

Journal of Materials Chemistry A

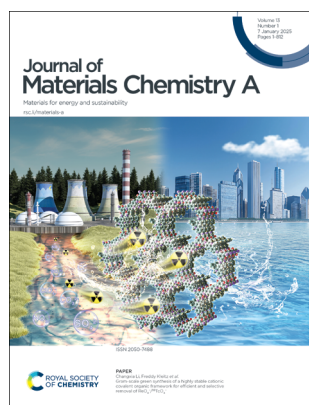
Materials for energy and sustainability

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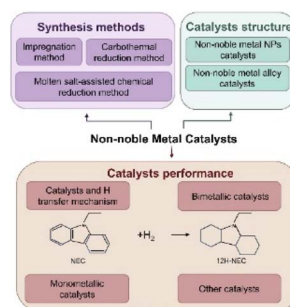
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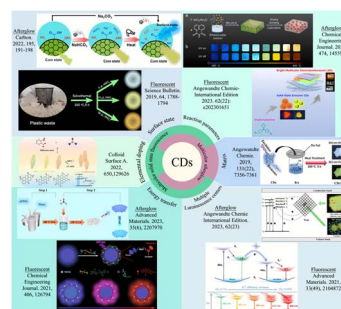
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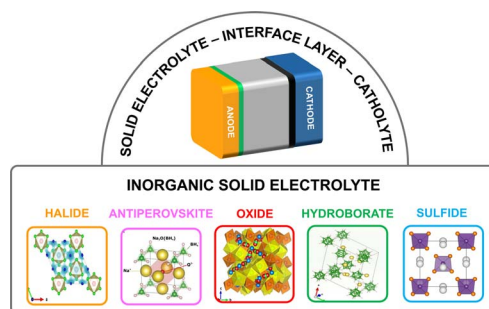
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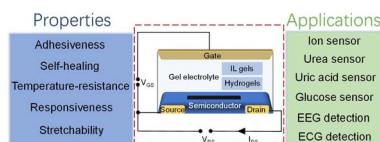
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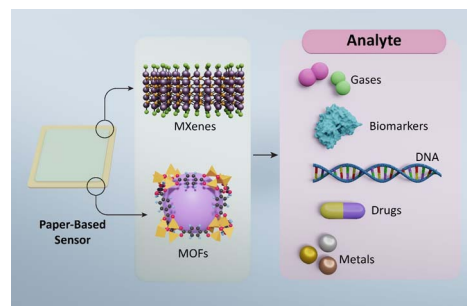
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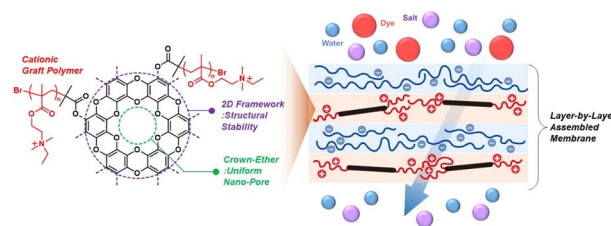


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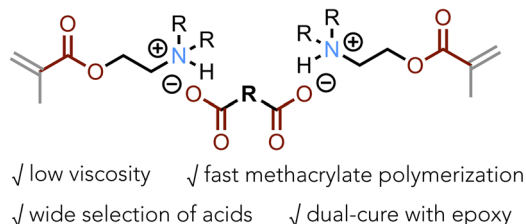
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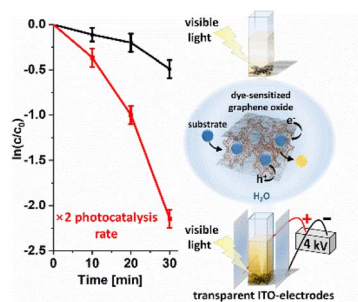
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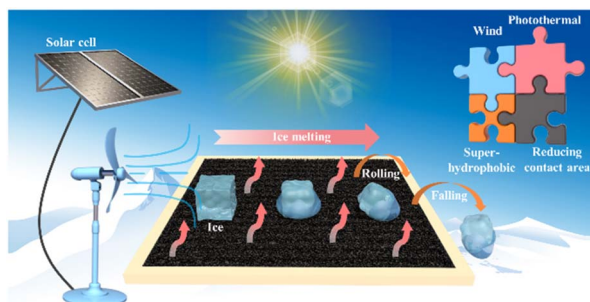
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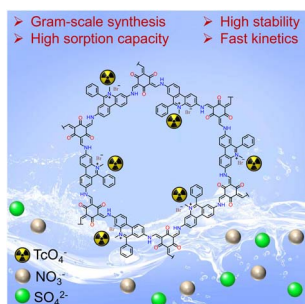


