

Xianglei Liu

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

70
papers

1,551
citations

24
h-index

37
g-index

76
ext. papers

2,103
ext. citations

6
avg, IF

5.49
L-index

#	Paper	IF	Citations
70	Near-field radiative heat transfer with doped-silicon nanostructured metamaterials. <i>International Journal of Heat and Mass Transfer</i> , 2014 , 73, 389-398	4.9	96
69	Near-Perfect Photon Tunneling by Hybridizing Graphene Plasmons and Hyperbolic Modes. <i>ACS Photonics</i> , 2014 , 1, 785-789	6.3	89
68	Near-Field Thermal Radiation: Recent Progress and Outlook. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2015 , 19, 98-126	3.7	88
67	Near-field thermal radiation between hyperbolic metamaterials: Graphite and carbon nanotubes. <i>Applied Physics Letters</i> , 2013 , 103, 213102	3.4	73
66	Graphene-assisted near-field radiative heat transfer between corrugated polar materials. <i>Applied Physics Letters</i> , 2014 , 104, 251911	3.4	72
65	Near-Field Thermal Radiation between Metasurfaces. <i>ACS Photonics</i> , 2015 , 2, 1320-1326	6.3	68
64	Application Conditions of Effective Medium Theory in Near-Field Radiative Heat Transfer Between Multilayered Metamaterials. <i>Journal of Heat Transfer</i> , 2014 , 136,	1.8	66
63	Full-spectrum volumetric solar thermal conversion via photonic nanofluids. <i>Nanoscale</i> , 2017 , 9, 14854-14860	4.6	58
62	Giant enhancement of nanoscale thermal radiation based on hyperbolic graphene plasmons. <i>Applied Physics Letters</i> , 2015 , 107, 143114	3.4	54
61	Anisotropic optical properties of silicon nanowire arrays based on the effective medium approximation. <i>International Journal of Thermal Sciences</i> , 2013 , 65, 62-69	4.1	51
60	Graphene-assisted near-field radiative thermal rectifier based on phase transition of vanadium dioxide (VO ₂). <i>International Journal of Heat and Mass Transfer</i> , 2017 , 109, 63-72	4.9	49
59	Enhanced near-field thermal radiation and reduced Casimir stiction between doped-Si gratings. <i>Physical Review A</i> , 2015 , 91,	2.6	45
58	Wideband Tunable Omnidirectional Infrared Absorbers Based on Doped-Silicon Nanowire Arrays. <i>Journal of Heat Transfer</i> , 2013 , 135,	1.8	41
57	Pattern-free thermal modulator via thermal radiation between Van der Waals materials. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017 , 200, 100-107	2.1	40
56	Calcium-based composites for direct solar-thermal conversion and thermochemical energy storage. <i>Chemical Engineering Journal</i> , 2020 , 382, 122815	14.7	40
55	High-performance electroluminescent refrigeration enabled by photon tunneling. <i>Nano Energy</i> , 2016 , 26, 353-359	17.1	38
54	Dark calcium carbonate particles for simultaneous full-spectrum solar thermal conversion and large-capacity thermochemical energy storage. <i>Solar Energy Materials and Solar Cells</i> , 2020 , 207, 110364	6.4	35

