Johanna Nelson Weker

List of Publications by Year
in descending order

75	5,411	36	73
papers	citations	h-index	g-index
		101384	79541

78	78	78	7776
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Interfaces in all solid state Li-metal batteries: A review on instabilities, stabilization strategies, and scalability. Energy Storage Materials, 2022, 45, 969-1001.	9.5	36
2	In situ imaging of three dimensional freeze printing process using rapid x-ray synchrotron radiography. Review of Scientific Instruments, 2022, 93, 013703.	0.6	2
3	Thermodynamics-driven interfacial engineering of alloy-type anode materials. Cell Reports Physical Science, 2022, 3, 100694.	2.8	4
4	Promoting Reversibility of Multielectron Redox in Alkali-Rich Sulfide Cathodes through Cryomilling. Chemistry of Materials, 2022, 34, 3236-3245.	3.2	1
5	A laser powder bed fusion system for operando synchrotron x-ray imaging and correlative diagnostic experiments at the Stanford Synchrotron Radiation Lightsource. Review of Scientific Instruments, 2022, 93, 043702.	0.6	6
6	Conformal Pressure and Fast-Charging Li-Ion Batteries. Journal of the Electrochemical Society, 2022, 169, 040540.	1.3	8
7	High-Rate Lithium Cycling and Structure Evolution in Mo₄O₁₁. Chemistry of Materials, 2022, 34, 4122-4133.	3.2	13
8	Room-Temperature Electrochemical Fluoride (De)insertion into CsMnFeF₆. ACS Energy Letters, 2022, 7, 2340-2348.	8.8	3
9	Quantification of heterogeneous, irreversible lithium plating in extreme fast charging of lithium-ion batteries. Energy and Environmental Science, 2021, 14, 4979-4988.	15.6	58
10	A Review of Existing and Emerging Methods for Lithium Detection and Characterization in Liâ€Ion and Liâ€Metal Batteries. Advanced Energy Materials, 2021, 11, 2100372.	10.2	114
11	Tracking the evolution of processes occurring in silicon anodes in lithium ion batteries by 3D visualization of relaxation times. Journal of Electroanalytical Chemistry, 2021, 892, 115309.	1.9	10
12	Quantification of Efficiency in Lithium Metal Negative Electrodes via Operando X-ray Diffraction. Chemistry of Materials, 2021, 33, 7537-7545.	3.2	17
13	Controlling Covalency and Anion Redox Potentials through Anion Substitution in Li-Rich Chalcogenides. Chemistry of Materials, 2021, 33, 378-391.	3.2	20
14	Using <i>In Situ</i> High-Energy X-ray Diffraction to Quantify Electrode Behavior of Li-Ion Batteries from Extreme Fast Charging. ACS Applied Energy Materials, 2021, 4, 11590-11598.	2.5	17
15	Nanoscale state-of-charge heterogeneities within polycrystalline nickel-rich layered oxide cathode materials. Cell Reports Physical Science, 2021, 2, 100647.	2.8	12
16	Heterogeneous Behavior of Lithium Plating during Extreme Fast Charging. Cell Reports Physical Science, 2020, 1, 100114.	2.8	49
17	Direct Measure of Electrode Spatial Heterogeneity: Influence of Processing Conditions on Anode Architecture and Performance. ACS Applied Materials & Interfaces, 2020, 12, 55954-55970.	4.0	21
18	High Speed In-situ X-ray Imaging of 3D Freeze Printing of Aerogels. Additive Manufacturing, 2020, 36, 101513.	1.7	6

