

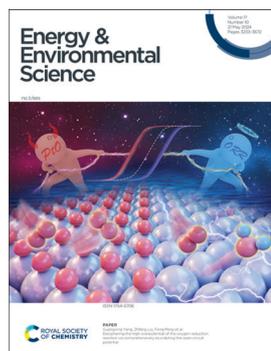
Energy & Environmental Science

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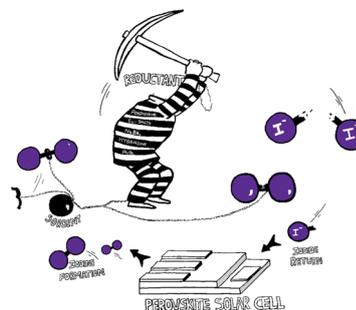
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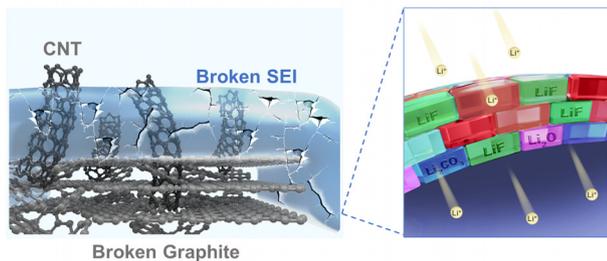


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Fundamental questions
Elemental answers



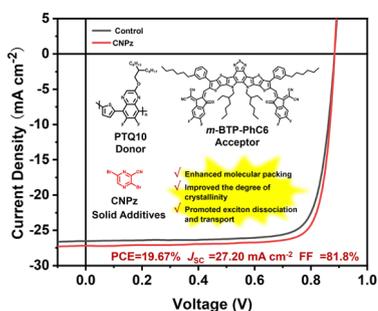
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The acupuncture effect of carbon nanotubes induced by the volume expansion of silicon-based anodes

Ziying He, Chenxi Zhang, Yukang Zhu and Fei Wei*

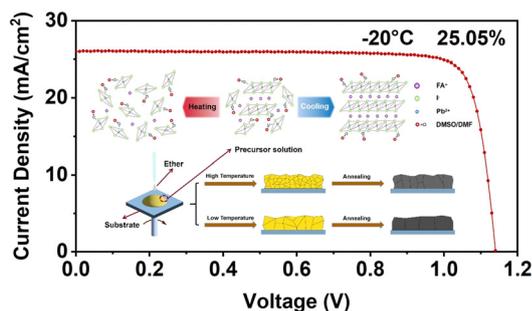
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Cyano-functionalized pyrazine: an electron-deficient unit as a solid additive enables binary organic solar cells with 19.67% efficiency

Lijun Tu, Hao Wang, Weixu Duan, Ruijie Ma,* Tao Jia, Top Archie Dela Peña, Yongmin Luo, Jiaying Wu, Mingjie Li, Xiaomin Xia, Siqi Wu, Kai Chen,* Yue Wu, Yulin Huang, Kun Yang, Gang Li* and Yongqiang Shi*

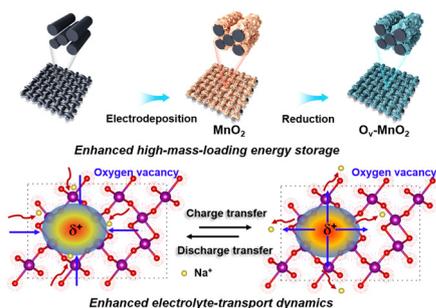
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“Freezing” intermediate phases for efficient and stable FAPbI₃ perovskite solar cells

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Regulating oxygen vacancies and coordination environment of manganese dioxide for enhanced high-mass-loading energy storage

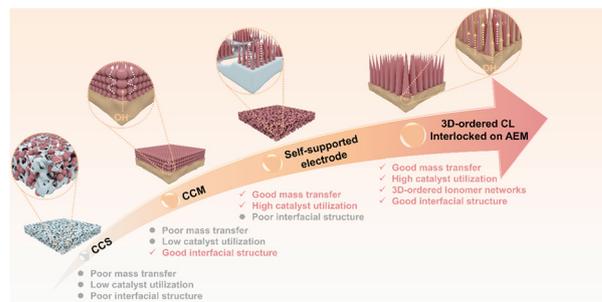
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3D-ordered catalytic nanoarrays interlocked on anion exchange membranes for water electrolysis

