

# Lei Miao

## List of Publications by Year in descending order

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104  
papers

3,962  
citations

147566

31  
h-index

138251

58  
g-index

106  
all docs

106  
docs citations

106  
times ranked

3841  
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhanced activity for catalytic combustion of ethylene by the Pt nanoparticles confined in TiO <sub>2</sub> nanotube with surface oxygen vacancy. <i>Ceramics International</i> , 2022, 48, 3933-3940.	2.3	14
2	Constructed Ge Quantum Dots and Sn Precipitate SiGeSn Hybrid Film with High Thermoelectric Performance at Low Temperature Region. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	22
3	High Thermoelectric Performance Achieved in Sb-Doped GeTe by Manipulating Carrier Concentration and Nanoscale Twin Grains. <i>Materials</i> , 2022, 15, 406.	1.3	5
4	Ultra-low thermal conductivity in B <sub>2</sub> O <sub>3</sub> composited SiGe bulk with enhanced thermoelectric performance at medium temperature region. <i>Journal of Materials Chemistry A</i> , 2022, 10, 4120-4130.	5.2	12
5	Sintering pressure as a "scalpel" to enhance the thermoelectric performance of MgAgSb. <i>Journal of Materials Chemistry C</i> , 2022, 10, 3360-3367.	2.7	5
6	Enhanced Visible Photocatalytic Hydrogen Evolution of KN-Based Semiconducting Ferroelectrics via Band-Gap Engineering and High-Field Poling. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 8916-8930.	4.0	18
7	Visible-light photocatalytic hydrogen production in a narrow-bandgap semiconducting La/Ni-modified KNbO <sub>3</sub> ferroelectric and further enhancement via high-field poling. <i>Journal of Materials Chemistry A</i> , 2022, 10, 7238-7250.	5.2	18
8	Wearable Thermoelectric Cooler Based on a Two-Layer Hydrogel/Nickel Foam Heatsink with Two-Axis Flexibility. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 15317-15323.	4.0	16
9	Simultaneous Realization of Flexibility and Ultrahigh Normalized Power Density in a Heatsink-Free Thermoelectric Generator via Fine Thermal Regulation. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 1045-1055.	4.0	15
10	Bifunctional polypyrrole-based conductive paper towards simultaneous efficient solar-driven water evaporation and electrochemical energy storage. <i>Nanoscale</i> , 2022, 14, 6949-6958.	2.8	13
11	Review on Wearable Thermoelectric Generators: From Devices to Applications. <i>Energies</i> , 2022, 15, 3375.	1.6	28
12	Achieving Ultrahigh Photocurrent Density of Mg/Mn-Modified KNbO <sub>3</sub> Ferroelectric Semiconductors by Bandgap Engineering and Polarization Maintenance. <i>Chemistry of Materials</i> , 2022, 34, 4274-4285.	3.2	15
13	Enhancing the thermoelectric performance of Ag <sub>2</sub> Se by non-stoichiometric defects. <i>Applied Physics Letters</i> , 2022, 120, .	1.5	12
14	Synergistic Effect of Band and Nanostructure Engineering on the Boosted Thermoelectric Performance of n-type Mg <sub>3</sub> Ir(Sb, Bi) <sub>2</sub> Zintl. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	41
15	Highly efficient and long-term stable solar-driven water purification through a rechargeable hydrogel evaporator. <i>Desalination</i> , 2022, 537, 115872.	4.0	33
16	Electronic "Bridge" Construction via Ag Intercalation to Diminish Catalytic Anisotropy for 2D Tin Diselenide Cathode Catalyst in Lithium-Oxygen Batteries. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	33
17	A robust starch-polyacrylamide hydrogel with scavenging energy harvesting capacity for efficient solar thermoelectricity-freshwater cogeneration. <i>Energy and Environmental Science</i> , 2022, 15, 3388-3399.	15.6	63
18	Carrier and microstructure tuning for improving the thermoelectric properties of Ag <sub>8</sub> SnSe <sub>6</sub> via introducing SnBr <sub>2</sub> . <i>Journal of Advanced Ceramics</i> , 2022, 11, 1144-1152.	8.9	10