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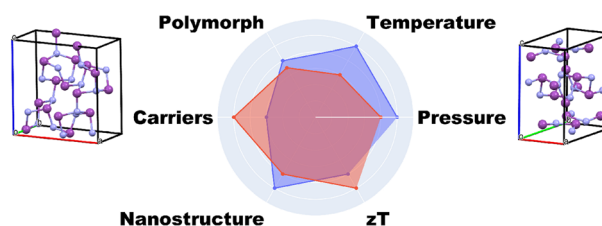


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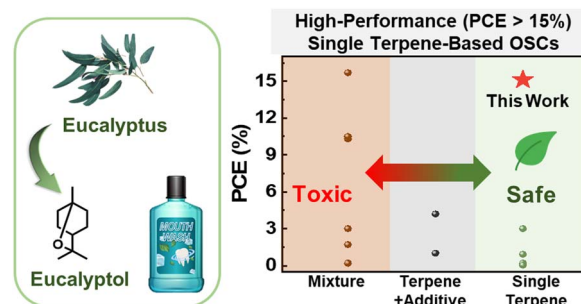
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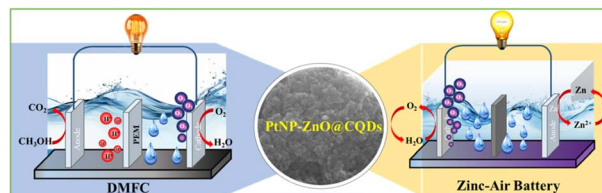
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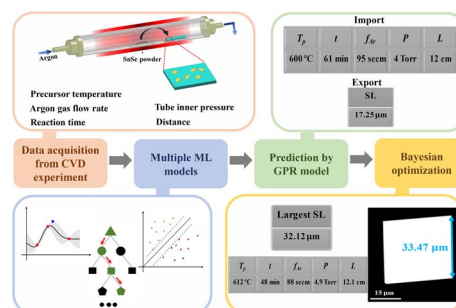
Anup Kumar Pradhan, Sayan Halder and Chanchal Chakraborty*



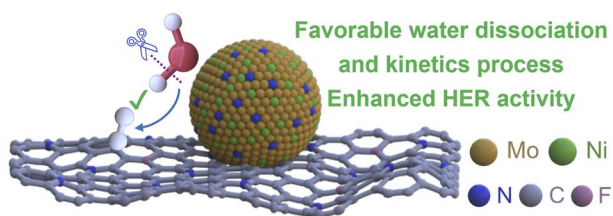
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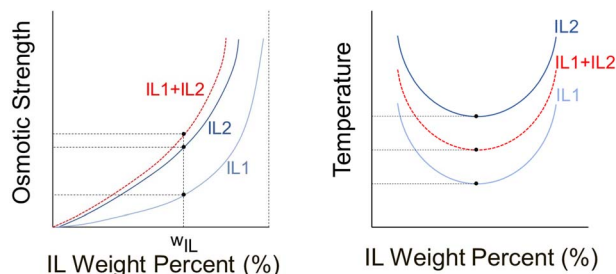
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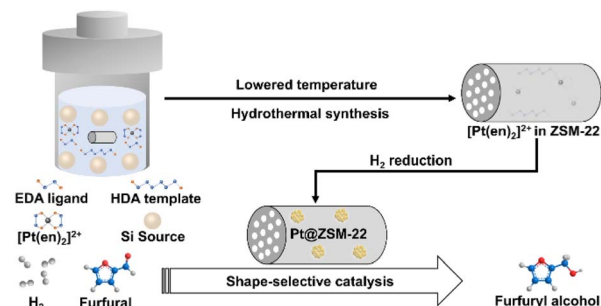
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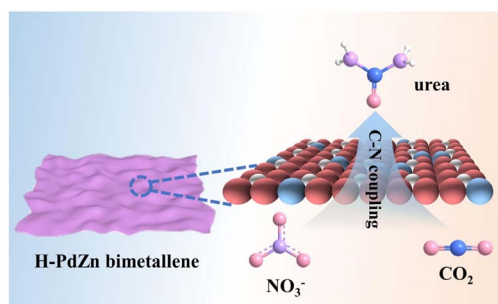
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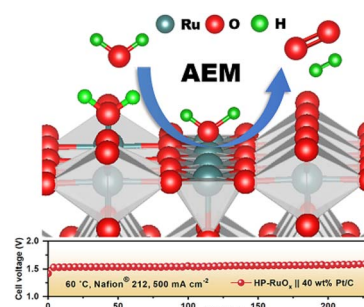