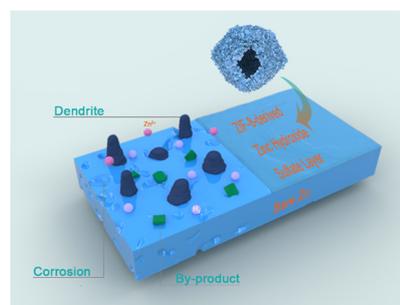
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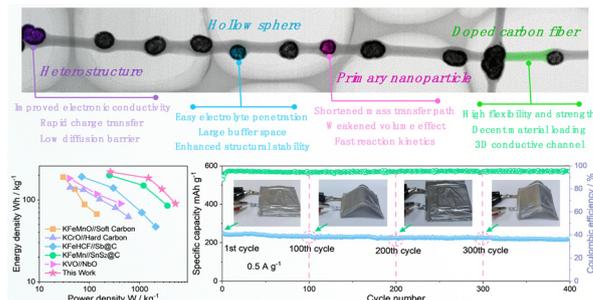
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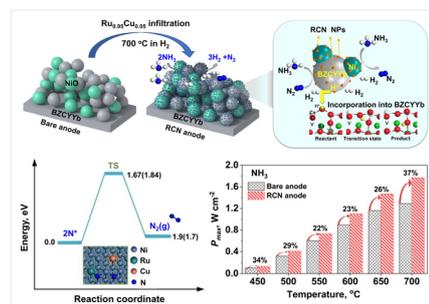
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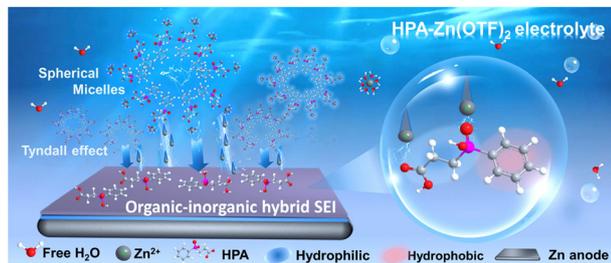
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In situ formed catalysts for active, durable, and thermally stable ammonia protonic ceramic fuel cells at 550 °C

Hua Zhang, Kang Xu, Yangsen Xu, Fan He, Feng Zhu, Kotaro Sasaki, YongMan Choi* and Yu Chen*



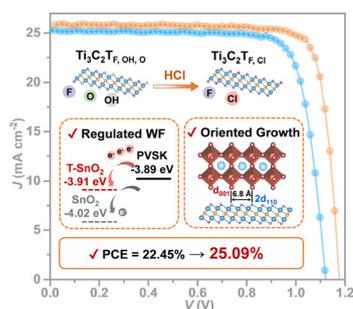
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Amphiphilic electrolyte additive as an ion-flow stabilizer enables superb zinc metal batteries

Zimin Yang, Yilun Sun, Siting Deng, Hao Tong, Mingqiang Wu, Xinbin Nie, Yifan Su, Guanjie He, Yinghe Zhang, Jianwei Li* and Guoliang Chai*

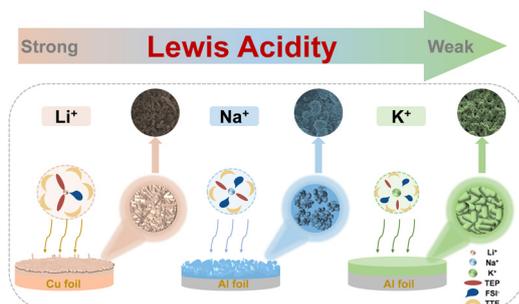
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Chlorinated-Ti₃C₂F₇ as a dual-functional buried interface on SnO₂ electron-transporting layers for 25.09% high-performance n-i-p perovskite solar cells

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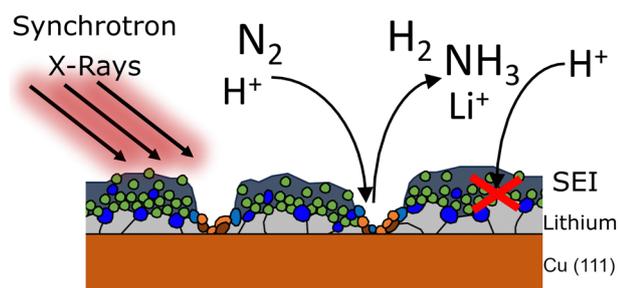
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Superior electrochemical performance of alkali metal anodes enabled by milder Lewis acidity

