**Aerogels and Hydrogels (2022-2024)**

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1. **In Situ Polymer Gel Electrolyte in Boosting Scalable Fibre Lithium Battery Applications (Highlight)**

Jie Luo & Qichong Zhang

Nano-Micro Lett. 16, 230 (2024). <https://doi.org/10.1007/s40820-024-01451-z>

1. **Tree-Inspired Structurally Graded Aerogel with Synergistic Water, Salt, and Thermal Transport for High-Salinity Solar-Powered Evaporation (Article)**

Xiaomeng Zhao, Heng Zhang, Kit-Ying Chan, Xinyue Huang, Yunfei Yang & Xi Shen

Nano-Micro Lett. 16, 222 (2024). <https://doi.org/10.1007/s40820-024-01448-8>

1. **MXene Sediment-Based Poly(vinyl alcohol)/Sodium Alginate Aerogel Evaporator with Vertically Aligned Channels for Highly Efficient Solar Steam Generation (Article)**

Tian Wang, Meng Li, Hongxing Xu, Xiao Wang, Mingshu Jia, Xianguang Hou, Shuai Gao, Qingman Liu, Qihang Yang, Mingwei Tian, Lijun Qu, Zhenhua Song, Xiaohu Wu, Lili Wang & Xiansheng Zhang

Nano-Micro Lett. 16, 220 (2024). <https://doi.org/10.1007/s40820-024-01433-1>

1. **Multifunctional MXene/Carbon Nanotube Janus Film for Electromagnetic Shielding and**
2. **Harness High-Temperature Thermal Energy via Elastic Thermoelectric Aerogels (Article)**

Hongxiong Li, Zhaofu Ding, Quan Zhou, Jun Chen, Zhuoxin Liu, Chunyu Du, Lirong Liang & Guangming Chen

Nano-Micro Lett. 16, 151 (2024). <https://doi.org/10.1007/s40820-024-01370-z>

1. **Highly Porous Yet Transparent Mechanically Flexible Aerogels Realizing Solar-Thermal Regulatory Cooling (Article)**

Meng Lian, Wei Ding, Song Liu, Yufeng Wang, Tianyi Zhu, Yue-E. Miao, Chao Zhang & Tianxi Liu

Nano-Micro Lett. 16, 131 (2024). <https://doi.org/10.1007/s40820-024-01356-x>

1. **Highly Aligned Graphene Aerogels for Multifunctional Composites (Review)**

Ying Wu, Chao An, Yaru Guo, Yangyang Zong, Naisheng Jiang, Qingbin Zheng & Zhong-Zhen Yu

Nano-Micro Lett. 16, 118 (2024). <https://doi.org/10.1007/s40820-024-01357-w>

1. **A Sustainable Dual Cross-Linked Cellulose Hydrogel Electrolyte for High-Performance Zinc-Metal Batteries (Article)**

Haodong Zhang, Xiaotang Gan, Yuyang Yan & Jinping Zhou

Nano-Micro Lett. 16, 106 (2024). <https://doi.org/10.1007/s40820-024-01329-0>

1. **An Environment-Tolerant Ion-Conducting Double-Network Composite Hydrogel for High-Performance Flexible Electronic Devices (Article)**

Wenchao Zhao, Haifeng Zhou, Wenkang Li, Manlin Chen, Min Zhou & Long Zhao

Nano-Micro Lett. 16, 99 (2024). <https://doi.org/10.1007/s40820-023-01311-2>

1. **Bioinspired Multifunctional Self-Sensing Actuated Gradient Hydrogel for Soft-Hard Robot Remote Interaction (Article)**

He Liu, Haoxiang Chu, Hailiang Yuan, Deliang Li, Weisi Deng, Zhiwei Fu, Ruonan Liu, Yiying Liu, Yixuan Han, Yanpeng Wang, Yue Zhao, Xiaoyu Cui & Ye Tian

Nano-Micro Lett. 16, 69 (2024). <https://doi.org/10.1007/s40820-023-01287-z>

1. **Chemical Scissors Tailored Nano-Tellurium with High-Entropy Morphology for Efficient Foam-Hydrogel-Based Solar Photothermal Evaporators (Article)**

Chenyang Xing, Zihao Li, Ziao Wang, Shaohui Zhang, Zhongjian Xie, Xi Zhu & Zhengchun Peng

Nano-Micro Lett. 16, 47 (2024). <https://doi.org/10.1007/s40820-023-01242-y>

1. **Gelatin-Based Metamaterial Hydrogel Films with High Conformality for Ultra-Soft Tissue Monitoring (Article)**

