

Nano-Micro Fabrication (2022-2024)

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Laser Process

- 1. Green Vertical-Cavity Surface-Emitting Lasers Based on InGaN Quantum Dots and Short Cavity (Article)**
Tao Yang, Yan-Hui Chen, Ya-Chao Wang, Wei Ou, Lei-Ying Ying, Yang Mei, Ai-Qin Tian, Jian-Ping Liu, Hao-Chung Guo & Bao-Ping Zhang
Nano-Micro Lett. 15, 223 (2023). <https://doi.org/10.1007/s40820-023-01189-0>
- 2. MOF-Like 3D Graphene-Based Catalytic Membrane Fabricated by One-Step Laser Scribing for Robust Water Purification and Green Energy Production (Article)**
Xinyu Huang, Liheng Li, Shuaifei Zhao, Lei Tong, Zheng Li, Zhuri Peng, Runfeng Lin, Li Zhou, Chang Peng, Kan-Hao Xue, Lijuan Chen, Gary J. Cheng, Zhu Xiong & Lei Ye
Nano-Micro Lett. 14, 174 (2022). <https://doi.org/10.1007/s40820-022-00923-4>
- 3. High-Density Nanowells Formation in Ultrafast Laser-Irradiated Thin Film Metallic Glass (Article)**
Mathilde Prudent, Djafar Iabbaden, Florent Bourquard, Stéphanie Reynaud, Yaya Lefkir, Alejandro Borroto, Jean-François Pierson, Florence Garrelie & Jean-Philippe Colombier
Nano-Micro Lett. 14, 103 (2022). <https://doi.org/10.1007/s40820-022-00850-4>
- 4. Femtosecond Laser Thermal Accumulation-Triggered Micro-/Nanostructures with Patternable and Controllable Wettability Towards Liquid Manipulating (Article)**
Kai Yin, Lingxiao Wang, Qinwen Deng, Qiaoqiao Huang, Jie Jiang, Guoqiang Li & Jun He
Nano-Micro Lett. 14, 97 (2022). <https://doi.org/10.1007/s40820-022-00840-6>
- 5. Laser-Derived Interfacial Confinement Enables Planar Growth of 2D SnS₂ on Graphene for High-Flux Electron/Ion Bridging in Sodium Storage (Article)**
Xiaosa Xu, Fei Xu, Xiuhai Zhang, Changzhen Qu, Jinbo Zhang, Yuqian Qiu, Rong Zhuang & Hongqiang Wang
Nano-Micro Lett. 14, 91 (2022). <https://doi.org/10.1007/s40820-022-00829-1>
- 6. 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>

MEMS

- 1. Semi-Implantable Bioelectronics (Review)**
Jiaru Fang, Shuang Huang, Fanmao Liu, Gen He, Xiangling Li, Xinshuo Huang, Hui-jiuan Chen & Xi Xie

Nano-Micro Lett. 14, 125 (2022). <https://doi.org/10.1007/s40820-022-00818-4>

3D Print

- 1. Challenges and Opportunities in Preserving Key Structural Features of 3D-Printed Metal/Covalent Organic Framework (Review)**
Ximeng Liu, Dan Zhao & John Wang
Nano-Micro Lett. 16, 157 (2024). <https://doi.org/10.1007/s40820-024-01373-w>
- 2. 3D-Printed Carbon-Based Conformal Electromagnetic Interference Shielding Module for Integrated Electronics (Article)**
Shaohong Shi, Yuheng Jiang, Hao Ren, Siwen Deng, Jianping Sun, Fangchao Cheng, Jingjing Jing & Yinghong Chen
Nano-Micro Lett. 16, 85 (2024). <https://doi.org/10.1007/s40820-023-01317-w>
- 3. Engineering Nano/Microscale Chiral Self-Assembly in 3D Printed Constructs (Article)**
Mohsen Esmaeili, Ehsan Akbari, Kyle George, Gelareh Rezvan, Nader Taheri-Qazvini & Monirosadat Sadati
Nano-Micro Lett. 16, 54 (2024). <https://doi.org/10.1007/s40820-023-01286-0>
- 4. A Generalized Polymer Precursor Ink Design for 3D Printing of Functional Metal Oxides (Article)**
Hehao Chen, Jizhe Wang, Siying Peng, Dongna Liu, Wei Yan, Xinggang Shang, Boyu Zhang, Yuan Yao, Yue Hui & Nanjia Zhou
Nano-Micro Lett. 15, 180 (2023). <https://doi.org/10.1007/s40820-023-01147-w>
- 5. 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>
- 6. Digital Light Processing 3D-Printed Ceramic Metamaterials for Electromagnetic Wave Absorption (Article)**
Rui Zhou, Yansong Wang, Ziyu Liu, Yongqiang Pang, Jianxin Chen & Jie Kong
Nano-Micro Lett. 14, 122 (2022). <https://doi.org/10.1007/s40820-022-00865-x>
- 7. “Toolbox” for the Processing of Functional Polymer Composites (Review)**
Yun Wei, Hongju Zhou, Hua Deng, Wenjing Ji, Ke Tian, Zhuyu Ma, Kaiyi Zhang & Qiang Fu
Nano-Micro Lett. 14, 35 (2022). <https://doi.org/10.1007/s40820-021-00774-5>
- 8. Sorting Gold and Sand (Silica) Using Atomic Force Microscope-Based Dielectrophoresis (Article)**
Chungman Kim, Sunghoon Hong, Dongha Shin, Sangmin An, Xingcai Zhang & Wonho Jhe
Nano-Micro Lett. 14, 13 (2022). <https://doi.org/10.1007/s40820-021-00760-x>

