

MXenes (2022-2024)

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1. Versatile MXene Gels Assisted by Brief and Low-Strength Centrifugation (Article)

Weiyang Yu, Yi Yang, Yunjing Wang, Lulin Hu, Jingcheng Hao, Lu Xu & Weimin Liu

Nano-Micro Lett. 16, 94 (2024). <https://doi.org/10.1007/s40820-023-01302-3>

2. Enhancing Green Ammonia Electrosynthesis Through Tuning Sn Vacancies in Sn-Based MXene/MAX Hybrids (Article)

Xinyu Dai, Zhen-Yi Du, Ying Sun, Ping Chen, Xiaoguang Duan, Junjun Zhang, Hui Li, Yang Fu, Baohua Jia, Lei Zhang, Wenhui Fang, Jieshan Qiu & Tianyi Ma

Nano-Micro Lett. 16, 89 (2024). <https://doi.org/10.1007/s40820-023-01303-2>

3. Tailoring MXene Thickness and Functionalization for Enhanced Room-Temperature Trace NO₂ Sensing (Article)

Muhammad Hilal, Woochul Yang, Yongha Hwang & Wanfeng Xie

Nano-Micro Lett. 16, 84 (2024). <https://doi.org/10.1007/s40820-023-01316-x>

4. Textured Asymmetric Membrane Electrode Assemblies of Piezoelectric Phosphorene and Ti₃C₂Tx MXene Heterostructures for Enhanced Electrochemical Stability and Kinetics in LIBs (Article)

Yihui Li, Juan Xie, Ruofei Wang, Shugang Min, Zewen Xu, Yangjian Ding, Pengcheng Su, Xingmin Zhang, Liyu Wei, Jing-Feng Li, Zhaoqiang Chu, Jingyu Sun & Cheng Huang

Nano-Micro Lett. 16, 79 (2024). <https://doi.org/10.1007/s40820-023-01265-5>

5. Highly Aligned Ternary Nanofiber Matrices Loaded with MXene Expedite Regeneration of Volumetric Muscle Loss (Article)

Moon Sung Kang, Yeuni Yu, Rowoon Park, Hye Jin Heo, Seok Hyun Lee, Suck Won Hong, Yun Hak Kim & Dong-Wook Han

Nano-Micro Lett. 16, 73 (2024). <https://doi.org/10.1007/s40820-023-01293-1>

6. MXene Enhanced 3D Needled Waste Denim Felt for High-Performance Flexible Supercapacitors (Article)

Wei Fan, Qi Wang, Kai Rong, Yang Shi, Wanxi Peng, Handong Li, Zhanhu Guo, Ben Bin Xu, Hua Hou, Hassan Algadi & Shengbo Ge

Nano-Micro Lett. 16, 36 (2024). <https://doi.org/10.1007/s40820-023-01226-y>

7. Diverse Structural Design Strategies of MXene-Based Macrostructure for High-Performance Electromagnetic Interference Shielding (Review)

Yue Liu, Yadi Wang, Na Wu, Mingrui Han, Wei Liu, Jiurong Liu & Zhihui Zeng

Nano-Micro Lett. 15, 240 (2023). <https://doi.org/10.1007/s40820-023-01203-5>

8. NH₃-Induced In Situ Etching Strategy Derived 3D-Interconnected Porous MXene/Carbon Dots Films for High Performance Flexible Supercapacitors (Article)

Yongbin Wang, Ningjun Chen, Bin Zhou, Xuefeng Zhou, Ben Pu, Jia Bai, Qi Tang, Yan Liu & Weiqing Yang

Nano-Micro Lett. 15, 231 (2023). <https://doi.org/10.1007/s40820-023-01204-4>

9. Built-In Electric Field-Driven Ultrahigh-Rate K-Ion Storage via Heterostructure Engineering of Dual Tellurides Integrated with Ti₃C₂Tx MXene (Article)

Long Pan, Rongxiang Hu, Yuan Zhang, Dawei Sha, Xin Cao, Zhuoran Li, Yonggui Zhao, Jiangxiang Ding, Yaping Wang & ZhengMing Sun

Nano-Micro Lett. 15, 225 (2023). <https://doi.org/10.1007/s40820-023-01202-6>

10. MXene Lubricated Tribovoltaic Nanogenerator with High Current Output and Long Lifetime (Article)

Wenyan Qiao, Linglin Zhou, Zhihao Zhao, Peiyuan Yang, Di Liu, Xiaoru Liu, Jiaqi Liu, Dongyang Liu, Zhong Lin Wang & Jie Wang

Nano-Micro Lett. 15, 218 (2023). <https://doi.org/10.1007/s40820-023-01198-z>

11. Maximizing Terahertz Energy Absorption with MXene Absorber (Highlights)

Xinliang Li & Hao Luo

Nano-Micro Lett. 15, 198 (2023). <https://doi.org/10.1007/s40820-023-01167-6>

12. Multifunctional MXene/C Aerogels for Enhanced Microwave Absorption and Thermal Insulation (Article)

Fushuo Wu, Peiying Hu, Feiyue Hu, Zhihua Tian, Jingwen Tang, Peigen Zhang, Long Pan, Michel W. Barsoum, Longzhu Cai & ZhengMing Sun