Yuewei Chen, Yanyan Zhou, Zihe Hu, Weiying Lu, Zhuang Li, Ning Gao, Nian Liu, Yuanrong Li, Jing He, Qing Gao, Zhijian Xie, Jiachun Li & Yong He

Nano-Micro Lett. 16, 34 (2024). <https://doi.org/10.1007/s40820-023-01225-z>

1. **Coupling of Adhesion and Anti-Freezing Properties in Hydrogel Electrolytes for Low-Temperature Aqueous-Based Hybrid Capacitors (Article)**

Jingya Nan, Yue Sun, Fusheng Yang, Yijing Zhang, Yuxi Li, Zihao Wang, Chuchu Wang, Dingkun Wang, Fuxiang Chu, Chunpeng Wang, Tianyu Zhu & Jianchun Jiang

Nano-Micro Lett. 16, 22 (2024). <https://doi.org/10.1007/s40820-023-01229-9>

1. **Efficient Electromagnetic Wave Absorption and Thermal Infrared Stealth in PVTMS@MWCNT Nano-Aerogel via Abundant Nano-Sized Cavities and Attenuation Interfaces (Article)**

Haoyu Ma, Maryam Fashandi, Zeineb Ben Rejeb, Xin Ming, Yingjun Liu, Pengjian Gong, Guangxian Li & Chul B. Park

Nano-Micro Lett. 16, 20 (2024). <https://doi.org/10.1007/s40820-023-01218-y>

1. **In Situ Deposition of Drug and Gene Nanoparticles on a Patterned Supramolecular Hydrogel to Construct a Directionally Osteochondral Plug (Article)**

Jiawei Kang, Yaping Li, Yating Qin, Zhongming Huang, Yifan Wu, Long Sun, Cong Wang, Wei Wang, Gang Feng & Yiying Qi

Nano-Micro Lett. 16, 18 (2024). <https://doi.org/10.1007/s40820-023-01228-w>

1. **Nitrogen-Doped Magnetic-Dielectric-Carbon Aerogel for High-Efficiency Electromagnetic Wave Absorption (Article)**

Shijie Wang, Xue Zhang, Shuyan Hao, Jing Qiao, Zhou Wang, Lili Wu, Jiurong Liu & Fenglong Wang

Nano-Micro Lett. 16, 16 (2024). <https://doi.org/10.1007/s40820-023-01244-w>

1. **Intelligent Recognition Using Ultralight Multifunctional Nano-Layered Carbon Aerogel Sensors with Human-Like Tactile Perception (Article)**

Huiqi Zhao, Yizheng Zhang, Lei Han, Weiqi Qian, Jiabin Wang, Heting Wu, Jingchen Li, Yuan Dai, Zhengyou Zhang, Chris R. Bowen & Ya Yang

Nano-Micro Lett. 16, 11 (2024). <https://doi.org/10.1007/s40820-023-01216-0>

1. **Ionization Engineering of Hydrogels Enables Highly Efficient Salt-Impeded Solar Evaporation and Night-Time Electricity Harvesting (Article)**

Nan He, Haonan Wang, Haotian Zhang, Bo Jiang, Dawei Tang & Lin Li

Nano-Micro Lett. 16, 8 (2024). <https://doi.org/10.1007/s40820-023-01215-1>

1. **Temperature-Arousing Self-Powered Fire Warning E-Textile Based on p–n Segment Coaxial Aerogel Fibers for Active Fire Protection in Firefighting Clothing (Article)**

Hualing He, Yi Qin, Zhenyu Zhu, Qing Jiang, Shengnan Ouyang, Yuhang Wan, Xueru Qu, Jie Xu & Zhicai Yu

Nano-Micro Lett. 15, 226 (2023). <https://doi.org/10.1007/s40820-023-01200-8>

1. **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>

1. **Nanofiber Composite Reinforced Organohydrogels for Multifunctional and Wearable Electronics (Article)**

Jing Wen, Yongchuan Wu, Yuxin Gao, Qin Su, Yuntao Liu, Haidi Wu, Hechuan Zhang, Zhanqi Liu, Hang Yao, Xuewu Huang, Longcheng Tang, Yongqian Shi, Pingan Song, Huaiguo Xue & Jiefeng Gao

Nano-Micro Lett. 15, 174 (2023). <https://doi.org/10.1007/s40820-023-01148-9>

1. **Biological Tissue-Inspired Ultrasoft, Ultrathin, and Mechanically Enhanced Microfiber Composite Hydrogel for Flexible Bioelectronics (Article)**