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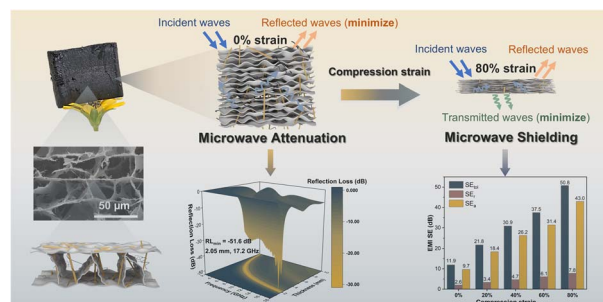
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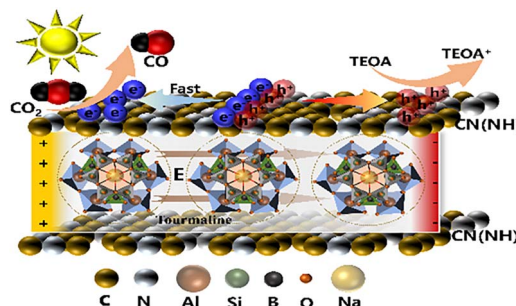
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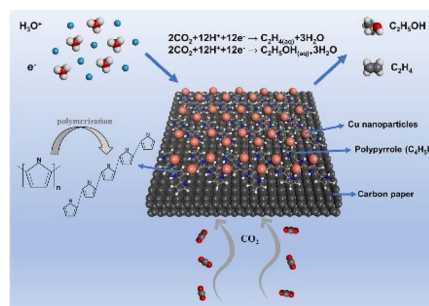
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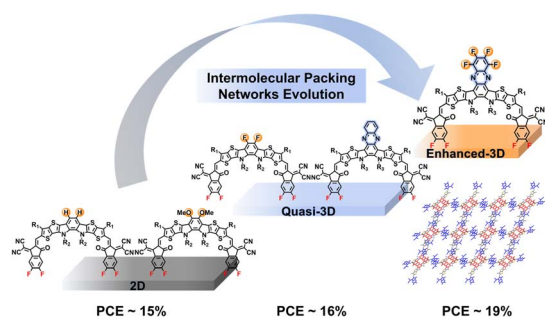
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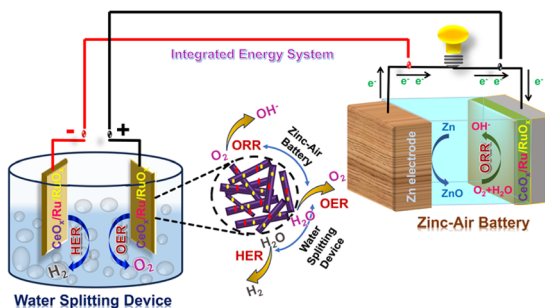
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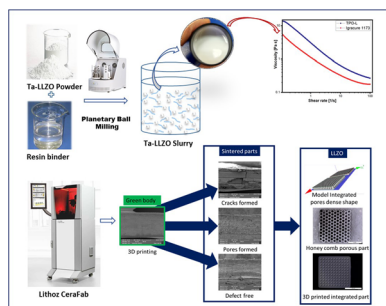
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Synergistic influence of multivalent $\text{Ru}^{\delta+}$ on a CeO_x nanocatalyst for self-powered efficient electrochemical water splitting

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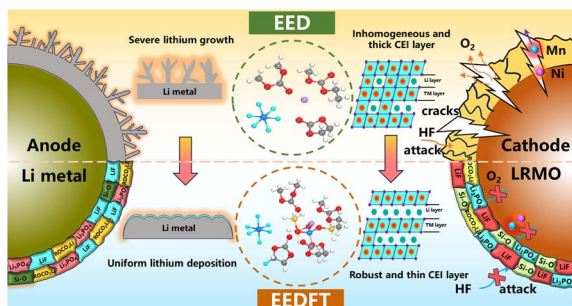
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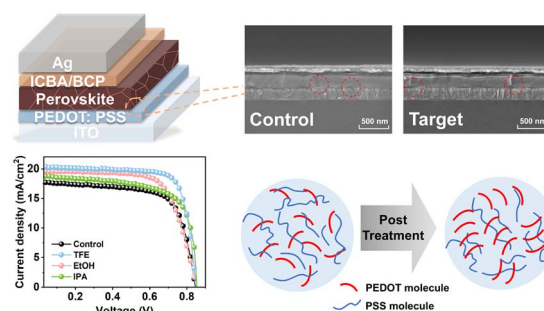
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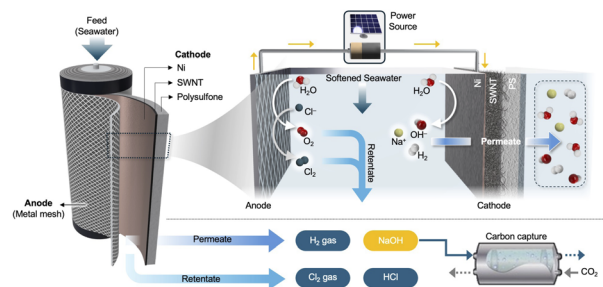
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Efficient caustic and hydrogen production using a pressurized flow-through cathode