Linlin Wang, Jiacheng Zhu, Nan Li, Zhe Zhang, Shiwan Zhang, Yifan Chen, Jianwen Zhang, Yusi Yang, Lulu Tan, Xiaogang Niu, Xuefeng Wang,* Xiao Ji* and Yujie Zhu*

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Operando investigations of the solid electrolyte interphase in the lithium mediated nitrogen reduction reaction

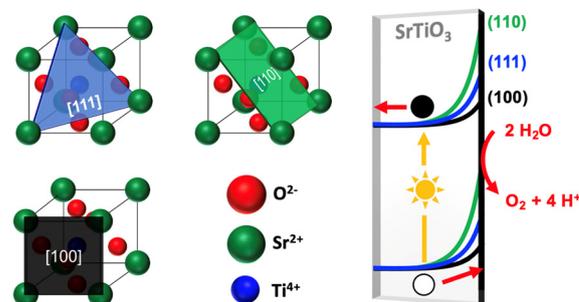
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Facets control charge separation during photoelectrochemical water oxidation with strontium titanate (SrTiO₃) single crystals

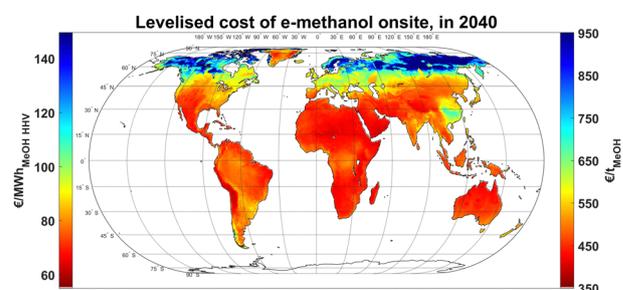
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Global production potential of green methanol based on variable renewable electricity

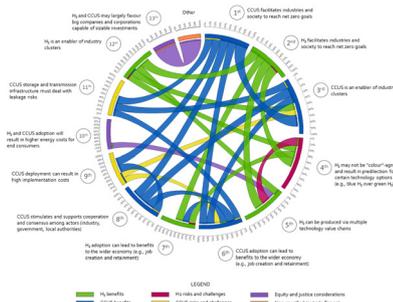
Mahdi Fasihi* and Christian Breyer



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Reconfiguring European industry for net-zero: a qualitative review of hydrogen and carbon capture utilization and storage benefits and implementation challenges

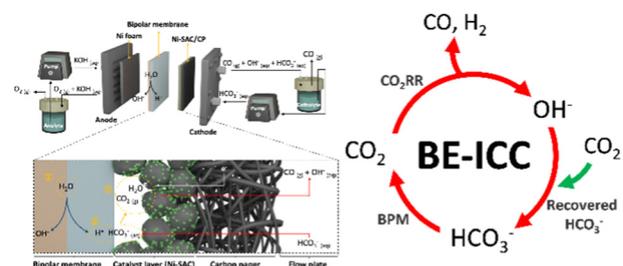
Benjamin K. Sovacool,* Dylan Furszyfer Del Rio,
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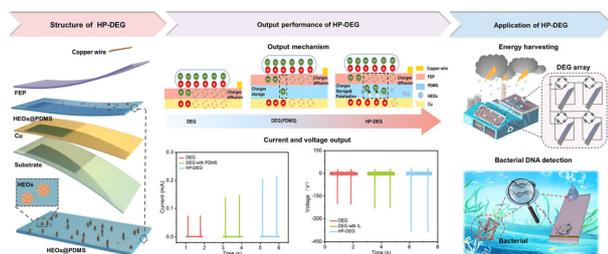
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Integrated carbon capture and CO production from bicarbonates through bipolar membrane electrolysis

Hakhyeon Song, Carlos A. Fernández, Hyeonuk Choi,
Po-Wei Huang, Jihun Oh* and Marta C. Hatzell*



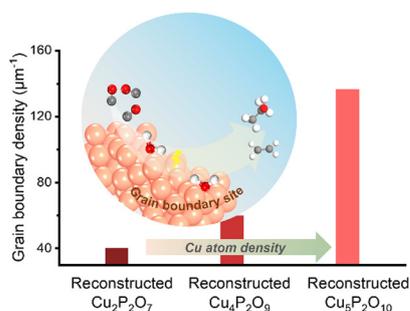
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Enhancement of the voltage output of droplet electricity generators using high dielectric high-entropy oxide composites

