

Thermal Management Materials (2022-2024)

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1. **Highly Thermally Conductive and Structurally Ultra-Stable Graphitic Films with Seamless Heterointerfaces for Extreme Thermal Management (Article)**
Peijuan Zhang, Yuanyuan Hao, Hang Shi, Jiahao Lu, Yingjun Liu, Xin Ming, Ya Wang, Wenzhang Fang, Yuxing Xia, Yance Chen, Peng Li, Ziqiu Wang, Qingyun Su, Weidong Lv, Ji Zhou, Ying Zhang, Haiwen Lai, Weiwei Gao, Zhen Xu & Chao Gao
Nano-Micro Lett. 16, 58 (2024). <https://doi.org/10.1007/s40820-023-01277-1>
2. **Metal–Organic Gel Leading to Customized Magnetic-Coupling Engineering in Carbon Aerogels for Excellent Radar Stealth and Thermal Insulation Performances (Article)**
Xin Li, Ruizhe Hu, Zhiqiang Xiong, Dan Wang, Zhixia Zhang, Chongbo Liu, Xiaojun Zeng, Dezhi Chen, Renchao Che & Xuliang Nie
Nano-Micro Lett. 16, 42 (2024). <https://doi.org/10.1007/s40820-023-01255-7>
3. **Flexible and Robust Functionalized Boron Nitride/Poly(p-Phenylene Benzobisoxazole) Nanocomposite Paper with High Thermal Conductivity and Outstanding Electrical Insulation (Article)**
Lin Tang, Kunpeng Ruan, Xi Liu, Yusheng Tang, Yali Zhang & Junwei Gu
Nano-Micro Lett. 16, 38 (2024). <https://doi.org/10.1007/s40820-023-01257-5>
4. **Coaxial Wet Spinning of Boron Nitride Nanosheet-Based Composite Fibers with Enhanced Thermal Conductivity and Mechanical Strength (Article)**
Wenjiang Lu, Qixuan Deng, Minsu Liu, Baofu Ding, Zhiyuan Xiong & Ling Qiu
Nano-Micro Lett. 16, 25 (2024). <https://doi.org/10.1007/s40820-023-01236-w>
5. **Highly Thermoconductive, Strong Graphene-Based Composite Films by Eliminating Nanosheets Wrinkles (Article)**
Guang Xiao, Hao Li, Zhizhou Yu, Haoting Niu & Yagang Yao
Nano-Micro Lett. 16, 17 (2024). <https://doi.org/10.1007/s40820-023-01252-w>
6. **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>
7. **Cerium Methacrylate Assisted Preparation of Highly Thermally Conductive and Anticorrosive Multifunctional Coatings for Heat Conduction Metals Protection (Article)**
Fei Xu, Peng Ye, Jianwen Peng, Haolei Geng, Yexiang Cui, Di Bao, Renjie Lu, Hongyu Zhu, Yanji Zhu & Huaiyuan Wang
Nano-Micro Lett. 15, 201 (2023). <https://doi.org/10.1007/s40820-023-01163-w>
8. **"Three-in-One" Multi-Scale Structural Design of Carbon Fiber-Based Composites for Personal Electromagnetic Protection and Thermal Management (Article)**

Ming Zhou, Shujuan Tan, Jingwen Wang, Yue Wu, Leilei Liang & Guangbin Ji

Nano-Micro Lett. 15, 176 (2023). <https://doi.org/10.1007/s40820-023-01144-z>

9. A Thermochromic, Viscoelastic Nacre-like Nanocomposite for the Smart Thermal Management of Planar Electronics (Article)

Jiemin Wang, Tairan Yang, Zequn Wang, Xuhui Sun, Meng An, Dan Liu, Changsheng Zhao, Gang Zhang & Weiwei Lei

Nano-Micro Lett. 15, 170 (2023). <https://doi.org/10.1007/s40820-023-01149-8>

10. Functional Materials and Innovative Strategies for Wearable Thermal Management Applications (Review)

Yeongju Jung, Minwoo Kim, Taegyeom Kim, Jiyong Ahn, Jinwoo Lee & Seung Hwan Ko

Nano-Micro Lett. 15, 160 (2023). <https://doi.org/10.1007/s40820-023-01126-1>

11. Tetris-Style Stacking Process to Tailor the Orientation of Carbon Fiber Scaffolds for Efficient Heat Dissipation (Article)

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12. Self-Supporting Nanoporous Copper Film with High Porosity and Broadband Light Absorption for Efficient Solar Steam Generation (Article)

Bin Yu, Yan Wang, Ying Zhang & Zhonghua Zhang

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13. Ion–Electron Coupling Enables Ionic Thermoelectric Material with New Operation Mode and High Energy Density (Article)

Yongjie He, Shaowei Li, Rui Chen, Xu Liu, George Omololu Odunmbaku, Wei Fang, Xiaoxue Lin, Zeping Ou, Qianzhi Gou, Jiacheng Wang, Nabonswende Aida Nadege Ouedraogo, Jing Li, Meng Li, Chen Li, Yujie Zheng, Shanshan Chen, Yongli Zhou & Kuan Sun