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19	Strategies for breaking theoretical evaporation limitation in direct solar steam generation. <i>Solar Energy Materials and Solar Cells</i> , 2021, 220, 110842.	3.0	47
20	Multifunctional Hydrothermalâ€Carbonized Sugarcane for Highly Efficient Direct Solar Steam Generation. <i>Solar Rrl</i> , 2021, 5, 2000782.	3.1	23
21	Substantial thermoelectric enhancement achieved by manipulating the band structure and dislocations in Ag and La co-doped SnTe. <i>Journal of Advanced Ceramics</i> , 2021, 10, 860-870.	8.9	32
22	High-entropy ceramics: Present status, challenges, and a look forward. <i>Journal of Advanced Ceramics</i> , 2021, 10, 385-441.	8.9	510
23	Versatile PVA/CS/CuO aerogel with superior hydrophilic and mechanical properties towards efficient solar steam generation. <i>Nano Select</i> , 2021, 2, 2380-2389.	1.9	11
24	Polypyrroleâ€Reinforced N,Sâ€Doping Graphene Foam for Efficient Solar Purification of Wastewater. <i>Solar Rrl</i> , 2021, 5, 2100210.	3.1	17
25	Reduced Red Mud as the Solar Absorber for Solar-Driven Water Evaporation and Vaporâ€Electricity Generation. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 30556-30564.	4.0	32
26	No external load measurement strategy for micro thermoelectric generator based on high-performance Si1âˆ”xâˆ”yGe <sub>x</sub> Sn <sub>y</sub> film. <i>Journal of Materiomics</i> , 2021, 7, 665-671.	2.8	7
27	Optimized Electronic Bands and Ultralow Lattice Thermal Conductivity in Ag and Y Codoped SnTe. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 32876-32885.	4.0	21
28	Highly Suppressed Thermal Conductivity in Diamond-like Cu <sub>2</sub> Sn <sub>3</sub> by Dense Dislocation. <i>ACS Applied Energy Materials</i> , 2021, 4, 8728-8733.	2.5	8
29	Reinforcement of power factor in N-type multiphase thin film of Si1âˆ”xâˆ”yGe <sub>x</sub> Sn <sub>y</sub> by mitigating the opposing behavior of Seebeck coefficient and electrical conductivity. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	14
30	Thermoelectric enhancement in triple-doped strontium titanate with multi-scale microstructure*. <i>Chinese Physics B</i> , 2021, 30, 097204.	0.7	2
31	Selfâ€Cleaning Integrative Aerogel for Stable Solarâ€Assisted Desalination. <i>Global Challenges</i> , 2021, 5, 2000063.	1.8	16
32	Silicon-based low-dimensional materials for thermal conductivity suppression: recent advances and new strategies to high thermoelectric efficiency. <i>Japanese Journal of Applied Physics</i> , 2021, 60, SA0803.	0.8	9
33	Strategy of Extra Zr Doping on the Enhancement of Thermoelectric Performance for TiZr <sub>x</sub> NiSn Synthesized by a Modified Solid-State Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 48801-48809.	4.0	12
34	Manipulating the Solubility of SnSe in SnTe by Br Doping for Improving the Thermoelectric Performance. <i>ACS Applied Energy Materials</i> , 2021, 4, 13027-13035.	2.5	5
35	Synergistically optimizing the thermoelectric properties of polycrystalline Ag <sub>8</sub> SnSe <sub>6</sub> by introducing additional Sn. <i>CrystEngComm</i> , 2020, 22, 248-256.	1.3	19
36	Boosting High Thermoelectric Performance of Ni-Doped Cu <sub>1.9</sub> S by Significantly Reducing Thermal Conductivity. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 8385-8391.	4.0	22