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19	Cooling dynamics of two titanium alloys during laser powder bed fusion probed with in situ X-ray imaging and diffraction. Materials and Design, 2020, 195, 108987.	3.3	25
20	Understanding additive controlled lithium morphology in lithium metal batteries. Journal of Materials Chemistry A, 2020, 8, 16960-16972.	5.2	26
21	Understanding Stabilization in Nanoporous Intermetallic Alloy Anodes for Li-Ion Batteries Using <i>Operando</i> Transmission X-ray Microscopy. ACS Nano, 2020, 14, 14820-14830.	7.3	9
22	NASICON Na₃V₂(PO₄)₃ Enables Quasi-Two-Stage Na⁺ and Zn²⁺ Intercalation for Multivalent Zinc Batteries. Chemistry of Materials, 2020, 32, 3028-3035.	3.2	75
23	Multielectron, Cation and Anion Redox in Lithium-Rich Iron Sulfide Cathodes. Journal of the American Chemical Society, 2020, 142, 6737-6749.	6.6	46
24	Differentiating Double-Layer, Psuedocapacitance, and Battery-like Mechanisms by Analyzing Impedance Measurements in Three Dimensions. ACS Applied Materials & Interfaces, 2020, 12, 14071-14078.	4.0	64
25	Subsurface Cooling Rates and Microstructural Response during Laser Based Metal Additive Manufacturing. Scientific Reports, 2020, 10, 1981.	1.6	64
26	Hybrid Nanostructured Ni(OH)2/NiO for High-Capacity Lithium-Ion Battery Anodes. Journal of Electrochemical Energy Conversion and Storage, 2020, 17, .	1.1	4
27	Highly Reversible Plating/Stripping of Porous Zinc Anodes for Multivalent Zinc Batteries. Journal of the Electrochemical Society, 2020, 167, 140520.	1.3	14
28	Laserâ€Induced Keyhole Defect Dynamics during Metal Additive Manufacturing. Advanced Engineering Materials, 2019, 21, 1900455.	1.6	45
29	Dynamics of pore formation during laser powder bed fusion additive manufacturing. Nature Communications, 2019, 10, 1987.	5.8	408
30	Chemical Evolution of CoCrMo Wear Particles: An in Situ Characterization Study. Journal of Physical Chemistry C, 2019, 123, 9894-9901.	1.5	4
31	2D and 3D Characterization of PtNi Nanowire Electrode Composition and Structure. ACS Applied Nano Materials, 2019, 2, 525-534.	2.4	10
32	An instrument for <i>in situ</i> time-resolved X-ray imaging and diffraction of laser powder bed fusion additive manufacturing processes. Review of Scientific Instruments, 2018, 89, 055101.	0.6	123
33	Understanding the reactivity of CoCrMo-implant wear particles. Npj Materials Degradation, 2018, 2, .	2.6	11
34	Zinc Blende Magnesium Sulfide in Rechargeable Magnesium-Sulfur Batteries. Chemistry of Materials, 2018, 30, 6318-6324.	3.2	29
35	Electrochemical trapping of metastable Mn ³⁺ ions for activation of MnO ₂ oxygen evolution catalysts. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E5261-E5268.	3.3	173
36	Using X-ray Microscopy To Understand How Nanoporous Materials Can Be Used To Reduce the Large Volume Change in Alloy Anodes. Nano Letters, 2017, 17, 870-877.	4.5	48

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37	Structural Transformations in High-Capacity Li₂Cu_{0.5}Ni_{0.5}O₂ Cathodes. Chemistry of Materials, 2017, 29, 2997-3005.	3.2	21
38	Exceptional Oxygen Reduction Reaction Activity and Durability of Platinumâ€“Nickel Nanowires through Synthesis and Post-Treatment Optimization. ACS Omega, 2017, 2, 1408-1418.	1.6	53
39	Operando Spectroscopic Microscopy of LiCoO2 Cathodes Outside Standard Operating Potentials. Electrochimica Acta, 2017, 247, 977-982.	2.6	29
40	Mechanism of Na⁺ Insertion in Alkali Vanadates and Its Influence on Battery Performance. Advanced Energy Materials, 2016, 6, 1502336.	10.2	26
41	Direct Observation of Localized Radial Oxygen Migration in Functioning Tantalum Oxide Memristors. Advanced Materials, 2016, 28, 2772-2776.	11.1	92
42	Persistent Stateâ€ofâ€Charge Heterogeneity in Relaxed, Partially Charged Li_{1âˆ'}<i>_x</i>Ni_{1/3}Co_{1/3}Mn_{1/3}O₂ Secondary Particles. Advanced Materials, 2016, 28, 6631-6638.	11.1	142
43	Memristors: Direct Observation of Localized Radial Oxygen Migration in Functioning Tantalum Oxide Memristors (Adv. Mater. 14/2016). Advanced Materials, 2016, 28, 2771-2771.	11.1	2
44	P2â€“Na_{<i>x</i>}Co_{<i>y</i>}Mn_{1â€“<i>y</i>}O₂ (<i>y</i> = 0,) Tj ETQq0 0 0 rgBT /O Cycling Stability. Chemistry of Materials, 2016, 28, 2041-2051.	3.2	154
45	Nanoscale Chemical Imaging of an Individual Catalyst Particle with Soft X-ray Ptychography. ACS Catalysis, 2016, 6, 2178-2181.	5.5	91
46	In situ X-ray-based imaging of nano materials. Current Opinion in Chemical Engineering, 2016, 12, 14-21.	3.8	29
47	Direct in situ observation of ZnO nucleation and growth via transmission X-ray microscopy. Nanoscale, 2016, 8, 1849-1853.	2.8	13
48	Fluorescence: Dichotomy in the Lithiation Pathway of Ellipsoidal and Platelet LiFePO4Particles Revealed through Nanoscale Operando State-of-Charge Imaging (Adv. Funct. Mater. 24/2015). Advanced Functional Materials, 2015, 25, 3676-3676.	7.8	0
49	Dichotomy in the Lithiation Pathway of Ellipsoidal and Platelet LiFePO₄ Particles Revealed through Nanoscale Operando Stateâ€ofâ€Charge Imaging. Advanced Functional Materials, 2015, 25, 3677-3687.	7.8	72
50	Low dose, limited energy spectroscopic x-ray microscopy. , 2015, , .		0
51	Development of a soft x-ray ptychography beamline at SSRL and its application in the study of energy storage materials. , 2015, , .		1
52	Emerging In Situ and Operando Nanoscale Xâ€Ray Imaging Techniques for Energy Storage Materials. Advanced Functional Materials, 2015, 25, 1622-1637.	7.8	95
53	Reversible Multivalent (Monovalent, Divalent, Trivalent) Ion Insertion in Open Framework Materials. Advanced Energy Materials, 2015, 5, 1401869.	10.2	185
54	Effect of Al₂O₃ Coating on Stabilizing LiNi_{0.4}Mn_{0.4}Co_{0.2}O₂ Cathodes. Chemistry of Materials, 2015, 27, 6146-6154.	3.2	185

