Yan Wang

List of Publications by Year
in descending order

60 papers	6,510 citations	136950 32 h-index	133252 59 g-index
63 all docs	63 docs citations	63 times ranked	6819 citing authors

#	Article	IF	Citations
1	Lithium superionic conductors with corner-sharing frameworks. Nature Materials, 2022, 21, 924-931.	27.5	67
2	High-energy and durable lithium metal batteries using garnet-type solid electrolytes with tailored lithium-metal compatibility. Nature Communications, 2022, 13, 1883.	12.8	67
3	Achieving High Stability and Performance in P2â€‘Type Mnâ€‘Based Layered Oxides with Tetravalent Cations for Sodiumâ€‘Ion Batteries. Small, 2022, 18, e2201086.	10.0	25
4	Interrupted anion-network enhanced Li+-ion conduction in Li3+yPO4Iy. Energy Storage Materials, 2022, 51, 88-96.	18.0	6
5	Pillar-beam structures prevent layered cathode materials from destructive phase transitions. Nature Communications, 2021, 12, 13.	12.8	85
6	First-principles theory for Schottky barrier physics. Physical Review B, 2021, 104, .	3.2	14
7	Computational Design and Experimental Synthesis of Air-Stable Solid-State Ionic Conductors with High Conductivity. Chemistry of Materials, 2021, 33, 6909-6917.	6.7	10
8	Lithium Oxide Superionic Conductors Inspired by Garnet and NASICON Structures. Advanced Energy Materials, 2021, 11, 2101437.	19.5	33
9	Synthetic accessibility and stability rules of NASICONs. Nature Communications, 2021, 12, 5752.	12.8	47
10	Towards rational mechanical design of inorganic solid electrolytes for all-solid-state lithium ion batteries. Energy Storage Materials, 2020, 26, 313-324.	18.0	114
11	Understanding interface stability in solid-state batteries. Nature Reviews Materials, 2020, 5, 105-126.	48.7	630
12	The interplay between thermodynamics and kinetics in the solid-state synthesis of layered oxides. Nature Materials, 2020, 19, 1088-1095.	27.5	129
13	Enhanced ion conduction by enforcing structural disorder in Li-deficient argyrodites Li6âˆ’xPS5âˆ’xCl1+x. Energy Storage Materials, 2020, 30, 67-73.	18.0	97
14	Enhanced Ion Conduction in Li_{2.5}Zn_{0.25}PS₄ via Anion Doping. Chemistry of Materials, 2020, 32, 3036-3042.	6.7	9
15	Computational Investigation of Halogen-Substituted Na Argyrodites as Solid-State Superionic Conductors. Chemistry of Materials, 2020, 32, 1896-1903.	6.7	9
16	Fast Ion Conduction and Its Origin in Li_{6â€“<i>x</i>}PS_{5â€“<i>x</i>}Br_{1+<i>x</i>}. Chemistry of Materials, 2020, 32, 3833-3840.	6.7	75
17	A Highâ€‘Energy NASICONâ€‘Type Cathode Material for Naâ€‘Ion Batteries. Advanced Energy Materials, 2020, 10, 1903968.	19.5	116
18	Cell failures of all-solid-state lithium metal batteries with inorganic solid electrolytes: Lithium dendrites. Energy Storage Materials, 2020, 33, 309-328.	18.0	63

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19	Computational Screening of Cathode Coatings for Solid-State Batteries. Joule, 2019, 3, 1252-1275.	24.0	276
20	<i>Ab initio</i>investigation of the stability of electrolyte/electrode interfaces in all-solid-state Na batteries. Journal of Materials Chemistry A, 2019, 7, 8144-8155.	10.3	102
21	Synthesis and Electrochemical Properties of <i>I</i>4Ì…-Type Li_{1+2<i>x</i>}Zn_{1â€“<i>x</i>}PS₄ Solid Electrolyte. Chemistry of Materials, 2018, 30, 2236-2244.	6.7	30
22	The Interaction between Cu and Fe in P2-Type Na_xTMO₂Cathodes for Advanced Battery Performance. Journal of the Electrochemical Society, 2018, 165, A1184-A1192.	2.9	32
23	Predictive modeling and design rules for solid electrolytes. MRS Bulletin, 2018, 43, 746-751.	3.5	47
24	Additional Sodium Insertion into Polyanionic Cathodes for Higherâ€Energy Naâ€Ion Batteries. Advanced Energy Materials, 2017, 7, 1700514.	19.5	157
25	Computational Prediction and Evaluation of Solid-State Sodium Superionic Conductors Na₇P₃X₁₁ (X = O, S, Se). Chemistry of Materials, 2017, 29, 7475-7482.	6.7	56
26	High magnesium mobility in ternary spinel chalcogenides. Nature Communications, 2017, 8, 1759.	12.8	212
27	Improving Fluorophosphates Na3V2(PO4)2F3 As Na-Ion Cathodes Beyond the 2 Sodium Limit. ECS Meeting Abstracts, 2017, , .	0.0	0
28	Water adsorption on the LaMnO3 surface. Journal of Chemical Physics, 2016, 144, 064701.	3.0	5
29	Structural and Na-ion conduction characteristics of Na₃PS_xSe_{4âˆ’x}. Journal of Materials Chemistry A, 2016, 4, 9044-9053.	10.3	73
30	Jahnâ€“Teller Assisted Na Diffusion for High Performance Na Ion Batteries. Chemistry of Materials, 2016, 28, 6575-6583.	6.7	135
31	Interface Stability in Solid-State Batteries. Chemistry of Materials, 2016, 28, 266-273.	6.7	1,132
32	Design of Li_{1+2x}Zn_{1âˆ’x}PS₄, a new lithium ion conductor. Energy and Environmental Science, 2016, 9, 3272-3278.	30.8	99
33	Design and synthesis of the superionic conductor Na10SnP2S12. Nature Communications, 2016, 7, 11009.	12.8	246
34	Computational and Experimental Investigations of Na-Ion Conduction in Cubic Na₃PSe₄. Chemistry of Materials, 2016, 28, 252-258.	6.7	108
35	(Invited) Predicting the Interfacial Reactions Between Cathodes and Liquid and Solid Electrolytes. ECS Meeting Abstracts, 2016, , .	0.0	0
36	Selenides Based Sodium Superionic Conductors. ECS Meeting Abstracts, 2016, , .	0.0	0

