**Sensors (2022-2024)**

[Browse in the web](https://link.springer.com/collections/cjfihfhadc)

1. **Transient Response and Ionic Dynamics in Organic Electrochemical Transistors (Review)**

Chao Zhao, Jintao Yang & Wei Ma

Nano-Micro Lett. 16, 233 (2024). <https://doi.org/10.1007/s40820-024-01452-y>

1. **Multifunctional MXene/Carbon Nanotube Janus Film for Electromagnetic Shielding and Infrared Shielding/Detection in Harsh Environments (Article)**

Tufail Hassan, Aamir Iqbal, Byungkwon Yoo, Jun Young Jo, Nilufer Cakmakci, Shabbir Madad Naqvi, Hyerim Kim, Sungmin Jung, Noushad Hussain, Ujala Zafar, Soo Yeong Cho, Seunghwan Jeong, Jaewoo Kim, Jung Min Oh, Sangwoon Park, Youngjin Jeong & Chong Min Koo

Nano-Micro Lett. 16, 216 (2024). <https://doi.org/10.1007/s40820-024-01431-3>

1. **MXene Key Composites: A New Arena for Gas Sensors (Review)**

Yitong Wang, Yuhua Wang, Min Jian, Qinting Jiang & Xifei Li

Nano-Micro Lett. 16, 209 (2024). <https://doi.org/10.1007/s40820-024-01430-4>

1. **Facile Semiconductor p–n Homojunction Nanowires with Strategic p-Type Doping Engineering Combined with Surface Reconstruction for Biosensing Applications (Article)**

Liuan Li, Shi Fang, Wei Chen, Yueyue Li, Mohammad Fazel Vafadar, Danhao Wang, Yang Kang, Xin Liu, Yuanmin Luo, Kun Liang, Yiping Dang, Lei Zhao, Songrui Zhao, Zongzhi Yin & Haiding Sun

Nano-Micro Lett. 16, 192 (2024). <https://doi.org/10.1007/s40820-024-01394-5>

1. **Functional Optical Fiber Sensors Detecting Imperceptible Physical/Chemical Changes for Smart Batteries (Review)**

Yiding Li, Li Wang, Youzhi Song, Wenwei Wang, Cheng Lin & Xiangming He

Nano-Micro Lett. 16, 154 (2024). <https://doi.org/10.1007/s40820-024-01374-9>

1. **Building Feedback-Regulation System Through Atomic Design for Highly Active SO2 Sensing (Article)**

Xin Jia, Panzhe Qiao, Xiaowu Wang, Muyu Yan, Yang Chen, Bao-Li An, Pengfei Hu, Bo Lu, Jing Xu, Zhenggang Xue & Jiaqiang Xu

Nano-Micro Lett. 16, 136 (2024). <https://doi.org/10.1007/s40820-024-01350-3>

1. **MXene-Based Elastomer Mimetic Stretchable Sensors: Design, Properties, and Applications (Review)**

Poushali Das, Parham Khoshbakht Marvi, Sayan Ganguly, Xiaowu (Shirley) Tang, Bo Wang, Seshasai Srinivasan, Amin Reza Rajabzadeh & Andreas Rosenkranz

Nano-Micro Lett. 16, 135 (2024). <https://doi.org/10.1007/s40820-024-01349-w>

1. **Laser-Induced and MOF-Derived Metal Oxide/Carbon Composite for Synergistically Improved Ethanol Sensing at Room temperature (Article)**

Hyeongtae Lim, Hyeokjin Kwon, Hongki Kang, Jae Eun Jang & Hyuk-Jun Kwon

Nano-Micro Lett. 16, 113 (2024). <https://doi.org/10.1007/s40820-024-01332-5>

1. **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>

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. **Implantable Electrochemical Microsensors for In Vivo Monitoring of Animal Physiological Information (Review)**

Jin Zhou, Shenghan Zhou, Peidi Fan, Xunjia Li, Yibin Ying, Jianfeng Ping & Yuxiang Pan

Nano-Micro Lett. 16, 49 (2024). <https://doi.org/10.1007/s40820-023-01274-4>

1. **Untethered Micro/Nanorobots for Remote Sensing: Toward Intelligent Platform (Review)**

Qianqian Wang, Shihao Yang & Li Zhang

Nano-Micro Lett. 16, 40 (2024). <https://doi.org/10.1007/s40820-023-01261-9>

1. **Advances of Electrochemical and Electrochemiluminescent Sensors Based on Covalent Organic Frameworks (Review)**

