

# Jihui Yang

## List of Publications by Citations

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76  
papers

10,017  
citations

41  
h-index

77  
g-index

77  
ext. papers

12,514  
ext. citations

15.5  
avg, IF

6.37  
L-index

#	Paper	IF	Citations
76	Reversible aqueous zinc/manganese oxide energy storage from conversion reactions. <i>Nature Energy</i> , <b>2016</b> , 1,	62.3	1461
75	Pathways for practical high-energy long-cycling lithium metal batteries. <i>Nature Energy</i> , <b>2019</b> , 4, 180-186	62.3	1202
74	Multiple-filled skutterudites: high thermoelectric figure of merit through separately optimizing electrical and thermal transports. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 7837-46	16.4	1071
73	Water-Lubricated Intercalation in V O <sub>2</sub> H <sub>2</sub> O for High-Capacity and High-Rate Aqueous Rechargeable Zinc Batteries. <i>Advanced Materials</i> , <b>2018</b> , 30, 1703725	24	725
72	Thermoelectric Materials for Space and Automotive Power Generation. <i>MRS Bulletin</i> , <b>2006</b> , 31, 224-229	3.2	480
71	Active Materials for Aqueous Zinc Ion Batteries: Synthesis, Crystal Structure, Morphology, and Electrochemistry. <i>Chemical Reviews</i> , <b>2020</b> , 120, 7795-7866	68.1	347
70	Superparamagnetic enhancement of thermoelectric performance. <i>Nature</i> , <b>2017</b> , 549, 247-251	50.4	314
69	On the tuning of electrical and thermal transport in thermoelectrics: an integrated theory-experiment perspective. <i>Npj Computational Materials</i> , <b>2016</b> , 2,	10.9	290
68	Expanded hydrated vanadate for high-performance aqueous zinc-ion batteries. <i>Energy and Environmental Science</i> , <b>2019</b> , 12, 2273-2285	35.4	277
67	Rational Design of Advanced Thermoelectric Materials. <i>Advanced Energy Materials</i> , <b>2013</b> , 3, 549-565	21.8	225
66	The role of the solid electrolyte interphase layer in preventing Li dendrite growth in solid-state batteries. <i>Energy and Environmental Science</i> , <b>2018</b> , 11, 1803-1810	35.4	220
65	Understanding and applying coulombic efficiency in lithium metal batteries. <i>Nature Energy</i> , <b>2020</b> , 5, 561-568	66.8	201
64	Part-crystalline part-liquid state and rattling-like thermal damping in materials with chemical-bond hierarchy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2014</b> , 111, 15031-5	11.5	181
63	Interfacial behaviours between lithium ion conductors and electrode materials in various battery systems. <i>Journal of Materials Chemistry A</i> , <b>2016</b> , 4, 15266-15280	13	155
62	Magnetoelectric interaction and transport behaviours in magnetic nanocomposite thermoelectric materials. <i>Nature Nanotechnology</i> , <b>2017</b> , 12, 55-60	28.7	155
61	Capacity Fading of Ni-Rich NCA Cathodes: Effect of Microcracking Extent. <i>ACS Energy Letters</i> , <b>2019</b> , 4, 2995-3001	20.1	138
60	Resonant level-induced high thermoelectric response in indium-doped GeTe. <i>NPG Asia Materials</i> , <b>2017</b> , 9, e343-e343	10.3	129

