Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

Journal of Materials Chemistry A

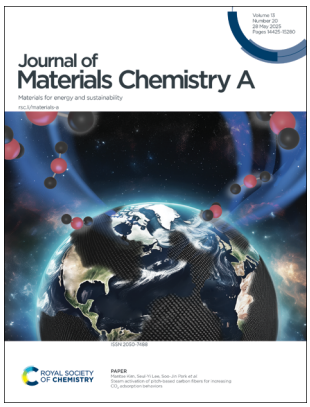
Materials for energy and sustainability

rsc.li/materials-a

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 2050-7488 CODEN JMCAET 13(20) 14425–15280 (2025)



Cover
See Mantae Kim, Seul-Yi Lee, Soo-Jin Park *et al.*, pp. 14580–14587. Image reproduced by permission of Soo-Jin Park from *J. Mater. Chem. A*, 2025, **13**, 14580.

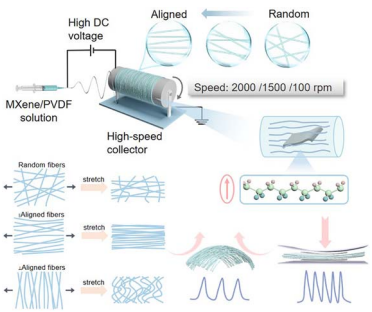
Inside cover
See Ho-Hsiu Chou *et al.*, pp. 14588–14600. Image reproduced by permission of Ya-Ting Chang from *J. Mater. Chem. A*, 2025, **13**, 14588.

COMMUNICATIONS

14446

Confined orientation PVDF/MXene nanofibers for wearable piezoelectric nanogenerators

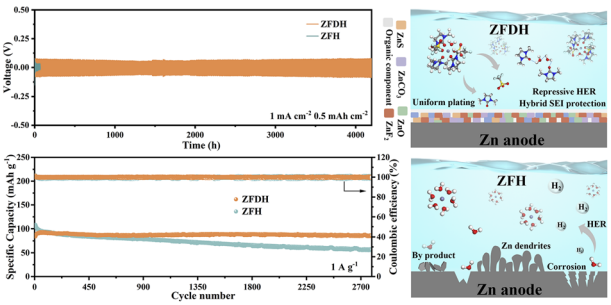
Long Jin, Yong Ao, Tianpei Xu, Jieling Zhang, Yulin Zou, Boling Lan, Shenglong Wang, Weili Deng and Weiqing Yang*



14455

Modulating an anion-enriched Zn^{2+} solvation structure *via* a dual weak interaction for stable zinc–metal batteries

Guimei Yao, Weimin Gao, Rongxian Wang, Jing Xu, Xianfa Rao,* Bingjun Yang,* Lingyang Liu* and Bao Liu*



View Article Online

ROYAL SOCIETY OF CHEMISTRY

GOLD OPEN ACCESS

RSC Applied Polymers

The application of polymers, both natural and synthetic

Interdisciplinary and open access

rsc.li/RSCApplPolym

Fundamental questions
Elemental answers

Registered charity number: 207890

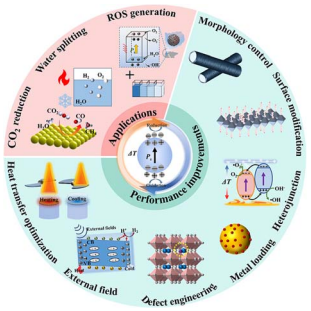
Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

REVIEWS

14465

Toward enhanced pyro-catalysis performance: mechanisms, strategies and challenges

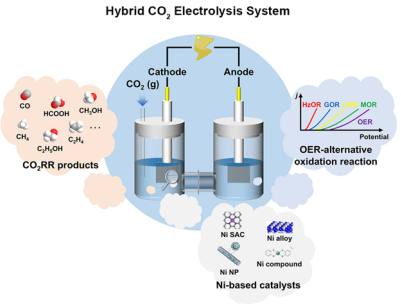
Xiaoli Xu, Wanwan Cheng, Huan Zhai, Ying Wang, Lingbo Xiao,* Jiahui Hou, Jianyang Kong, Laishun Qin, Yanmin Jia, Yan Zhang, Shun Li and Da Chen



14491

Recent advances in Ni-based catalysts for hybrid CO_2 electrolysis

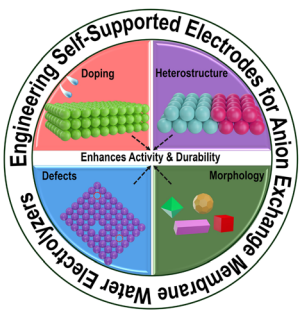
Kang Lian, Junyang Ding, Yifan Liu,* Qian Liu, Yinghong Wu,* Guangzhi Hu and Xijun Liu*



14510

Impact of catalyst engineering on the durability performance of self-supported catalysts in anion exchange membrane water electrolyzers: recent advances and perspectives

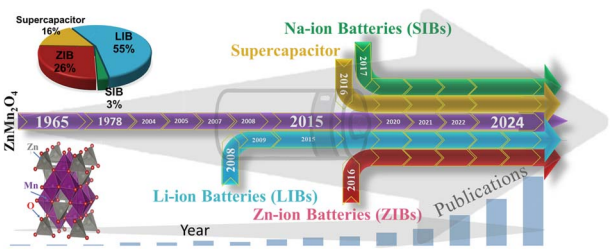
Keerthana Pradeep, A. Anto Jeffery, Arun Prakash Sundaresan, R. Gunaseelan, Saravanan Rajendran,* P. Esakki Karthik,* Young-Ho Ahn* and N. Clament Sagaya Selvam*



14540

$ZnMn_2O_4$ applications in batteries and supercapacitors: a comprehensive review

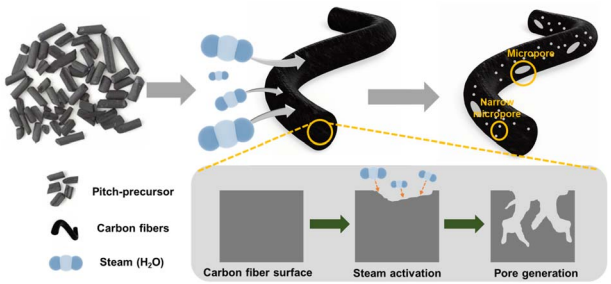
Joel Kingston Ramesh, Sasan Rostami, Jayaprakasan Rajesh, R. Margrate Bhackiyavathi Princess, Radhika Govindaraju, Jinho Kim, Rainer Adelung, Palanisamy Rajkumar* and Mozaffar Abdollahifar*



Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

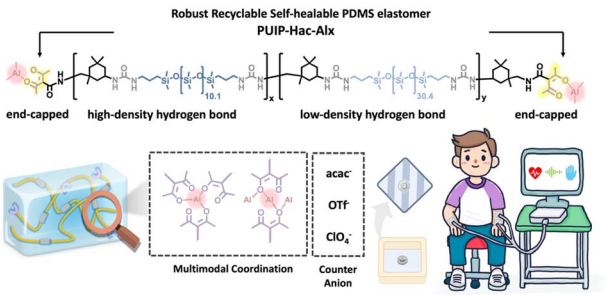
14580



Steam activation of pitch-based carbon fibers for increasing CO_2 adsorption behaviors

Choong-Hee Kim, Mantae Kim,* Jaein Lee, Hokab Choi, Seul-Yi Lee* and Soo-Jin Park*