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37	Thermoelectric Flexible Silver Selenide Films: Compositional and Length Optimization. IScience, 2020, 23, 100753.	1.9	42
38	Low-temperature-poling awakened high dielectric breakdown strength and outstanding improvement of discharge energy density of (Pb,La)(Zr,Sn,Ti)O <sub>3</sub> relaxor thin film. Nano Energy, 2020, 77, 105132.	8.2	27
39	Realizing high thermoelectric performance in p-type Si <sub>1-x-y</sub> GexSny thin films at ambient temperature by Sn modulation doping. Applied Physics Letters, 2020, 117, .	1.5	16
40	Energy Matching for Boosting Water Evaporation in Direct Solar Steam Generation. Solar Rrl, 2020, 4, 2000341.	3.1	50
41	Integrated photothermal aerogels with ultrahigh-performance solar steam generation. Nano Energy, 2020, 74, 104857.	8.2	103
42	Realizing a High $ZT$ of 1.6 in N-Type Mg <sub>3</sub> Sb <sub>2</sub> -Based Zintl Compounds through Mn and Se Codoping. ACS Applied Materials & Interfaces, 2020, 12, 21799-21807.	4.0	26
43	Synthesis of hollow copper sulfide nanocubes with low emissivity for highly efficient solar steam generation. Solar Energy Materials and Solar Cells, 2020, 210, 110484.	3.0	39
44	Characterisation of the temperature-dependent M1 to R phase transition in W-doped VO <sub>2</sub> nanorod aggregates by Rietveld refinement and theoretical modelling. Physical Chemistry Chemical Physics, 2020, 22, 7984-7994.	1.3	9
45	Influence of trace lithium addition on the structure and properties of K <sub>0.5</sub> Na <sub>0.5</sub> NbO <sub>3</sub> -based single crystals. Journal of Materials Science: Materials in Electronics, 2020, 31, 4857-4866.	1.1	6
46	Development and Evolution of the System Structure for Highly Efficient Solar Steam Generation from Zero to Three Dimensions. Advanced Functional Materials, 2019, 29, 1903255.	7.8	249
47	Realizing High Thermoelectric Performance at Ambient Temperature by Ternary Alloying in Polycrystalline Si <sub>1-x-y</sub> GexSny Thin Films with Boron Ion Implantation. Scientific Reports, 2019, 9, 14342.	1.6	30
48	Enhancement of Thermoelectric Performance of Layered SnSe <sub>2</sub> by Synergistic Modulation of Carrier Concentration and Suppression of Lattice Thermal Conductivity. ACS Applied Energy Materials, 2019, 2, 8481-8490.	2.5	18
49	First-principles calculations and high thermoelectric performance of La <sup>2+</sup> -Nb doped SrTiO <sub>3</sub> ceramics. Journal of Materials Chemistry A, 2019, 7, 236-247.	5.2	40
50	Flame-treated and fast-assembled foam system for direct solar steam generation and non-plugging high salinity desalination with self-cleaning effect. Applied Energy, 2019, 241, 652-659.	5.1	85
51	Dynamic Ag <sup>+</sup> -intercalation with AgSnSe <sub>2</sub> nano-precipitates in Cl-doped polycrystalline SnSe <sub>2</sub> toward ultra-high thermoelectric performance. Journal of Materials Chemistry A, 2019, 7, 9761-9772.	5.2	50
52	Co <sub>3</sub> O <sub>4</sub> nanoforest/Ni foam as the interface heating sheet for the efficient solar-driven water evaporation under one sun. Sustainable Materials and Technologies, 2019, 20, e00106.	1.7	24
53	Extraordinary thermoelectric performance in MgAgSb alloy with ultralow thermal conductivity. Nano Energy, 2019, 59, 311-320.	8.2	59
54	Sn vacancy engineering for enhancing the thermoelectric performance of two-dimensional SnS. Journal of Materials Chemistry C, 2019, 7, 3351-3359.	2.7	31

