

Jian-Jun Wang

List of Publications by Year in descending order

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110
papers

7,216
citations

61984

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83
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114
all docs

114
docs citations

114
times ranked

5520
citing authors

#	ARTICLE	IF	CITATIONS
1	Bio-Inspired Strategies for Anti-Icing. ACS Nano, 2014, 8, 3152-3169.	14.6	760
2	Anti-icing Coating with an Aqueous Lubricating Layer. ACS Applied Materials & Interfaces, 2014, 6, 6998-7003.	8.0	292
3	Superhydrophobic surfaces cannot reduce ice adhesion. Applied Physics Letters, 2012, 101, .	3.3	282
4	Robust Prototypical Anti-icing Coatings with a Self-lubricating Liquid Water Layer between Ice and Substrate. ACS Applied Materials & Interfaces, 2013, 5, 4026-4030.	8.0	269
5	Probing the critical nucleus size for ice formation with graphene oxide nanosheets. Nature, 2019, 576, 437-441.	27.8	268
6	Anti-icing surfaces based on enhanced self-propelled jumping of condensed water microdroplets. Chemical Communications, 2013, 49, 4516.	4.1	266
7	Janus effect of antifreeze proteins on ice nucleation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 14739-14744.	7.1	205
8	Super-hydrophobic surfaces to condensed micro-droplets at temperatures below the freezing point retard ice/frost formation. Soft Matter, 2011, 7, 3993.	2.7	201
9	Graphene Oxide Restricts Growth and Recrystallization of Ice Crystals. Angewandte Chemie - International Edition, 2017, 56, 997-1001.	13.8	186
10	Temperature-Driven Switching of Water Adhesion on Organogel Surface. Advanced Materials, 2014, 26, 1895-1900.	21.0	165
11	Vertically aligned reduced graphene oxide/Ti ₃ C ₂ T _x MXene hybrid hydrogel for highly efficient solar steam generation. Nano Research, 2020, 13, 3048-3056.	10.4	163
12	Bioinspired Materials for Controlling Ice Nucleation, Growth, and Recrystallization. Accounts of Chemical Research, 2018, 51, 1082-1091.	15.6	159
13	Anti-Ice Coating Inspired by Ice Skating. Small, 2014, 10, 4693-4699.	10.0	157
14	Bioinspired Multifunctional Anti-icing Hydrogel. Matter, 2020, 2, 723-734.	10.0	150
15	Hierarchically structured porous aluminum surfaces for high-efficient removal of condensed water. Soft Matter, 2012, 8, 6680.	2.7	146
16	Investigating the Effects of Solid Surfaces on Ice Nucleation. Langmuir, 2012, 28, 10749-10754.	3.5	139
17	Guided Self-Propelled Leaping of Droplets on a Micro-Anisotropic Superhydrophobic Surface. Angewandte Chemie - International Edition, 2016, 55, 4265-4269.	13.8	135
18	Tuning ice nucleation with counterions on polyelectrolyte brush surfaces. Science Advances, 2016, 2, e1600345.	10.3	134

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19	Distinct ice patterns on solid surfaces with various wettabilities. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11285-11290.	7.1	132
20	Hierarchical Porous Surface for Efficiently Controlling Microdroplets' Self-Removal. Advanced Materials, 2013, 25, 2291-2295.	21.0	126
21	Oxidized Quasi-Carbon Nitride Quantum Dots Inhibit Ice Growth. Advanced Materials, 2017, 29, 1606843.	21.0	121
22	Organogel as durable anti-icing coatings. Science China Materials, 2015, 58, 559-565.	6.3	116
23	Bioinspired Solid Organogel Materials with a Regenerable Sacrificial Alkane Surface Layer. Advanced Materials, 2017, 29, 1700865.	21.0	109
24	Highly efficient solar anti-icing/deicing via a hierarchical structured surface. Materials Horizons, 2020, 7, 2097-2104.	12.2	108
25	Air-Stable n-Type Thermoelectric Materials Enabled by Organic Diradicaloids. Angewandte Chemie - International Edition, 2019, 58, 4958-4962.	13.8	92
26	Novel amphoteric ion exchange membranes by blending sulfonated poly(ether ether) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 467 Td (keton Materials Chemistry A, 2015, 3, 17590-17597.	10.3	91
27	Superhydrophobic surface at low surface temperature. Applied Physics Letters, 2011, 98, .	3.3	86
28	Self-Replenishable Anti-Waxing Organogel Materials. Angewandte Chemie - International Edition, 2015, 54, 8975-8979.	13.8	71
29	Ion-specific ice recrystallization provides a facile approach for the fabrication of porous materials. Nature Communications, 2017, 8, 15154.	12.8	71
30	Antiadhesion Organogel Materials: From Liquid to Solid. Advanced Materials, 2017, 29, 1703032.	21.0	70
31	Novel sulfonated polyimide/polyvinyl alcohol blend membranes for vanadium redox flow battery applications. Journal of Materials Chemistry A, 2015, 3, 2072-2081.	10.3	65
32	Condensation mode determines the freezing of condensed water on solid surfaces. Soft Matter, 2012, 8, 8285.	2.7	64
33	Air-Stable n-Type Thermoelectric Materials Enabled by Organic Diradicaloids. Angewandte Chemie, 2019, 131, 5012-5016.	2.0	64
34	Solar anti-icing surface with enhanced condensate self-removing at extreme environmental conditions. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	63
35	Contact line pinning and the relationship between nanobubbles and substrates. Journal of Chemical Physics, 2014, 140, 054705.	3.0	61
36	Heterogeneous ice nucleation correlates with bulk-like interfacial water. Science Advances, 2019, 5, eaat9825.	10.3	60