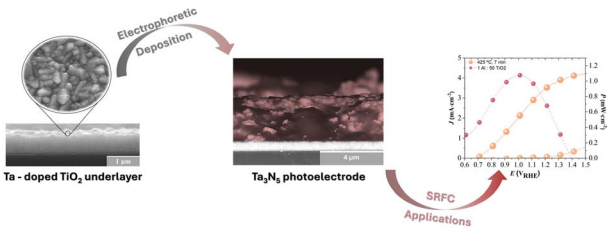
14588



Toughening self-healable and recyclable PDMS supramolecular elastomers through an end-capping agent and a metallic crosslinker

Rou-Han Lai, Yi-An Chen, Chung-Ying Chou, Hung-Yi Huang, Wassana Mongkonkan, Chia-An Chiu, Yan-Heng Chen, Min-Han Yu, Chi-Chang Hu, Siriporn Jungsuttiwong and Ho-Hsiu Chou*

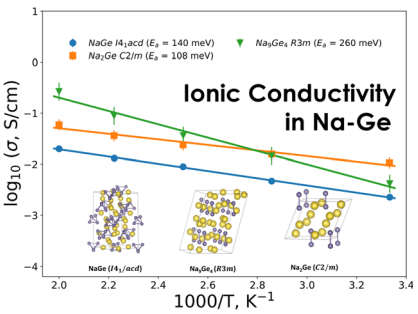
14601



Unlocking the potential of semi-transparent Ta_3N_5 photoelectrodes for high-performance, reproducible solar redox flow cells

Filipe Moisés M. Francisco, Paula Dias* and Adélio Mendes*

14612



Structure transformations and ionic conductivity in germanides of sodium and potassium

Alexey P. Maltsev,* Anastasiia V. Iosimovska, Ilya V. Chepkasov and Artem R. Oganov*

This journal is © The Royal Society of Chemistry 2025

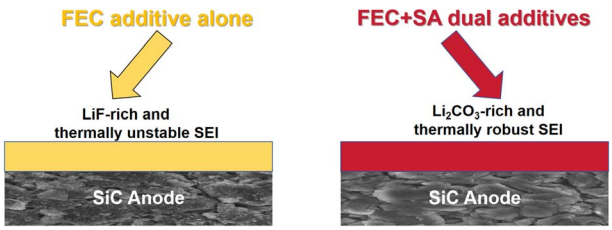
Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

14620

Dual-functional additives enabling a high-performance silicon–carbon composite anode in pouch cells at high temperatures

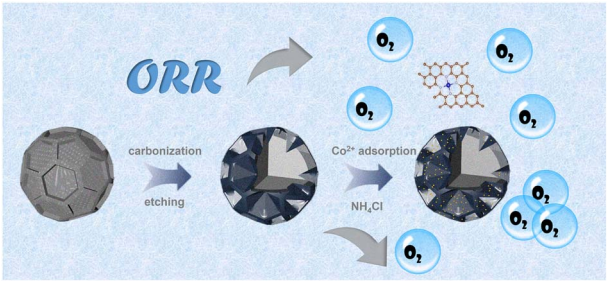
Xiaohe Hou, Jianlong Cong, Shiwen Gong, Zezhuo Li, Yuxuan Shao, Aiqi He, Yuxin Fan* and Yunhui Huang*



14631

Architecting hydrangea-inspired nitrogen-doped hollow carbon with isolated Co atoms for superior oxygen reduction catalysis

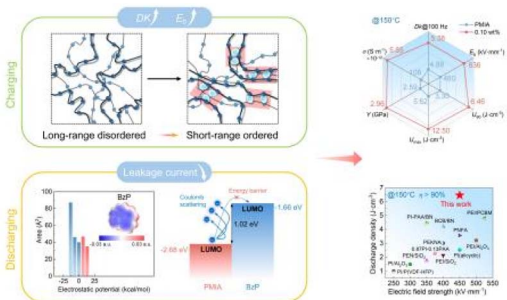
Xiaolan Gao, Yue Li, Zhiqing Zhang, Hao Zhang and Ge Li*



14646

Enhanced high-temperature capacitive energy storage in PMIA-based dielectric films by tailoring a short-range ordered conformation

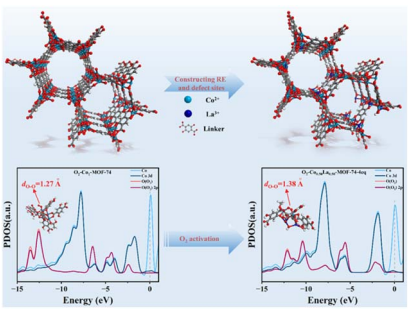
Xiang Yu, Xin Xu, Rui Yang, Wenqi Zhang, Zhipeng Zhang, Yuqi Zhang, Bang Gu* and Sidi Fan*



14655

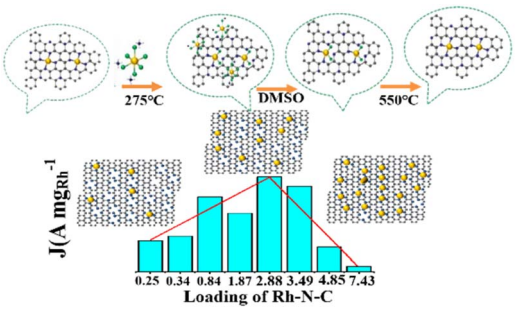
Synergistic regulation of the Co microenvironment in MOF-74 for olefin epoxidation *via* lanthanum modification and defect engineering

Chang'an Wang, Zuoshuai Xi, Tao Ban, Zhiyuan Liu, Yibin Luo, Hongyi Gao,* Ge Wang* and Xingtian Shu*



Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

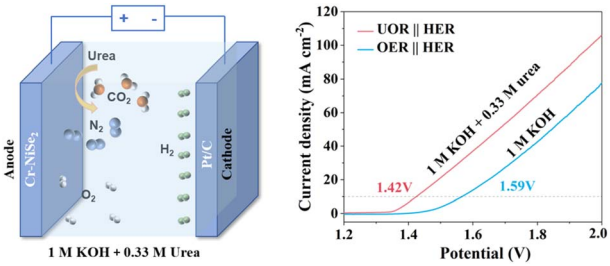
14672



Rh single-atom catalysts with optimized metal loading for direct CO-feed high-temperature proton exchange membrane fuel cells

Chunqiang Zhuang, Huanqiao Li, Xiaoming Zhang, Hong Zhang, Suli Wang* and Gongquan Sun*

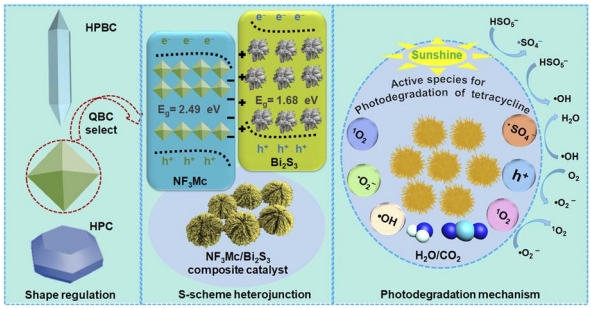
14681



Regulating the electronic states of $NiSe_2$ by Cr-doping to promote formation of active phases for high catalytic performance of the urea oxidation reaction

Shao-Lan Zheng, Hui-Min Xu, Chen-Jin Huang, Hong-Rui Zhu, Chen-Yu Song, Ruo-Zhen Xiong and Gao-Ren Li*