Nano-Micro Lett. 15, 194 (2023). <https://doi.org/10.1007/s40820-023-01158-7>

13. Boosting Interfacial Polarization Through Heterointerface Engineering in MXene/Graphene Intercalated-Based Microspheres for Electromagnetic Wave Absorption (Article)

Ge Wang, Changfeng Li, Diana Estevez, Peng Xu, Mengyue Peng, Huijie Wei & Faxiang Qin

Nano-Micro Lett. 15, 152 (2023). <https://doi.org/10.1007/s40820-023-01123-4>

14. A Review on Interface Engineering of MXenes for Perovskite Solar Cells (Review)

Srikanta Palei, G. Murali, Choong-Hee Kim, Insik In, Seul-Yi Lee & Soo-Jin Park

Nano-Micro Lett. 15, 123 (2023). <https://doi.org/10.1007/s40820-023-01083-9>

15. Wetting of MXenes and Beyond (PERSPECTIVE)

Massoud Malaki & Rajender S. Varma

Nano-Micro Lett. 15, 116 (2023). <https://doi.org/10.1007/s40820-023-01049-x>

16. Progression in the Oxidation Stability of MXenes (Perspective)

Razium A. Soomro, Peng Zhang, Baomin Fan, Yi Wei & Bin Xu

Nano-Micro Lett. 15, 108 (2023). <https://doi.org/10.1007/s40820-023-01069-7>

17. Self-Healing MXene- and Graphene-Based Composites: Properties and Applications (Review)

Atefeh Zarepour, Sepideh Ahmadi, Navid Rabiee, Ali Zarrabi & Siavash Iravani

Nano-Micro Lett. 15, 100 (2023). <https://doi.org/10.1007/s40820-023-01074-w>

18. Nanocellulose-Assisted Construction of Multifunctional MXene-Based Aerogels with Engineering Biomimetic Texture for Pressure Sensor and Compressible Electrode (Article)

Ting Xu, Qun Song, Kun Liu, Huayu Liu, Junjie Pan, Wei Liu, Lin Dai, Meng Zhang, Yaxuan Wang, Chuanling Si, Haishun Du & Kai Zhang

Nano-Micro Lett. 15, 98 (2023). <https://doi.org/10.1007/s40820-023-01073-x>

19. Recent Advances and Perspectives of Lewis Acidic Etching Route: An Emerging Preparation Strategy for MXenes (Review)

Pengfei Huang & Wei-Qiang Han

Nano-Micro Lett. 15, 68 (2023). <https://doi.org/10.1007/s40820-023-01039-z>

20. Bioinspired MXene-Based Soft Actuators Exhibiting Angle-Independent Structural Color (Article)

Pan Xue, Yuanhao Chen, Yiyi Xu, Cristian Valenzuela, Xuan Zhang, Hari Krishna Bisoyi, Xiao Yang, Ling Wang, Xinhua Xu & Quan Li

Nano-Micro Lett. 15, 1 (2023). <https://doi.org/10.1007/s40820-022-00977-4>

21. MXene-Based Composites as Nanozymes in Biomedicine: A Perspective (Perspective)

Siavash Iravani & Rajender S. Varma

Nano-Micro Lett. 14, 213 (2022). <https://doi.org/10.1007/s40820-022-00958-7>

22. Construction of Ultrathin Layered MXene-TiN Heterostructure Enabling Favorable Catalytic Ability for High-Areal-Capacity Lithium–Sulfur Batteries (Article)

Hao Wang, Zhe Cui, Shu-Ang He, Jinqi Zhu, Wei Luo, Qian Liu & Rujia Zou

Nano-Micro Lett. 14, 189 (2022). <https://doi.org/10.1007/s40820-022-00935-0>

23. Recent Advancements on Photothermal Conversion and Antibacterial Applications over MXenes-Based Materials (Review)

Shuyan Hao, Hecheng Han, Zhengyi Yang, Mengting Chen, Yanyan Jiang, Guixia Lu, Lun Dong, Hongling Wen, Hui Li, Jiurong Liu, Lili Wu, Zhou Wang & Fenglong Wang

Nano-Micro Lett. 14, 178 (2022). <https://doi.org/10.1007/s40820-022-00901-w>

24. Quantum Dots Compete at the Acme of MXene Family for the Optimal Catalysis (Review)

Yuhua Liu, Wei Zhang & Weitao Zheng

Nano-Micro Lett. 14, 158 (2022). <https://doi.org/10.1007/s40820-022-00908-3>

25. Tailoring Nitrogen Terminals on MXene Enables Fast Charging and Stable Cycling Na-Ion Batteries at Low Temperature (Article)

