Graphene-based surface heater for de-icing applications

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Citation Report

#	Article	IF	Citations
3	Icephobic Strategies and Materials with Superwettability: Design Principles and Mechanism. Langmuir, 2018, 34, 15425-15444.	1.6	108
4	High-Performance Graphene-Based Natural Fiber Composites. ACS Applied Materials & Interfaces, 2018, 10, 34502-34512.	4.0	116
5	Large-Scale Production of Highly Stretchable CNT/Cotton/Spandex Composite Yarn for Wearable Applications. ACS Applied Materials & Interfaces, 2018, 10, 32726-32735.	4.0	96
6	Assembly of carbon nanodots in graphene-based composite for flexible electro-thermal heater with ultrahigh efficiency. Nano Research, 2019, 12, 2498-2508.	5.8	42
7	Effect of graphene oxide size on interlaminar shear strength of glass fabric/epoxy composites. Materials Research Express, 2019, 6, 105306.	0.8	4
8	Recent developments in air-trapped superhydrophobic and liquid-infused slippery surfaces for anti-icing application. Progress in Organic Coatings, 2019, 137, 105373.	1.9	129
9	All Inkjet-Printed Graphene-Silver Composite Ink on Textiles for Highly Conductive Wearable Electronics Applications. Scientific Reports, 2019, 9, 8035.	1.6	141
10	Ultrahigh Performance of Nanoengineered Graphene-Based Natural Jute Fiber Composites. ACS Applied Materials & Interfaces, 2019, 11, 21166-21176.	4.0	106
11	A Review of Using Conductive Composite Materials in Solving Lightening Strike and Ice Accumulation Problems in Aviation. Journal of Aerospace Technology and Management, 0, , .	0.3	47
12	Engineering Graphene Flakes for Wearable Textile Sensors via Highly Scalable and Ultrafast Yarn Dyeing Technique. ACS Nano, 2019, 13, 3847-3857.	7.3	179
13	Fabrication of low cost and scalable carbon-based conductive ink for E-textile applications. Materials Today Communications, 2019, 19, 32-38.	0.9	33
14	Graphene-based materials production and application in textile wastewater treatment: color removal and phytotoxicity using Lactuca sativa as bioindicator. Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 2020, 55, 97-106.	0.9	6
15	Recent Advances in 1D Stretchable Electrodes and Devices for Textile and Wearable Electronics: Materials, Fabrications, and Applications. Advanced Materials, 2020, 32, e1902532.	11.1	219
17	Transforming waste cigarette filters into 3D carbon scaffolds for form-stable and energy conversion phase change materials. Sustainable Energy and Fuels, 2020, 4, 4285-4292.	2.5	17
18	Facile preparation of wearable heater based on conductive silver paste with low actuation voltage and rapid response. SN Applied Sciences, 2020, 2, 1.	1.5	6
19	Screening effect of monolayer van der Waals crystals on surface deicing: a molecular simulation study. Physical Chemistry Chemical Physics, 2020, 22, 27873-27881.	1.3	3
20	Salt templated and graphene nanoplatelets draped copper (GNP-draped-Cu) composites for dramatic improvements in pool boiling heat transfer. Scientific Reports, 2020, 10, 11941.	1.6	15
21	Radio-frequency-transmitting hexagonal boron nitride-based anti- and de-icing heating system. Nanoscale, 2020, 12, 21895-21900.	2.8	7

