Alan C West

List of Publications by Year
in descending order

81 papers	3,056 citations	201674 27 h-index	168389 53 g-index
83 all docs	83 docs citations	83 times ranked	2454 citing authors

#	Article	IF	Citations
1	Supervised Learning of Synthetic Big Data for Liâ€Ion Battery Degradation Diagnosis. Batteries and Supercaps, 2022, 5, .	4.7	25
2	Engineering Polyhistidine Tags on Surface Proteins of Acidithiobacillus ferrooxidans: Impact of Localization on the Binding and Recovery of Divalent Metal Cations. ACS Applied Materials & Interfaces, 2022, 14, 10125-10133.	8.0	5
3	Gradient Architecture Design in Scalable Porous Battery Electrodes. Nano Letters, 2022, 22, 2521-2528.	9.1	37
4	Thick Electrode Design for Facile Electron and Ion Transport: Architectures, Advanced Characterization, and Modeling. Accounts of Materials Research, 2022, 3, 472-483.	11.7	23
5	Parameter Estimation for Electrode Degradation: Learning in the Face of Model-Experiment Discrepancies. Journal of the Electrochemical Society, 2022, 169, 050517.	2.9	4
6	Drug delivery device for the inner ear: ultra-sharp fully metallic microneedles. Drug Delivery and Translational Research, 2021, 11, 214-226.	5.8	37
7	Lithium vanadium oxide (Li_{1.1}V₃O₈) thick porous electrodes with high rate capacity: utilization and evolution upon extended cycling elucidatedvia operandoenergy dispersive X-ray diffraction and continuum simulation. Physical Chemistry Chemical Physics, 2021, 23, 139-150.	2.8	10
8	From Fundamental Understanding to Engineering Design of Highâ€Performance Thick Electrodes for Scalable Energyâ€Storage Systems. Advanced Materials, 2021, 33, e2101275.	21.0	89
9	Electrodeposition of Ru onto Ru and Au Seed Layers from Solutions of Ruthenium Nitrosyl Sulfate and Ruthenium Chloride. Journal of the Electrochemical Society, 2021, 168, 052504.	2.9	3
10	Dispersion of sulfur creates a valuable new growth medium formulation that enables earlier sulfur oxidation in relation to iron oxidation in Acidithiobacillus ferrooxidans cultures. Biotechnology and Bioengineering, 2021, 118, 3225-3238.	3.3	14
11	Simulation assisted design for microneedle manufacturing: Computational modeling of two-photon templated electrodeposition. Journal of Manufacturing Processes, 2021, 66, 211-219.	5.9	5
12	Quantifying Uncertainty in Tortuosity Estimates for Porous Electrodes. Journal of the Electrochemical Society, 2021, 168, 070537.	2.9	9
13	Tunable Porous Electrode Architectures for Enhanced Li-Ion Storage Kinetics in Thick Electrodes. Nano Letters, 2021, 21, 5896-5904.	9.1	66
14	Discrete-time modeling of Li-ion batteries with electrochemical overpotentials including diffusion. Journal of Power Sources, 2021, 500, 229991.	7.8	17
15	Optimal electrode-scale design of Li-ion electrodes: A general correlation. Energy Storage Materials, 2021, 39, 176-185.	18.0	16
16	Glutathione Synthetase Overexpression in Acidithiobacillus ferrooxidans Improves Halotolerance of Iron Oxidation. Applied and Environmental Microbiology, 2021, 87, e0151821.	3.1	10
17	Electrodeposition of Cu(111) onto a Ru(0001) seed layer for epitaxial Cu interconnects. Journal of Applied Physics, 2021, 130, 135301.	2.5	1
18	Transport In and Optimization of Aligned-Channel Li-Ion Electrode Architectures. Journal of the Electrochemical Society, 2021, 168, 100536.	2.9	4

#	Article	IF	Citations
19	Quantitative Parameter Estimation, Model Selection, and Variable Selection in Battery Science. Journal of the Electrochemical Society, 2020, 167, 013501.	2.9	19
20	Impact of Electrostatic Interactions on the Self-Assembly of Charge-Neutral Block Copolyelectrolytes. Macromolecules, 2020, 53, 548-557.	4.8	14
21	The Systematic Refinement for the Phase Change and Conversion Reactions Arising from the Lithiation of Magnetite Nanocrystals. Advanced Functional Materials, 2020, 30, 1907337.	14.9	8
22	Enhanced microbial corrosion of stainless steel by Acidithiobacillus ferrooxidans through the manipulation of substrate oxidation and overexpression of rus. Biotechnology and Bioengineering, 2020, 117, 3475-3485.	3.3	18
23	Epitaxial metals for interconnects beyond Cu. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	29
24	Probing the Speed Limits of Scanning Electrochemical Microscopy with In situ Colorimetric Imaging. ChemElectroChem, 2020, 7, 2424-2432.	3.4	1
25	Determining the Length Scale of Transport Impedances in Li-Ion Electrodes: Li(Ni_{0.33}Mn_{0.33}Co_{0.33})O₂. Journal of the Electrochemical Society, 2020, 167, 100542.	2.9	11
26	Impact of Anode on Product Formation During the Electrochemical Reduction of Chalcopyrite. Jom, 2020, 72, 3818-3825.	1.9	3
27	Design Principles to Govern Electrode Fabrication for the Lithium Trivanadate Cathode. Journal of the Electrochemical Society, 2020, 167, 100503.	2.9	10
28	Application of Concentrated Solution Theory to the Measurement of Salt Transference Numbers in Ion-Selective Membranes. Journal of the Electrochemical Society, 2020, 167, 020546.	2.9	4
29	Hydration Effects on the Permselectivity-Conductivity Trade-Off in Polymer Electrolytes. Macromolecules, 2020, 53, 1014-1023.	4.8	19
30	Current-Driven Vanadium Crossover as a Function of SOC and SOD in the Vanadium Redox Flow Battery. Journal of the Electrochemical Society, 2020, 167, 080512.	2.9	15
31	Influence of the Seed Layer and Electrolyte on the Epitaxial Electrodeposition of Co(0001) for the Fabrication of Single Crystal Interconnects. Journal of the Electrochemical Society, 2020, 167, 162503.	2.9	7
32	Microbially Influenced Corrosion of Stainless Steel by Acidithiobacillus ferrooxidans Supplemented with Pyrite: Importance of Thiosulfate. Applied and Environmental Microbiology, 2019, 85, .	3.1	14
33	Measurement of VO²⁺ Transference Number in Nafion with Varying Concentrations of Sulfuric Acid. Journal of the Electrochemical Society, 2019, 166, A848-A855.	2.9	11
34	Temporally and Spatially Resolved Visualization of Electrochemical Conversion: Monitoring Phase Distribution During Lithiation of Magnetite (Fe₃O₄) Electrodes. ACS Applied Energy Materials, 2019, 2, 2561-2569.	5.1	10
35	Advancements in the treatment and processing of electronic waste with sustainability: a review of metal extraction and recovery technologies. Green Chemistry, 2019, 21, 919-936.	9.0	248
36	Electrodeposition of Epitaxial Co on Ru(0001)/Al₂O₃(0001). Journal of the Electrochemical Society, 2019, 166, D875-D881.	2.9	8