53	Modified Ca-Looping materials for directly capturing solar energy and high-temperature storage. <i>Energy Storage Materials</i> , 2020 , 25, 836-845	19.4	30
52	Carbonate salt based composite phase change materials for medium and high temperature thermal energy storage: A microstructural study. <i>Solar Energy Materials and Solar Cells</i> , 2019 , 196, 25-35	6.4	28
51	Defects-assisted solar absorption of plasmonic nanoshell-based nanofluids. <i>Solar Energy</i> , 2017 , 146, 503-510	5.8	27
50	Super-Planckian thermal radiation enabled by coupled quasi-elliptic 2D black phosphorus plasmons. <i>Applied Thermal Engineering</i> , 2018 , 144, 403-410	5.8	26
49	Energy streamlines in near-field radiative heat transfer between hyperbolic metamaterials. <i>Optics Express</i> , 2014 , 22 Suppl 4, A1112-27	3.3	25
48	Absorption Coefficients of Crystalline Silicon at Wavelengths from 500 nm to 1000 nm. <i>International Journal of Thermophysics</i> , 2013 , 34, 213-225	2.1	25
47	Blocking-assisted infrared transmission of subwavelength metallic gratings by graphene. <i>Journal of Optics (United Kingdom)</i> , 2015 , 17, 035004	1.7	24
46	High-performance noncontact thermal diode via asymmetric nanostructures. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018 , 211, 1-8	2.1	23
45	Super-Planckian thermal radiation enabled by hyperbolic surface phonon polaritons. <i>Science China Technological Sciences</i> , 2016 , 59, 1680-1686	3.5	22
44	A Computational Simulation of Using Tungsten Gratings in Near-Field Thermophotovoltaic Devices. <i>Journal of Heat Transfer</i> , 2017 , 139,	1.8	21
43	Modeling the Optical and Radiative Properties of Vertically Aligned Carbon Nanotubes in the Infrared Region. <i>Journal of Heat Transfer</i> , 2015 , 137,	1.8	18
42	Diatomite-based porous ceramics with high apparent porosity: Pore structure modification using calcium carbonate. <i>Ceramics International</i> , 2019 , 45, 6085-6092	5.1	18
41	Near-Field Thermal Radiation between Nanostructures of Natural Anisotropic Material. <i>Physical Review Applied</i> , 2018 , 10,	4.3	18
40	Ultrahigh thermal rectification based on near-field thermal radiation between dissimilar nanoparticles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2019 , 234, 1-9	2.1	16
39	Bionic topology optimization of fins for rapid latent heat thermal energy storage. <i>Applied Thermal Engineering</i> , 2021 , 194, 117104	5.8	16
38	Near-Field Thermal Radiation of Nanopatterned Black Phosphorene Mediated by Topological Transitions of Phosphorene Plasmons. <i>Nanoscale and Microscale Thermophysical Engineering</i> , 2019 , 23, 188-199	3.7	16
37	Decomposition kinetics of Al- and Fe-doped calcium carbonate particles with improved solar absorbance and cycle stability. <i>Chemical Engineering Journal</i> , 2021 , 406, 126282	14.7	16
36	Near-field radiation between graphene-covered carbon nanotube arrays. <i>AIP Advances</i> , 2015 , 5, 053501	1.5	14

35	Metal-free low-loss negative refraction in the mid-infrared region. <i>Applied Physics Letters</i> , 2013 , 103, 103101	3.4	14
34	Wide-angle near infrared polarizer with extremely high extinction ratio. <i>Optics Express</i> , 2013 , 21, 10502-10510	3.5	14
33	A 130 kWe solar simulator with tunable ultra-high flux and characterization using direct multiple lamps mapping. <i>Applied Energy</i> , 2020 , 270, 115165	10.7	13
32	High thermal conductivity and high energy density compatible latent heat thermal energy storage enabled by porous AlN ceramics composites. <i>International Journal of Heat and Mass Transfer</i> , 2021 , 175, 121405	4.9	12
31	High-performance infrared thermal radiation suppression metamaterials enabling inhibited infrared emittance and decreased temperature simultaneously. <i>International Journal of Heat and Mass Transfer</i> , 2020 , 161, 120318	4.9	9
30	Active control for enhancing vortex induced vibration of a circular cylinder based on deep reinforcement learning. <i>Physics of Fluids</i> , 2021 , 33, 103604	4.4	8
29	Synergetic enhancement of heat storage density and heat transport ability of phase change materials inlaid in 3D hierarchical ceramics. <i>Applied Energy</i> , 2022 , 306, 117995	10.7	8
28	Effects of near-field photon tunneling on the performance of photon-enhanced thermionic emission energy conversion. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2019 , 222-223, 223-228	2.1	8
27	Bionic hierarchical porous aluminum nitride ceramic composite phase change material with excellent heat transfer and storage performance. <i>Composites Communications</i> , 2021 , 27, 100892	6.7	8
26	Thermochemical heat storage performances of fluidized black CaCO ₃ pellets under direct concentrated solar irradiation. <i>Renewable Energy</i> , 2021 , 178, 1353-1369	8.1	7
25	Tunable Stable Levitation Based on Casimir Interaction between Nanostructures. <i>Physical Review Applied</i> , 2016 , 5,	4.3	6
24	Full-spectrum solar energy allocation for efficient space-based photovoltaic-thermoelectric energy conversion. <i>Journal of Photonics for Energy</i> , 2019 , 9, 1	1.2	6
23	Nacre-like ceramics-based phase change composites for concurrent efficient solar-to-thermal conversion and rapid energy storage. <i>Solar Energy Materials and Solar Cells</i> , 2021 , 230, 111240	6.4	6
22	Bifunctional biomorphic SiC ceramics embedded molten salts for ultrafast thermal and solar energy storage. <i>Materials Today Energy</i> , 2021 , 21, 100764	7	5
21	Experimental Investigations of Pool Boiling Heat Transfer on Horizontal Plate Sintered with Metallic Fiber Felt. <i>International Journal of Green Energy</i> , 2012 , 9, 22-38	3	4
20	Data-driven modeling of geometry-adaptive steady heat conduction based on convolutional neural networks. <i>Case Studies in Thermal Engineering</i> , 2021 , 28, 101651	5.6	4
19	Loofah-derived eco-friendly SiC ceramics for high-performance sunlight capture, thermal transport, and energy storage. <i>Energy Storage Materials</i> , 2022 , 45, 786-795	19.4	4
18	Inverted perovskite/silicon V-shaped tandem solar cells with 27.6% efficiency via self-assembled monolayer-modified nickel oxide layer. <i>Journal of Materials Chemistry A</i> , 2022 , 10, 7251-7262	13	4