Qiang Gao, Fuqin Sun, Yue Li, Lianhui Li, Mengyuan Liu, Shuqi Wang, Yongfeng Wang, Tie Li, Lin Liu, Simin Feng, Xiaowei Wang, Seema Agarwal & Ting Zhang

Nano-Micro Lett. 15, 139 (2023). <https://doi.org/10.1007/s40820-023-01096-4>

1. **Functionalized Hydrogel-Based Wearable Gas and Humidity Sensors (Review)**

Yibing Luo, Jianye Li, Qiongling Ding, Hao Wang, Chuan Liu & Jin Wu

Nano-Micro Lett. 15, 136 (2023). <https://doi.org/10.1007/s40820-023-01109-2>

1. **Engineering Smart Composite Hydrogels for Wearable Disease Monitoring (Review)**

Jianye Li, Qiongling Ding, Hao Wang, Zixuan Wu, Xuchun Gui, Chunwei Li, Ning Hu, Kai Tao & Jin Wu

Nano-Micro Lett. 15, 105 (2023). <https://doi.org/10.1007/s40820-023-01079-5>

1. **Skin-Inspired Ultra-Tough Supramolecular Multifunctional Hydrogel Electronic Skin for Human–Machine Interaction (Article)**

Kun Chen, Kewei Liang, He Liu, Ruonan Liu, Yiying Liu, Sijia Zeng & Ye Tian

Nano-Micro Lett. 15, 102 (2023).[https://doi.org/10.1007/s40820-023-01084-8]( https:/doi.org/10.1007/s40820-023-01084-8)

1. **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](%20https:/doi.org/10.1007/s40820-023-01073-x)

1. **Self-Healing Liquid Metal Magnetic Hydrogels for Smart Feedback Sensors and High-Performance Electromagnetic Shielding (Original Article)**

Biao Zhao, Zhongyi Bai, Hualiang Lv, Zhikai Yan, Yiqian Du, Xiaoqin Guo, Jincang Zhang, Limin Wu, Jiushuai Deng, David Wei Zhang & Renchao Che

 Nano-Micro Lett. 15, 79 (2023). <https://doi.org/10.1007/s40820-023-01043-3>

1. **Fibrous Aerogels with Tunable Superwettability for High-Performance Solar-Driven Interfacial Evaporation (Article)**

Chengjian Xu, Mengyue Gao, Xiaoxiao Yu, Junyan Zhang, Yanhua Cheng & Meifang Zhu

Nano-Micro Lett. 15, 64 (2023). [https://doi.org/10.1007/s40820-023-01034-4](%20https:/doi.org/10.1007/s40820-023-01034-4)

1. **Ultrasensitive and Highly Stretchable Multiple-Crosslinked Ionic Hydrogel Sensors with Long-Term Stability (Article)**

Jin-Young Yu, Seung Eon Moon, Jeong Hun Kim & Seong Min Kang

Nano-Micro Lett. 15, 51 (2023). <https://doi.org/10.1007/s40820-023-01015-7>

1. **3D Printed Integrated Gradient-Conductive MXene/CNT/Polyimide Aerogel Frames for Electromagnetic Interference Shielding with Ultra-Low Reflection (Article)**

Tiantian Xue, Yi Yang, Dingyi Yu, Qamar Wali, Zhenyu Wang, Xuesong Cao, Wei Fan & Tianxi Liu

Nano-Micro Lett. 15, 45 (2023). [https://doi.org/10.1007/s40820-023-01017-5](%20https:/doi.org/10.1007/s40820-023-01017-5)

1. **Transparent, Ultra-Stretching, Tough, Adhesive Carboxyethyl Chitin/Polyacrylamide Hydrogel Toward High-Performance Soft Electronics (Article)**

Jipeng Zhang, Yang Hu, Lina Zhang, Jinping Zhou & Ang Lu

Nano-Micro Lett. 15, 8 (2023). <https://doi.org/10.1007/s40820-022-00980-9>

1. **From 1D Nanofibers to 3D Nanofibrous Aerogels: A Marvellous Evolution of Electrospun SiO2 Nanofibers for Emerging Applications (Review)**

Cheng Liu, Sai Wang, Ni Wang, Jianyong Yu, Yi-Tao Liu & Bin Ding

Nano-Micro Lett. 14, 194 (2022). <https://doi.org/10.1007/s40820-022-00937-y>

1. **Bioinspired Injectable Self-Healing Hydrogel Sealant with Fault-Tolerant and Repeated Thermo-Responsive Adhesion for Sutureless Post-Wound-Closure and Wound Healing (Article)**

