Wen Shang

List of Publications by Year
in descending order

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99 papers	7,861 citations	66234 42 h-index	49773 87 g-index
100 all docs	100 docs citations	100 times ranked	7352 citing authors

#	Article	IF	Citations
1	Transparent nanofluids with high thermal conductivity for improved convective thermal management of optoelectronic devices. Experimental Heat Transfer, 2022, 35, 183-195.	2.3	6
2	Construction of 3D Conductive Network in Liquid Gallium with Enhanced Thermal and Electrical Performance. Advanced Materials Technologies, 2022, 7, 2100970.	3.0	14
3	Structural evolution of Pt-based oxygen reduction reaction electrocatalysts. Chinese Journal of Catalysis, 2022, 43, 47-58.	6.9	20
4	All-in-one polymer sponge composite 3D evaporators for simultaneous high-flux solar-thermal desalination and electricity generation. Nano Energy, 2022, 93, 106882.	8.2	87
5	Stability of single-atom catalysts for electrocatalysis. Journal of Materials Chemistry A, 2022, 10, 5835-5849.	5.2	40
6	Galliumâ€Based Liquid Metal Composites with Enhanced Thermal and Electrical Performance Enabled by Structural Engineering of Filler. Advanced Engineering Materials, 2022, 24, 2101678.	1.6	16
7	Facile Approach to Enhance Electrical and Thermal Performance of Conducting Polymer PEDOT:PSS Films via Hot Pressing. ACS Applied Materials & Interfaces, 2022, 14, 10605-10615.	4.0	16
8	Noncontact human-machine interaction based on hand-responsive infrared structural color. Nature Communications, 2022, 13, 1446.	5.8	33
9	Synthesis of Liquid Gallium@Reduced Graphene Oxide Coreâ€"Shell Nanoparticles with Enhanced Photoacoustic and Photothermal Performance. Journal of the American Chemical Society, 2022, 144, 6779-6790.	6.6	57
10	Effectively Tuning the Ratio of CO and H₂ into Syngas through CO₂ Electrochemical Reduction over a Wide Potential Range on a ZnO Nanosheet via Ni Doping. ACS Applied Energy Materials, 2022, 5, 5531-5539.	2.5	8
11	Paste-like recyclable Ga liquid metal phase change composites loaded with miscible Ga2O3 particles for transient cooling of portable electronics. Applied Thermal Engineering, 2022, 213, 118766.	3.0	8
12	Ethylene glycol nanofluids dispersed with monolayer graphene oxide nanosheet for high-performance subzero cold thermal energy storage. RSC Advances, 2021, 11, 30495-30502.	1.7	1
13	Atomistic Imaging of Competition between Surface Diffusion and Phase Transition during the Intermetallic Formation of Faceted Particles. ACS Nano, 2021, 15, 5284-5293.	7.3	17
14	Heterostructure of ZnO Nanosheets/Zn with a Highly Enhanced Edge Surface for Efficient CO₂ Electrochemical Reduction to CO. ACS Applied Materials & Interfaces, 2021, 13, 10837-10844.	4.0	33
15	Human hand as a powerless and multiplexed infrared light source for information decryption and complex signal generation. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	14
16	Unzipping Carbon Nanotube Bundles through NHâˆ'Ï€ Stacking for Enhanced Electrical and Thermal Transport. ACS Applied Materials & Interfaces, 2021, 13, 28583-28592.	4.0	6
17	Design of Highly Durable Coreâˆ'Shell Catalysts by Controlling Shell Distribution Guided by Inâ€Situ Corrosion Study. Advanced Materials, 2021, 33, e2101511.	11.1	21
18	Chemo- and Stereospecific Solid-State Thermal Dimerization of Sodium trans-2-Butenoate and Î³-Ray-Induced Single-Crystal-to-Single-Crystal Dimerization of Hexaaquamagnesium trans-2-Butenoate Dihydrate: Both Give rel-(3S,4R)-1-Hexene-3,4-dicarboxylate but by Different Mechanisms. Stereospecific Î³-Ray-Induced Trimerization of Sodium trans-2-Butenoate. Crystal Growth and Design, 2021, 21, 663-682.	1.4	2

