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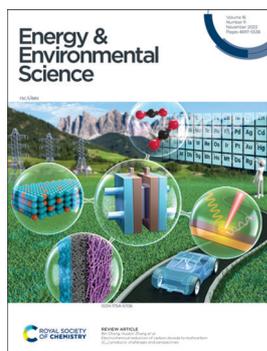
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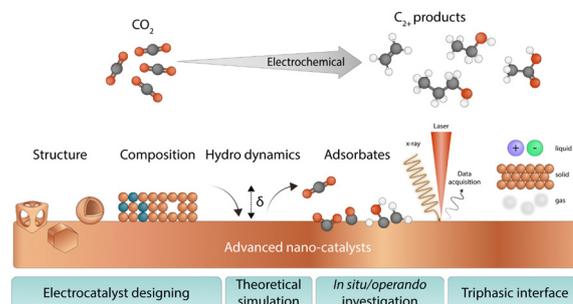
See Bin Chang, Huabin Zhang *et al.*, pp. 4714–4758. Image reproduced by permission of Huabin Zhang and Bin Chang from *Energy Environ. Sci.*, 2023, 16, 4714.

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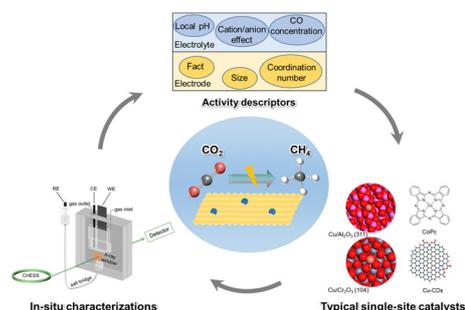


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### Recent status, key strategies and challenging perspectives of fast-charging graphite anodes for lithium-ion batteries

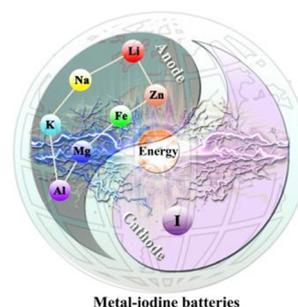
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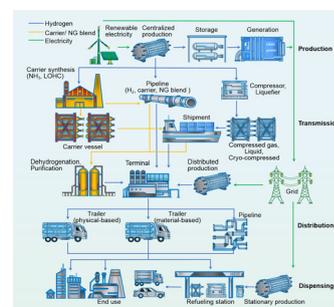
Metal-iodine batteries

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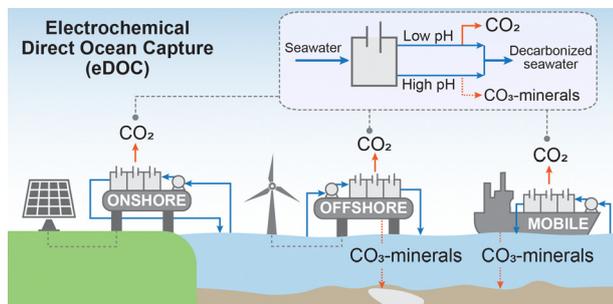
### Hydrogen society: from present to future

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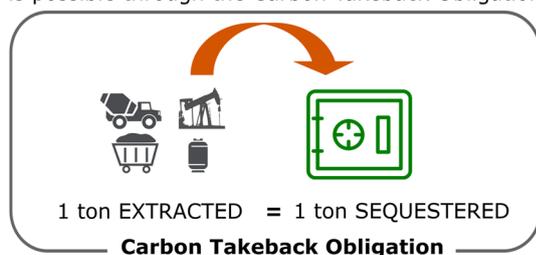


### Direct ocean capture: the emergence of electrochemical processes for oceanic carbon removal

Prince Aleta, Abdelrahman Refaie, Mohsen Afshari, Ahmad Hassan and Mohammad Rahimi\*

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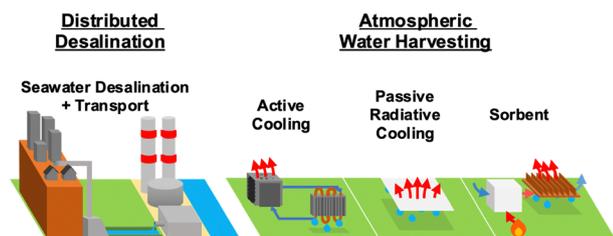
**Carbon accounting without Life Cycle Analysis** is possible through the Carbon Takeback Obligation



### Carbon accounting without life cycle analysis

Klaus S Lackner,\* Stephanie H Arcusa,\* Habib Azarabadi, Vishrudh Sriramprasad and Robert Page

