Materials Horizons

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IN THIS ISSUE

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Cover
See Keeyoung Jung, Inchul Park *et al.*, pp. 727–735.
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Inside cover
See Ki Yoon Bae, Ji Hoon Lee *et al.*, pp. 736–747.
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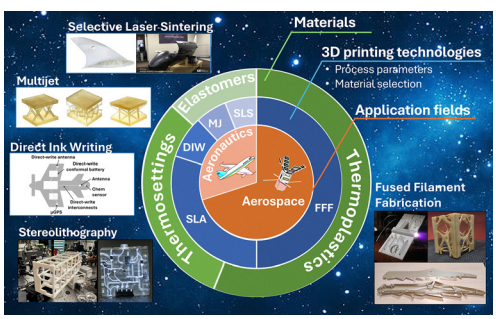
EDITORIAL

REVIEWS



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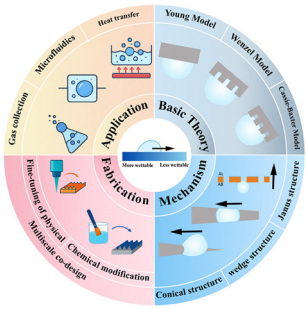

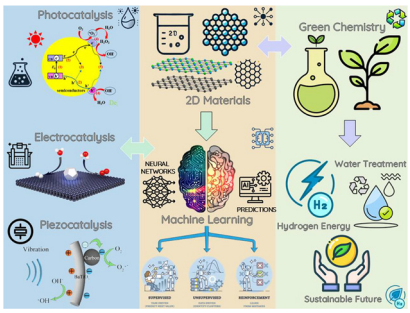

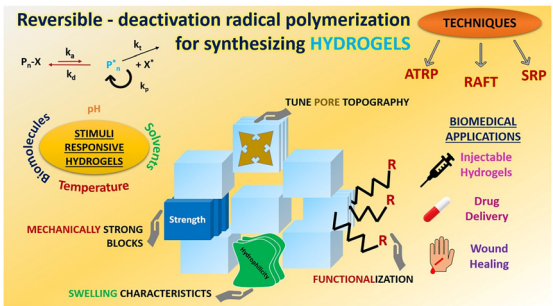

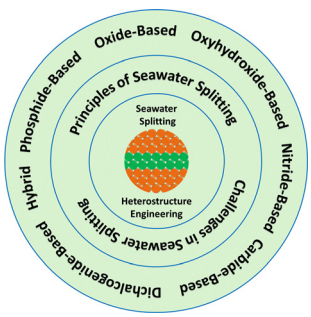

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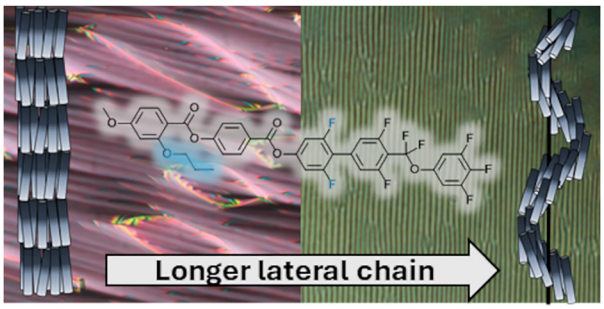