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37	Materials Design Guidelines for All-Solid-State Batteries. ECS Meeting Abstracts, 2016, MA2016-03, 456-456.	0.0	2
38	Highâ€Performance P2â€Type Na_{2/3}(Mn_{1/2}Fe_{1/4}Co_{1/4})O₂ Cathode Material with Superior Rate Capability for Naâ€Ion Batteries. Advanced Energy Materials, 2015, 5, 1500944.	19.5	125
39	First-Principles Studies on Cation Dopants and Electrolyte | Cathode Interphases for Lithium Garnets. Chemistry of Materials, 2015, 27, 4040-4047.	6.7	279
40	Design principles for solid-state lithium superionic conductors. Nature Materials, 2015, 14, 1026-1031.	27.5	1,079
41	Li-ion conductivity in Li₉S₃N. Journal of Materials Chemistry A, 2015, 3, 20338-20344.	10.3	28
42	Extraordinary Hydrogen Evolution and Oxidation Reaction Activity from Carbon Nanotubes and Graphitic Carbons. ACS Nano, 2014, 8, 8447-8456.	14.6	115
43	First-principles study of Co concentration and interfacial resonance states in Fe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^’</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>Co<mml xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mi>x</mml:mi></mml:msub></mml:math>magnetic tunnel junctions. Physical Review B, 2013, 88,	3.2	2
44	Oxygen Reduction Activity on Perovskite Oxide Surfaces: A Comparative First-Principles Study of LaMnO₃, LaFeO₃, and LaCrO₃. Journal of Physical Chemistry C, 2013, 117, 2106-2112.	3.1	140
45	Reversible Spin Polarization at Hybrid Organicâ€"Ferromagnetic Interfaces. Journal of Physical Chemistry Letters, 2013, 4, 3508-3512.	4.6	18
46	Plane-wave transport method for low-symmetry lattices and its application. Physical Review B, 2012, 86, .	3.2	6
47	Electronic and transport properties of azobenzene monolayer junctions as molecular switches. Physical Review B, 2012, 86, .	3.2	22
48	Density functional study of gold and iron clusters on perfect and defected graphene. Physical Review B, 2012, 85, .	3.2	53
49	Water thin film-silica interaction on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î±</mml:mi></mml:math>-quartz (0001) surfaces. Physical Review B, 2011, 84, .	3.2	32
50	Perfect spin-filtering and giant magnetoresistance with Fe-terminated graphene nanoribbon. Applied Physics Letters, 2011, 99, .	3.3	19
51	Interedge magnetic coupling in transition-metal terminated graphene nanoribbons. Physical Review B, 2011, 83, .	3.2	25
52	Metal-terminated graphene nanoribbons. Physical Review B, 2010, 82, .	3.2	58
53	Spin-dependent tunneling spectroscopy for interface characterization of epitaxial Fe/MgO/Fe magnetic tunnel junctions. Physical Review B, 2010, 81, .	3.2	35
54	First-principles study of Fe/MgO based magnetic tunnel junctions with Mg interlayers. Physical Review B, 2010, 82, .	3.2	28

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55	Inverse and oscillatory magnetoresistance in Fe(001)/MgO/Cr/Fe magnetic tunnel junctions. Physical Review B, 2010, 82, .	3.2	14
56	Temperature dependence of resistance in epitaxial Fe/MgO/Fe magnetic tunnel junctions. Applied Physics Letters, 2009, 95, 052506.	3.3	32
57	Effect of Co interlayers in Fe/MgO/Fe magnetic tunnel junctions. Applied Physics Letters, 2008, 93, .	3.3	25
58	Theory of nonspecular tunneling through magnetic tunnel junctions. Physical Review B, 2008, 77, .	3.2	21
59	Simple models for electron and spin transport in barrierâ€“conductorâ€“barrier devices. Solid-State Electronics, 2007, 51, 1344-1350.	1.4	2
60	First-Principles Theory of Quantum Well Resonance in Double Barrier Magnetic Tunnel Junctions. Physical Review Letters, 2006, 97, 087210.	7.8	38