59	High thermoelectric performance in Te-free (Bi,Sb) <sub>2</sub> Se <sub>3</sub> via structural transition induced band convergence and chemical bond softening. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 3436-3447	35.4	123
58	Enhanced thermoelectric properties of Bi <sub>2</sub> (Te <sub>1-x</sub> Sex) <sub>3</sub> -based compounds as n-type legs for low-temperature power generation. <i>Journal of Materials Chemistry</i> , <b>2012</b> , 22, 20943		122
57	Reaction Mechanisms for Long-Life Rechargeable Zn/MnO <sub>2</sub> Batteries. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 2036-2047	9.6	119
56	Field-Effect Tuned Adsorption Dynamics of VSe Nanosheets for Enhanced Hydrogen Evolution Reaction. <i>Nano Letters</i> , <b>2017</b> , 17, 4109-4115	11.5	98
55	Conductivity-limiting bipolar thermal conductivity in semiconductors. <i>Scientific Reports</i> , <b>2015</b> , 5, 10136	4.9	97
54	Enhancing thermoelectric performance in hierarchically structured BiCuSeO by increasing bond covalency and weakening carrier-phonon coupling. <i>Energy and Environmental Science</i> , <b>2017</b> , 10, 1590-1599	35.4	94
53	Multi-localization transport behaviour in bulk thermoelectric materials. <i>Nature Communications</i> , <b>2015</b> , 6, 6197	17.4	90
52	Charge-Compensated Compound Defects in Ga-containing Thermoelectric Skutterudites. <i>Advanced Functional Materials</i> , <b>2013</b> , 23, 3194-3203	15.6	90
51	Facilitating the Operation of Lithium-Ion Cells with High-Nickel Layered Oxide Cathodes with a Small Dose of Aluminum. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 3101-3109	9.6	86
50	Solid-State Explosive Reaction for Nanoporous Bulk Thermoelectric Materials. <i>Advanced Materials</i> , <b>2017</b> , 29, 1701148	24	82
49	Probing the initiation of voltage decay in Li-rich layered cathode materials at the atomic scale. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 5385-5391	13	69
48	High-performance n-type YbxCo <sub>4</sub> Sb <sub>12</sub> : from partially filled skutterudites towards composite thermoelectrics. <i>NPG Asia Materials</i> , <b>2016</b> , 8, e285-e285	10.3	68
47	Electronegative guests in CoSb <sub>3</sub> . <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 2090-2098	35.4	67
46	On Intensifying Carrier Impurity Scattering to Enhance Thermoelectric Performance in Cr-Doped CeyCo <sub>4</sub> Sb <sub>12</sub> . <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 6660-6670	15.6	65
45	The Electron crystal behavior in copper chalcogenides Cu <sub>2</sub> X (X = Se, S). <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 5098-5105	13	63
44	Separating electronic and ionic conductivity in mix-conducting layered lithium transition-metal oxides. <i>Journal of Power Sources</i> , <b>2018</b> , 393, 75-82	8.9	59
43	Two-dimensional thermoelectrics with Rashba spin-split bands in bulk BiTeI. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	59
42	Electrical Transport Properties of Filled CoSb <sub>3</sub> Skutterudites: A Theoretical Study. <i>Journal of Electronic Materials</i> , <b>2009</b> , 38, 1397-1401	1.9	57

41	Facile room temperature solventless synthesis of high thermoelectric performance Ag <sub>2</sub> Se via a dissociative adsorption reaction. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 23243-23251	13	52
40	Blocking Ion Migration Stabilizes the High Thermoelectric Performance in Cu Se Composites. <i>Advanced Materials</i> , <b>2020</b> , 32, e2003730	24	49
39	Complex electronic structure and compositing effect in high performance thermoelectric BiCuSeO. <i>Nature Communications</i> , <b>2019</b> , 10, 2814	17.4	46
38	Thermoelectric properties of Ni-doped CeFe <sub>4</sub> Sb <sub>12</sub> skutterudites. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 023705	2.5	46
37	Compound defects and thermoelectric properties in ternary CuAgSe-based materials. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 13662-13670	13	45
36	Catalyzing zinc-ion intercalation in hydrated vanadates for aqueous zinc-ion batteries. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 7713-7723	13	41
35	Finite element analysis of temperature and stress fields during the selective laser melting process of thermoelectric SnTe. <i>Journal of Materials Processing Technology</i> , <b>2018</b> , 261, 74-85	5.3	38
34	Diverse lattice dynamics in ternary Cu-Sb-Se compounds. <i>Scientific Reports</i> , <b>2015</b> , 5, 13643	4.9	37
33	Band Structure Engineering and Thermoelectric Properties of Charge-Compensated Filled Skutterudites. <i>Scientific Reports</i> , <b>2015</b> , 5, 14641	4.9	35
32	Rationalizing the interphase stability of Li doped-Li <sub>7</sub> La <sub>3</sub> Zr <sub>2</sub> O <sub>12</sub> via automated reaction screening and machine learning. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 19961-19969	13	34
31	Electrochemical and interfacial behavior of all solid state batteries using Li <sub>10</sub> SnP <sub>2</sub> S <sub>12</sub> solid electrolyte. <i>Journal of Power Sources</i> , <b>2018</b> , 396, 824-830	8.9	32
30	Thermoelectric performance of CuFeS <sub>2</sub> +2x composites prepared by rapid thermal explosion. <i>NPG Asia Materials</i> , <b>2017</b> , 9, e390-e390	10.3	29
29	Enhanced Thermoelectric Performance in Cu-Intercalated BiTeI by Compensation Weakening Induced Mobility Improvement. <i>Scientific Reports</i> , <b>2015</b> , 5, 14319	4.9	29
28	Non-equilibrium synthesis and characterization of n-type Bi <sub>2</sub> Te <sub>2.7</sub> Se <sub>0.3</sub> thermoelectric material prepared by rapid laser melting and solidification. <i>RSC Advances</i> , <b>2017</b> , 7, 21439-21445	3.7	28
27	Preparation of n-type Bi <sub>2</sub> Te <sub>3</sub> thermoelectric materials by non-contact dispenser printing combined with selective laser melting. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2017</b> , 11, 1700067	2.5	27
26	Probing Electrochemical Cycling Stability of Li-ion Cathode Materials at Atomic-scale. <i>Microscopy and Microanalysis</i> , <b>2014</b> , 20, 452-453	0.5	27
25	Fabrication and Thermoelectric Properties of n-Type CoSbTe Using Selective Laser Melting. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 13669-13674	9.5	25
24	Power factor enhancement in light valence band p-type skutterudites. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 022101	3.4	24