Yuqing Liang, Huiru Xu, Zhenlong Li, Aodi Zhangji & Baolin Guo

Nano-Micro Lett. 14, 185 (2022). <https://doi.org/10.1007/s40820-022-00928-z>

1. **Humidity Sensing of Stretchable and Transparent Hydrogel Films for Wireless Respiration Monitoring (Article)**

Yuning Liang, Qiongling Ding, Hao Wang, Zixuan Wu, Jianye Li, Zhenyi Li, Kai Tao, Xuchun Gui & Jin Wu

Nano-Micro Lett. 14, 183 (2022). <https://doi.org/10.1007/s40820-022-00934-1>

1. **Touch-Responsive Hydrogel for Biomimetic Flytrap-Like Soft Actuator (Article)**

Junjie Wei, Rui Li, Long Li, Wenqin Wang & Tao Chen

Nano-Micro Lett. 14, 182 (2022). <https://doi.org/10.1007/s40820-022-00931-4>

1. **Ultrabroad Microwave Absorption Ability and Infrared Stealth Property of Nano-Micro CuS@rGO Lightweight Aerogels (Article)**

Yue Wu, Yue Zhao, Ming Zhou, Shujuan Tan, Reza Peymanfar, Bagher Aslibeiki & Guangbin Ji

Nano-Micro Lett. 14, 171 (2022). <https://doi.org/10.1007/s40820-022-00906-5>

1. **Multifunctional SiC@SiO2 Nanofiber Aerogel with Ultrabroadband Electromagnetic Wave Absorption (Article)**

Limeng Song, Fan Zhang, Yongqiang Chen, Li Guan, Yanqiu Zhu, Mao Chen, Hailong Wang, Budi Riza Putra, Rui Zhang & Bingbing Fan

Nano-Micro Lett. 14, 152 (2022). <https://doi.org/10.1007/s40820-022-00905-6>

1. **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>

1. **Ultralight Magnetic and Dielectric Aerogels Achieved by Metal–Organic Framework Initiated Gelation of Graphene Oxide for Enhanced Microwave Absorption (Article)**

Xiaogu Huang, Jiawen Wei, Yunke Zhang, BinBin Qian, Qi Jia, Jun Liu, Xiaojia Zhao & Gaofeng Shao

Nano-Micro Lett. 14, 107 (2022). <https://doi.org/10.1007/s40820-022-00851-3>

1. **Highly Flexible and Broad-Range Mechanically Tunable All-Wood Hydrogels with Nanoscale Channels via the Hofmeister Effect for Human Motion Monitoring (Article)**

Guihua Yan, Shuaiming He, Gaofeng Chen, Sen Ma, Anqi Zeng, Binglin Chen, Shuliang Yang, Xing Tang, Yong Sun, Feng Xu, Lu Lin & Xianhai Zeng

Nano-Micro Lett. 14, 84 (2022). <https://doi.org/10.1007/s40820-022-00827-3>

1. **Superinsulating BNNS/PVA Composite Aerogels with High Solar Reflectance for Energy-Efficient Buildings (Article)**

Jie Yang, Kit-Ying Chan, Harun Venkatesan, Eunyoung Kim, Miracle Hope Adegun, Jeng-Hun Lee, Xi Shen & Jang‐Kyo Kim

Nano-Micro Lett. 14, 54 (2022). <https://doi.org/10.1007/s40820-022-00797-6>

1. **Self-Healing, Self-Adhesive and Stable Organohydrogel-Based Stretchable Oxygen Sensor with High Performance at Room Temperature (Article)**

Yuning Liang, Zixuan Wu, Yaoming Wei, Qiongling Ding, Meital Zilberman, Kai Tao, Xi Xie & Jin Wu

Nano-Micro Lett. 14, 52 (2022). <https://doi.org/10.1007/s40820-021-00787-0>

1. **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

Nano-Micro Lett. 14, 37 (2022). <https://doi.org/10.1007/s40820-021-00781-6>

1. **Calcium-Doped Boron Nitride Aerogel Enables Infrared Stealth at High Temperature Up to 1300 °C (Article)**

Mengya Zhu, Guangyong Li, Wenbin Gong, Lifeng Yan & Xuetong Zhang

Nano-Micro Lett. 14, 18 (2022). <https://doi.org/10.1007/s40820-021-00754-9>