

# Jiajun Wang

## List of Publications by Year in descending order

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66  
papers

7,039  
citations

61857

43  
h-index

114278

63  
g-index

67  
all docs

67  
docs citations

67  
times ranked

8540  
citing authors

#	ARTICLE	IF	CITATIONS
1	Understanding and recent development of carbon coating on LiFePO <sub>4</sub> cathode materials for lithium-ion batteries. Energy and Environmental Science, 2012, 5, 5163-5185.	15.6	839
2	Olivine LiFePO <sub>4</sub> : the remaining challenges for future energy storage. Energy and Environmental Science, 2015, 8, 1110-1138.	15.6	412
3	Effect of carbon black support corrosion on the durability of Pt/C catalyst. Journal of Power Sources, 2007, 171, 331-339.	4.0	383
4	Challenges and opportunities of nanostructured materials for aprotic rechargeable lithium-air batteries. Nano Energy, 2013, 2, 443-467.	8.2	315
5	Superior energy capacity of graphene nanosheets for a nonaqueous lithium-oxygen battery. Chemical Communications, 2011, 47, 9438.	2.2	293
6	Nitrogen-doped carbon nanotubes as cathode for lithium-air batteries. Electrochemistry Communications, 2011, 13, 668-672.	2.3	261
7	Nitrogen-doped graphene nanosheets as cathode materials with excellent electrocatalytic activity for high capacity lithium-oxygen batteries. Electrochemistry Communications, 2012, 18, 12-15.	2.3	248
8	Nitrogen Doping Effects on Carbon Nanotubes and the Origin of the Enhanced Electrocatalytic Activity of Supported Pt for Proton-Exchange Membrane Fuel Cells. Journal of Physical Chemistry C, 2011, 115, 3769-3776.	1.5	228
9	3D porous LiFePO <sub>4</sub> /graphene hybrid cathodes with enhanced performance for Li-ion batteries. Journal of Power Sources, 2012, 208, 340-344.	4.0	201
10	LiFePO <sub>4</sub> -graphene as a superior cathode material for rechargeable lithium batteries: impact of stacked graphene and unfolded graphene. Energy and Environmental Science, 2013, 6, 1521.	15.6	199
11	Enhanced stability of Pt electrocatalysts by nitrogen doping in CNTs for PEM fuel cells. Electrochemistry Communications, 2009, 11, 2071-2076.	2.3	196
12	In operando tracking phase transformation evolution of lithium iron phosphate with hard X-ray microscopy. Nature Communications, 2014, 5, 4570.	5.8	155
13	In Operando XRD and TXM Study on the Metastable Structure Change of NaNi <sub>1/3</sub> Fe <sub>1/3</sub> Mn <sub>1/3</sub> O <sub>2</sub> under Electrochemical Sodium-ion Intercalation. Advanced Energy Materials, 2016, 6, 1601306.	10.2	147
14	Lifetime of the solar nebula constrained by meteorite paleomagnetism. Science, 2017, 355, 623-627.	6.0	147
15	Defect-Rich Crystalline SnO <sub>2</sub> Immobilized on Graphene Nanosheets with Enhanced Cycle Performance for Li Ion Batteries. Journal of Physical Chemistry C, 2012, 116, 22149-22156.	1.5	138
16	Discharge product morphology and increased charge performance of lithium-oxygen batteries with graphene nanosheet electrodes: the effect of sulphur doping. Journal of Materials Chemistry, 2012, 22, 20170.	6.7	136
17	Hierarchically porous LiFePO <sub>4</sub> /nitrogen-doped carbon nanotubes composite as a cathode for lithium ion batteries. Journal of Materials Chemistry, 2012, 22, 7537.	6.7	135
18	Investigation of Further Improvement of Platinum Catalyst Durability with Highly Graphitized Carbon Nanotubes Support. Journal of Physical Chemistry C, 2008, 112, 5784-5789.	1.5	130