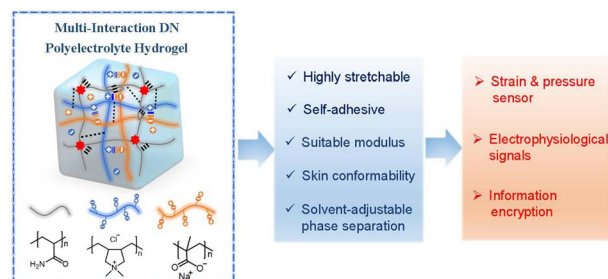
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A multi-interaction conductive double-network polyelectrolyte hydrogel with high stretchability, self-adhesion, and tunable transparency for bioelectronic sensing and information encryption

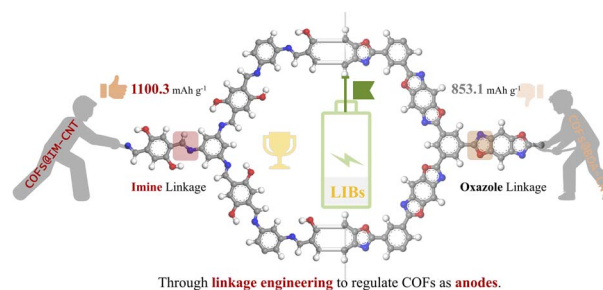
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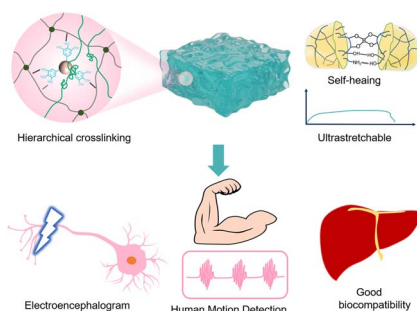
Changyu Weng, Hongmei Yuan, Jie Wang, Longlong Ma and Jianguo Liu*



Through linkage engineering to regulate COFs as anodes.



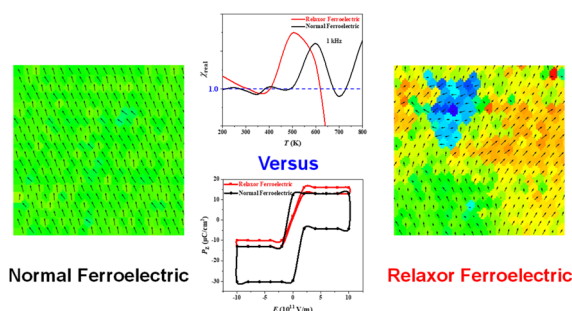
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Hierarchical hybrid crosslinking multifunctional gelatin-based hydrogel: ideal platforms for flexible wearable devices, brain–computer interfaces and biomedical applications

Chang Xu, Shiqiang Guan, Hao Zhang, Weiwang Fan, Xijing Zhuang* and Xufeng Dong*

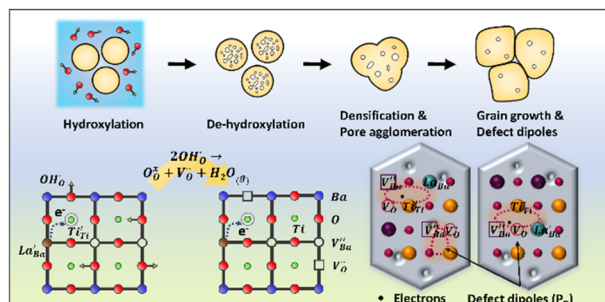
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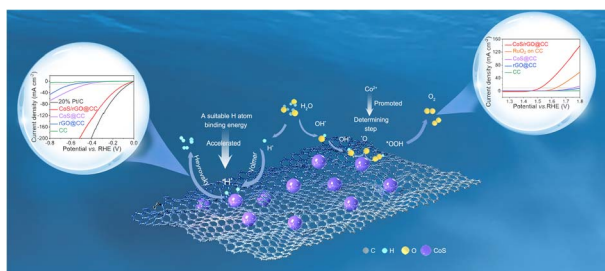
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Seung Yong Lee, Jung Hwan Song, Jiseop Oh and Do Kyung Kim*