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37	Tuning Ice Nucleation with Supercharged Polypeptides. <i>Advanced Materials</i> , 2016, 28, 5008-5012.	21.0	59
38	Size Fractionation of Graphene Oxide Nanosheets via Controlled Directional Freezing. <i>Journal of the American Chemical Society</i> , 2017, 139, 12517-12523.	13.7	52
39	Bioinspired L-Proline Oligomers for the Cryopreservation of Oocytes via Controlling Ice Growth. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 18352-18362.	8.0	52
40	Competing Effects between Condensation and Self-Removal of Water Droplets Determine Antifrosting Performance of Superhydrophobic Surfaces. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 7805-7814.	8.0	52
41	Bioinspired Polydopamine/Polyzwitterion Coatings for Underwater Anti-Oil and -Freezing Surfaces. <i>Langmuir</i> , 2019, 35, 1895-1901.	3.5	47
42	High performance ultraviolet photodetectors based on an individual Zn ₂ SnO ₄ single crystalline nanowire. <i>Journal of Materials Chemistry</i> , 2010, 20, 9858.	6.7	46
43	Controllable Synthesis of Latex Particles with Multicavity Structures. <i>Macromolecules</i> , 2011, 44, 2404-2409.	4.8	46
44	All-Day Anti-Icing/Deicing Film Based on Combined Photo-Electro-Thermal Conversion. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 44948-44955.	8.0	46
45	A Freezing-Induced Turn-On Imaging Modality for Real-Time Monitoring of Cancer Cells in Cryosurgery. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 3834-3837.	13.8	44
46	Bioinspired Ice-Binding Materials for Tissue and Organ Cryopreservation. <i>Journal of the American Chemical Society</i> , 2022, 144, 5685-5701.	13.7	42
47	Control of Ice Propagation by Using Polyelectrolyte Multilayer Coatings. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 11436-11439.	13.8	41
48	Spreading fully at the ice-water interface is required for high ice recrystallization inhibition activity. <i>Science China Chemistry</i> , 2019, 62, 909-915.	8.2	39
49	Preparation and characterization of dendritic silver nanoparticles. <i>Journal of Materials Science</i> , 2005, 40, 1681-1683.	3.7	38
50	Size Controllable, Transparent, and Flexible 2D Silver Meshes Using Recrystallized Ice Crystals as Templates. <i>ACS Nano</i> , 2017, 11, 9898-9905.	14.6	38
51	Closed-air induced composite wetting on hydrophilic ordered nanoporous anodic alumina. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	37
52	Fabrication of Anti-Icing Surfaces by Short ±-Helical Peptides. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 1957-1962.	8.0	36
53	Ion-specific ice propagation behavior on polyelectrolyte brush surfaces. <i>RSC Advances</i> , 2017, 7, 840-844.	3.6	34
54	Inhibition of Heterogeneous Ice Nucleation by Bioinspired Coatings of Polyampholytes. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 30092-30099.	8.0	34