#	Article	IF	Citations
22	Cotton Fabrics Coated with Few-Layer Graphene as Highly Responsive Surface Heaters and Integrated Lightweight Electronic-Textile Circuits. ACS Applied Nano Materials, 2020, 3, 9771-9783.	2.4	32
24	Simulation of self-heating process on the nanoscale: a multiscale approach for molecular models of nanocomposite materials. Nanoscale Advances, 2020, 2, 3164-3180.	2.2	15
25	A superhydrophobic/electrothermal synergistically anti-icing strategy based on graphene composite. Composites Science and Technology, 2020, 198, 108307.	3.8	213
26	Transparent Heaters: A Review. Advanced Functional Materials, 2020, 30, 1910225.	7.8	156
27	Laser induced graphene printing of spatially controlled super-hydrophobic/hydrophilic surfaces. Carbon, 2020, 162, 570-578.	5.4	50
28	Fabrication and characterization of reduced graphene oxide by atmospheric pressure plasma jet. AIP Advances, 2020, 10, .	0.6	0
29	Highly Conductive, Scalable, and Machine Washable Grapheneâ€Based Eâ€Textiles for Multifunctional Wearable Electronic Applications. Advanced Functional Materials, 2020, 30, 2000293.	7.8	204
30	Realization of â€œsingle-atom ferromagnetismâ€• in graphene by Cuâ€“N4 moieties anchoring. Applied Physics Letters, 2020, 116, .	1.5	9
31	Microwave deicing efficiency and dielectric property of road concrete modified using different wave absorbing material. Cold Regions Science and Technology, 2020, 174, 103064.	1.6	21
32	Graphene-based film heater fabricated by laser writing. Materials Letters, 2021, 284, 128869.	1.3	11
33	Tailored Graphene Micropatterns by Waferâ€Scale Direct Transfer for Flexible Chemical Sensor Platform. Advanced Materials, 2021, 33, e2004827.	11.1	40
34	Hierarchically carbonized silk/ceramic composites for electro-thermal conversion. Composites Part A: Applied Science and Manufacturing, 2021, 141, 106237.	3.8	14
35	Facile fabrication of highly conductive, waterproof, and washable e-textiles for wearable applications. Nano Research, 2021, 14, 1043-1052.	5.8	46
36	Sustainable and Multifunctional Composites of Grapheneâ€Based Natural Jute Fibers. Advanced Sustainable Systems, 2021, 5, 2000228.	2.7	48
37	Realization of 3D epoxy resin/Ti₃C₂T _x MXene aerogel composites for low-voltage electrothermal heating. 2D Materials, 2021, 8, 025022.	2.0	17
38	Engineered Nanomaterials for Aviation Industry in COVID-19 Context: A Time-Sensitive Review. Coatings, 2021, 11, 382.	1.2	16
39	Highly Concentrated, Conductive, Defect-free Graphene Ink for Screen-Printed Sensor Application. Nano-Micro Letters, 2021, 13, 87.	14.4	36
40	Temperature-dependent electrical resistivity of macroscopic graphene nanoplatelet strips. Nanotechnology, 2021, 32, 275701.	1.3	16

#	Article	IF	Citations
41	The flexible pressure-sensitive adhesive graphene-based composite heater based on the laminating structure for de-icing applications. Journal of Materials Science: Materials in Electronics, 2021, 32, 13994-14005.	1.1	3
43	Molecular dynamics simulation of thermal de-icing on a flat surface. Applied Thermal Engineering, 2021, 189, 116701.	3.0	14
44	Enhancing the mechanical properties of natural jute yarn suitable for structural applications. Materials Research Express, 2021, 8, 055503.	0.8	16
45	Electrothermal Modeling and Characterization of Graphene-Based Thin Strips. , 2021, , .		2
46	Top-down synthesis of graphene: A comprehensive review. FlatChem, 2021, 27, 100224.	2.8	143
47	A facile and combined methodology to fabricate sputtered thin film micro-patterns for heater/sensor applications utilizing CO₂laser-cut masks. Surface Engineering, 2021, 37, 1133-1142.	1.1	3
48	Lightweight, few-layer graphene composites with improved electro-thermal properties as efficient heating devices for de-icing applications. Carbon, 2021, 182, 655-668.	5.4	24
49	Functional textiles and composite based wearable thermal devices for Joule heating: progress and perspectives. Applied Materials Today, 2021, 23, 101025.	2.3	64
50	Enhancing the de-icing effects using reduced graphene oxide with boron nitride nano powder in glass fibre reinforced polymer. Materials Today: Proceedings, 2021, 47, 4807-4813.	0.9	3
51	Facile Synthesis of Electrically Conductive and Heatable Nanoparticle/Nanocarbon Hybrid Aerogels. ACS Applied Materials & Interfaces, 2021, 13, 36201-36212.	4.0	6
52	Electric heating behavior of flexible knitted fabrics comprising reduced graphene oxide, with emphasis on resistance temperature-sensitive behavior and decoupling of contact resistance. Journal of Industrial Textiles, 2022, 51, 3131S-3148S.	1.1	7
53	Design of highly transparent conductive optical coatings optimized for oblique angle light incidence. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	1.1	1
54	HVOF-Sprayed AlSi50 Alloy Coatings as a Novel Electrothermal Anti-icing/De-icing System for Polymer-based Composite Structures. Journal of Thermal Spray Technology, 2021, 30, 2161-2173.	1.6	13
55	Printed Single-Wall Carbon Nanotube-Based Joule Heating Devices Integrated as Functional Laminae in Advanced Composites. ACS Applied Materials & Interfaces, 2021, 13, 39880-39893.	4.0	23
56	Highly stretchable, fast thermal response carbon nanotube composite heater. Composites Part A: Applied Science and Manufacturing, 2021, 147, 106471.	3.8	30
57	Potential use of smart coatings for icephobic applications: A review. Surface and Coatings Technology, 2021, 424, 127656.	2.2	30
58	Multiphysics anti-icing simulation of a CFRP composite wing structure embedded with thin etched-foil electrothermal heating films in glaze ice conditions. Composite Structures, 2021, 276, 114441.	3.1	17
59	A Route to Sustainable Aviation: A Roadmap for the Realization of Aircraft Components With Electrical and Structural Multifunctionality. IEEE Transactions on Transportation Electrification, 2021, 7, 3032-3049.	5.3	16