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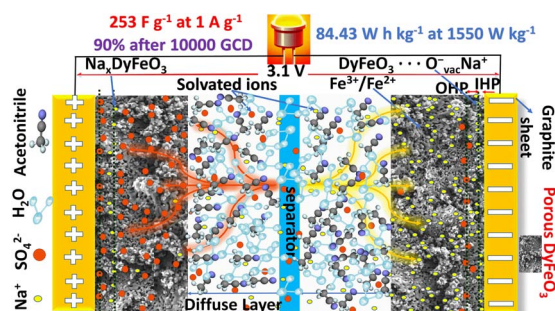
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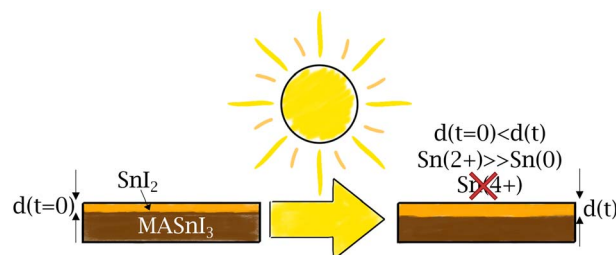
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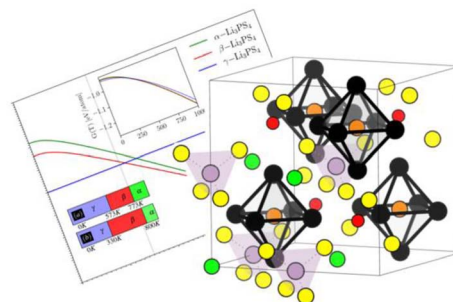
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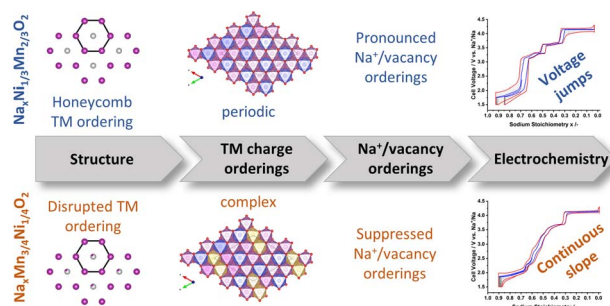
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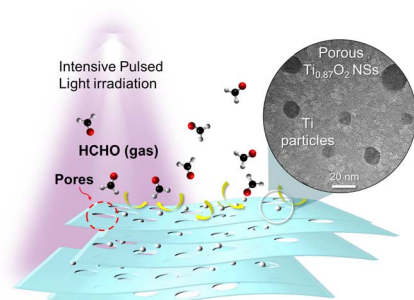
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From structure to electrochemistry: the influence of transition metal ordering on Na⁺/vacancy orderings in P2-type Na_xMO₂ cathode materials for sodium-ion batteries

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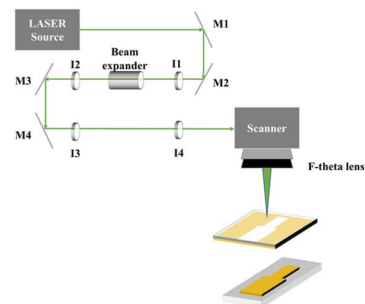
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Ultrafast formation of porosity and heterogeneous structures on 2D oxides via momentary photothermal effect

Ahrom Ryu, Bo-In Park, Hyun-Jae Lee, Jung-Won An, Jeong-Jun Kim, Sahn Nahm, Seong H. Kim, Byungju Lee,* Ji-Won Choi* and Ji-Soo Jang*

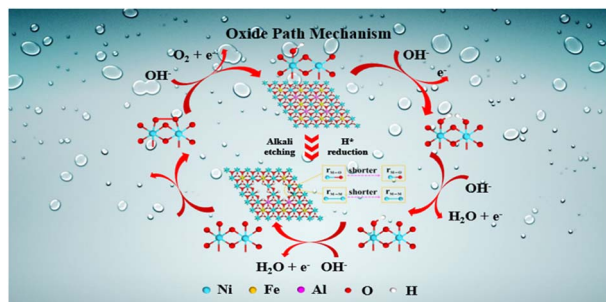
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Non-enzymatic low-level glucose detection electrode fabricated via single-step laser-induced forward transfer

Pong-Ping Liu, Shing-Fung Lau and Chien-Fang Ding*

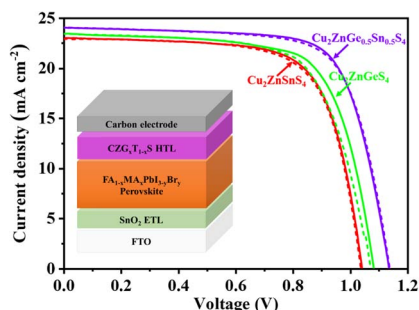
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Atomic cation and anion co-vacancy defects boosted the oxide path mechanism of the oxygen evolution reaction on NiFeAl-layered double hydroxide