Nano-Micro Lett. 15, 101 (2023). <https://doi.org/10.1007/s40820-023-01077-7>

14. Flexible, Highly Thermally Conductive and Electrically Insulating Phase Change Materials for Advanced Thermal Management of 5G Base Stations and Thermoelectric Generators (Article)

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Nano-Micro Lett. 15, 31 (2023). <https://doi.org/10.1007/s40820-022-01003-3>

15. A Thermoregulatory Flexible Phase Change Nonwoven for All-Season High-Efficiency Wearable Thermal Management (Article)

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Zhang, Srikanth Mateti, Ying Chen, Zhong-Shuai Wu & Quan Shi

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16. Ultralow Interfacial Thermal Resistance of Graphene Thermal Interface Materials with Surface Metal Liquefaction (Article)

Wen Dai, Xing-Jie Ren, Qingwei Yan, Shengding Wang, Mingyang Yang, Le Lv, Junfeng Ying, Lu Chen, Peidi Tao, Liwen Sun, Chen Xue, Jinhong Yu, Chengyi Song, Kazuhito Nishimura, Nan Jiang & Cheng-Te Lin

Nano-Micro Lett. 15, 9 (2023). <https://doi.org/10.1007/s40820-022-00979-2>

17. Self-Modifying Nanointerface Driving Ultrahigh Bidirectional Thermal Conductivity Boron Nitride-Based Composite Flexible Films (Article)

Taoqing Huang, Xinyu Zhang, Tian Wang, Honggang Zhang, Yongwei Li, Hua Bao, Min Chen & Limin Wu

Nano-Micro Lett. 15, 2 (2023). <https://doi.org/10.1007/s40820-022-00972-9>

18. Bifunctional Liquid Metals Allow Electrical Insulating Phase Change Materials to Dual-Mode Thermal Manage the Li-Ion Batteries (Article)

Cong Guo, Lu He, Yihang Yao, Weizhi Lin, Yongzheng Zhang, Qin Zhang, Kai Wu & Qiang Fu

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19. Self-Exfoliation of Flake Graphite for Bioinspired Compositing with Aramid Nanofiber toward Integration of Mechanical and Thermoconductive Properties (Article)

Limei Huang, Guang Xiao, Yunjing Wang, Hao Li, Yahong Zhou, Lei Jiang & Jianfeng Wang

Nano-Micro Lett. 14, 168 (2022). <https://doi.org/10.1007/s40820-022-00919-0>

20. Vertical Alignment of Anisotropic Fillers Assisted by Expansion Flow in Polymer Composites (Article)

Hongyu Niu, Haichang Guo, Lei Kang, Liucheng Ren, Ruicong Lv & Shulin Bai

Nano-Micro Lett. 14, 153 (2022). <https://doi.org/10.1007/s40820-022-00909-2>

21. High Conduction Band Inorganic Layers for Distinct Enhancement of Electrical Energy Storage in Polymer Nanocomposites (Article)

Yingke Zhu, Zhonghui Shen, Yong Li, Bin Chai, Jie Chen, Pingkai Jiang & Xingyi Huang

Nano-Micro Lett. 14, 151 (2022). <https://doi.org/10.1007/s40820-022-00902-9>

22. Highly Thermally Conductive Polymer/Graphene Composites with Rapid Room-Temperature Self-Healing Capacity (Article)

Huitao Yu, Can Chen, Jinxu Sun, Heng Zhang, Yiyu Feng, Mengmeng Qin & Wei Feng

Nano-Micro Lett. 14, 135 (2022). <https://doi.org/10.1007/s40820-022-00882-w>

23. Interconnected MXene/Graphene Network Constructed by Soft Template for Multi-Performance Improvement of Polymer Composites (Article)

Liyuan Jin, Wenjing Cao, Pei Wang, Na Song & Peng Ding

Nano-Micro Lett. 14, 133 (2022). <https://doi.org/10.1007/s40820-022-00877-7>

24. Efficient Preconstruction of Three-Dimensional Graphene Networks for Thermally Conductive Polymer Composites (Article)

Hao-Yu Zhao, Ming-Yuan Yu, Ji Liu, Xiaofeng Li, Peng Min & Zhong-Zhen Yu

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Chang-Ping Feng, Fang Wei, Kai-Yin Sun, Yan Wang, Hong-Bo Lan, Hong-Jing Shang, Fa-Zhu Ding, Lu Bai, Jie Yang & Wei Yang

Nano-Micro Lett. 14, 127 (2022). <https://doi.org/10.1007/s40820-022-00868-8>

26. Hierarchically Multifunctional Polyimide Composite Films with Strongly Enhanced Thermal Conductivity (Article)

Yongqiang Guo, Hua Qiu, Kunpeng Ruan, Yali Zhang & Junwei Gu

Nano-Micro Lett. 14, 26 (2022). <https://doi.org/10.1007/s40820-021-00767-4>