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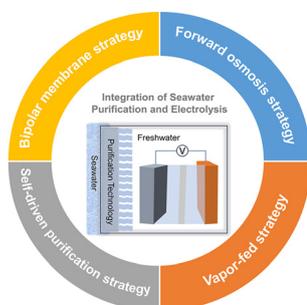


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Jordan D. Kocher and Akanksha K. Menon\*

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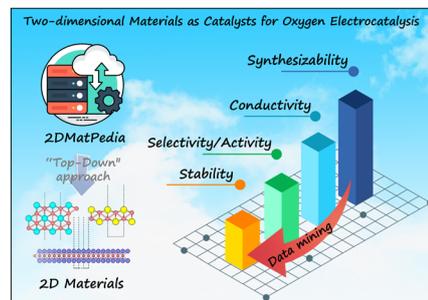
Lu Li, Gao Chen,\* Zongping Shao and Haitao Huang\*



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Xiangyu Guo, Shengli Zhang,\* Liangzhi Kou, Chi-Yung Yam, Thomas Frauenheim, Zhongfang Chen\* and Shiping Huang\*

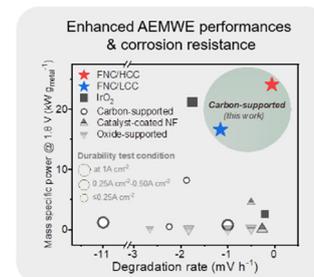
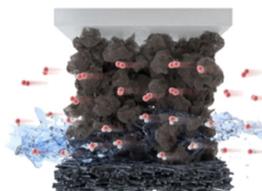


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Myeong-Geun Kim, Tae Kyung Lee, Eungjun Lee, Subin Park, Hyun Ju Lee, Haneul Jin, Dong Wook Lee, Min-Gi Jeong, Hun-Gi Jung, Kyungmin Im, Chuan Hu, Hyung Chul Ham, Kwang Ho Song, Yung-Eun Sung, Young Moo Lee and Sung Jong Yoo\*

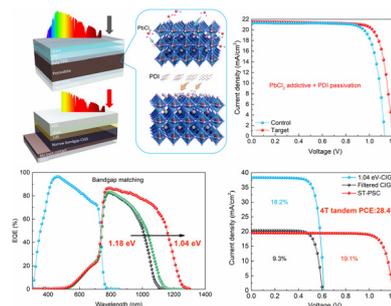
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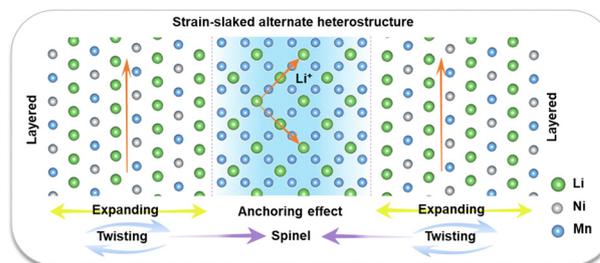
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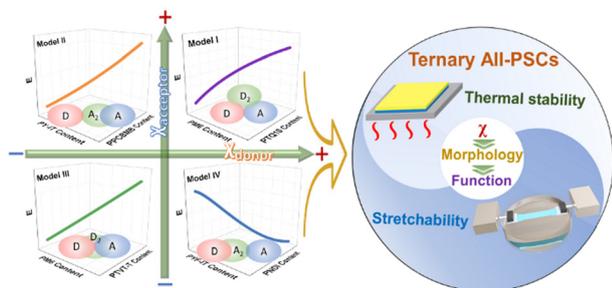
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Ying Zhang, Xiaoyu Shi, Shuanghao Zheng, Yuguo Ouyang, Mingrun Li, Caixia Meng, Yan Yu\* and Zhong-Shuai Wu\*



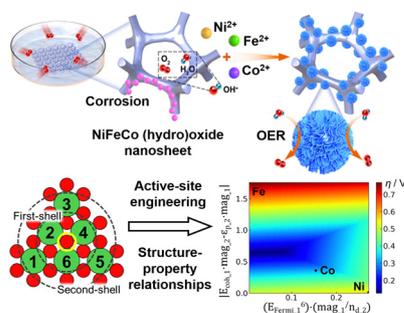
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Kangkang Zhou, Kaihu Xian, Ruijie Ma, Junwei Liu, Mengyuan Gao, Saimeng Li, Tao Liu, Yu Chen, Yanhou Geng and Long Ye\*