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19	Rapid one-step scalable microwave synthesis of Ti₃C₂T_x MXene. Chemical Communications, 2021, 57, 12611-12614.	2.2	14
20	Pyroelectric Synthesis of the Siteâ€Specific Auâ€ZnO Nanorod Array. ChemistrySelect, 2021, 6, 11224-11230.	0.7	1
21	The impact of surface chemistry on the interfacial evaporation-driven self-assembly of thermoplasmonic gold nanoparticles. Nanoscale, 2021, 13, 20521-20530.	2.8	3
22	Butterfly Wing Inspired High Performance Infrared Detection with Spectral Selectivity. Advanced Optical Materials, 2020, 8, 1901647.	3.6	7
23	Selfâ€Assembly in Hopperâ€Shaped Crystals. Advanced Functional Materials, 2020, 30, 1908108.	7.8	14
24	Integration of Biological Components into Engineered Functional Systems. Matter, 2020, 3, 974-976.	5.0	1
25	Light-Driven Nanodroplet Generation Using Porous Membranes. Nano Letters, 2020, 20, 7874-7881.	4.5	2
26	All-Day Freshwater Harvesting through Combined Solar-Driven Interfacial Desalination and Passive Radiative Cooling. ACS Applied Materials & Interfaces, 2020, 12, 47612-47622.	4.0	60
27	Erythritol impregnated within surface-roughened hydrophilic metal foam for medium-temperature solar-thermal energy harvesting. Energy Conversion and Management, 2020, 222, 113241.	4.4	32
28	Reconsidering the Benchmarking Evaluation of Catalytic Activity in Oxygen Reduction Reaction. IScience, 2020, 23, 101532.	1.9	42
29	Bioinspired roll-to-roll solar-thermal energy harvesting within form-stable flexible composite phase change materials. Journal of Materials Chemistry A, 2020, 8, 20970-20978.	5.2	62
30	Manipulation of Electron Transfer between Pd and TiO₂ for Improved Electrocatalytic Hydrogen Evolution Reaction Performance. ACS Applied Materials & Interfaces, 2020, 12, 27037-27044.	4.0	13
31	Boosting Oxygen and Peroxide Reduction Reactions on PdCu Intermetallic Cubes. ChemElectroChem, 2020, 7, 2614-2620.	1.7	7
32	Pyroelectric synthesis of Au/Pt bimetallic nanoparticlesâ€"BaTiO₃ hybrid nanomaterials. RSC Advances, 2020, 10, 22616-22621.	1.7	3
33	Solar-driven interfacial desalination for simultaneous freshwater and salt generation. Desalination, 2020, 484, 114423.	4.0	121
34	Strain-Induced Corrosion Kinetics at Nanoscale Are Revealed in Liquid: Enabling Control of Corrosion Dynamics of Electrocatalysis. CheM, 2020, 6, 2257-2271.	5.8	48
35	Hopperâ€Shaped Crystals: Selfâ€Assembly in Hopperâ€Shaped Crystals (Adv. Funct. Mater. 26/2020). Advanced Functional Materials, 2020, 30, 2070170.	7.8	0
36	Bioinspired Temperature Regulation in Interfacial Evaporation. Advanced Functional Materials, 2020, 30, 1910481.	7.8	42

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37	Self-powered infrared detection using a graphene oxide film. Journal of Materials Chemistry A, 2020, 8, 9248-9255.	5.2	12
38	Self-dispersible graphene quantum dots in ethylene glycol for direct absorption-based medium-temperature solar-thermal harvesting. RSC Advances, 2020, 10, 45028-45036.	1.7	8
39	Strong Electronic Interaction of Amorphous Fe₂O₃ Nanosheets with Singleâ€Atom Pt toward Enhanced Carbon Monoxide Oxidation. Advanced Functional Materials, 2019, 29, 1904278.	7.8	51
40	Coalescence, Spreading, and Rebound of Two Water Droplets with Different Temperatures on a Superhydrophobic Surface. ACS Omega, 2019, 4, 17615-17622.	1.6	9
41	In Situ Transmission Electron Microscopy Study of Nanocrystal Formation for Electrocatalysis. ChemNanoMat, 2019, 5, 1439-1455.	1.5	14
42	Electrically Driven Interfacial Evaporation for High-Efficiency Steam Generation and Sterilization. ACS Omega, 2019, 4, 16603-16611.	1.6	17
43	Patterned Surfaces for Solar-Driven Interfacial Evaporation. ACS Applied Materials & Interfaces, 2019, 11, 7584-7590.	4.0	49
44	A Nonâ€Pt Electronically Coupled Semiconductor Heterojunction for Enhanced Oxygen Reduction Electrocatalytic Property. ChemistrySelect, 2019, 4, 5264-5268.	0.7	2
45	High-Efficiency Superheated Steam Generation for Portable Sterilization under Ambient Pressure and Low Solar Flux. ACS Applied Materials & Interfaces, 2019, 11, 18466-18474.	4.0	69
46	Magnetically-accelerated large-capacity solar-thermal energy storage within high-temperature phase-change materials. Energy and Environmental Science, 2019, 12, 1613-1621.	15.6	110
47	Self-propelled rotation of paper-based Leidenfrost rotor. Applied Physics Letters, 2019, 114, .	1.5	12
48	Butterfly Wing Hears Sound: Acoustic Detection Using Biophotonic Nanostructure. Nano Letters, 2019, 19, 2627-2633.	4.5	29
49	Ethylene glycol-based solar-thermal fluids dispersed with reduced graphene oxide. RSC Advances, 2019, 9, 10282-10288.	1.7	14
50	Three-Dimensional Porous Solar-Driven Interfacial Evaporator for High-Efficiency Steam Generation under Low Solar Flux. ACS Omega, 2019, 4, 3546-3555.	1.6	58
51	An open thermo-electrochemical cell enabled by interfacial evaporation. Journal of Materials Chemistry A, 2019, 7, 6514-6521.	5.2	52
52	Bubbleâ€Enabled Underwater Motion of a Lightâ€Driven Motor. Small, 2019, 15, e1804959.	5.2	14
53	Pyroelectric Synthesis of Metalâ€"BaTiO₃ Hybrid Nanoparticles with Enhanced Pyrocatalytic Performance. ACS Sustainable Chemistry and Engineering, 2019, 7, 2602-2609.	3.2	41
54	Form-Stable Solar Thermal Heat Packs Prepared by Impregnating Phase-Changing Materials within Carbon-Coated Copper Foams. ACS Applied Materials & Interfaces, 2019, 11, 3417-3427.	4.0	83