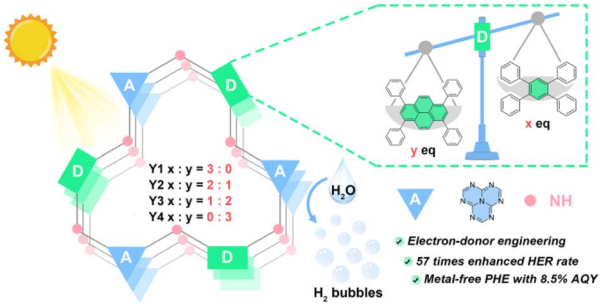
14690



Linker scissoring strategy enables precise shaping of Fe/Mn-MOF to construct an S-scheme heterojunction with Bi_2S_3 for enhanced photoexcitation under peroxymonosulfate activation

Ronghua Zhang, Zaikun Xue, Jiaxin Shao, Zhaolong Li, Hao Liang, Qingshan Li and Ning Yuan*

14708



Electron-donor engineering of heptazine-based donor–acceptor conjugated microporous polymers for efficient metal-free photocatalytic hydrogen evolution

Lin-Fang Yang, Yi-Zhou Zhu,* Cheng-Cheng Zhang and Jian-Yu Zheng*

This journal is © The Royal Society of Chemistry 2025

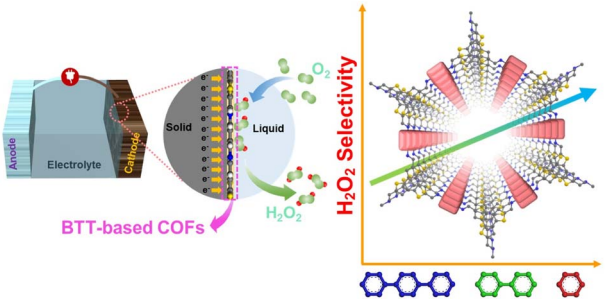
Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

14716

Benzothiophene-based covalent organic frameworks for H_2O_2 electrosynthesis: the critical role of conjugated structure

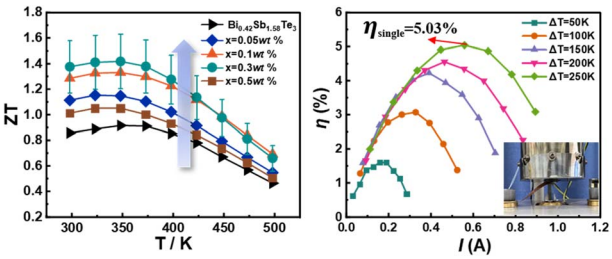
Simin Zhang, Jiawei Xu, Jiayong Lu, Zhijian Liu, Zechen Xiao, Wei Guo, Mo Zhang, Yan Wan* and Yangming Lin*



14726

Synergistic enhancement of thermoelectric and mechanical properties in Bi–Sb–Te alloys enabled by Zn based metal–organic frameworks (ZIF-8)

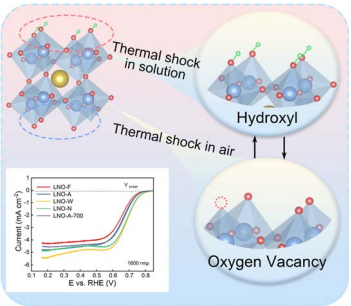
Jiang-Hu Yu, Chong-Yu Wang, Hao Liang, Yang-Wei Wang, Ze-Yuan Yang, Yi-Xin Zhang, Jing Feng and Zhen-Hua Ge*



14737

Optimizing $LaNiO_3$ surface structure for an efficient oxygen reduction reaction

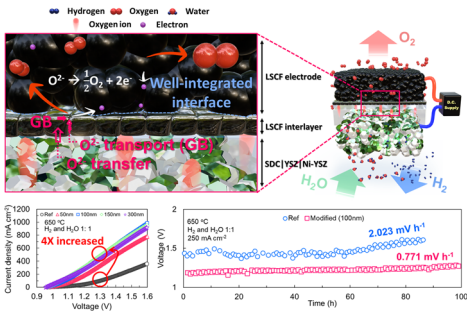
Tianzhen Ren, Lu-Kang Zhao, Xiao Zhang, Xuan-Wen Gao,* Hong Chen, Zhaomeng Liu,* Dongrun Yang and Wen-Bin Luo*



14743

A nanocrystalline $La_{0.6}Sr_{0.4}Co_{0.4}Fe_{0.6}O_{3-\delta}$ interlayer for an enhanced oxygen electrode–electrolyte interface in solid oxide cells

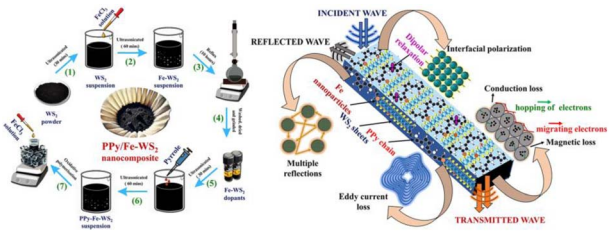
Juhwan Lee, Kyoungjae Ju, Ho Jun Yoo, Sung Eun Jo, Hyunmin Kim, Geonwoo Park, Geongu Han, Woojin Park, Gu Young Cho, Hyong June Kim* and Jihwan An*



Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

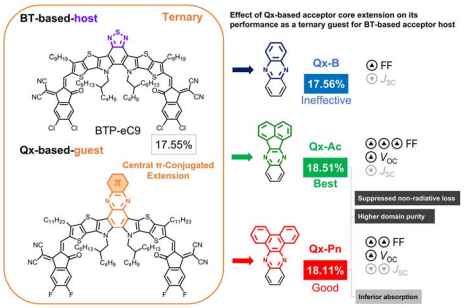
14751



EMI shielding performance of PPy/Fe-WS_2 nanocomposites in the Ku band

Raeesah Islam, Harish Mudila, Ritu Chahal, Anil Ohlan* and Anil Kumar*

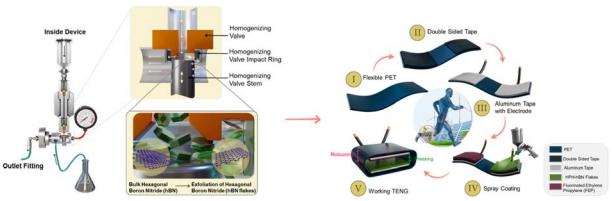
14765



Central π-conjugated extension in quinoxaline-based small-molecule acceptors as guest components enabling high-performance ternary organic solar cells

Chung Hang Kwok, Ho Ming Ng, Chuanlin Gao, Huawei Hu,* Top Archie Dela Peña, Joshua Yuk Lin Lai, Li Chen, Lan Xie, Mingjie Li, Jiaying Wu, Guangye Zhang, Wai-Yeung Wong,* He Yan* and Han Yu*

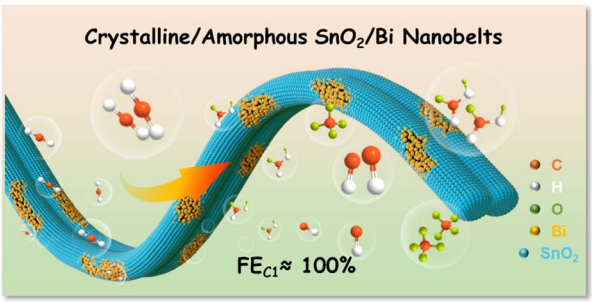
14773



Sustainable high-pressure homogenization of hexagonal boron nitride for triboelectric nanogenerators: advancing self-powered environmental monitoring in portable electronics