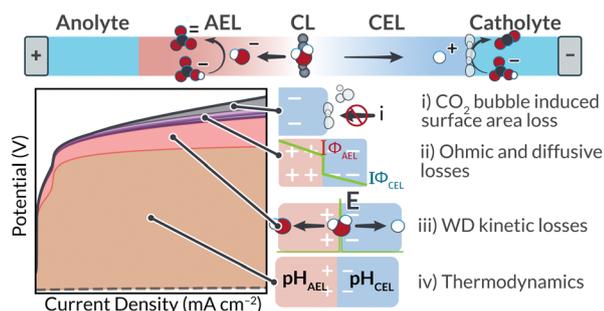
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Doudou Zhang, Haobo Li,\* Haijiao Lu, Zongyou Yin, Zelio Fusco, Asim Riaz, Karsten Reuter, Kylie Catchpole and Siva Karuturi\*

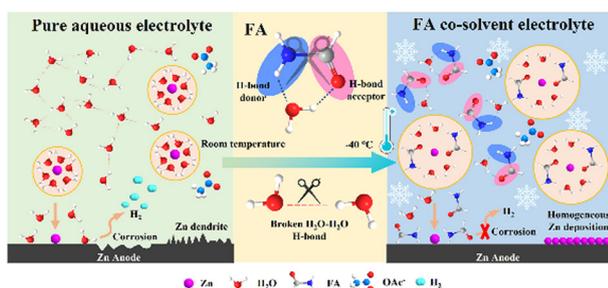
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Justin C. Bui, Éowyn Lucas, Eric W. Lees, Andrew K. Liu, Harry A. Atwater, Chengxiang Xiang, Alexis T. Bell and Adam Z. Weber\*

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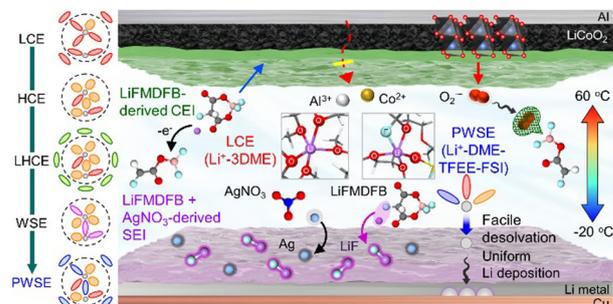
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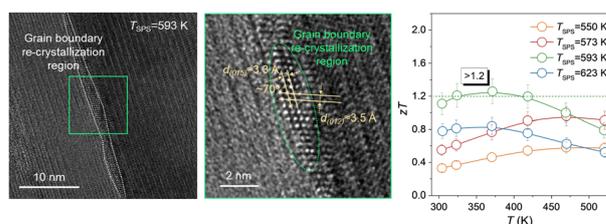
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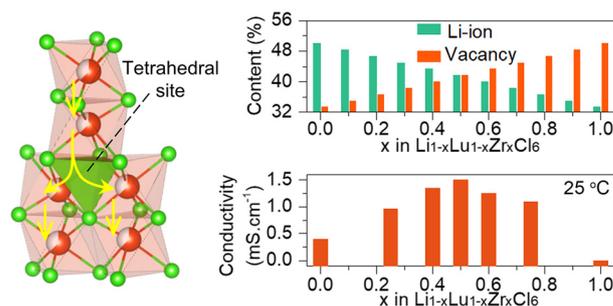
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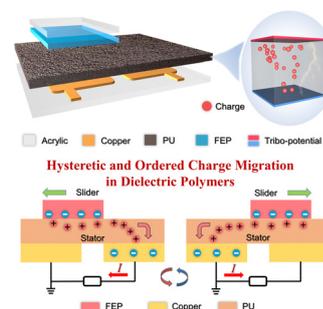
Changhong Wang, Shuo Wang, Xudong Liu, Yanlong Wu, Ruizhi Yu, Hui Duan, Jung Tae Kim, Huan Huang, Jiantao Wang,\* Yifei Mo\* and Xueliang Sun\*



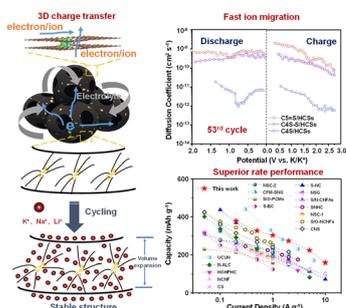
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Huiyuan Wu, Jian Wang, Shaoke Fu, Chuncai Shan, Qionghua Zhao, Kaixian Li, Gui Li, Qianjin Mu, Xue Wang\* and Chenguo Hu\*