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55	A hybrid hydrogel with protonated g-C <sub>3</sub> N <sub>4</sub> and graphene oxide as an efficient absorber for solar steam evaporation. <i>Sustainable Materials and Technologies</i> , 2019, 20, e00095.	1.7	22
56	Realizing tremendous electrical transport properties of polycrystalline SnSe <sub>2</sub> by Cl-doped and anisotropy. <i>Ceramics International</i> , 2019, 45, 82-89.	2.3	22
57	The dispersion of Au nanorods decorated on graphene oxide nanosheets for solar steam generation. <i>Sustainable Materials and Technologies</i> , 2019, 19, e00090.	1.7	28
58	Bi <sub>2</sub> O <sub>3</sub> decorated TiO <sub>2</sub> nanotube confined Pt nanoparticles with enhanced activity for catalytic combustion of ethylene. <i>Journal of Materials Science</i> , 2019, 54, 4637-4646.	1.7	17
59	Extremely high water-production created by a nanoink-stained PVA evaporator with embossment structure. <i>Nano Energy</i> , 2019, 55, 368-376.	8.2	86
60	Improved Thermoelectric Performance Achieved by Regulating Heterogeneous Phase in Half-Heusler TiNiSn-Based Materials. <i>Journal of Electronic Materials</i> , 2018, 47, 3248-3253.	1.0	5
61	Position-aware deep multi-task learning for drug-drug interaction extraction. <i>Artificial Intelligence in Medicine</i> , 2018, 87, 1-8.	3.8	58
62	Microwave dielectric properties of Bi(Sc <sub>1/3</sub> Mo <sub>2/3</sub> )O <sub>4</sub> ceramics for LTCC applications. <i>Journal of Materials Science: Materials in Electronics</i> , 2018, 29, 1817-1822.	1.1	10
63	Cost effective synthesis of p-type Zn-doped MgAgSb by planetary ball-milling with enhanced thermoelectric properties. <i>RSC Advances</i> , 2018, 8, 35353-35359.	1.7	17
64	Realizing high thermoelectric performance in Te nanocomposite through Sb <sub>2</sub> Te <sub>3</sub> incorporation. <i>CrystEngComm</i> , 2018, 20, 7729-7738.	1.3	20
65	The synergistic action between anhydride grafted carbon fiber and intumescent flame retardant enhances flame retardancy and mechanical properties of polypropylene composites. <i>Science and Technology of Advanced Materials</i> , 2018, 19, 718-731.	2.8	13
66	Improved thermoelectric property of B-doped Si/Ge multilayered quantum dot films prepared by RF magnetron sputtering. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 01AF03.	0.8	5
67	Broadening the temperature range for high thermoelectric performance of bulk polycrystalline strontium titanate by controlling the electronic transport properties. <i>Journal of Materials Chemistry C</i> , 2018, 6, 7594-7603.	2.7	46
68	Enhanced thermoelectric properties of p-type polycrystalline SnSe by regulating the anisotropic crystal growth and Sn vacancy. <i>Chinese Physics B</i> , 2018, 27, 047211.	0.7	11
69	A mimetic transpiration system for record high conversion efficiency in solar steam generator under one-sun. <i>Materials Today Energy</i> , 2018, 8, 166-173.	2.5	145
70	Decoration of Bi <sub>2</sub> Se <sub>3</sub> nanosheets with a thin Bi <sub>2</sub> Se <sub>2</sub> O <sub>7</sub> layer for visible-light-driven overall water splitting. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 10950-10958.	3.8	17
71	A Novel Ink-Stained Paper for Solar Heavy Metal Treatment and Desalination. <i>Solar Rrl</i> , 2018, 2, 1800073.	3.1	49
72	Improved Thermoelectric Performance in Flexible Tellurium Nanowires/Reduced Graphene Oxide Sandwich Structure Hybrid Films. <i>Journal of Electronic Materials</i> , 2017, 46, 3049-3056.	1.0	9

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73	The emergence of solar thermal utilization: solar-driven steam generation. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7691-7709.	5.2	255
74	Morphology Control of Ag Polyhedron Nanoparticles for Cost-Effective and Fast Solar Steam Generation. <i>Solar Rrl</i> , 2017, 1, 1600023.	3.1	72
75	A novel glass-fiber-aided cold-press method for fabrication of n-type Ag <sub>2</sub> Te nanowires thermoelectric film on flexible copy-paper substrate. <i>Journal of Materials Chemistry A</i> , 2017, 5, 24740-24748.	5.2	73
76	Synthesis and optical property of zinc aluminate spinel cryogels. <i>Journal of Asian Ceramic Societies</i> , 2016, 4, 185-190.	1.0	5
77	Depressed haze and enhanced solar modulation capability for VO <sub>2</sub> -based composite films with distinct size effects. <i>RSC Advances</i> , 2016, 6, 90813-90823.	1.7	16
78	Enhanced power factor in flexible reduced graphene oxide/nanowires hybrid films for thermoelectrics. <i>RSC Advances</i> , 2016, 6, 31580-31587.	1.7	35
79	Solvothermal synthesis of wire-like Sn <sub>x</sub> Sb <sub>2</sub> Te <sub>3+x</sub> with an enhanced thermoelectric performance. <i>Dalton Transactions</i> , 2016, 45, 7483-7491.	1.6	6
80	Free-Standing Reduced Graphene Oxide Paper with High Electrical Conductivity. <i>Journal of Electronic Materials</i> , 2016, 45, 1290-1295.	1.0	32
81	Improving the Thermoelectric Properties of Polyaniline by Introducing Poly(3,4-ethylenedioxythiophene). <i>Journal of Electronic Materials</i> , 2016, 45, 1813-1820.	1.0	11
82	Photoluminescence and cathodoluminescence properties of Li <sup>+</sup> doped Gd <sub>1.88</sub> Eu <sub>0.12</sub> O <sub>3</sub> . <i>Journal of the Ceramic Society of Japan</i> , 2015, 123, 989-994.	0.5	0
83	Shape-controlled synthesis and influence of W doping and oxygen nonstoichiometry on the phase transition of VO <sub>2</sub> . <i>Scientific Reports</i> , 2015, 5, 14087.	1.6	39
84	Power factor enhancement via simultaneous improvement of electrical conductivity and Seebeck coefficient in tellurium nanowires/reduced graphene oxide flexible thermoelectric films. <i>Synthetic Metals</i> , 2015, 210, 342-351.	2.1	14
85	Novel PEPA-functionalized graphene oxide for fire safety enhancement of polypropylene. <i>Science and Technology of Advanced Materials</i> , 2015, 16, 025006.	2.8	13
86	A Facile Surfactant-Assisted Reflux Method for the Synthesis of Single-Crystalline Sb <sub>2</sub> Te <sub>3</sub> Nanostructures with Enhanced Thermoelectric Performance. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 14263-14271.	4.0	36
87	One-step hydrothermal synthesis of V <sub>1-x</sub> W <sub>x</sub> O <sub>2</sub> (M/R) nanorods with superior doping efficiency and thermochromic properties. <i>Journal of Materials Chemistry A</i> , 2015, 3, 3726-3738.	5.2	61
88	High thermoelectric performance of Nb-doped SrTiO <sub>3</sub> bulk materials with different doping levels. <i>Journal of Materials Chemistry C</i> , 2015, 3, 11406-11411.	2.7	84
89	Fluoro-benzoselenadiazole-based low band gap polymers for high efficiency organic solar cells. <i>Polymer Chemistry</i> , 2014, 5, 330-334.	1.9	28
90	Low-Temperature, Solution-Based, Scalable Synthesis of Sb <sub>2</sub> Te <sub>3</sub> Nanoparticles with an Enhanced Power Factor. <i>Journal of Electronic Materials</i> , 2014, 43, 2165-2173.	1.0	8