Yawar Abbas, Rohan B. Ambade, Muhammad Umair Khan, Rui Chang, Yahya Zweiri, Baker Mohammad, Dalaver Anjum* and Yarjan Abdul Samad*

14786



***In situ* construction of a crystalline/amorphous interface in SnO_2/Bi nanobelts for efficient CO_2 electroreduction**

Hanjun Li, Guangtong Hai,* Zhenyu Wang, Xin Chen, Shuxing Bai, Nan Zhang* and Tianxi Liu*

This journal is © The Royal Society of Chemistry 2025

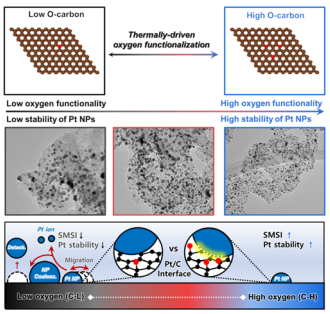
Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

14796

Thermally driven oxygen functionalization for durable Pt electrocatalysts in the oxygen reduction reaction

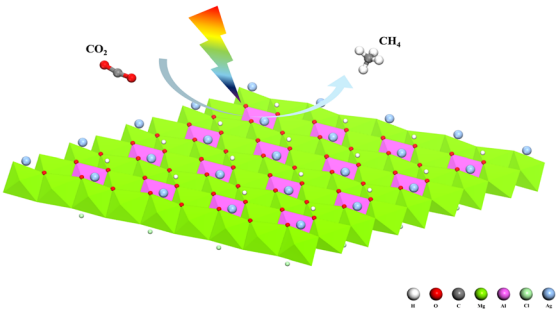
Min Woo Kim, Jong Min Lee, Chi-Young Jung, Jung-Eun Cha, Kwang Shik Myung, Nam Jin Lee, Nam Dong Kim* and Jae Young Jung*



14809

Ag single-atom modification of MgAl-LDH to enhance the CH_4 product selectivity in CO_2 reduction: a DFT study

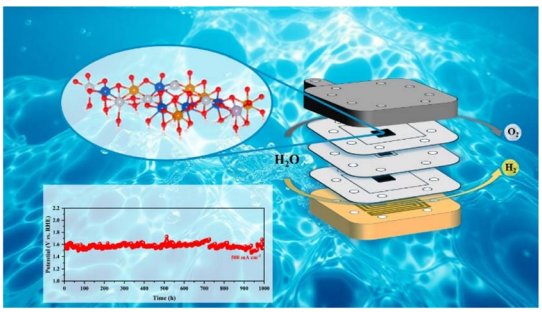
Yi-fu Liu, Feng Yang* and Rui-tang Guo*



14822

Multimetallic layered double hydroxides as efficient and durable oxygen evolution catalysts for anion exchange membrane water electrolysis at high current densities

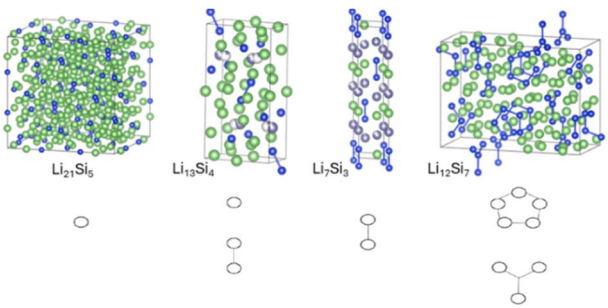
Yaowen Xu, Kaiyang Xu, Hao Tan, Haoliang Huang, Fei Lin, Chenyue Zhang, Jingwei Wang, Run Ran, Jinfeng Zeng, Zhipeng Yu, Sitaramanjaneya Mouli Thalluri, Lijian Meng, Dehua Xiong* and Lifeng Liu*



14836

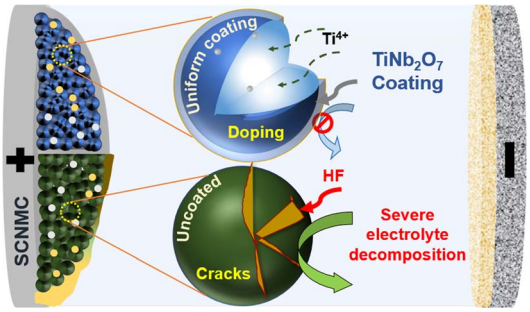
Thermal expansion of lithiated silicon ($Li_{13}Si_4$ and Li_7Si_3) anodes: a powder neutron diffraction study

Atia Azad,* Katherine Bateman, Matthew Irvine, Aaron B. Naden, Stewart A. M. Dickson, Ronald I. Smith, Richard K. B. Gover and John T. S. Irvine



Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

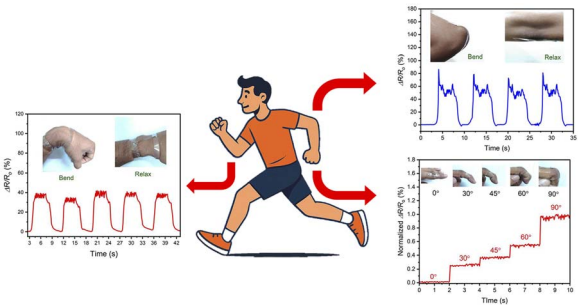
14846



Boosting stability in Ni-rich cathodes: a synergistic approach to surface and bulk modifications for advanced lithium-ion batteries

Shadab Ali Ahmed, Tripti Agnihotri, Ashok Ranjan, Chia-Yu Chang, Chun-Chi Chang, Rehbar Hasan, Yosef Nikodimos, Teklay Mezgebe Hagos, She-Huang Wu,* Wei-Nien Su* and Bing Joe Hwang*

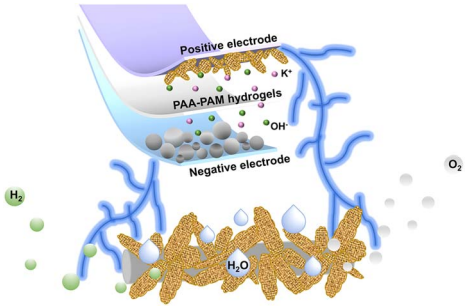
14858



A CNT- and ZnO nanorod-incorporated fish gelatin nanocomposite towards developing flexible pressure/strain sensors for human motion monitoring

Salvin Mustakim, Md Abdul Momin, Md Abul Kalam, Tetsu Mieno, Manisha Ahamad and Mohammad Jellur Rahman*

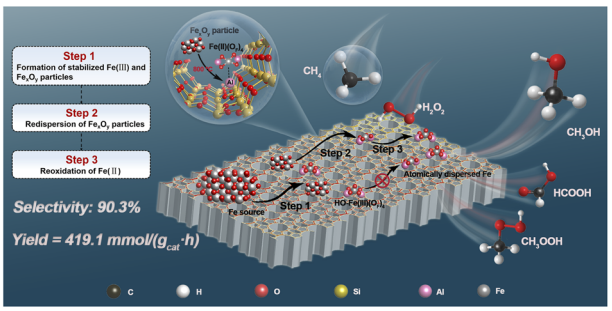
14873



***In situ* formation of heterojunction of thiophene-based metal–organic frameworks with carbon dots for efficient overall water splitting and supercapacitor applications**