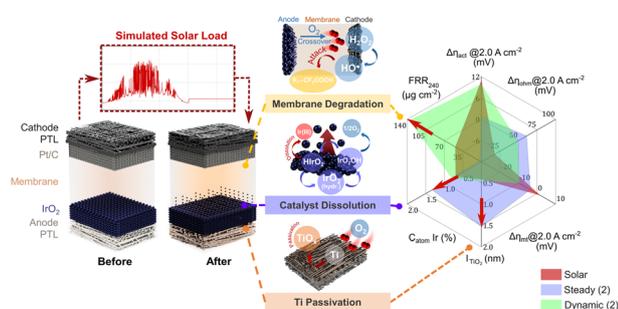
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Fei Wang, Zhendong Liu, Zhijie Xiang, Chengzhi Zhang,\*  
Anbang Lu, Fulai Qi, Jun Tan\* and Jinshui Liu\*

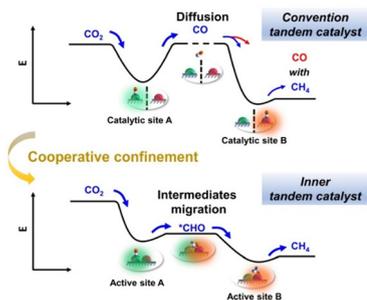
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## Systematic degradation analysis in renewable energy-powered proton exchange membrane water electrolysis

Anastasiia Voronova, Sol Kim, Dongwon Kim,  
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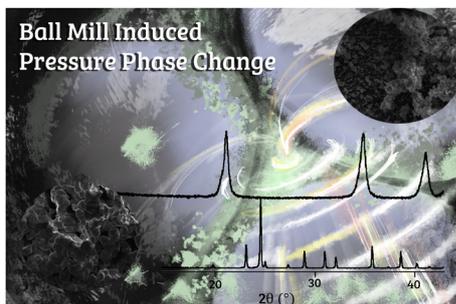
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Yan Liu,\* Huimei Chen, Yan Yang, Chi Jiao, Wenkun Zhu,  
Yaping Zhang, Xiaojun Wu, Junjie Mao\* and  
Zhiwen Zhuo\*

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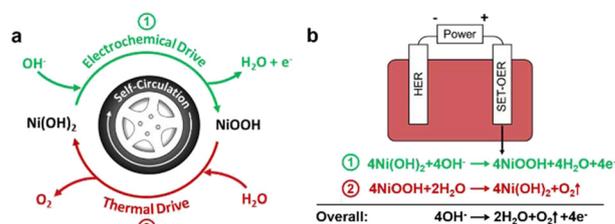
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and Peter R. Slater\*



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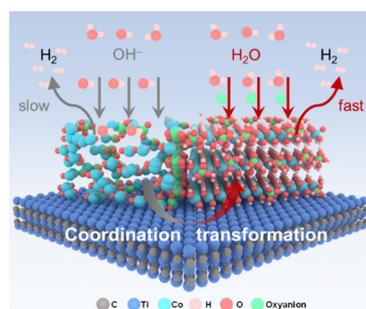
Bohan Deng, Guangqiang Yu, Wei Zhao, Yuanzheng Long, Cheng Yang, Peng Du, Xian He, Zhuting Zhang, Kai Huang,\* Xibo Li\* and Hui Wu\*



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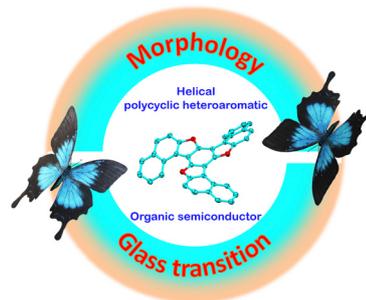
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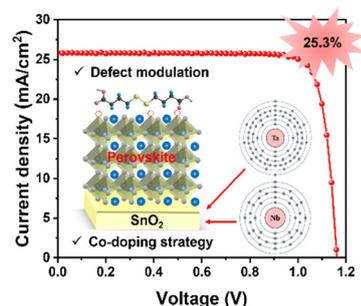
Lingyi Fang, Yuyan Zhang, Yaohang Cai, Jing Zhang, Yuefang Wei, Yi Yuan\* and Peng Wang\*



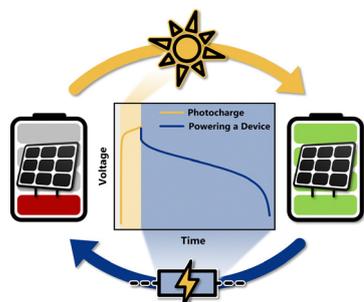
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### Synergistic transition metal ion co-doping and multiple functional additive passivation for realizing 25.30% efficiency perovskite solar cells