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55	Graphene Oxide Restricts Growth and Recrystallization of Ice Crystals. <i>Angewandte Chemie</i> , 2017, 129, 1017-1021.	2.0	33
56	Direct observation of 2-dimensional ices on different surfaces near room temperature without confinement. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 16723-16728.	7.1	33
57	Inhibiting Condensation Freezing on Patterned Polyelectrolyte Coatings. <i>ACS Nano</i> , 2020, 14, 5000-5007.	14.6	32
58	Rationally designed surface microstructural features for enhanced droplet jumping and anti-frosting performance. <i>Soft Matter</i> , 2020, 16, 4462-4476.	2.7	30
59	Recent Research Progress in the Synthesis of Polyphosphazene and Their Applications. <i>Designed Monomers and Polymers</i> , 2009, 12, 357-375.	1.6	29
60	Orientation studies of uniaxial drawn syndiotactic polystyrene/carbon nanotube nanocomposite films. <i>Soft Matter</i> , 2011, 7, 4039.	2.7	28
61	Bioinspired Ice Growth Inhibitors Based on Self-Assembling Peptides. <i>ACS Macro Letters</i> , 2019, 8, 1383-1390.	4.8	27
62	Preparation of Nano-Polyethylene Fibers and Floccules by Extrusion Polymerization Under Atmospheric Pressure Using the SBA-15-Supported Cp ₂ ZrCl ₂ Catalytic System. <i>Macromolecular Materials and Engineering</i> , 2005, 290, 31-37.	3.6	26
63	Guided Self-Propelled Leaping of Droplets on a Micro-Anisotropic Superhydrophobic Surface. <i>Angewandte Chemie</i> , 2016, 128, 4337-4341.	2.0	26
64	Use of Ion Exchange To Regulate the Heterogeneous Ice Nucleation Efficiency of Mica. <i>Journal of the American Chemical Society</i> , 2020, 142, 17956-17965.	13.7	26
65	Interfacial Materials for Anti-Icing: Beyond Superhydrophobic Surfaces. <i>Chemistry - an Asian Journal</i> , 2018, 13, 1406-1414.	3.3	25
66	Bioinspired solar anti-icing/de-icing surfaces based on phase-change materials. <i>Science China Materials</i> , 2022, 65, 1369-1376.	6.3	25
67	Beyond Cassie equation: Local structure of heterogeneous surfaces determines the contact angles of microdroplets. <i>Scientific Reports</i> , 2014, 4, 5822.	3.3	24
68	Hydroxyl Groups on the Graphene Surfaces Facilitate Ice Nucleation. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 2458-2462.	4.6	24
69	Electrochemical behavior of high-molecular-weight poly(ferrocenylsilane) films in aqueous electrolyte solutions. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2004, 42, 2245-2253.	2.1	23
70	Viscosity of interfacial water regulates ice nucleation. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	23
71	Bioinspired Cryoprotectants of Glucose-Based Carbon Dots. <i>ACS Applied Bio Materials</i> , 2020, 3, 3785-3791.	4.6	21
72	Control of ice growth and recrystallization by sulphur-doped oxidized quasi-carbon nitride quantum dots. <i>Carbon</i> , 2017, 124, 415-421.	10.3	20

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73	Suppressing ice growth by integrating the dual characteristics of antifreeze proteins into biomimetic two-dimensional graphene derivatives. <i>Journal of Materials Chemistry A</i> , 2020, 8, 23555-23562.	10.3	20
74	Tuning Ice Nucleation and Propagation with Counterions on Multilayer Hydrogels. <i>Langmuir</i> , 2018, 34, 11986-11991.	3.5	17
75	Novel polystyrene-supported zirconocene catalyst for olefin polymerization and its catalytic kinetics. <i>Journal of Polymer Science Part A</i> , 2005, 43, 2650-2656.	2.3	16
76	Nonionic and Water-Soluble Poly(D,L-serine) as a Promising Biomedical Polymer for Cryopreservation. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 18454-18461.	8.0	14
77	Size-Dependent Interfacial Assembly of Graphene Oxide at Water/Oil Interfaces. <i>Journal of Physical Chemistry B</i> , 2020, 124, 4835-4842.	2.6	14
78	Transparent, Photothermal, and Icephobic Surfaces via Layer-by-Layer Assembly. <i>Advanced Science</i> , 2022, 9, e2105986.	11.2	14
79	Strong Hydration Ability of Silk Fibroin Suppresses Formation and Recrystallization of Ice Crystals During Cryopreservation. <i>Biomacromolecules</i> , 2022, 23, 478-486.	5.4	12
80	Iodine-124 Labeled Gold Nanoclusters for Positron Emission Tomography Imaging in Lung Cancer Model. <i>Journal of Nanoscience and Nanotechnology</i> , 2020, 20, 1375-1382.	0.9	11
81	Urea and plasma ice-nucleating proteins promoted the modest freeze tolerance in Pleske's high altitude frog <i>Nanorana pleskei</i> . <i>Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology</i> , 2018, 188, 599-610.	1.5	10
82	Hydrogen polarity of interfacial water regulates heterogeneous ice nucleation. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 258-264.	2.8	10
83	Recrystallized ice-templated electroless plating for fabricating flexible transparent copper meshes. <i>RSC Advances</i> , 2020, 10, 9894-9901.	3.6	10
84	Ion-Specific Effects on the Growth of Single Ice Crystals. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 8726-8731.	4.6	10
85	Bioinspired Crowding Inhibits Explosive Ice Growth in Antifreeze Protein Solutions. <i>Biomacromolecules</i> , 2021, 22, 2614-2624.	5.4	9
86	Study on ethylene (co)polymerization and its kinetics catalyzed by a reversible crosslinked polystyrene-supported metallocene catalyst. <i>Journal of Applied Polymer Science</i> , 2005, 97, 1632-1636.	2.6	8
87	Synthesis and electrochemical properties of phloroglucin-based ferrocenyl compounds and their application in anion recognition. <i>Journal of Applied Polymer Science</i> , 2008, 107, 1539-1546.	2.6	8
88	Surface-mediated buckling of core-shell spheres for the formation of oriented anisotropic particles with tunable morphologies. <i>Soft Matter</i> , 2013, 9, 2589.	2.7	8
89	Unraveling Molecular Mechanism on Dilute Surfactant Solution Controlled Ice Recrystallization. <i>Langmuir</i> , 2020, 36, 1691-1698.	3.5	8
90	Precise Control Over Kinetics of Molecular Assembly: Production of Particles with Tunable Sizes and Crystalline Forms. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 15141-15146.	13.8	8