17	Bamboo derived SiC ceramics-phase change composites for efficient, rapid, and compact solar thermal energy storage. <i>Solar Energy Materials and Solar Cells</i> , 2022 , 240, 111726	6.4	4
16	Ca- and Ga-Doped LaMnO ₃ for Solar Thermochemical CO ₂ Splitting with High Fuel Yield and Cycle Stability. <i>ACS Applied Energy Materials</i> , 2021 , 4, 9000-9012	6.1	3
15	A novel composite phase change material for medium temperature thermal energy storage manufactured with a scalable continuous hot-melt extrusion method. <i>Applied Energy</i> , 2021 , 303, 117591	10.7	3
14	Sr-doped SmMnO ₃ perovskites for high-performance near-isothermal solar thermochemical CO ₂ -to-fuel conversion. <i>Sustainable Energy and Fuels</i> , 2021 , 5, 4295-4310	5.8	3
13	Artificial mitochondrion for fast latent heat storage: Experimental study and lattice Boltzmann simulation. <i>Energy</i> , 2022 , 245, 123296	7.9	2
12	Highly efficient solar-driven CO ₂ -to-fuel conversion assisted by CH ₄ over NiCo-ZIF derived catalysts. <i>Fuel</i> , 2021 , 310, 122441	7.1	2
11	Granular porous calcium carbonate particles for scalable and high-performance solar-driven thermochemical heat storage. <i>Science China Technological Sciences</i> , 2021 , 64, 2142	3.5	2
10	High-performance three-body near-field thermophotovoltaic energy conversion. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021 , 259, 107411	2.1	2
9	The influence of pore size distribution on thermal conductivity, permeability, and phase change behavior of hierarchical porous materials. <i>Science China Technological Sciences</i> , 2021 , 64, 2485	3.5	1
8	Pore-Scaled investigation on dynamic carbonation mechanism of calcium oxide particles. <i>Chemical Engineering Science</i> , 2022 , 248, 117212	4.4	1
7	A Computational Simulation of Using Tungsten Gratings in Near-Field Thermophotovoltaic Devices 2016 ,		1
6	Solar-Enhanced CO ₂ Conversion with CH ₄ over Synergetic NiCo Alloy Catalysts with Light-to-Fuel Efficiency of 33.8%. <i>Solar Rrl</i> , 2021 , 5, 2170085	7.1	1
5	Fast and stable solar/thermal energy storage via gradient SiC foam-based phase change composite. <i>International Journal of Heat and Mass Transfer</i> , 2022 , 194, 123012	4.9	0
4	Experimental and numerical investigations of solar charging performances of 3D porous skeleton based latent heat storage devices. <i>Applied Energy</i> , 2022 , 320, 119297	10.7	0
3	Direct solar thermochemical CO ₂ splitting based on Ca- and Al- doped SmMnO ₃ perovskites: Ultrahigh CO yield within small temperature swing. <i>Renewable Energy</i> , 2022 , 194, 482-494	8.1	0
2	Silicon metamaterials for infrared applications. <i>Series in Materials Science and Engineering</i> , 2017 , 347-372		
1	Thermal and Thermochemical Energy Conversion and Storage. <i>ACS Symposium Series</i> , 2020 , 257-301	0.4	