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19	Probing three-dimensional sodiation-desodiation equilibrium in sodium-ion batteries by in situ hard X-ray nanotomography. <i>Nature Communications</i> , 2015, 6, 7496.	5.8	123
20	Soft X-ray XANES studies of various phases related to LiFePO <sub>4</sub> based cathode materials. <i>Energy and Environmental Science</i> , 2012, 5, 7007.	15.6	116
21	Multi-walled carbon nanotubes based Pt electrodes prepared with in situ ion exchange method for oxygen reduction. <i>Journal of Power Sources</i> , 2006, 161, 47-53.	4.0	114
22	Hierarchical nanostructured core-shell Sn@C nanoparticles embedded in graphene nanosheets: spectroscopic view and their application in lithium ion batteries. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 3535.	1.3	113
23	Visualization of anisotropic-isotropic phase transformation dynamics in battery electrode particles. <i>Nature Communications</i> , 2016, 7, 12372.	5.8	113
24	In-situ Three-Dimensional Synchrotron X-ray Nanotomography of the (De)lithiation Processes in Tin Anodes. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 4460-4464.	7.2	105
25	Unravelling the origin of irreversible capacity loss in NaNiO <sub>2</sub> for high voltage sodium ion batteries. <i>Nano Energy</i> , 2017, 34, 215-223.	8.2	94
26	Surface aging at olivine LiFePO <sub>4</sub> : a direct visual observation of iron dissolution and the protection role of nano-carbon coating. <i>Journal of Materials Chemistry A</i> , 2013, 1, 1579-1586.	5.2	93
27	Novel approach toward a binder-free and current collector-free anode configuration: highly flexible nanoporous carbon nanotube electrodes with strong mechanical strength harvesting improved lithium storage. <i>Journal of Materials Chemistry</i> , 2012, 22, 18847.	6.7	91
28	Stacking fault disorder induced by Mn doping in Ni(OH) <sub>2</sub> for supercapacitor electrodes. <i>Chemical Engineering Journal</i> , 2021, 412, 128617.	6.6	91
29	In situ chemical mapping of a lithium-ion battery using full-field hard X-ray spectroscopic imaging. <i>Chemical Communications</i> , 2013, 49, 6480.	2.2	87
30	In situ self-catalyzed formation of core-shell LiFePO <sub>4</sub> @CNT nanowires for high rate performance lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2013, 1, 7306.	5.2	78
31	Emerging X-ray imaging technologies for energy materials. <i>Materials Today</i> , 2020, 34, 132-147.	8.3	70
32	Carbon nanotubes supported Pt-Au catalysts for methanol-tolerant oxygen reduction reaction: A comparison between Pt/Au and PtAu nanoparticles. <i>Journal of Power Sources</i> , 2009, 194, 668-673.	4.0	69
33	Pd nanoparticles deposited on vertically aligned carbon nanotubes grown on carbon paper for formic acid oxidation. <i>International Journal of Hydrogen Energy</i> , 2009, 34, 8270-8275.	3.8	66
34	Size-dependent surface phase change of lithium iron phosphate during carbon coating. <i>Nature Communications</i> , 2014, 5, 3415.	5.8	66
35	A novel Pt/Au/C cathode catalyst for direct methanol fuel cells with simultaneous methanol tolerance and oxygen promotion. <i>Electrochemistry Communications</i> , 2008, 10, 831-834.	2.3	63
36	Elucidating the Irreversible Mechanism and Voltage Hysteresis in Conversion Reaction for High-Energy Sodium-Metal Sulfide Batteries. <i>Advanced Energy Materials</i> , 2017, 7, 1602706.	10.2	61