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91	Ice Recrystallization Inhibition Activity of Protein Mimetic Peptoids. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2021, 31, 203-208.	3.7	8
92	Bioinspired <i>in situ</i> repeatable self-recovery of superhydrophobicity by self-reconstructing the hierarchical surface structure. <i>Chemical Communications</i> , 2021, 57, 8425-8428.	4.1	8
93	Electrochemical behaviors of poly(ferrocenylsilane) solutions. <i>Journal of Applied Polymer Science</i> , 2007, 103, 789-794.	2.6	7
94	Anisotropy of Local Stress Tensor Leads to Line Tension. <i>Scientific Reports</i> , 2015, 5, 9491.	3.3	7
95	A Freezing-Induced Turn-On Imaging Modality for Real-Time Monitoring of Cancer Cells in Cryosurgery. <i>Angewandte Chemie</i> , 2019, 131, 3874-3877.	2.0	7
96	Metal-catechol complexes mediate ice nucleation. <i>Chemical Communications</i> , 2019, 55, 6413-6416.	4.1	7
97	Effect of antifreeze protein on heterogeneous ice nucleation based on a two-dimensional random-field Ising model. <i>Physical Review E</i> , 2017, 95, 052140.	2.1	6
98	Directional freezing of binary colloidal suspensions: a model for size fractionation of graphene oxide. <i>Soft Matter</i> , 2019, 15, 243-251.	2.7	5
99	Spontaneous Freezing of Water between 233 and 235 K Is Not Due to Homogeneous Nucleation. <i>Journal of the American Chemical Society</i> , 2021, 143, 13548-13556.	13.7	5
100	Manifestation of electrolyte ion size effect on electrochemical behavior of poly(ferrocenylsilane) films. <i>Journal of Applied Polymer Science</i> , 2006, 101, 515-523.	2.6	4
101	Gold Nanoprobes Exploring the Ice Structure in the Aqueous Dispersion of Poly(Ethylene Terephthalate) Nanofibers. <i>Journal of Applied Polymer Science</i> , 2013, 108, 1075-1081.	3.5	4
102	A convenient quantitative study of polymer mesophase induced by isothermal annealing. <i>RSC Advances</i> , 2013, 3, 12631.	3.6	3
103	Modifying Surfaces with the Primary and Secondary Faces of Cyclodextrins To Achieve a Distinct Anti-icing Capability. <i>Langmuir</i> , 2019, 35, 5176-5182.	3.5	3
104	Observation of flower-like patterns in syndiotactic polystyrene/carbon nanotube nanocomposite films. <i>RSC Advances</i> , 2012, 2, 7964.	3.6	2
105	Facile preparation of composites composed of high performance thermoplastic and difficult-to-process functional polymer. <i>RSC Advances</i> , 2014, 4, 31874.	3.6	2
106	Precise Control Over Kinetics of Molecular Assembly: Production of Particles with Tunable Sizes and Crystalline Forms. <i>Angewandte Chemie</i> , 2020, 132, 15253-15258.	2.0	2
107	Control of Ice Propagation by Using Polyelectrolyte Multilayer Coatings. <i>Angewandte Chemie</i> , 2017, 129, 11594-11597.	2.0	1
108	Bio-inspired Ice-controlling Materials for Cryopreservation of Cells and Tissues. <i>Acta Chimica Sinica</i> , 2021, 79, 729.	1.4	1

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109	A novel paramagnetic polymeric sensor material sensitive to organic molecules. Journal of Materials Science, 2005, 40, 4807-4810.	3.7	0
110	Organogels: Temperature-Driven Switching of Water Adhesion on Organogel Surface (Adv. Mater.)	21.0	0