Yuting Chen, Qi Wang, Yuqi Yao, Jiewei Yang, Weijian Tang, Wuke Qiu, Yihui Wu\* and Qiang Peng\*



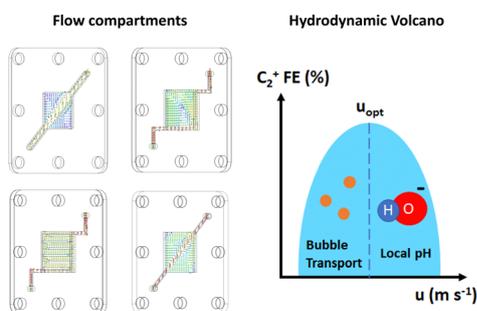
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### Organic photo-battery with high operating voltage using a multi-junction organic solar cell and an organic redox-polymer-based battery

Rodrigo Delgado Andrés, Robin Wessling, Jan Büttner, Leonie Pap, Anna Fischer, Birgit Esser\* and Uli Würfel\*

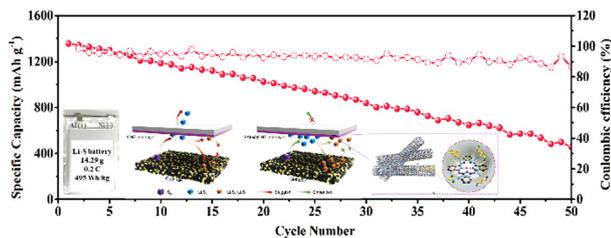
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### Understanding the impact of catholyte flow compartment design on the efficiency of CO<sub>2</sub> electrolyzers

Michael Filippi, Tim Möller, Liang Liang and Peter Strasser\*

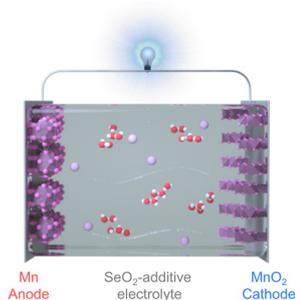
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### Engineering a deficient-coordinated single-atom indium electrocatalyst for fast redox conversion in practical 500 W h kg<sup>-1</sup>-level pouch lithium–sulfur batteries

Yang Guo, Zhaoqing Jin, Jianhao Lu, Lei Wei, Weikun Wang,\* Yaqin Huang\* and Anbang Wang\*

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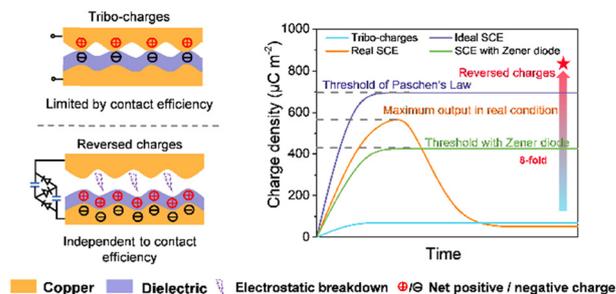
Mingming Wang, Yahan Meng, Yan Xu, Na Chen, Mingyan Chuai, Yuan Yuan, Jifei Sun, Zaichun Liu, Xinhua Zheng, Ziqi Zhang, Dongjun Li and Wei Chen\*



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## Achieving a highly efficient triboelectric nanogenerator *via* a charge reversion process

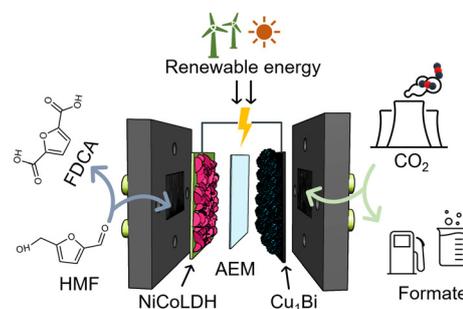
Ziting Guo, Peiyuan Yang, Zhihao Zhao,\* Yikui Gao, Jiayue Zhang, Linglin Zhou, Jie Wang\* and Zhong Lin Wang\*



5305

## A coupled electrocatalytic system with reduced energy input for CO<sub>2</sub> reduction and biomass valorization

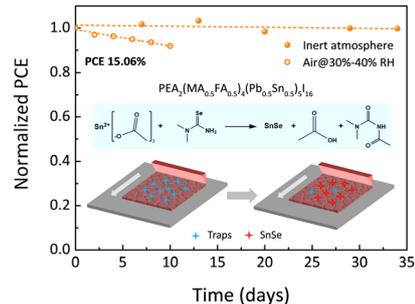
Shao-Qing Liu, Min-Rui Gao, Shuwen Wu, Renfei Feng, Yicheng Wang, Linfang Cui, Ying Guo, Xian-Zhu Fu and Jing-Li Luo\*