Zhaoyan Li, Duo Wang, Hongguang Kang, Zhongning Shi, Xianwei Hu, Hongbin Sun and Junli Xu*

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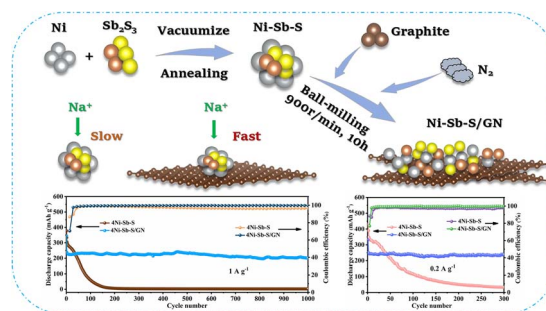
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Enhanced electrochemical performance of NiSbS/NiSb/NiS nanocomposites anchored on graphite nanosheets for sodium-ion battery applications

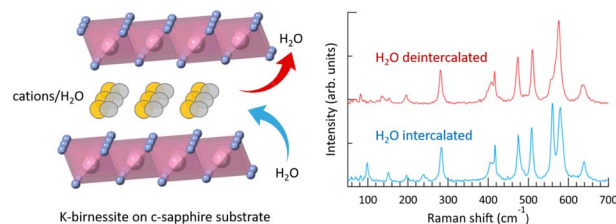
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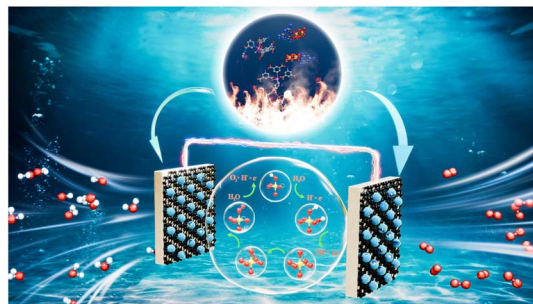
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Co-MOF-derived core-shell CoP@Co₃O₄ nanoparticle loaded N-doped graphene: an efficient catalyst for the oxygen evolution reaction

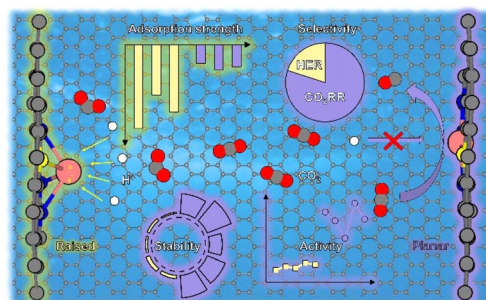
Xian-Chen Meng, Jian Luan,* Yi Liu, Yu-Shu Sheng, Fu-Yu Guo, Peng Zheng, Wen-Long Duan* and Wen-Ze Li*



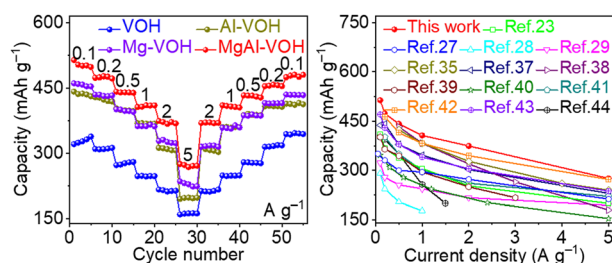
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Structural rule of heteroatom-modified single-atom catalysts for the CO₂ electroreduction reaction

Xinyuan Sui, Haiyang Yuan* and Yu Hou*



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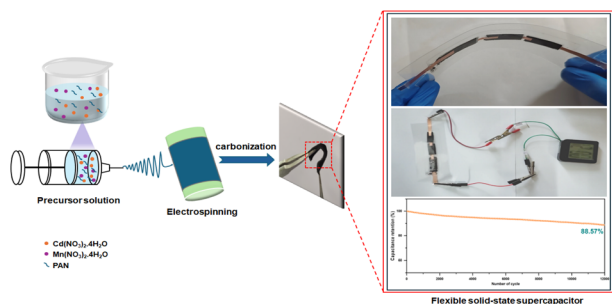
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Co nanoparticles encapsulated in N-doped carbon nanotube materials derived from new metal–organic frameworks for oxygen electrocatalysis

Jieling Zhang, Weiran Suo, Yu Han, Yiwen Cao, Yuhang Xu, Mengying Wang, Zuozhong Liang,* Yuan Wang,* Haoquan Zheng* and Rui Cao*

