**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>

1. **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, Zhuiri Peng, Runfeng Lin, Li Zhou, Chang Peng, Kan-Hao Xue, Lijuan Chen, Gary J. Cheng, Zhu Xiong & Lei Ye

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1. **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

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1. **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

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1. **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

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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

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**MEMS**

1. **Semi-Implantable Bioelectronics (Review)**

Jiaru Fang, Shuang Huang, Fanmao Liu, Gen He, Xiangling Li, Xinshuo Huang, Hui-jiuan Chen & Xi Xie

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**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

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1. **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>

1. **Engineering Nano/Microscale Chiral Self-Assembly in 3D Printed Constructs (Article)**

Mohsen Esmaeili, Ehsan Akbari, Kyle George, Gelareh Rezvan, Nader Taheri-Qazvini & Monirosadat Sadati

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1. **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

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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

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1. **Digital Light Processing 3D-Printed Ceramic Metamaterials for Electromagnetic Wave Absorption (Article)**

Rui Zhou, Yansong Wang, Ziyu Liu, Yongqiang Pang, Jianxin Chen & Jie Kong

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1. **“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

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1. **Sorting Gold and Sand (Silica) Using Atomic Force Microscope-Based Dielectrophoresis (Article)**

Chungman Kim, Sunghoon Hong, Dongha Shin, Sangmin An, Xingcai Zhang & Wonho Jhe

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**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

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**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

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**DRIE**

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

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**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

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

Lei Tang & Jingyun Zou

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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

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1. **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

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1. **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

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1. **Emerging MoS2 Wafer-Scale Technique for Integrated Circuits (Review)**

Zimeng Ye, Chao Tan, Xiaolei Huang, Yi Ouyang, Lei Yang, Zegao Wang & Mingdong Dong

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1. **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

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1. **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

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1. **Chip-Based High-Dimensional Optical Neural Network (Article)**

Xinyu Wang, Peng Xie, Bohan Chen & Xingcai Zhang

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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

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1. **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, Juin J. Liou, Wugang Liao & Chaoliang Tan

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