5315

## *In situ* SnSe deposition as passivation for scalable and stable quasi-2D lead-tin perovskite solar cells

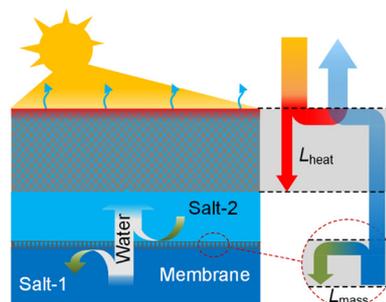
Lijun Chen, Eelco Kinsa Tekelenburg, Kushagra Gahlot, Matteo Pitaro, Jun Xi, Alessia Lasorsa, Giovanna Feraco, Loredana Protesescu, Patrick C. A. van der Wel, Giuseppe Portale, Petra Rudolf, Christoph J. Brabec and Maria Antonietta Loi\*



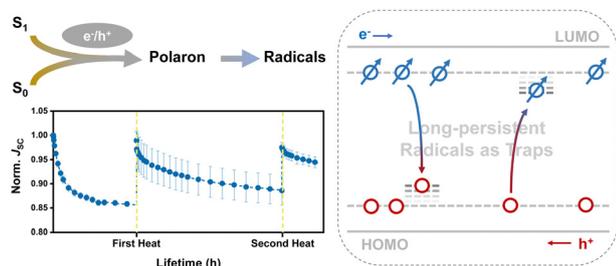
5325

## Solar evaporation with solute replacement towards real-world applications

Zhenyuan Xu,\* Jie Yu, He Shan, Jiebing Wang, Jintong Gao, Zhanyu Ye and Ruzhu Wang\*



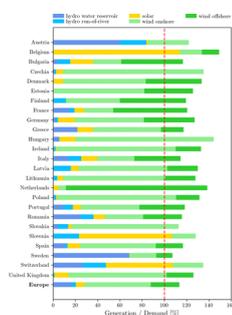
5339



### Observation of reversible light degradation in organic photovoltaics induced by long-persistent radicals

Difei Zhang, Chao Liu, Kaicheng Zhang, Yanhua Jia, Wenkai Zhong, Weidong Qiu, Yuanfeng Li, Thomas Heumüller, Karen Forberich, Vincent M. Le Corre, Larry Lürer, Ning Li,\* Fei Huang,\* Christoph J. Brabec and Lei Ying\*

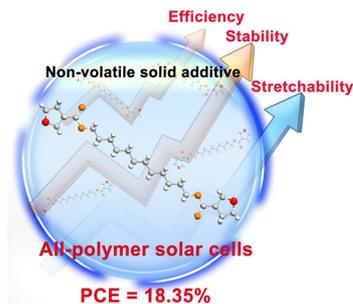
5350



### The critical role of electricity storage for a clean and renewable European economy

Alessio Santecchia,\* Rafael Castro-Amoedo, Tuong-Van Nguyen, Ivan Kantor, Paul Stadler and François Marechal

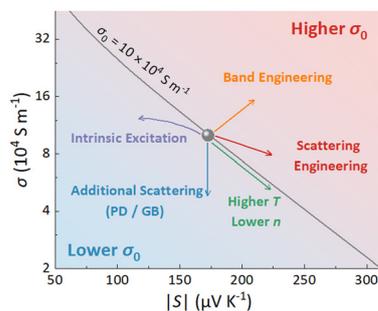
5371



### Multifunctional solid additive enables all-polymer solar cells with improved efficiency, photostability and mechanical durability

Jiali Song, Linglong Ye,\* Chunhui Liu, Yunhao Cai, Chen Zhang, GuiChu Yue, Yun Li, Min Hun Jee, Yong Zhao, Donghui Wei, Han Young Woo and Yanming Sun\*

5381



### Intrinsic conductivity as an indicator for better thermoelectrics

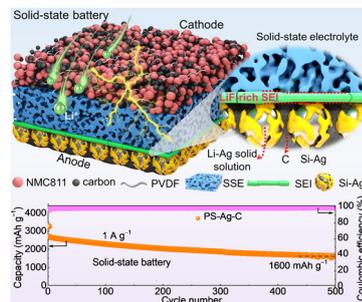
Chaoliang Hu, Ziheng Gao, Min Zhang, Shen Han, Chenguang Fu\* and Tiejun Zhu\*