Yue Cao, Ru Wu, Yan-Yan Gao, Yang Zhou & Jun-Jie Zhu

Nano-Micro Lett. 16, 37 (2024). <https://doi.org/10.1007/s40820-023-01249-5>

1. **A Selective-Response Hypersensitive Bio-Inspired Strain Sensor Enabled by Hysteresis Effect and Parallel Through-Slits Structures (Article)**

Qun Wang, Zhongwen Yao, Changchao Zhang, Honglie Song, Hanliang Ding, Bo Li, Shichao Niu, Xinguan Huang, Chuanhai Chen, Zhiwu Han & Luquan Ren

Nano-Micro Lett. 16, 26 (2024). <https://doi.org/10.1007/s40820-023-01250-y>

1. **Artificial Intelligence Meets Flexible Sensors: Emerging Smart Flexible Sensing Systems Driven by Machine Learning and Artificial Synapses (Review)**

Tianming Sun, Bin Feng, Jinpeng Huo, Yu Xiao, Wengan Wang, Jin Peng, Zehua Li, Chengjie Du, Wenxian Wang, Guisheng Zou & Lei Liu

Nano-Micro Lett. 16, 14 (2024). <https://doi.org/10.1007/s40820-023-01235-x>

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. **A Broad Range Triboelectric Stiffness Sensor for Variable Inclusions Recognition(Article)**

Ziyi Zhao, Zhentan Quan, Huaze Tang, Qinghao Xu, Hongfa Zhao, Zihan Wang, Ziwu Song, Shoujie Li, Ishara Dharmasena, Changsheng Wu & Wenbo Ding

Nano-Micro Lett. 15, 233 (2023). <https://doi.org/10.1007/s40820-023-01201-7>

1. **Swift Assembly of Adaptive Thermocell Arrays for Device-Level Healable and Energy-Autonomous Motion Sensors (Article)**

Xin Lu, Daibin Xie, Kaihua Zhu, Shouhao Wei, Ziwei Mo, Chunyu Du, Lirong Liang, Guangming Chen & Zhuoxin Liu

Nano-Micro Lett. 15, 196 (2023). <https://doi.org/10.1007/s40820-023-01170-x>

1. **Outstanding Humidity Chemiresistors Based on Imine-Linked Covalent Organic Framework Films for Human Respiration Monitoring (Article)**

Xiyu Chen, Lingwei Kong, Jaafar Abdul-Aziz Mehrez, Chao Fan, Wenjing Quan, Yongwei Zhang, Min Zeng, Jianhua Yang, Nantao Hu, Yanjie Su, Hao Wei & Zhi Yang

Nano-Micro Lett. 15, 149 (2023). <https://doi.org/10.1007/s40820-023-01107-4>

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. **Green Fabrication of Freestanding Piezoceramic Films for Energy Harvesting and Virus Detection (Article)**

Shiyuan Liu, Junchen Liao, Xin Huang, Zhuomin Zhang, Weijun Wang, Xuyang Wang, Yao Shan, Pengyu Li, Ying Hong, Zehua Peng, Xuemu Li, Bee Luan Khoo, Johnny C. Ho & Zhengbao Yang

Nano-Micro Lett. 15, 131 (2023). <https://doi.org/10.1007/s40820-023-01105-6>

1. **Two-Dimensional Metal Halides for X-Ray Detection Applications (Review)**

Yumin Li, Yutian Lei, Haoxu Wang & Zhiwen Jin

Nano-Micro Lett. 15, 128 (2023). <https://doi.org/10.1007/s40820-023-01118-1>

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. **Advances in Noble Metal-Decorated Metal Oxide Nanomaterials for Chemiresistive Gas Sensors: Overview (Review)**

Li-Yuan Zhu, Lang-Xi Ou, Li-Wen Mao, Xue-Yan Wu, Yi-Ping Liu & Hong-Liang Lu

Nano-Micro Lett. 15, 89 (2023). [https://doi.org/10.1007/s40820-023-01047-z](%20https:/doi.org/10.1007/s40820-023-01047-z)

1. **Highly Ordered Thermoplastic Polyurethane/Aramid Nanofiber Conductive Foams Modulated by Kevlar Polyanion for Piezoresistive Sensing and Electromagnetic Interference Shielding (Original Article)**

Kunpeng Qian, Jianyu Zhou, Miao Miao, Hongmin Wu, Sineenat Thaiboonrod, Jianhui Fang & Xin Feng