Lithography

1. Fabrication of High-Density Out-of-Plane Microneedle Arrays with Various Heights and Diverse Cross-Sectional Shapes (Article)

Hyeonhee Roh, Young Jun Yoon, Jin Soo Park, Dong-Hyun Kang, Seung Min Kwak, Byung Chul Lee & Maesoon Im

Nano-Micro Lett. 14, 24 (2022). <https://doi.org/10.1007/s40820-021-00778-1>

Thermoplastic Processing

1. Precise Thermoplastic Processing of Graphene Oxide Layered Solid by Polymer Intercalation (Article)

Zeshen Li, Fan Guo, Kai Pang, Jiahao Lin, Qiang Gao, Yance Chen, Dan Chang, Ya Wang, Senping Liu, Yi Han, Yingjun Liu, Zhen Xu & Chao Gao

Nano-Micro Lett. 14, 12 (2022). <https://doi.org/10.1007/s40820-021-00755-8>

DRIE

1. Fabrication of High-Density Out-of-Plane Microneedle Arrays with Various Heights and Diverse Cross-Sectional Shapes (Article)

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Nano-Micro Lett. 14, 24 (2022). <https://doi.org/10.1007/s40820-021-00778-1>

Preparation of Nano-Micro Materials and Devices

1. Synthesis and Modulation of Low-Dimensional Transition Metal Chalcogenide Materials via Atomic Substitution (Review)

Xuan Wang, Akang Chen, XinLei Wu, Jiatao Zhang, Jichen Dong & Leining Zhang

Nano-Micro Lett. 16, 163 (2024). <https://doi.org/10.1007/s40820-024-01378-5>

2. p-Type Two-Dimensional Semiconductors: From Materials Preparation to Electronic Applications (Review)

Lei Tang & Jingyun Zou

Nano-Micro Lett. 15, 230 (2023). <https://doi.org/10.1007/s40820-023-01211-5>

3. 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>

4. Monolayer MoS₂ Fabricated by In Situ Construction of Interlayer Electrostatic Repulsion Enables Ultrafast Ion Transport in Lithium-Ion Batteries (Article)

Meisheng Han, Yongbiao Mu, Jincong Guo, Lei Wei, Lin Zeng & Tianshou Zhao

- Nano-Micro Lett. 15, 80 (2023). <https://doi.org/10.1007/s40820-023-01042-4>
5. **Circularly Polarized Light-Enabled Chiral Nanomaterials: From Fabrication to Application (Review)**
Changlong Hao, Gaoyang Wang, Chen Chen, Jun Xu, Chuanlai Xu, Hua Kuang & Liguang Xu
Nano-Micro Lett. 15, 39 (2023). <https://doi.org/10.1007/s40820-022-01005-1>
 6. **Emerging MoS₂ Wafer-Scale Technique for Integrated Circuits (Review)**
Zimeng Ye, Chao Tan, Xiaolei Huang, Yi Ouyang, Lei Yang, Zegao Wang & Mingdong Dong
Nano-Micro Lett. 15, 38 (2023). <https://doi.org/10.1007/s40820-022-01010-4>
 7. **3D Artificial Array Interface Engineering Enabling Dendrite-Free Stable Zn Metal Anode (Article)**
Jianbin Ruan, Dingtao Ma, Kefeng Ouyang, Sicheng Shen, Ming Yang, Yanyi Wang, Jinlai Zhao, Hongwei Mi & Peixin Zhang
Nano-Micro Lett. 15, 37 (2023). <https://doi.org/10.1007/s40820-022-01007-z>
 8. **Graphene Bridge Heterostructure Devices for Negative Differential Transconductance Circuit Applications (Article)**
Minjong Lee, Tae Wook Kim, Chang Yong Park, Kimoon Lee, Takashi Taniguchi, Kenji Watanabe, Min-gu Kim, Do Kyung Hwang & Young Tack Lee
Nano-Micro Lett. 15, 22 (2023). <https://doi.org/10.1007/s40820-022-01001-5>
 9. **Chip-Based High-Dimensional Optical Neural Network (Article)**
Xinyu Wang, Peng Xie, Bohan Chen & Xingcai Zhang
Nano-Micro Lett. 14, 221 (2022). <https://doi.org/10.1007/s40820-022-00957-8>
 10. **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>
 11. **Growth of Tellurium Nanobelts on h-BN for p-type Transistors with Ultrahigh Hole Mobility (Article)**
Peng Yang, Jiajia Zha, Guoyun Gao, Long Zheng, Haoxin Huang, Yunpeng Xia, Songcen Xu, Tengfei Xiong, Zhuomin Zhang, Zhengbao Yang, Ye Chen, Dong-Keun Ki, Jun J. Liou, Wugang Liao & Chaoliang Tan
Nano-Micro Lett. 14, 109 (2022). <https://doi.org/10.1007/s40820-022-00852-2>