Qianqian Wang, Xiaoyan Ma,* Ran Bi, Xiangpan Hu, Senyang Song, Pengcheng Ma and Fang Chen

14884



Speciation evolution of iron species within ZSM-5 for selective methane oxidation: from redispersion to activation

Xia Chen, Shuqing Li, Lu Bai, Jiong Li, Yu Fu* and Jun Zhang*

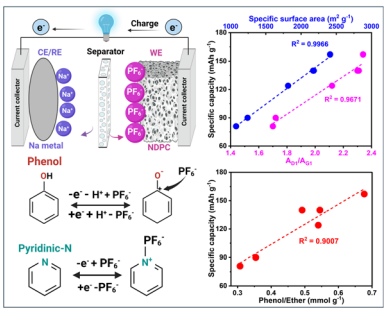
This journal is © The Royal Society of Chemistry 2025

Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

14896

Engineering nitrogen-doped porous carbon positive electrodes for high-performance sodium-ion capacitors: the critical role of porosity, structure and surface functionalities

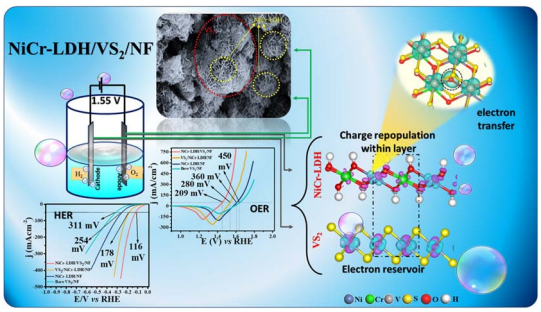
Ademola Adeniji, Adrian Beda, Philippe Fioux and Camelia Matei Ghimbeu*



14915

Revolutionizing water splitting performance by probing the influence of electron transfer on the NiCr-LDH/VS_2/NF heterostructure

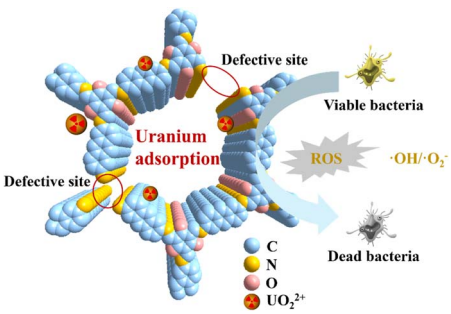
Aditi De, Pandiarajan Devi, Palanichamy Murugan and Subrata Kundu*



14928

Defect engineering in β-ketoenamine-linked covalent organic frameworks for high-efficiency uranium extraction

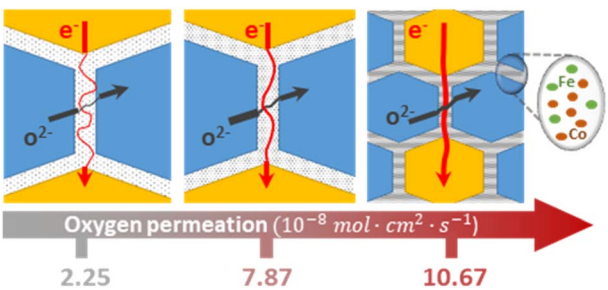
Douchao Mei and Bing Yan*



14940

A novel mixed-conducting network in all-oxide composites: overcoming traditional percolation constraints

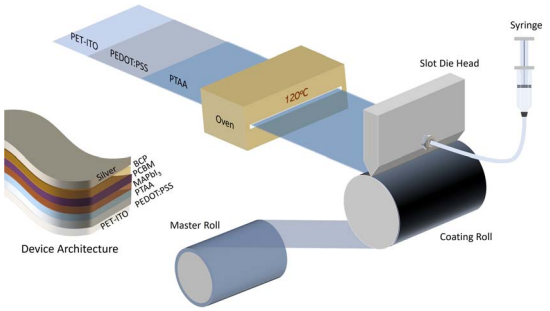
Fanlin Zeng,* Ke Ran, Christian Dellen, Hartmut Schlenz, Joachim Mayer, Ruth Schwaiger, Wilhelm Albert Meulenberg and Stefan Baumann



Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

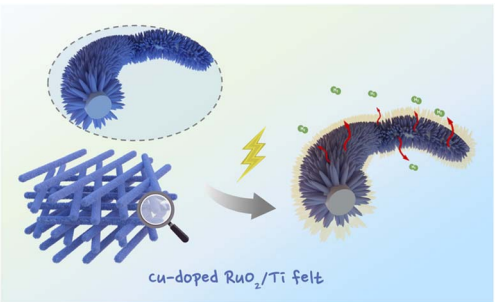
14957



Roll-to-roll slot-die coating of PTAA with PEDOT:PSS buffer layer for perovskite solar cells: coating analysis by XPS mapping

Rahul Patidar,* James McGettrick, Rodrigo Garcia-Rodriguez, Chris Griffiths, Kathryn Lacey, Ershad Parvazian, David Beynon, Matthew Davies and Trystan Watson*

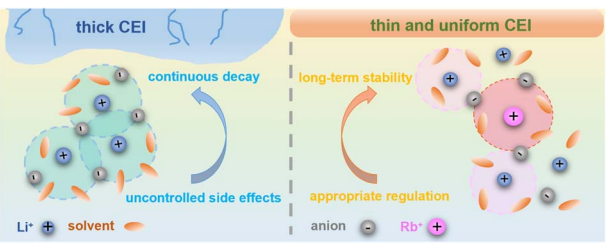
14964



Cu dopants as electron buffers for stabilizing Ru-based active layers for hydrogen evolution

Xinyu Wang, Tongtong Liu,* Jingjing Wang, Bowen Xia, Yanfei Wang,* Zhilin Li, Zhengping Zhang* and Feng Wang*

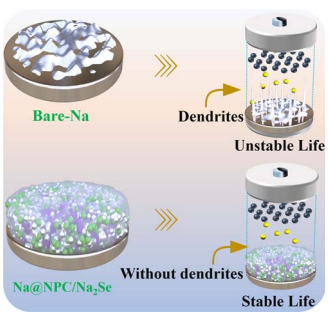
14972



Establishing a long-term stable cathode–electrolyte interphase through multi-cationic competitive coordination for 4.6 V $LiCoO_2$

Yujie Wang, Tingting Cui,* Netanel Shpigel, Zihao Meng, Fuhui Liang, Tianju Fan* and Yonggang Min*

14982



Introduction of a multifunctional percolated framework into Na metal for highly stable sodium metal batteries

Sikandar Iqbal, Aadil Nabi Chishti, Moazzam Ali, Javed Rehman, Fakhr uz Zaman, Ting Luo, Muhammad Ali, Samia Aman, Hamid Hussain, Huiqin Huang, Shakeel Ahmad Khandy, Yinzhu Jiang* and Muhammad Yousaf*

This journal is © The Royal Society of Chemistry 2025

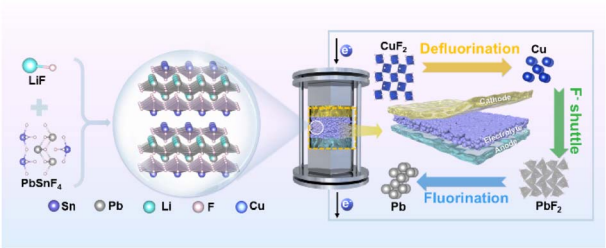
Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