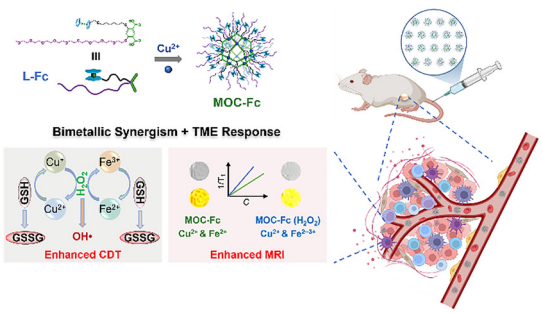

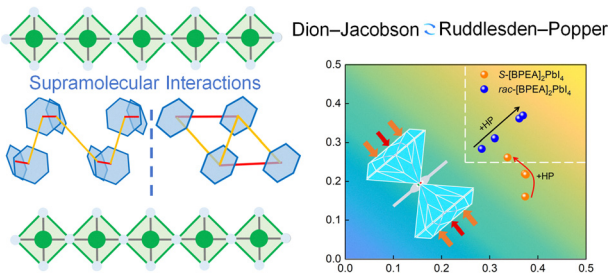

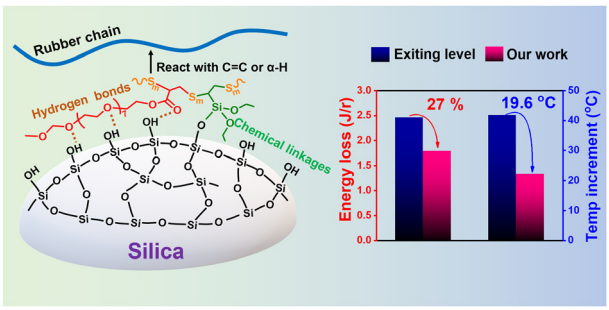

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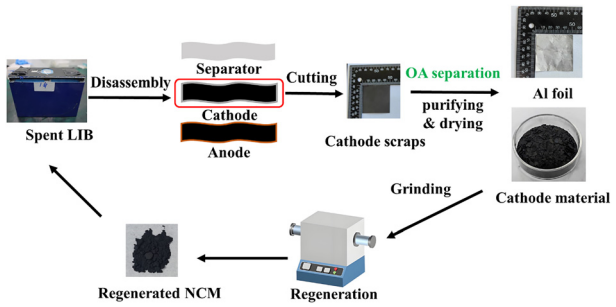
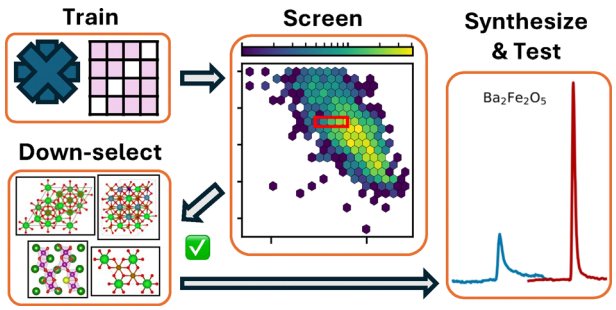
819



Efficient separation of the NCM cathode material and Al foil from spent lithium-ion batteries with oxalic acid under mild conditions

Yuzhang Xiao, Zhi Gao, Weihao Lin, Guangyao Yang, Sikai Peng, Yihong Tong, Weiliang Peng,* Bin Yuan,* Renzong Hu and Wei Min Huang

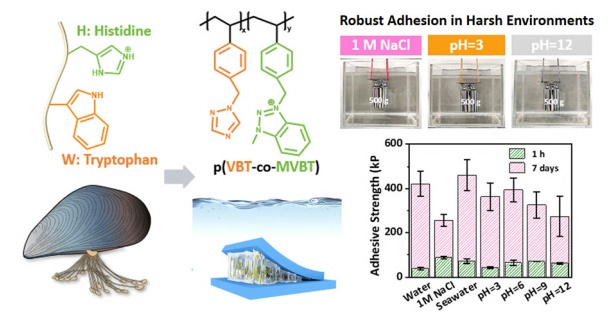
829



Large-scale experimental validation of thermochemical water-splitting oxides discovered by defect graph neural networks

Tyra C. Douglas, Michael J. Dzara, Andrew J. E. Rowberg, Keith A. King, Maria Syrigou, Nicholas A. Strange, Robert T. Bell, Anuj Goyal, Pin-Wen Guan, Robert B. Wexler, Joel B. Varley, Tadashi Ogitsu, Stephan Lany, Anthony H. McDaniel, Sean R. Bishop* and Matthew D. Witman*

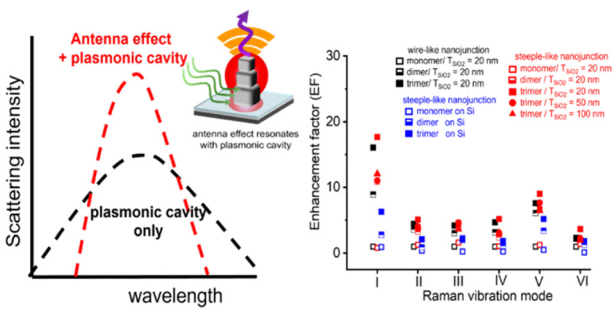
840



Biomimetic underwater adhesives based on IL-mediated coacervation

Yuming Deng, Haochen Ni, Yueman Tang, Bingjie Liu, Hongyao Ding, Gaopeng Wang, Si Yu Zheng* and Jintao Yang*

851



Introducing plasmonic antenna nanojunctions into nanocavity structures to confine and enhance their local electromagnetic fields

Yu-Hsun Liao, Li-Kai Luo and Su-Wen Hsu*

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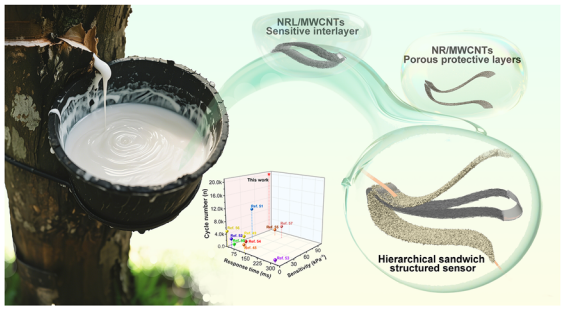

