagerholt, Kim D. Jensen, Jack K. Pedersen, Tom Vosch, Jan Rossmeisl, Stig Helveg and Kirsten M. Ø. Jensen^{*}

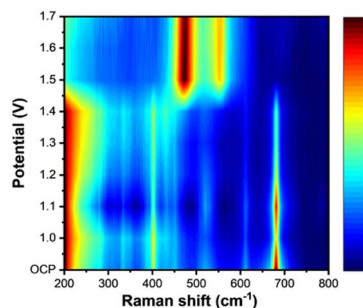
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Tailoring natural anthracite carbon materials towards considerable electrochemical properties with exploration of ester/ether-based electrolyte

Yu Dong, Shaohui Yuan, Wenqing Zhao, Chenxing Yi, Zihao Zeng, Siyan Xie, Yue Yang, Wei Sun, Xiaobo Ji and Peng Ge^{*}

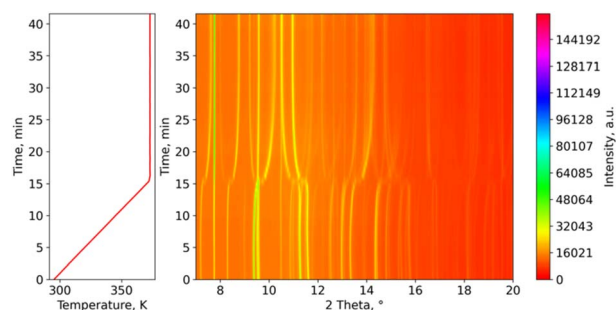
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Transforming NiFe layered double hydroxide into NiFeP_x for efficient alkaline water splitting

Jia Zhao, Nan Liao and Jingshan Luo^{*}

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Water vapour and gas induced phase transformations in an 8-fold interpenetrated diamondoid metal–organic framework

Aizhamal Subanbekova, Varvara I. Nikolayenko, Andrey A. Bezrukov, Debobroto Sensharma, Naveen Kumar, Daniel J. O'Hearn, Volodymyr Bon, Shi-Qiang Wang, Kyriaki Koupepidou, Shaza Darwish, Stefan Kaskel and Michael J. Zaworotko^{*}



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Efficiently predicting and synthesizing intrinsic highly fire-safe polycarbonates with processability

Ronghua Yu, Shengda Wang, Yue Zhu, Qianyu Li, Jiangan You, Jian Qiu, Yanhui Wang, Jie Liu* and Tao Tang*