#	Article	IF	Citations
60	Multifunctional Graphene-Based Wearable E-Textiles. Proceedings (mdpi), 2021, 68, .	0.2	11
61	Fabrication and characterization of graphene-based de-icing heater. Materials Today: Proceedings, 2022, 52, 206-211.	0.9	2
62	Computational design and analysis of patterned micro-heaters with various thickness and trace width. Journal of Physics: Conference Series, 2021, 2054, 012083.	0.3	1
63	Studying changes in the electrical resistance of carbon-nanotubes-modified elastomers during their compression, stretching and torsion. Voprosy Materialovedeniya, 2019, , 128-138.	0.0	0
64	Studying Changes in the Electrical Resistance of Elastomers Modified by Carbon Nanotubes during Their Compression, Stretching, and Torsion. Inorganic Materials: Applied Research, 2020, 11, 1383-1389.	0.1	0
65	An Ultra-Sensitive Multi-Functional Optical Micro/Nanofiber Based on Stretchable Encapsulation. Sensors, 2021, 21, 7437.	2.1	8
66	Patterning Configuration of Surface Hydrophilicity by Graphene Nanosheet towards the Inhibition of Ice Nucleation and Growth. Coatings, 2022, 12, 52.	1.2	1
67	Accelerated automated screening of viscous graphene suspensions with various surfactants for optimal electrical conductivity. , 2022, 1, 139-146.		5
68	Thermoelectrical properties of graphene knife-coated cellulosic fabrics for defect monitoring in Joule-heated textiles. Journal of Industrial Textiles, 2022, 51, 8884S-8905S.	1.1	6
69	Transparent heaters based on CVD grown few-layer graphene. Journal of Materials Science: Materials in Electronics, 2022, 33, 3586-3594.	1.1	0
70	The effect of surface treatments and graphene-based modifications on mechanical properties of natural jute fiber composites: A review. IScience, 2022, 25, 103597.	1.9	36
71	Dual-Emitter Graphene Glass Fiber Fabric for Radiant Heating. ACS Nano, 2022, 16, 2577-2584.	7.3	29
72	Flexible Inkjet-Printed Heaters Utilizing Graphene-Based Inks. Sensors, 2022, 22, 1173.	2.1	11
73	Effects of multiwalled carbon nanotubes and reduced graphene oxide of different proportions on the electrothermal properties of cationic cellulose nanofibril-based composites. Journal of Materials Research and Technology, 2022, 17, 2388-2399.	2.6	10
74	Ultralow work function of the electride Sr₃CrN₃. Physical Chemistry Chemical Physics, 2022, 24, 8854-8858.	1.3	3
75	Electro-Thermal Parameters of Graphene Nano-Platelets Films for De-Icing Applications. Aerospace, 2022, 9, 107.	1.1	6
76	Fully printed and multifunctional graphene-based wearable e-textiles for personalized healthcare applications. IScience, 2022, 25, 103945.	1.9	40
77	Green Synthesis of Laser-Induced Graphene with Copper Oxide Nanoparticles for Deicing Based on Photo-Electrothermal Effect. Nanomaterials, 2022, 12, 960.	1.9	3