5395

### Manipulating charge-transfer kinetics and a flow-domain LiF-rich interphase to enable high-performance microsized silicon–silver–carbon composite anodes for solid-state batteries

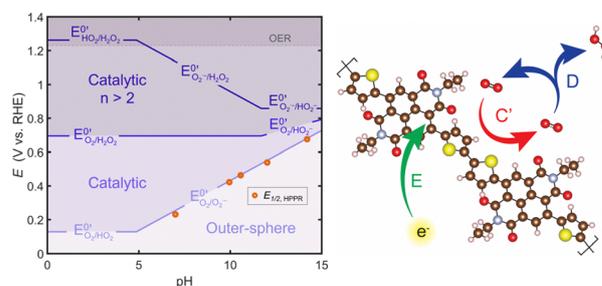
Xiang Han, Lanhui Gu, Zhefei Sun, Minfeng Chen, Yinggan Zhang, Linshan Luo, Min Xu, Songyan Chen, Haodong Liu, Jiayu Wan, Yan-Bing He, Jizhang Chen\* and Qiaobao Zhang\*



5409

### Origins of hydrogen peroxide selectivity during oxygen reduction on organic mixed ionic–electronic conducting polymers

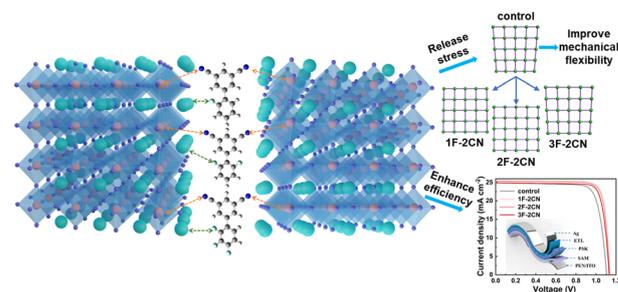
Ana De La Fuente Durán, Allen Yu-Lun Liang, Ilaria Denti, Hang Yu, Drew Pearce, Adam Marks, Emily Penn, Jeremy Treiber, Karrie Weaver, Lily Turaski, Iuliana P. Maria, Sophie Griggs, Xingxing Chen, Alberto Salleo, William C. Chueh, Jenny Nelson, Alexander Giovannitti\* and J. Tyler Mefford\*



5423

### Molecular dipole engineering-assisted strain release for mechanically robust flexible perovskite solar cells

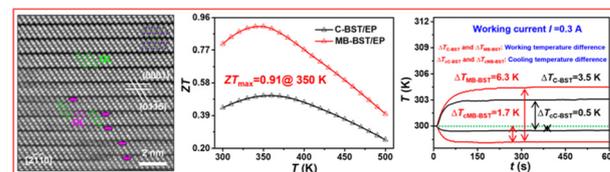
Lisha Xie, Songyu Du, Jun Li, Chang Liu, Zhenwei Pu, Xinyu Tong, Jian Liu, Yaohua Wang, Yuanyuan Meng, Mengjin Yang, Wei Li\* and Ziyi Ge\*



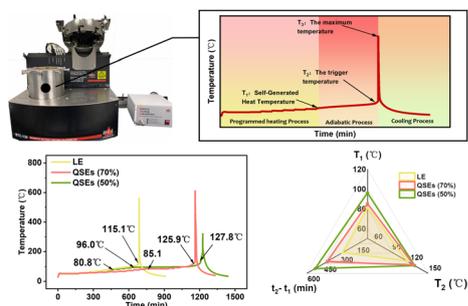
5434

### Multi-beam spark plasma sintering and excellent performance of Bi<sub>0.5</sub>Sb<sub>1.5</sub>Te<sub>3</sub>/epoxy thermoelectric films with insulating substrates

Shaoqiu Ke, Dong Liang, Xiaolei Nie,\* Xiaoling Ai, Longzhou Li, Chengshan Liu, Wenjie Xu, Wenjun Cui, Xianfeng Ye, Tiantian Chen, Xiangyu Li, Kai Fu, Wanting Zhu, Ping Wei, Wenyu Zhao\* and Qingjie Zhang



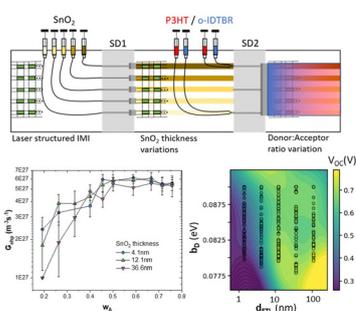
5444



### Systematic safety evaluation of quasi-solid-state lithium batteries: a case study

Wei Li, Hang Li, Jiayang Liu, Shini Lin, Qichen Chen, Weijie Ji, Zheng He, Peng Zhang\* and Jinbao Zhao\*