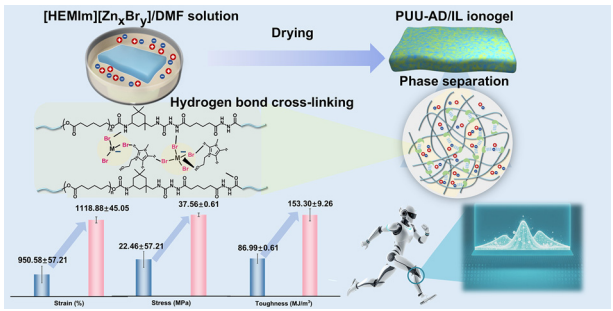

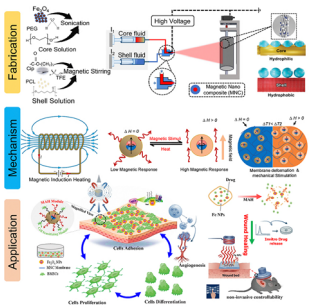

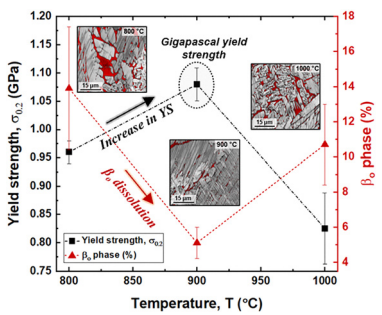

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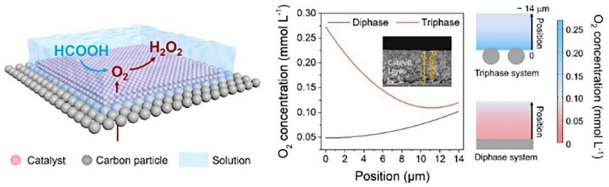

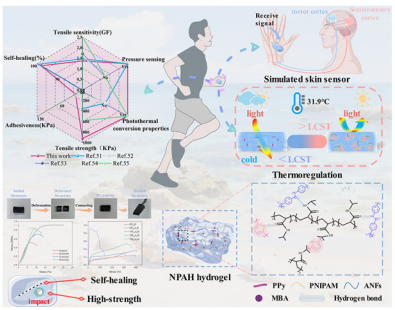

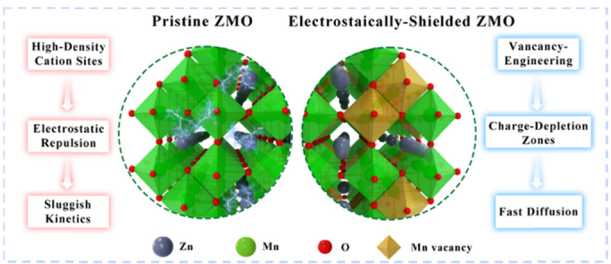

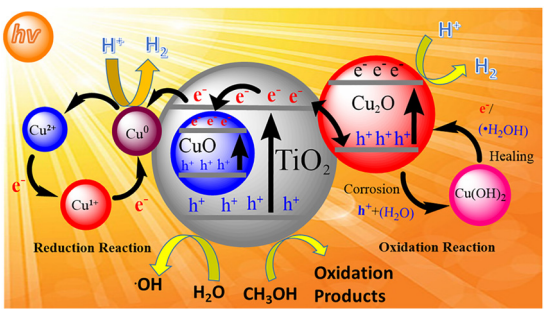

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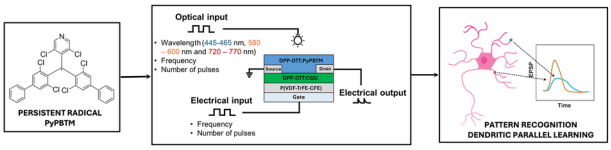
1056

Persistent radicals in organic photonic synaptic transistors for pattern recognition of electrical and multicolor optical stimuli

Giulia Baroni, Francesco Reginato, Ugo Bruno, Francesco Porcelli, Giuseppe Mattioli, Sara Mattiello, Luca Beverina, Mario Prosa, Margherita Bolognesi, Francesca Santoro* and Stefano Toffanin*



1068

Pb–S coordination-assisted *in situ* ligand engineering of $CsPbBr_3$ nanocrystals using (3-mercaptopropyl)methyldimethoxysilane for enhanced robustness and optoelectronic properties

Jin Young Kim, Tae Yong Im, Jihyun Lim, Byung Gi Kim, Emad S. Goda, Jun Ho Choi, Jeong Wan Park and Dong Hwan Wang*