14995

LiF doped β-$PbSnF_4$ with improved ionic conductivity toward high-performance all-solid-state fluoride-ion batteries

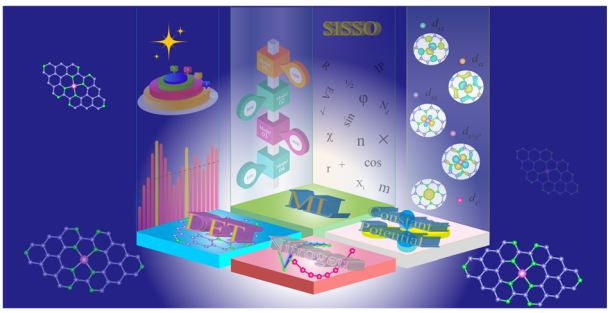
Tianyi Shen, Shaowei Li, Ke Yue, Jiale Zheng, Yile Ding, Shuangyu Song, Chenglong Li, Rongzeng Jin, Yiqun Wu, Yutong Wang, Yao Wang, Jianwei Nai, Yujing Liu, Peng Shi, Shihui Zou, Jianmin Luo,* Huadong Yuan* and Xinyong Tao*



15002

Breaking the Brønsted–Evans–Polanyi relationship in N_2 adsorption driven by potential-dependent repositioning of frontier orbitals: a sweet marriage of machine learning-assisted screening and the electric double-layer effect

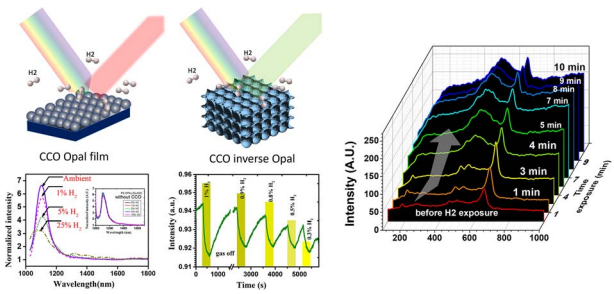
Yali Lu, Ning Guo, Qiang Zhang,* Zongjin Hu, Chenglong Shi, Weiju Hao, Yuling Song, Qingjun Zhou and Jianglong Mu



15016

Novel $CuCo_2O_4$ photonic crystals for optical hydrogen sensing: catalyst-free detection and mechanistic insights *via in situ* Raman spectroscopy

S. Silpa, Nidha Mariyam, Kritika Sharu, Saptak Majumder, Joy Mitra and Vinayak B. Kamble*



15031

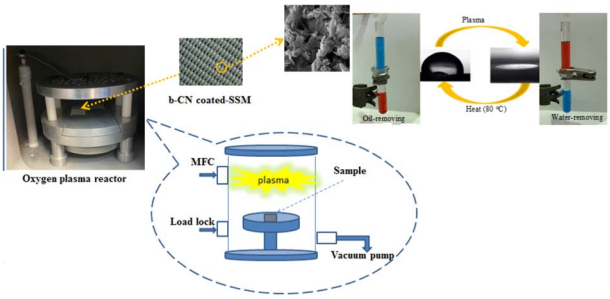
Mixed anion *closo*-carbaborates as Na-superionic conductors

Jakob B. Grinderslev, Therese S. S. Kjær, Lasse N. Skov and Torben R. Jensen*

Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

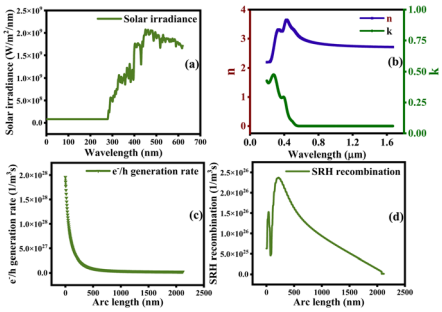
15040



Development of a smart plasma-treated nano-filter using carbon nitride nanostructures for oil–water emulsion separation: experimental and theoretical studies

Sonia Mir, Alimorad Rashidi,* Abbas Naderifar, Abdolvahab Seif, Pier Luigi Silvestrelli and Julio A. Alonso

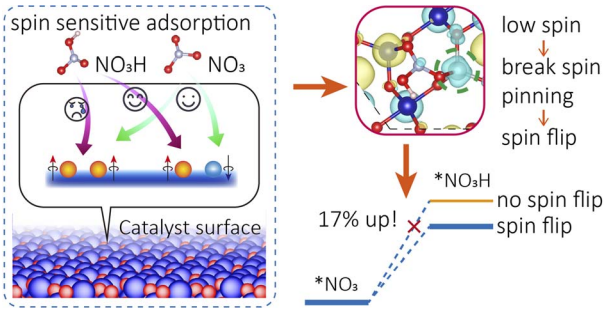
15057



Influence of acceptor/donor densities and layer thicknesses on the efficiency of 2D ZnO/BFO/spiro-OMeTAD perovskite solar cells: a COMSOL simulation-based optimization

Muhammad Umar Salman, Muhammad Bilal, Yumnah Khan Karmani, Umair Ali, Shahid M. Ramay, M. Younis and Shahid Atiq*

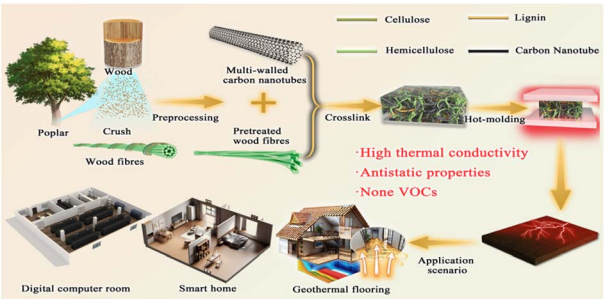
15067



Role of magnetic exchange in catalytic spin effects: insights from nitrite reduction on Co_3O_4

Haoyun Bai, Junxian Liu, Di Liu, Shuyang Peng, Hongling Liu, Kin Ho Lo, Hui Pan* and Liangzhi Kou*

15075



Sustainable wood fiber composites with antistatic and high-thermal-conductivity performance for energy-efficient home environments

Yang Yang, Lei Zhang, Shengbo Ge,* Hongfei Huo, Kai Huang, Mashallah Rezakazemi* and Zhongfeng Zhang*

This journal is © The Royal Society of Chemistry 2025

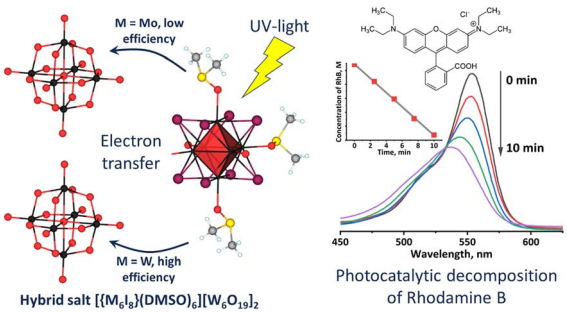
Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

15088

Unity of opposites: stabilization of cationic M_6 metal cluster and anionic Lindqvist-type polyoxotungstate in hybrid salts and synergism in photodegradation of organic pollutants