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55	Plasmonic-Enhanced Oxygen Reduction Reaction of Silver/Graphene Electrocatalysts. Nano Letters, 2019, 19, 1371-1378.	4.5	74
56	Nanoscale kinetics of asymmetrical corrosion in core-shell nanoparticles. Nature Communications, 2018, 9, 1011.	5.8	87
57	Facets Matching of Platinum and Ferric Oxide in Highly Efficient Catalyst Design for Low-Temperature CO Oxidation. ACS Applied Materials & Interfaces, 2018, 10, 15322-15327.	4.0	12
58	Biotemplated Morpho Butterfly Wings for Tunable Structurally Colored Photocatalysts. ACS Applied Materials & Interfaces, 2018, 10, 4614-4621.	4.0	54
59	Coupling effects in 3D plasmonic structures templated by Morpho butterfly wings. Nanoscale, 2018, 10, 533-537.	2.8	7
60	Temperature effect and thermal impact in lithium-ion batteries: A review. Progress in Natural Science: Materials International, 2018, 28, 653-666.	1.8	745
61	Solar-driven interfacial evaporation. Nature Energy, 2018, 3, 1031-1041.	19.8	1,347
62	Bioinspired Color Change through Guided Reflection. Advanced Optical Materials, 2018, 6, 1800464.	3.6	1
63	Integrating plasmonic nanostructures with natural photonic architectures in Pd-modified Morpho butterfly wings for sensitive hydrogen gas sensing. RSC Advances, 2018, 8, 32395-32400.	1.7	31
64	In Situ Vertical Growth of Feâ€"Ni Layered Double-Hydroxide Arrays on Feâ€"Ni Alloy Foil: Interfacial Layer Enhanced Electrocatalyst with Small Overpotential for Oxygen Evolution Reaction. ACS Energy Letters, 2018, 3, 2357-2365.	8.8	150
65	Neighboring Pt Atom Sites in an Ultrathin FePt Nanosheet for the Efficient and Highly CO-Tolerant Oxygen Reduction Reaction. Nano Letters, 2018, 18, 5905-5912.	4.5	84
66	Coupling Interface Constructions of MoS₂/Fe₅Ni₄S₈ Heterostructures for Efficient Electrochemical Water Splitting. Advanced Materials, 2018, 30, e1803151.	11.1	230
67	Bioinspired Infrared Sensing Materials and Systems. Advanced Materials, 2018, 30, e1707632.	11.1	36
68	Clean water generation with switchable dispersion of multifunctional Fe3O4-reduced graphene oxide particles. Progress in Natural Science: Materials International, 2018, 28, 422-429.	1.8	20
69	Photothermally Enabled Pyro-Catalysis of a BaTiO₃ Nanoparticle Composite Membrane at the Liquid/Air Interface. ACS Applied Materials & Interfaces, 2018, 10, 21246-21253.	4.0	48
70	Paper-based membranes on silicone floaters for efficient and fast solar-driven interfacial evaporation under one sun. Journal of Materials Chemistry A, 2017, 5, 16359-16368.	5.2	158
71	Enhancing the Photocatalytic Hydrogen Evolution Performance of a Metal/Semiconductor Catalyst through Modulation of the Schottky Barrier Height by Controlling the Orientation of the Interface. ACS Applied Materials & Interfaces, 2017, 9, 12494-12500.	4.0	45
72	Platinumâ€Based Nanowires as Active Catalysts toward Oxygen Reduction Reaction: In Situ Observation of Surfaceâ€Diffusionâ€Assisted, Solidâ€State Oriented Attachment. Advanced Materials, 2017, 29, 1703460.	11.1	102