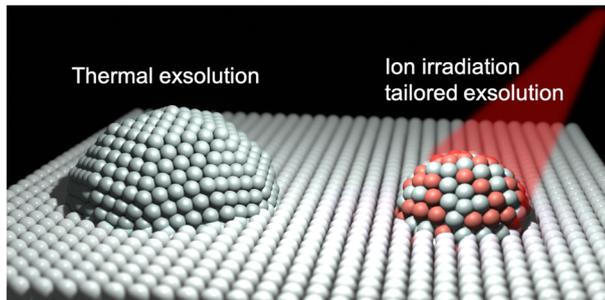
5454



### Cutting "lab-to-fab" short: high throughput optimization and process assessment in roll-to-roll slot die coating of printed photovoltaics

Michael Wagner, Andreas Distler, Vincent M. Le Corre, Simon Zapf, Burak Baydar, Hans-Dieter Schmidt, Madeleine Heyder, Karen Forberich,\* Larry Lürer, Christoph J. Brabec\* and H.-J. Egelhaaf

5464



### Ion irradiation to control size, composition and dispersion of metal nanoparticle exsolution

Jiayue Wang, Kevin B. Woller, Abinash Kumar, Zhan Zhang, Hua Zhou, Iradwikanari Waluyo, Adrian Hunt, James M. LeBeau and Bilge Yildiz\*

5479



### Mimicking ion and water management in poultry breeding for highly reversible zinc ion batteries

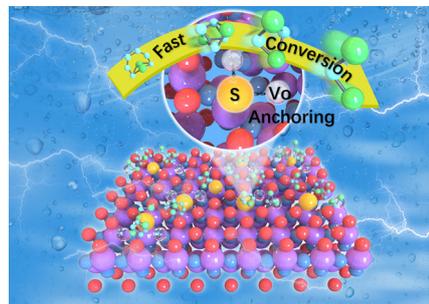
Shengli Zhai, Wanrong Song, Keren Jiang, Xuehai Tan, Wenyao Zhang, Yang Yang, Weifeng Chen, Ning Chen, Hongbo Zeng, Hui Li and Zhi Li\*



5490

### Highly active and stable oxygen vacancies via sulfur modification for efficient catalysis in lithium–sulfur batteries

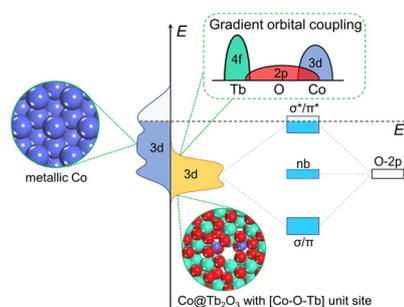
Chenghao Zhao, Bo Jiang, Yang Huang, Xun Sun, Ming Wang, Yu Zhang\* and Naiqing Zhang\*



5500

### Terbium-induced cobalt valence-band narrowing boosts electrocatalytic oxygen reduction

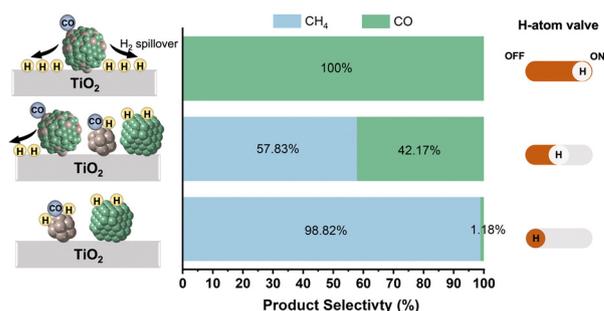
Xuan Wang, Juan Zhang, Pu Wang, Liangcheng Li, Huiyu Wang, Dongmei Sun, Yafei Li, Yawen Tang, Xue Feng Lu,\* Yu Wang\* and Gengtao Fu\*



5513

### Structure-performance correlation on bimetallic catalysts for selective CO<sub>2</sub> hydrogenation

Sibe Zou,\* Lizhuo Wang, Hao Wang, Xingmo Zhang, Haoyue Sun, Xiaozhou Liao, Jun Huang\* and Assaad R. Masri



5525

### Redox mediators for oxygen reduction reactions in lithium–oxygen batteries: governing kinetics and its implications

Youngmin Ko, Kyoungoh Kim, Jaekyun Yoo, Giyun Kwon, Hyeokjun Park, Jihyeon Kim, Byungju Lee, Jun-Hyuk Song, Jinsoo Kim and Kisuk Kang\*