Nano-Micro Lett. 15, 88 (2023). <https://doi.org/10.1007/s40820-023-01062-0>

1. **Screen-Printable Functional Nanomaterials for Flexible and Wearable Single-Enzyme-Based Energy-Harvesting and Self-Powered Biosensing Devices (Original Article)**

Kornautchaya Veenuttranon, Kanyawee Kaewpradub & Itthipon Jeerapan

Nano-Micro Lett. 15, 85 (2023). <https://doi.org/10.1007/s40820-023-01045-1>

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. **Mechanoluminescent-Triboelectric Bimodal Sensors for Self-Powered Sensing and Intelligent Control (Article)**

Bo Zhou, Jize Liu, Xin Huang, Xiaoyan Qiu, Xin Yang, Hong Shao, Changyu Tang & Xinxing Zhang

Nano-Micro Lett. 15, 72 (2023). <https://doi.org/10.1007/s40820-023-01054-0>

1. **Bioinspired All-Fibrous Directional Moisture-Wicking Electronic Skins for Biomechanical Energy Harvesting and All-Range Health Sensing (Article)**

Chuanwei Zhi, Shuo Shi, Shuai Zhang, Yifan Si, Jieqiong Yang, Shuo Meng, Bin Fei & Jinlian Hu

Nano-Micro Lett. 15, 60 (2023). <https://doi.org/10.1007/s40820-023-01028-2>

1. **Machine Learning-Enhanced Flexible Mechanical Sensing (Review)**

Yuejiao Wang, Mukhtar Lawan Adam, Yunlong Zhao, Weihao Zheng, Libo Gao, Zongyou Yin & Haitao Zhao

Nano-Micro Lett. 15, 55 (2023). <https://doi.org/10.1007/s40820-023-01013-9>

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](%20https:/doi.org/10.1007/s40820-023-01015-7)

1. **A Self-Powered, Highly Embedded and Sensitive Tribo-Label-Sensor for the Fast and Stable Label Printer (Article)**

Xindan Hui, Zhongjie Li, Lirong Tang, Jianfeng Sun, Xingzhe Hou, Jie Chen, Yan Peng, Zhiyi Wu & Hengyu Guo

Nano-Micro Lett. 15, 27 (2023). <https://doi.org/10.1007/s40820-022-00999-y>

1. **MOF/Polymer-Integrated Multi-Hotspot Mid-Infrared Nanoantennas for Sensitive Detection of CO2 Gas (Article)**

Hong Zhou, Zhihao Ren, Cheng Xu, Liangge Xu & Chengkuo Lee

Nano-Micro Lett. 14, 207 (2022). <https://doi.org/10.1007/s40820-022-00950-1>

1. **Recent Progress on Flexible Room-Temperature Gas Sensors Based on Metal Oxide Semiconductor (Review)**

Lang-Xi Ou, Meng-Yang Liu, Li-Yuan Zhu, David Wei Zhang & Hong-Liang Lu

Nano-Micro Lett. 14, 206 (2022). <https://doi.org/10.1007/s40820-022-00956-9>

1. **Progress of Materials and Devices for Neuromorphic Vision Sensors (Review)**

Sung Woon Cho, Chanho Jo, Yong-Hoon Kim & Sung Kyu Park

Nano-Micro Lett. 14, 203 (2022). <https://doi.org/10.1007/s40820-022-00945-y>

1. **Recent Advances on Early-Stage Fire-Warning Systems: Mechanism, Performance, and Perspective (Review)**

Xiaolu Li, Antonio Vázquez-López, José Sánchez del Río Saeza & De-Yi Wang

Nano-Micro Lett. 14, 197 (2022). <https://doi.org/10.1007/s40820-022-00938-x>

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. **Multifunctional Flexible Humidity Sensor Systems Towards Noncontact Wearable Electronics (Review)**

Yuyao Lu, Geng Yang, Yajing Shen, Huayong Yang & Kaichen Xu

Nano-Micro Lett. 14, 150 (2022). <https://doi.org/10.1007/s40820-022-00895-5>

1. **Morphological Engineering of Sensing Materials for Flexible Pressure Sensors and Artificial Intelligence Applications (Review)**

Zhengya Shi, Lingxian Meng, Xinlei Shi, Hongpeng Li, Juzhong Zhang, Qingqing Sun, Xuying Liu, Jinzhou Chen & Shuiren Liu

Nano-Micro Lett. 14, 141 (2022). <https://doi.org/10.1007/s40820-022-00874-w>

1. **Full-Fiber Auxetic-Interlaced Yarn Sensor for Sign-Language Translation Glove Assisted by Artificial Neural Network (Article)**