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Fabrication and electrochemical evaluation of flexible spinel CdMn_2O_4 carbon nanofibers for advanced supercapacitor applications

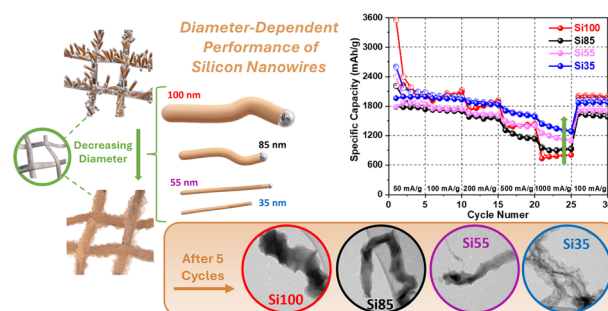
Akashkumar P. Patel, Deep S. Sharma, Sanjay N. Bariya, Yash G. Kapdi, Jaydip D. Solanki, Saurabh S. Soni, Vaibhav K. Patel* and Sanjay H. Panjabi*



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Diameter dependent performance of silicon nanowire anodes grown on 3D current collectors for lithium-ion batteries

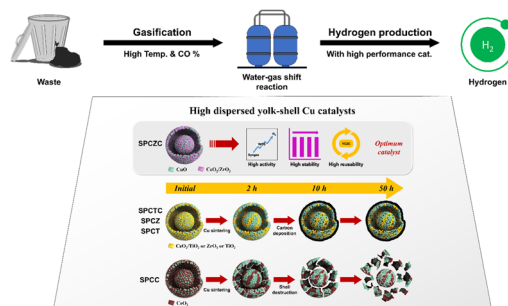
Mei Li, Niraj Nitish Patil, Shalini Singh, David McNulty* and Kevin M. Ryan*



704

Highly dispersed copper-based nanocomposite synthesis via spray pyrolysis: towards waste-to-hydrogen production through the water-gas shift reaction

I-Jeong Jeon, Jae Seob Lee, Kun Woo Baek, Chang-Hyeon Kim, Ji-Hyeon Gong, Won-Jun Jang,* Jung Sang Cho* and Jae-Oh Shim*

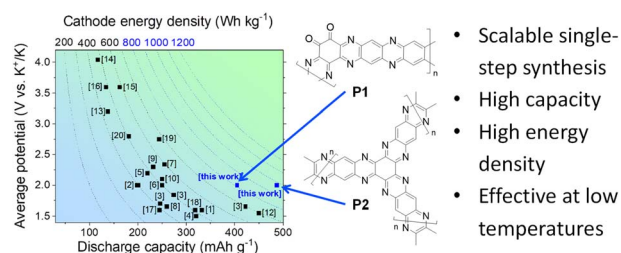


721

Potassium batteries for low temperature applications using high energy density organic cathodes

Elena V. Shchurik, Alexander V. Mumyatov, Ivan S. Zhidkov, Tatiana A. Savinykh, Guzaliya R. Baymuratova, Alexander F. Shestakov, Olga A. Kraevaya* and Pavel A. Troshin*

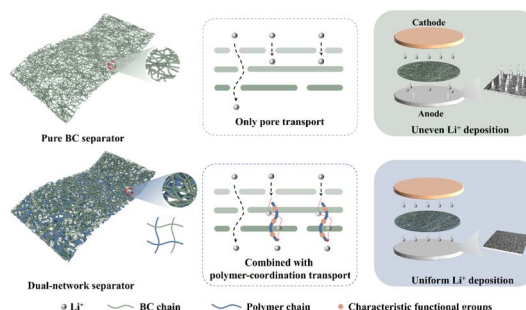
Promising organic cathodes for potassium batteries



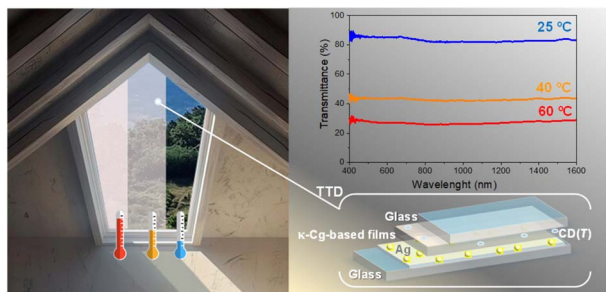
730

Dual-network bacterial cellulose-based separators with high wet strength and a dual ion transport mechanism for uniform lithium deposition