Yang Xia, Lanfang Que, Fuda Yu, Liang Deng, Zhenjin Liang, Yunshan Jiang, Meiyun Sun, Lei Zhao & Zhenbo Wang

Nano-Micro Lett. 14, 143 (2022). <https://doi.org/10.1007/s40820-022-00885-7>

26. Macroscopic Electromagnetic Cooperative Network-Enhanced MXene/Ni Chains Aerogel-Based Microwave Absorber with Ultra-Low Matching Thickness (Article)

Fei Pan, Yanping Rao, Dan Batalu, Lei Cai, Yanyan Dong, Xiaojie Zhu, Yuyang Shi, Zhong Shi, Yaowen Liu & Wei Lu

Nano-Micro Lett. 14, 140 (2022). <https://doi.org/10.1007/s40820-022-00869-7>

27. MXene-Graphene Composites: A Perspective on Biomedical Potentials (Highlights)

Ebrahim Mostafavi & Siavash Iravani

Nano-Micro Lett. 14, 130 (2022). <https://doi.org/10.1007/s40820-022-00880-y>

- 28. Bioinspired MXene-Based User-Interactive Electronic Skin for Digital and Visual Dual-Channel Sensing (Article)**
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- 29. Super-Tough and Environmentally Stable Aramid. Nanofiber@MXene Coaxial Fibers with Outstanding Electromagnetic Interference Shielding Efficiency (Article)**
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Nano-Micro Lett. 14, 111 (2022). <https://doi.org/10.1007/s40820-022-00853-1>
- 30. Next-Generation Intelligent MXene-Based Electrochemical Aptasensors for Point-of-Care Cancer Diagnostics (Review)**
Arpana Parihar, Ayushi Singhal, Neeraj Kumar, Raju Khan, Mohd. Akram Khan & Avanish K. Srivastava
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- 31. Environmentally Tough and Stretchable MXene Organohydrogel with Exceptionally Enhanced Electromagnetic Interference Shielding Performances (Article)**
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- 32. Self-Assembly MXene-rGO/CoNi Film with Massive Continuous Heterointerfaces and Enhanced Magnetic Coupling for Superior Microwave Absorber (Article)**
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- 33. Ni Flower/MXene-Melamine Foam Derived 3D Magnetic/Conductive Networks for Ultra-Efficient Microwave Absorption and Infrared Stealth (Article)**
Haoran Cheng, Yamin Pan, Xin Wang, Chuntai Liu, Changyu Shen, Dirk W. Schubert, Zhanhu Guo & Xianhu Liu
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- 34. Self-Assembly 3D Porous Crumpled MXene Spheres as Efficient Gas and Pressure Sensing Material for Transient All-MXene Sensors (Article)**
Zijie Yang, Siyuan Lv, Yueying Zhang, Jing Wang, Li Jiang, Xiaoteng Jia, Chenguang Wang, Xu Yan, Peng Sun, Yu Duan, Fangmeng Liu & Geyu Lu
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- 35. Room-Temperature Assembled MXene-Based Aerogels for High Mass-Loading Sodium-Ion Storage (Article)**
Fei Song, Jian Hu, Guohao Li, Jie Wang, Shuijiao Chen, Xiuqiang Xie, Zhenjun Wu & Nan Zhang
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- 36. Continuous Fabrication of $Ti_3C_2T_x$ MXene-Based Braided Zinc-Ion Hybrid Supercapacitors with Improved Performance (Article)**

Bao Shi, La Li, Aibing Chen, Tien-Chien Jen, Xinying Liu & Guozhen Shen

Nano-Micro Lett. 14, 34 (2022). <https://doi.org/10.1007/s40820-021-00757-6>

37. A MXene-Based Bionic Cascaded-Enzyme Nanoreactor for Tumor Phototherapy/Enzyme Dynamic Therapy and Hypoxia-Activated Chemotherapy (Article)

Xiaoge Zhang, Lili Cheng, Yao Lu, Junjie Tang, Qijun Lv, Xiaomei Chen, You Chen & Jie Liu

Nano-Micro Lett. 14, 22 (2022). <https://doi.org/10.1007/s40820-021-00761-w>

38. Carbon-Coated Three-Dimensional MXene/Iron Selenide Ball with Core–Shell Structure for High-Performance Potassium-Ion Batteries (Article)

Su Hyun Yang, Yun Jae Lee, Heemin Kang, Seung-Keun Park & Yun Chan Kang

Nano-Micro Lett. 14, 17 (2022). <https://doi.org/10.1007/s40820-021-00741-0>

39. Nature Inspired MXene-Decorated 3D Honeycomb-Fabric Architectures Toward Efficient Water Desalination and Salt Harvesting (Article)

Zhiwei Lei, Xuantong Sun, Shifeng Zhu, Kai Dong, Xuqing Liu, Lili Wang, Xiansheng Zhang, Lijun

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Nano-Micro Lett. 14, 10 (2022). <https://doi.org/10.1007/s40820-021-00748-7>