23	Understanding the electrochemical potential and diffusivity of MnO/C nanocomposites at various charge/discharge states. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 7831-7842	13	23
22	Structure family and polymorphous phase transition in the compounds with soft sublattice: Cu <sub>2</sub> Se as an example. <i>Journal of Chemical Physics</i> , <b>2016</b> , 144, 194502	3.9	23
21	Minimum Thermal Conductivity in Weak Topological Insulators with Bismuth-Based Stack Structure. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 5360-5367	15.6	21
20	Enhancement of thermoelectric performance in slightly charge-compensated Ce <sub>3</sub> Co <sub>4</sub> Sb <sub>12</sub> skutterudites. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 062103	3.4	21
19	Tuning self-healing properties of stiff, ion-conductive polymers. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 6773-6783	13	19
18	Quantitative nanoscale mapping of three-phase thermal conductivities in filled skutterudites via scanning thermal microscopy. <i>National Science Review</i> , <b>2018</b> , 5, 59-69	10.8	19
17	Theoretical Study on Structural Stability of Fully Filled p-Type Skutterudites RETM <sub>4</sub> Sb <sub>12</sub> (RE = Rare Earth; TM = Fe, Ru). <i>Journal of Electronic Materials</i> , <b>2013</b> , 42, 2492-2497	1.9	19
16	Thermo-element geometry optimization for high thermoelectric efficiency. <i>Energy</i> , <b>2018</b> , 147, 672-680	7.9	15
15	Thermopower enhancement in quantum wells with the Rashba effect. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 202115	3.4	14
14	Thermoelectric properties of n-type ZrNiSn prepared by rapid non-equilibrium laser processing.. <i>RSC Advances</i> , <b>2018</b> , 8, 15796-15803	3.7	14
13	Polytypism in superhard transition-metal triborides. <i>Scientific Reports</i> , <b>2014</b> , 4, 5063	4.9	13
12	Defect-mediated Rashba engineering for optimizing electrical transport in thermoelectric BiTeI. <i>Npj Computational Materials</i> , <b>2020</b> , 6,	10.9	13
11	Thermoelectric performance of p-type skutterudites YbxFe <sub>4-3y</sub> PtySb <sub>12</sub> (0.8 ≤ x ≤ 1, y = 1 and 0.5). <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 143708	2.5	12
10	A multi-functional interface derived from thiol-modified mesoporous carbon in lithium sulfur batteries. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 13372-13381	13	11
9	The Quest for Stable Potassium-Ion Battery Chemistry. <i>Advanced Materials</i> , <b>2021</b> , e2106876	24	10
8	All solid thick oxide cathodes based on low temperature sintering for high energy solid batteries. <i>Energy and Environmental Science</i> , <b>2021</b> , 14, 5044-5056	35.4	9
7	Designing solvate ionogel electrolytes with very high room-temperature conductivity and lithium transference number. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 24100-24106	13	9
6	Intrinsic low thermal conductivity in weakly ionic rocksalt structures. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	8

5	Dynamic process of the resonant phonon scattering in fully filled skutterudites. <i>Physical Review B</i> , <b>2018</b> , 98,	3-3	7
4	Electron and Phonon Transport in n- and p-type Skutterudites. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1490, 9-18		5
3	Systematic Evaluation of Carbon Hosts for High-Energy Rechargeable Lithium-Metal Batteries. <i>ACS Energy Letters</i> , 1550-1559	20.1	5
2	Condensation-related thermoelectric properties and formation of coherent nanoinclusions in Te-substituted In <sub>4</sub> Se <sub>3</sub> compounds. <i>Journal of Materials Chemistry A</i> , <b>2013</b> , 1, 15342	13	4
1	Apparatus design for measuring of the strain dependence of the Seebeck coefficient of single crystals. <i>Review of Scientific Instruments</i> , <b>2020</b> , 91, 023902	1.7	0