Chen Cheng, Rendang Yang, Yang Wang,* Xiaohui Guo and Jie Sheng



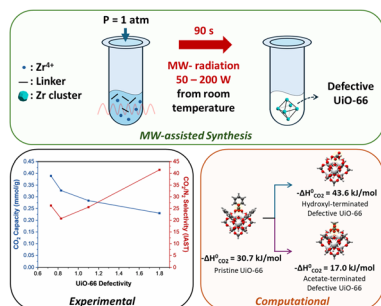
743



Eco-friendly innovation: three-mode sun-actuated thermotropic devices integrating κ -carrageenan-based film doped with *Arundo donax* leaf-derived carbon dots and 1-butyl-3-methyl-1*H*-imidazolium chloride

S. C. Nunes,^{*} T. A. G. Duarte, R. F. P. Pereira, L. Fu, R. A. S. Ferreira, P. Almeida and V. de Zea Bermudez^{*}

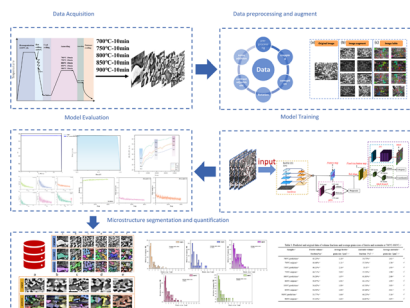
762



Rapid one-pot microwave-assisted synthesis and defect engineering of UiO-66 for enhanced CO₂ capture

Dong A. Kang, Amro M. O. Mohamed, Christian Murphy, Andres Ramos, Ioannis G. Economou, Jinsoo Kim^{*} and Hae-Kwon Jeong^{*}

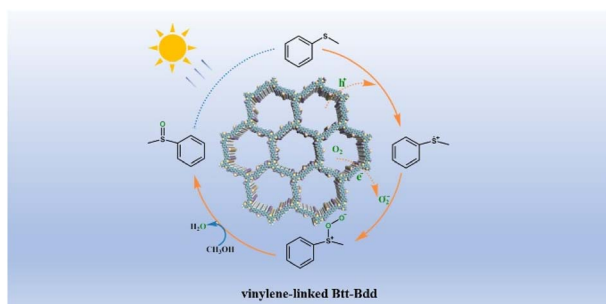
772



An automatic segmentation and quantification method for austenite and ferrite phases in duplex stainless steel based on deep learning

Lun Che, Zhongping He,^{*} Kaiyuan Zheng, Xiaotian Xu and Feng Zhao

786



Vinylene-linked donor-acceptor covalent organic polymers with low exciton binding energy for enhanced photocatalytic oxidation of sulfides

Wenhao Liu, Yujie Li, Fang Duan,^{*} Haiping Liu, Yanyan Ren, Shengrong Yan, Shuanglong Lu, Mingliang Du, Xin Chen and Jun Wang^{*}

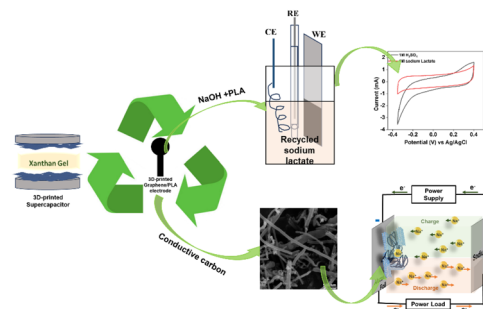


PAPERS

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Recyclable HF-free $\text{Ti}_3\text{C}_2\text{T}_x$ 3D-printed supercapacitors: their second life in sodium-ion batteries

Bindu Kalleshappa and Martin Pumera*



EXPRESSIONS OF CONCERN

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Expression of concern: Reduced graphene oxide nanosheets decorated with Au, Pd and Au–Pd bimetallic nanoparticles as highly efficient catalysts for electrochemical hydrogen generation

Gitashree Darabdhara, Mohammed A. Amin,* Gaber A. M. Mersal, Emad M. Ahmed, Manash R. Das,* Mohamed B. Zakaria, Victor Malgras, Saad M. Alshehri, Yusuke Yamauchi, Sabine Szunerits and Rabah Boukherroub*

809

Expression of concern: Construction of desert rose flower-shaped NiFe LDH- Ni_3S_2 heterostructures via seawater corrosion engineering for efficient water-urea splitting and seawater utilization

Zhao-Hui Zhang, Zhi-Ran Yu, Yi Zhang, Alexandre Barras, Ahmed Addad, Pascal Roussel, Long-Cheng Tang, Mu. Naushad, Sabine Szunerits and Rabah Boukherroub*

810

Expression of concern: Preparation of reduced graphene oxide- $\text{Ni}(\text{OH})_2$ composites by electrophoretic deposition: application for non-enzymatic glucose sensing

Palaniappan Subramanian, Joanna Niedziolka-Jonsson, Adam Lesniewski, Qian Wang, Musen Li, Rabah Boukherroub and Sabine Szunerits*