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91	Effects of environmental factors on the conversion efficiency of solar thermoelectric co-generators comprising parabola trough collectors and thermoelectric modules without evacuated tubular collector. <i>Energy Conversion and Management</i> , 2014, 86, 944-951.	4.4	36
92	Solution-Processed VO <sub>2</sub> -SiO <sub>2</sub> Composite Films with Simultaneously Enhanced Luminous Transmittance, Solar Modulation Ability and Anti-Oxidation property. <i>Scientific Reports</i> , 2014, 4, 7000.	1.6	90
93	Titania Embedded with Nanostructured Sodium Titanate: Reduced Thermal Conductivity for Thermoelectric Application. <i>Journal of Electronic Materials</i> , 2013, 42, 1680-1687.	1.0	3
94	A facile process to prepare one dimension VO <sub>2</sub> nanostructures with superior metal-semiconductor transition. <i>CrystEngComm</i> , 2013, 15, 1095-1106.	1.3	32
95	Efficient, low-cost solar thermoelectric cogenerators comprising evacuated tubular solar collectors and thermoelectric modules. <i>Applied Energy</i> , 2013, 109, 51-59.	5.1	98
96	Low-cost and fast synthesis of nanoporous silica cryogels for thermal insulation applications. <i>Science and Technology of Advanced Materials</i> , 2012, 13, 035003.	2.8	29
97	Bottom-up assembly to Ag nanoparticles embedded Nb-doped TiO <sub>2</sub> nanobulks with improved n-type thermoelectric properties. <i>Journal of Materials Chemistry</i> , 2012, 22, 14180.	6.7	24
98	Sol-gel template synthesis and characterization of VO <sub>2</sub> nanotube arrays. <i>Journal of Sol-Gel Science and Technology</i> , 2012, 63, 103-107.	1.1	22
99	The film thickness dependent thermal stability of Al <sub>2</sub> O <sub>3</sub> :Ag thin films as high-temperature solar selective absorbers. <i>Journal of Nanoparticle Research</i> , 2012, 14, 1.	0.8	16
100	Microstructure and Optical Properties of Sm <sup>3+</sup> Doped TiO <sub>2</sub> Thin Films by Oblique Angle Deposition. <i>Integrated Ferroelectrics</i> , 2011, 129, 201-207.	0.3	0
101	A facile process to prepare copper oxide thin films as solar selective absorbers. <i>Applied Surface Science</i> , 2011, 257, 10729-10736.	3.1	107
102	Broadband Near Ultraviolet Random Lasing in ZnO 3-D Nanowalls. <i>Journal of Nanoscience and Nanotechnology</i> , 2011, 11, 9326-9332.	0.9	4
103	Synthesis of Cation-Intercalated Titanate Nanobelts. <i>Journal of Nanoscience and Nanotechnology</i> , 2011, 11, 9267-9273.	0.9	0
104	W-doped anatase TiO <sub>2</sub> transparent conductive oxide films: Theory and experiment. <i>Journal of Applied Physics</i> , 2010, 107, .	1.1	49