Ronghui Wu, Sangjin Seo, Liyun Ma, Juyeol Bae & Taesung Kim

Nano-Micro Lett. 14, 139 (2022). <https://doi.org/10.1007/s40820-022-00887-5>

1. **An All-In-One Multifunctional Touch Sensor with Carbon-Based Gradient Resistance Elements (Article)**

Chao Wei, Wansheng Lin, Shaofeng Liang, Mengjiao Chen, Yuanjin Zheng, Xinqin Liao & Zhong Chen

Nano-Micro Lett. 14, 131 (2022). <https://doi.org/10.1007/s40820-022-00875-9>

1. **Bioinspired MXene-Based User-Interactive Electronic Skin for Digital and Visual Dual-Channel Sensing (Article)**

Wentao Cao, Zheng Wang, Xiaohao Liu, Zhi Zhou, Yue Zhang, Shisheng He, Daxiang Cui & Feng Chen

Nano-Micro Lett. 14, 119 (2022). <https://doi.org/10.1007/s40820-022-00838-0>

1. **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

Nano-Micro Lett. 14, 100 (2022). <https://doi.org/10.1007/s40820-022-00845-1>

1. **Fire Intumescent, High-Temperature Resistant, Mechanically Flexible Graphene Oxide Network for Exceptional Fire Shielding and Ultra-Fast Fire Warning (Article)**

Cheng-Fei Cao, Bin Yu, Zuan-Yu Chen, Yong-Xiang Qu, Yu-Tong Li, Yong-Qian Shi, Zhe-Wen Ma, Feng-Na Sun, Qing-Hua Pan, Long-Cheng Tang, Pingan Song & Hao Wang

Nano-Micro Lett. 14, 92 (2022). <https://doi.org/10.1007/s40820-022-00837-1>

1. **A Liquid–Solid Interface-Based Triboelectric Tactile Sensor with Ultrahigh Sensitivity of 21.48 kPa−1 (Article)**

Jingya Liu, Zhen Wen, Hao Lei, Zhenqiu Gao & Xuhui Sun

Nano-Micro Lett. 14, 88 (2022). <https://doi.org/10.1007/s40820-022-00831-7>

1. **Bioinspired Adaptive, Elastic, and Conductive Graphene Structured Thin-Films Achieving High-Efficiency Underwater Detection and Vibration Perception (Article)**

Qiling Wang, Peng Xiao, Wei Zhou, Yun Liang, Guangqiang Yin, Qiu Yang, Shiao-Wei Kuo & Tao Chen

Nano-Micro Lett. 14, 62 (2022). <https://doi.org/10.1007/s40820-022-00799-4>

1. **Functionalized Fiber-Based Strain Sensors: Pathway to Next-Generation Wearable Electronics (Review)**

Zekun Liu, Tianxue Zhu, Junru Wang, Zijian Zheng, Yi Li, Jiashen Li & Yuekun Lai

Nano-Micro Lett. 14, 61 (2022). <https://doi.org/10.1007/s40820-022-00806-8>

1. **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

Nano-Micro Lett. 14, 56 (2022). <https://doi.org/10.1007/s40820-022-00796-7>

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. **Multi-Bandgap Monolithic Metal Nanowire Percolation Network Sensor Integration by Reversible Selective Laser-Induced Redox (Article)**

Junhyuk Bang, Yeongju Jung, Hyungjun Kim, Dongkwan Kim, Maenghyo Cho & Seung Hwan Ko

Nano-Micro Lett. 14, 49 (2022). <https://doi.org/10.1007/s40820-021-00786-1>

1. **High-Porosity Foam-Based Iontronic Pressure Sensor with Superhigh Sensitivity of 9280 kPa−1 (Article)**

Qingxian Liu, Yuan Liu, Junli Shi, Zhiguang Liu, Quan Wang & Chuan Fei Guo

Nano-Micro Lett. 14, 21 (2022). <https://doi.org/10.1007/s40820-021-00770-9>

1. **A Novel Artificial Neuron-Like Gas Sensor Constructed from CuS Quantum Dots/Bi2S3 Nanosheets (Article)**

Xinwei Chen, Tao Wang, Jia Shi, Wen Lv, Yutong Han, Min Zeng, Jianhua Yang, Nantao Hu, Yanjie Su, Hao Wei, Zhihua Zhou, Zhi Yang & Yafei Zhang

Nano-Micro Lett. 14, 8 (2022). <https://doi.org/10.1007/s40820-021-00740-1>