#	Article	IF	Citations
78	Costâ€Effective Fabrication of Microâ€Nanostructured Superhydrophobic Polyethylene/Graphene Foam with Selfâ€Floating, Optical Trapping, Acidâ€/Alkali Resistance for Efficient Photothermal Deicing and Interfacial Evaporation. Small, 2022, 18, e2200175.	5.2	54
79	Synthesis of PEDOT:PSS Solution-Processed Electronic Textiles for Enhanced Joule Heating. ACS Omega, 2022, 7, 12716-12723.	1.6	15
80	Scalable high-efficiency multilayered anti-icing/de-icing coating: Superhydrophobic upper layer boosts the performance of the electrothermal system. Progress in Organic Coatings, 2022, 168, 106866.	1.9	5
81	Scalable MXene and PEDOT-CNT Nanocoatings for Fibre-Reinforced Composite De-Icing. Materials, 2022, 15, 3535.	1.3	0
82	Complementary Chemical Vapor Deposition Fabrication for Largeâ€Area Uniform Graphene Glass Fiber Fabric. Small Methods, 2022, 6, .	4.6	8
83	A robust superhydrophobic anti-icing/de-icing composite coating with electrothermal and auxiliary photothermal performances. Composites Science and Technology, 2022, 227, 109578.	3.8	48
84	Electrically Conductive 2D Material Coatings for Flexible and Stretchable Electronics: A Comparative Review of Graphenes and MXenes. Advanced Functional Materials, 2022, 32, .	7.8	52
85	Graphene and CNTâ€Based Smart Fiberâ€Reinforced Composites: A Review. Advanced Functional Materials, 2022, 32, .	7.8	67
86	Grapheneâ€Based Textiles for Thermal Management and Flame Retardancy. Advanced Functional Materials, 2022, 32, .	7.8	13
87	Sustainable Fiberâ€Reinforced Composites: A Review. Advanced Sustainable Systems, 2022, 6, .	2.7	61
88	A non-percolative rGO/XLPE composite with high electrothermal performance at high voltage and effective de/anti-icing for transmission-lines. Composites Science and Technology, 2022, 230, 109772.	3.8	3
89	Smart Electronic Textileâ€Based Wearable Supercapacitors. Advanced Science, 2022, 9, .	5.6	59
90	Rapid and Energy-Efficient Frontal Curing of Multifunctional Composites Using Integrated Nanostructured Heaters. ACS Applied Materials & Interfaces, 2022, 14, 50215-50224.	4.0	6
91	Improvement in electrical characteristics by surface modification of multi-wall carbon nanotube based buckypaper for de-icing application. Journal of Composite Materials, 2022, 56, 4487-4499.	1.2	1
92	Multi-material additive manufacturing of self-heating structures for out-of-autoclave post-processing and de-icing. Additive Manufacturing, 2023, 68, 103519.	1.7	0
93	Graphene Based Printable Conductive Wax for Lowâ€Power Thermal Actuation in Microfluidic Paperâ€Based Analytical Devices. Advanced Materials Technologies, 2023, 8, .	3.0	2
94	Narrow-Linewidth Tunable Fiber Laser Based on Laser-Induced Graphene Heated Fiber Bragg Grating with Low Voltage. Photonics, 2023, 10, 136.	0.9	0
95	Electrically tunable mode-locked fiber laser using laser induced graphene assisted long-period fiber grating. Laser Physics Letters, 2023, 20, 035102.	0.6	3

#	Article	IF	Citations