Yanan Zhou, Yan Zeng, Jianming Wang, Xiaoyi Li, Peng Wang,* Wenlong Ma, Congyu Wang, Jiawei Li, Wenyong Jiang and Dun Zhang

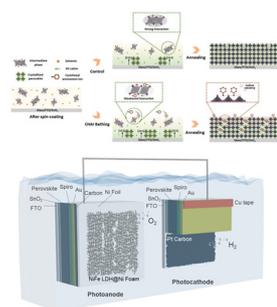
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Grain boundary generation *via* steering $\text{Cu}_x\text{P}_2\text{O}_{x+5}$ precursor composition enhances CO electrolysis

Jiaqi Sang, Tianfu Liu, Pengfei Wei, Hefei Li, Conghui Liu, Yi Wang, Youwen Rong, Qi Wang, Guoxiong Wang* and Xinhe Bao*

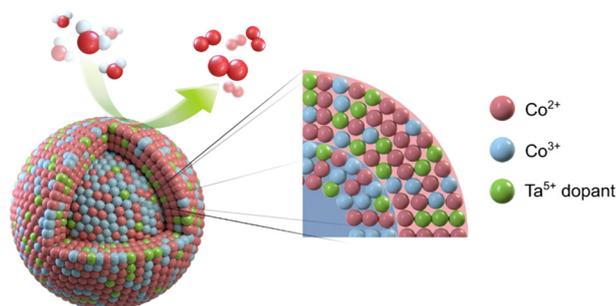
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Large-area all-perovskite-based coplanar photoelectrodes for scaled-up solar hydrogen production

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Tailoring cobalt spinel oxide with site-specific single atom incorporation for high-performance electrocatalysis

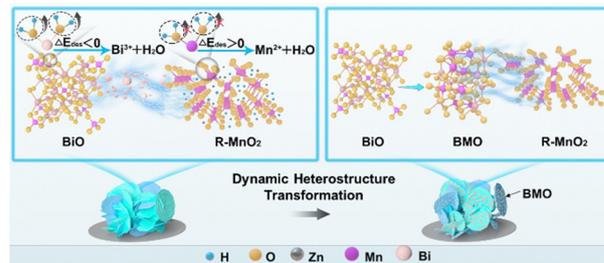
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Dynamic heterostructure design of MnO₂ for high-performance aqueous zinc-ion batteries

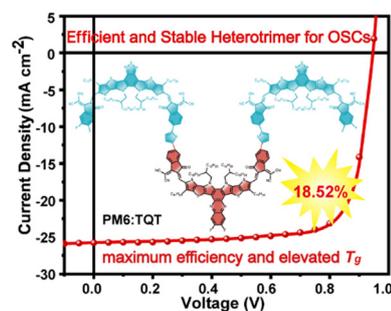
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A quinoxaline–benzothiadiazole heterotrimer for organic solar cells with extraordinary efficiency and stability

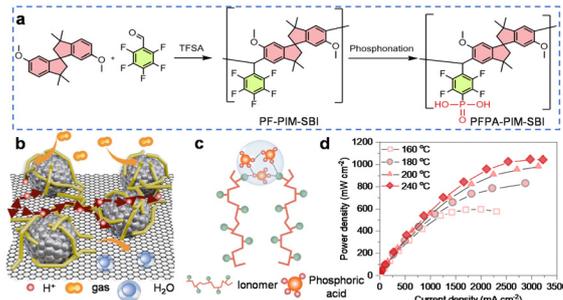
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Electrode binder design for high-power, low-Pt loading and durable high temperature fuel cells

Hui Li, Peipei Zuo, Wenyi Wu, Gonggen Tang, Junkai Fang, Tongwen Xu and Zhengjin Yang*



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Repairing humidity-induced interfacial degradation in quasi-2D perovskite solar cells printed in ambient air

Zhi Xing, Baojin Fan, Xiangchuan Meng, Dengxue Li, Zengqi Huang, Linfeng Li, Yanyan Zhang, Fuyi Wang, Xiaotian Hu, Ting Hu,* Thomas Riedl* and Yiwang Chen*