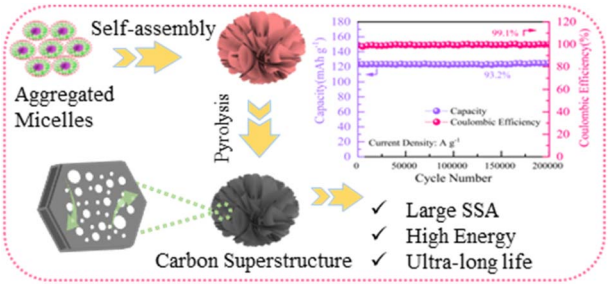
Anton A. Petunin, Arina V. Tomilenko, Darya V. Evtushok, Anton A. Ivanov, Alexey A. Ryadun, Taisiya S. Sukhikh, Igor P. Asanov, Michael A. Shestopalov and Yuri A. Vorotnikov*



15101

Hydrogen-bond-guided micellar self-assembly-directed carbon superstructures for high-energy and ultralong-life zinc-ion hybrid capacitors

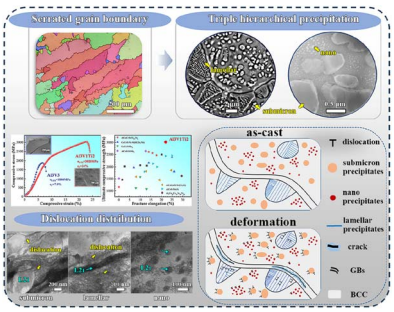
Shreeti Jha, Yang Qin, Yumin Chen, Ziyang Song, Ling Miao,* Yaokang Lv, Lihua Gan* and Mingxian Liu*



15111

Triple hierarchical precipitation and serrated grain boundaries strengthened co-free medium-entropy alloys

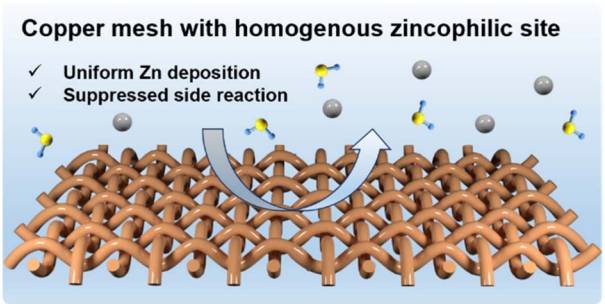
Peng Sang, Ningning Liang, Yi Liu, Lei Gu, Zan Zhang and Yongsheng Li*



15118

Uniformly dispersed zincophilic Cu sites on copper mesh enable a dendrite-free Zn metal anode

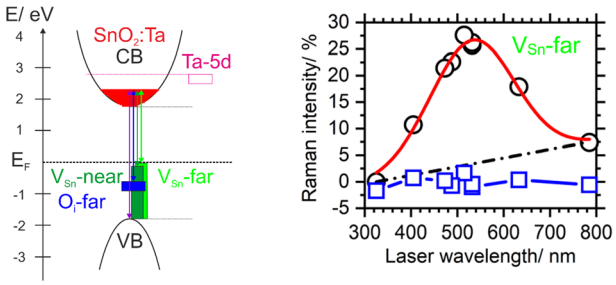
Dandan Liu, Qi Wang, Wanying Fang, Ge Tian, Xiaobo Chen, Huijuan Yue* and Shouhua Feng



Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

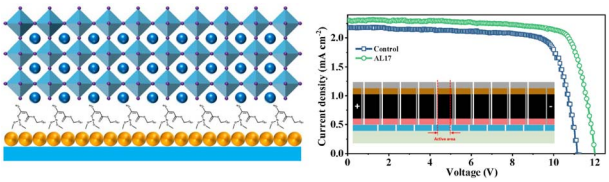
15128



Resonant defect states of the SnO_2:Ta transparent conductive oxide revealed by excitation wavelength-dependent Raman spectroscopy and hybrid functional DFT calculations

Matthias Krause,* Carlos Romero-Muñiz, Oleksandr Selyshchev, Dietrich R. T. Zahn and Ramon Escobar-Galindo

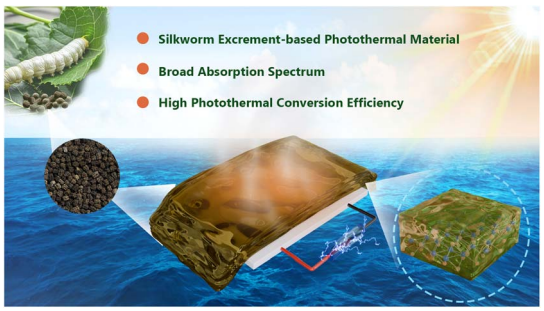
15140



Enhancing inverted perovskite solar cells *via* hydrophilic surface modification of NiO_x using aluminate coupling agents

Hanhong Zhang, Wenjing Hou, Yuanlong Deng, Jun Song* and Fan Zhang*

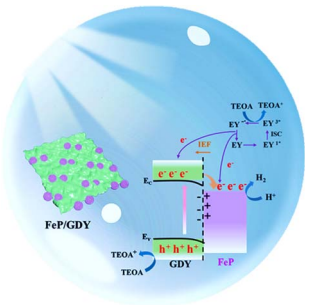
15149



High-performance biomass-based solar-thermal hydrogel based on silkworm excrement for water evaporation and thermoelectric integration application

Shuqing Ao, Zhifei Chen, Haoyang Chen, Liuke Zhang, Yanan Wang, Yingyuan Zhang, Tao Jia,* Gaolei Xi* and Tai Peng*

15157



Boosting visible-light hydrogen evolution *via* d-band center engineering in an FeP/graphdiyne heterointerface

Nini Zhao, Jingzhi Wang, Zhengyu Zhou, Miao Wang, Kai Wang* and Zhiliang Jin

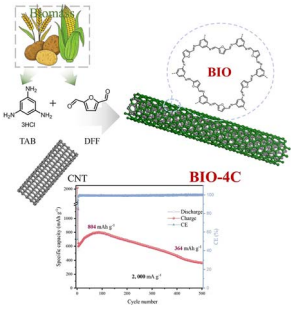
This journal is © The Royal Society of Chemistry 2025

Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

15169

Facile synthesis of a biomass-based sustainable covalent organic network (CON) anode for high-performance LIBs

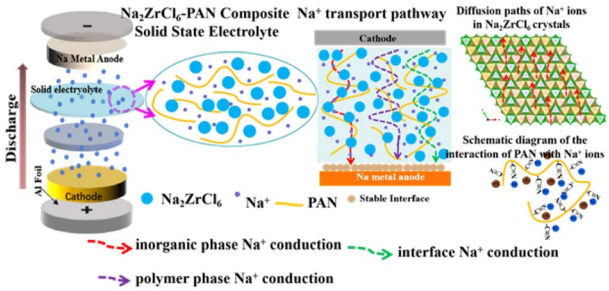
Changyu Weng, Hongmei Yuan, Yuxin Ji, Weidong Liu, Longlong Ma and Jianguo Liu*



15178

Dendrite-free, interfacially compatible Na_2ZrCl_6 composite halide solid-state electrolyte for solid-state sodium-ion batteries

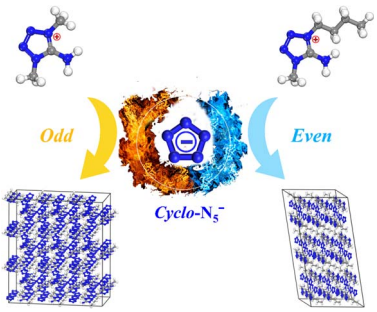
Hualing Tian, Jiajia Li, Yanjun Cai,* Xiang Yao and Zhi Su*