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37	Understanding the initial irreversibility of metal sulfides for sodium-ion batteries via operando techniques. <i>Nano Energy</i> , 2018, 43, 184-191.	8.2	61
38	Atomic layer deposition assisted Pt-SnO <sub>2</sub> hybrid catalysts on nitrogen-doped CNTs with enhanced electrocatalytic activities for low temperature fuel cells. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 11085-11092.	3.8	57
39	Probing Battery Electrochemistry with In Operando Synchrotron X-ray Imaging Techniques. <i>Small Methods</i> , 2018, 2, 1700293.	4.6	52
40	Interaction of Carbon Coating on LiFePO <sub>4</sub> : A Local Visualization Study of the Influence of Impurity Phases. <i>Advanced Functional Materials</i> , 2013, 23, 806-814.	7.8	47
41	Electrochemical durability investigation of single-walled and multi-walled carbon nanotubes under potentiostatic conditions. <i>Journal of Power Sources</i> , 2008, 176, 128-131.	4.0	46
42	Dispersion of Nanocrystalline Fe <sub>3</sub> O <sub>4</sub> within Composite Electrodes: Insights on Battery-Related Electrochemistry. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 11418-11430.	4.0	45
43	Formation of size-dependent and conductive phase on lithium iron phosphate during carbon coating. <i>Nature Communications</i> , 2018, 9, 929.	5.8	45
44	Pt-SnO <sub>2</sub> /nitrogen-doped CNT hybrid catalysts for proton-exchange membrane fuel cells (PEMFC): Effects of crystalline and amorphous SnO <sub>2</sub> by atomic layer deposition. <i>Journal of Power Sources</i> , 2013, 238, 144-149.	4.0	44
45	2D Cross Sectional Analysis and Associated Electrochemistry of Composite Electrodes Containing Dispersed Agglomerates of Nanocrystalline Magnetite, Fe <sub>3</sub> O <sub>4</sub> . <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 13457-13466.	4.0	43
46	Anisotropically Electrochemical-Mechanical Evolution in Solid-State Batteries and Interfacial Tailored Strategy. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 18647-18653.	7.2	43
47	3D boron doped carbon nanorods/carbon-microfiber hybrid composites: synthesis and applications in a highly stable proton exchange membrane fuel cell. <i>Journal of Materials Chemistry</i> , 2011, 21, 18195.	6.7	38
48	Observation of Surface/Defect States of SnO <sub>2</sub> Nanowires on Different Substrates from X-ray Excited Optical Luminescence. <i>Crystal Growth and Design</i> , 2012, 12, 397-402.	1.4	37
49	Unraveling the Origins of the "Unreactive Core" in Conversion Electrodes to Trigger High Sodium-Ion Electrochemistry. <i>ACS Energy Letters</i> , 2019, 4, 2007-2012.	8.8	33
50	Platinum Deposition on Multiwalled Carbon Nanotubes by Ion-Exchange Method as Electrocatalysts for Oxygen Reduction. <i>Journal of the Electrochemical Society</i> , 2007, 154, B687.	1.3	30
51	Nature of LiFePO <sub>4</sub> aging process: Roles of impurity phases. <i>Journal of Power Sources</i> , 2013, 238, 454-463.	4.0	30
52	Scalable Dry Printing Manufacturing to Enable Long-Life and High Energy Lithium-Ion Batteries. <i>Advanced Materials Technologies</i> , 2017, 2, 1700106.	3.0	30
53	Origin of phase inhomogeneity in lithium iron phosphate during carbon coating. <i>Nano Energy</i> , 2018, 45, 52-60.	8.2	26
54	Redox chemistry of a binary transition metal oxide (AB <sub>2</sub> O <sub>4</sub> ): a study of the Cu <sup>2+</sup> /Cu <sup>0</sup> and Fe <sup>3+</sup> /Fe <sup>0</sup> interconversions observed upon lithiation in a CuFe <sub>2</sub> O <sub>4</sub> battery using X-ray absorption spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 16930-16940.	1.3	21

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55	Modifying High-Voltage Olivine-Type LiMnPO <sub>4</sub> Cathode via Mg Substitution in High-Orientation Crystal. ACS Applied Energy Materials, 2018, 1, 5928-5935.	2.5	20
56	X-ray nanotomography analysis of the microstructural evolution of LiMn <sub>2</sub> O <sub>4</sub> electrodes. Journal of Power Sources, 2017, 360, 460-469.	4.0	17
57	Achieving high specific capacity of lithium-ion battery cathodes by modification with •O <sup>•</sup> radicals and oxygen-containing functional groups. Journal of Materials Chemistry A, 2017, 5, 24636-24644.	5.2	17
58	High capacity Li-ion battery anodes: Impact of crystallite size, surface chemistry and PEG-coating. Electrochimica Acta, 2018, 260, 235-245.	2.6	16
59	A nonmagnetic differentiated early planetary body. Earth and Planetary Science Letters, 2017, 468, 119-132.	1.8	15
60	Tracking Battery Dynamics by Operando Synchrotron X-ray Imaging: Operation from Liquid Electrolytes to Solid-State Electrolytes. Accounts of Materials Research, 2021, 2, 1177-1189.	5.9	15
61	Anisotropically Electrochemical-Mechanical Evolution in Solid-State Batteries and Interfacial Tailored Strategy. Angewandte Chemie, 2019, 131, 18820-18826.	1.6	12
62	Characterization of dynamic morphological changes of tin anode electrode during (de)lithiation processes using in operando synchrotron transmission X-ray microscopy. Electrochimica Acta, 2019, 314, 212-218.	2.6	10
63	Advanced Carbon Materials for Electrochemical Energy Conversion and Storage. World Scientific Series on Carbon Nanoscience, 2012, , 55-94.	0.1	0
64	Graphene and N-Doped Graphene as Cathodes for Li-Air Batteries. ECS Meeting Abstracts, 2012, , .	0.0	0
65	Principles and Applications of Industrial X-ray Computed Tomography. , 2021, , 179-204.		0
66	A Category of Synchrotron X-ray Imaging Methods. , 2021, , 1-25.		0