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55	Agglutination of single catalyst particles during fluid catalytic cracking as observed by X-ray nanotomography. Chemical Communications, 2015, 51, 8097-8100.	2.2	44
56	Full open-framework batteries for stationary energy storage. Nature Communications, 2014, 5, 3007.	5.8	440
57	Insitu nanotomography and operando transmission X-ray microscopy of micron-sized Ge particles. Energy and Environmental Science, 2014, 7, 2771-2777.	15.6	117
58	Operando Transmission X-ray Microscopy Studies on Li-Ion Batteries. Microscopy and Microanalysis, 2014, 20, 1526-1527.	0.2	2
59	X-ray nanoscopy of cobalt Fischerâ€“Tropsch catalysts at work. Chemical Communications, 2013, 49, 4622.	2.2	71
60	Lensless imaging of nanoporous glass with soft X-rays. Physics Letters, Section A: General, Atomic and Solid State Physics, 2013, 377, 1150-1153.	0.9	18
61	Identifying and managing radiation damage during in situ transmission x-ray microscopy of Li-ion batteries. Proceedings of SPIE, 2013, , .	0.8	28
62	Data-processing strategies for nano-tomography with elemental specification. Proceedings of SPIE, 2013, , .	0.8	1
63	Recent advances in synchrotron-based hard x-ray phase contrast imaging. Journal Physics D: Applied Physics, 2013, 46, 494001.	1.3	54
64	Hard Xâ€ray Nanotomography of Catalytic Solids at Work. Angewandte Chemie - International Edition, 2012, 51, 11986-11990.	7.2	96
65	<i>In Situ</i> X-ray Diffraction Studies of (De)lithiation Mechanism in Silicon Nanowire Anodes. ACS Nano, 2012, 6, 5465-5473.	7.3	156
66	High-Capacity Micrometer-Sized Li₂S Particles as Cathode Materials for Advanced Rechargeable Lithium-Ion Batteries. Journal of the American Chemical Society, 2012, 134, 15387-15394.	6.6	624
67	In Operando X-ray Diffraction and Transmission X-ray Microscopy of Lithium Sulfur Batteries. Journal of the American Chemical Society, 2012, 134, 6337-6343.	6.6	475
68	3D elemental sensitive imaging using transmission X-ray microscopy. Analytical and Bioanalytical Chemistry, 2012, 404, 1297-1301.	1.9	63
69	Anti-contamination device for cryogenic soft X-ray diffraction microscopy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 638, 171-175.	0.7	19
70	High-resolution x-ray diffraction microscopy of specifically labeled yeast cells. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 7235-7239.	3.3	121
71	Data preparation and evaluation techniques for x-ray diffraction microscopy. Optics Express, 2010, 18, 18598.	1.7	40
72	Incorrect support and missing center tolerances of phasing algorithms. Optics Express, 2010, 18, 26441.	1.7	44

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73	Soft X-Ray Diffraction Microscopy of a Frozen Hydrated Yeast Cell. Physical Review Letters, 2009, 103, 198101.	2.9	137
74	Signal-to-noise and radiation exposure considerations in conventional and diffraction x-ray microscopy. Optics Express, 2009, 17, 13541.	1.7	80
75	Cryo diffraction microscopy: Ice conditions and finite supports. Journal of Physics: Conference Series, 2009, 186, 012055.	0.3	3