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73	Vapor-Enabled Propulsion for Plasmonic Photothermal Motor at the Liquid/Air Interface. Journal of the American Chemical Society, 2017, 139, 12362-12365.	6.6	43
74	Floating rGO-based black membranes for solar driven sterilization. Nanoscale, 2017, 9, 19384-19389.	2.8	92
75	Dynamic tuning of optical absorbers for accelerated solar-thermal energy storage. Nature Communications, 2017, 8, 1478.	5.8	145
76	Ternary Ptâ€"Pdâ€"Ag alloy nanoflowers for oxygen reduction reaction electrocatalysis. CrystEngComm, 2017, 19, 6964-6971.	1.3	23
77	Controllable assembly of Pd nanosheets: a solution for 2D materials storage. CrystEngComm, 2017, 19, 3439-3444.	1.3	12
78	Efficient Solar-Thermal Energy Harvest Driven by Interfacial Plasmonic Heating-Assisted Evaporation. ACS Applied Materials & Interfaces, 2016, 8, 23412-23418.	4.0	144
79	In Situ Environmental TEM in Imaging Gas and Liquid Phase Chemical Reactions for Materials Research. Advanced Materials, 2016, 28, 9686-9712.	11.1	124
80	Substrateless Welding of Self-Assembled Silver Nanowires at Air/Water Interface. ACS Applied Materials & Interfaces, 2016, 8, 20483-20490.	4.0	39
81	Solar steam generation: Steam by thermal concentration. Nature Energy, 2016, 1, .	19.8	148
82	Stably dispersed high-temperature Fe₃O₄/silicone-oil nanofluids for direct solar thermal energy harvesting. Journal of Materials Chemistry A, 2016, 4, 17503-17511.	5.2	45
83	Bioinspired Multifunctional Paper-Based rGO Composites for Solar-Driven Clean Water Generation. ACS Applied Materials & Interfaces, 2016, 8, 14628-14636.	4.0	223
84	Bioinspired Bifunctional Membrane for Efficient Clean Water Generation. ACS Applied Materials & Interfaces, 2016, 8, 772-779.	4.0	187
85	Fabrication and performance evaluation of flexible heat pipes for potential thermal control of foldable electronics. Applied Thermal Engineering, 2016, 95, 445-453.	3.0	49
86	The impact of surface chemistry on the performance of localized solar-driven evaporation system. Scientific Reports, 2015, 5, 13600.	1.6	140
87	Enhancing Localized Evaporation through Separated Light Absorbing Centers and Scattering Centers. Scientific Reports, 2015, 5, 17276.	1.6	63
88	Subtractive Structural Modification ofMorphoButterfly Wings. Small, 2015, 11, 5705-5711.	5.2	17
89	Infrared Detection Based on Localized Modification of Morpho Butterfly Wings. Advanced Materials, 2015, 27, 1077-1082.	11.1	90
90	Flexible heat pipes with integrated bioinspired design. Progress in Natural Science: Materials International, 2015, 25, 51-57.	1.8	43

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91	A Bioinspired, Reusable, Paperâ€Based System for Highâ€Performance Largeâ€Scale Evaporation. Advanced Materials, 2015, 27, 2768-2774.	11.1	698
92	Bioinspired infrared detection using thermoresponsive hydrogel nanoparticles. Pure and Applied Chemistry, 2015, 87, 1029-1038.	0.9	4
93	Bioinspired Engineering of Thermal Materials. Advanced Materials, 2015, 27, 428-463.	11.1	225
94	Evaporation: Bioâ€Inspired Evaporation Through Plasmonic Film of Nanoparticles at the Airâ€"Water Interface (Small 16/2014). Small, 2014, 10, 3233-3233.	5.2	14
95	Bioâ€Inspired Evaporation Through Plasmonic Film of Nanoparticles at the Airâ€"Water Interface. Small, 2014, 10, 3234-3239.	5.2	418
96	Vertical segregation in the self-assembly of nanoparticles at the liquid/air interface. Nanoscale, 2014, 6, 14662-14666.	2.8	25
97	Temperature-Induced Coalescence of Colliding Binary Droplets on Superhydrophobic Surface. Scientific Reports, 2014, 4, 4303.	1.6	32
98	Rapid Charging of Thermal Energy Storage Materials through Plasmonic Heating. Scientific Reports, 2014, 4, 6246.	1.6	66
99	Chemo- and stereospecific solid-state dimerization of lithium trans-2-butenoate and lithium trans-2-butenoate formamide solvate. CrystEngComm, 2011, 13, 4339.	1.3	6