15189

The effects of cationic odd–even alkyl chains on the crystal structure and energetic properties of *cyclo*-N_5^- salts

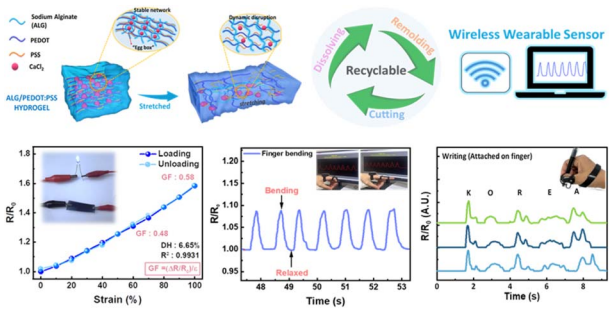
Zhiyu Jin, Bin Song, Xiang Chen, Lei Shi, Feng Zhao, Pengxiang Gao, Chong Zhang* and Bingcheng Hu*



15200

Recyclable, conductive alginate-based hydrogels with high stretchability and low electrical hysteresis for wireless wearable sensors

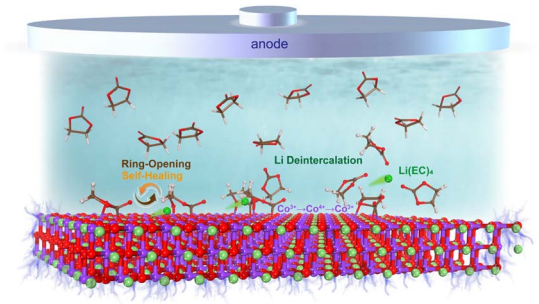
Yulia Shara br Sembiring, Truong Tien Vo, Siti Aisyah Nurmaulia Entifar, Anky Fitrian Wibowo, Jung Ha Kim, Nisa Aqilla Ellenahaya Entifar, Jang Hyeok Lee, Si Won Baek, Soo In Lee, Min Seong Kim, Sang Min Jeon, Jincheol Kim, Junghwan Oh* and Yong Hyun Kim*



Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

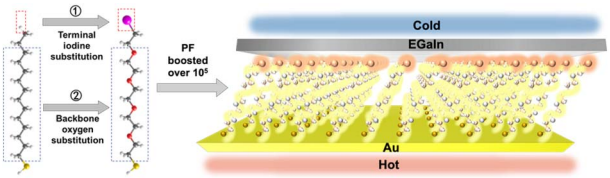
15213



Microscopic insights into the ring-opening reaction of ethylene carbonate on $LiCoO_2$ by on-the-fly machine learning molecular dynamics

Fanghui Mi, Ying Ou, Rui Luo, Shixian Wang, Zhijun Zhang,* Chunwen Sun,* Zhaoxiang Wang* and Yurui Gao*

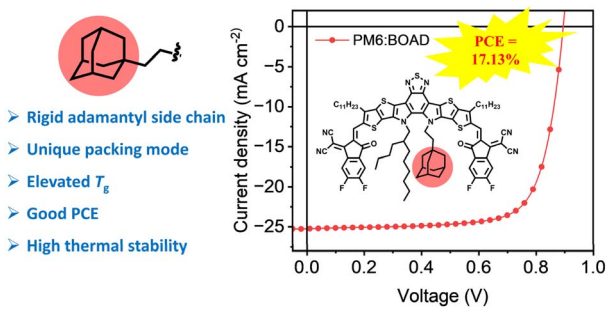
15222



Heteroatom engineering for enhancing the thermoelectric power factor of molecular junctions

Wuxian Peng, Ningyue Chen, Yu Xie, Liang Ma,* Jing-Tao Lü* and Yuan Li*

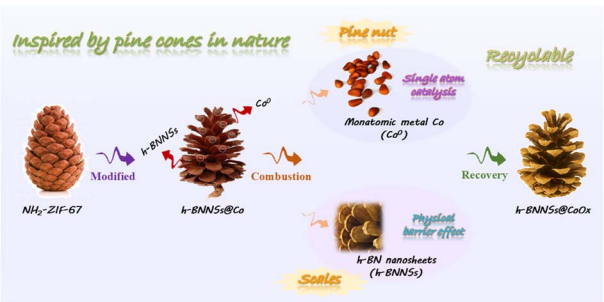
15232



Chemical modification of a small-molecule acceptor with an adamantyl side chain for efficient and thermally stable organic solar cells

Yecheng Shen, Yiming Wang, Chenhe Wang, Yimei Zhang, Shanghui Su, Yibo Hu, Yuxuan Zhu, Caiwei Zhang, Mengting Wang, Xiukun Ye, Guang-Peng Wu, Zaifei Ma, Haiming Zhu, Minmin Shi* and Hongzheng Chen*

15240



Fire-safe polymer composites enabled by a nature-inspired MOF-derived single atom catalysis strategy for thermal management with recyclability

Xue Bi, Jinhu Hu, Zeqi Zhang, Ye-Tang Pan,* Wenchao Zhang, Jun Sun, Xiaodong Qian, Pingan Song, Jiyu He* and Rongjie Yang

This journal is © The Royal Society of Chemistry 2025

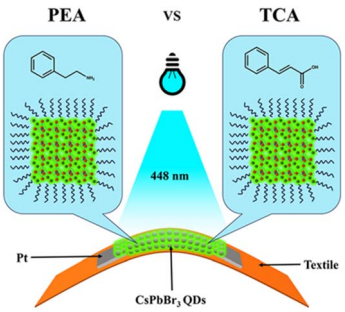
Open Access Article. Published on 20 May 2025. Downloaded on 1/19/2026 3:56:46 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

PAPERS

15257

Organic shell engineering of $CsPbBr_3$ perovskite quantum dots for efficient textile-based photodetectors

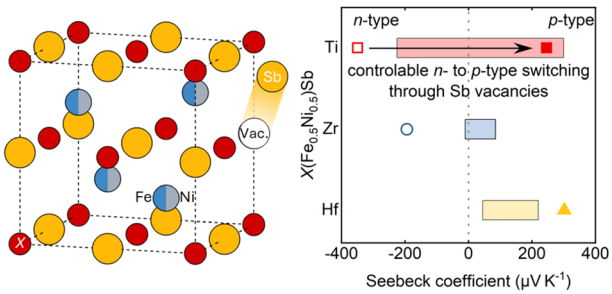
Jan Nawrocki, Vishnu Anilkumar, Guobin Jia, Apurba Mahapatra,* Piotr Bernatowicz, Jan Dellith, Gayatri, Mateusz Raczyński, Arka Karmakar, Pankaj Yadav, Seckin Akin, Benjamin Dietzek-Ivanšić, Maciej R. Molas, Jonathan Plentz and Daniel Prochowicz*



15268

Pivotal role of Sb vacancies in quaternary half-Heusler thermoelectrics

Illia Serhiienko, Michael Parzer, Fabian Garmroudi, Andrei Novitskii, Naohito Tsujii, Tarachand, Ernst Bauer, Yuri Grin and Takao Mori*



CORRECTION

15278

Correction: Efficient ethane production *via* $SnCl_4$ Lewis acid-enhanced CO_2 electroreduction in a flow cell electrolyser

Sankeerthana Bellamkonda,* Ian Brewis, Venkateswara Rao Gedela, Rana Faisal Shahzad, Mohamed Mamlouk and Shahid Rasul*