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37	Equilibria and Rate Phenomena from Atomistic to Mesoscale: Simulation Studies of Magnetite. Accounts of Chemical Research, 2018, 51, 583-590.	15.6	14
38	Operando Study of LiV₃O₈Cathode: Coupling EDXRD Measurements to Simulations. Journal of the Electrochemical Society, 2018, 165, A371-A379.	2.9	16
39	Energetics of Lithium Insertion into Magnetite, Defective Magnetite, and Maghemite. Chemistry of Materials, 2018, 30, 7922-7937.	6.7	26
40	Development of reactor configurations for an electrofuels platform utilizing genetically modified iron oxidizing bacteria for the reduction of CO2 to biochemicals. Journal of Biotechnology, 2017, 245, 21-27.	3.8	21
41	Simulations of Lithium-Magnetite Electrodes Incorporating Phase Change. Electrochimica Acta, 2017, 238, 384-396.	5.2	9
42	Metals and minerals as a biotechnology feedstock: engineering biomining microbiology for bioenergy applications. Current Opinion in Biotechnology, 2017, 45, 144-155.	6.6	33
43	Size dependent behavior of Fe₃O₄crystals during electrochemical (de)lithiation: an in situ X-ray diffraction, ex situ X-ray absorption spectroscopy, transmission electron microscopy and theoretical investigation. Physical Chemistry Chemical Physics, 2017, 19, 20867-20880.	2.8	54
44	Method of Measuring Salt Transference Numbers in Ion-Selective Membranes. Journal of the Electrochemical Society, 2017, 164, A2940-A2947.	2.9	10
45	Quantifying Losses in Photoelectrode Performance Due to Single Hydrogen Bubbles. Journal of Physical Chemistry C, 2017, 121, 26587-26597.	3.1	38
46	Characterization of endogenous promoters for control of recombinant gene expression in Acidithiobacillus ferrooxidans. Biotechnology and Applied Biochemistry, 2017, 64, 793-802.	3.1	21
47	Discharge, Relaxation, and Charge Model for the Lithium Trivanadate Electrode: Reactions, Phase Change, and Transport. Journal of the Electrochemical Society, 2016, 163, A2890-A2898.	2.9	17
48	Galvanostatic interruption of lithium insertion into magnetite: Evidence of surface layer formation. Journal of Power Sources, 2016, 321, 106-111.	7.8	10
49	Dispersion of Nanocrystalline Fe₃O₄ within Composite Electrodes: Insights on Battery-Related Electrochemistry. ACS Applied Materials & Interfaces, 2016, 8, 11418-11430.	8.0	45
50	Investigating the Complex Chemistry of Functional Energy Storage Systems: The Need for an Integrative, Multiscale (Molecular to Mesoscale) Perspective. ACS Central Science, 2016, 2, 380-387.	11.3	39
51	Enhancing isobutyric acid production from engineered Acidithiobacillus ferrooxidans cells via media optimization. Biotechnology and Bioengineering, 2016, 113, 790-796.	3.3	16
52	Engineering the ironâ€oxidizing chemolithoautotroph Acidithiobacillus ferrooxidans for biochemical production. Biotechnology and Bioengineering, 2016, 113, 189-197.	3.3	46
53	Modeling the Mesoscale Transport of Lithium-Magnetite Electrodes Using Insight from Discharge and Voltage Recovery Experiments. Journal of the Electrochemical Society, 2015, 162, A2817-A2826.	2.9	44
54	Stabilization of Silicon Carbide (SiC) micro- and nanoparticle dispersions in the presence of concentrated electrolyte. Journal of Colloid and Interface Science, 2014, 423, 48-53.	9.4	12

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55	Electrochemical detection of 14 common munitions constituents. Journal of Applied Electrochemistry, 2014, 44, 293-300.	2.9	3
56	Engineering <scp>A</scp>cidithiobacillus ferrooxidans growth media for enhanced electrochemical processing. AICHE Journal, 2014, 60, 4008-4013.	3.6	11
57	A shielded rotating disk setup with improved current distribution. Journal of Applied Electrochemistry, 2014, 44, 945-952.	2.9	3
58	Addition of citrate to Acidithiobacillus ferrooxidans cultures enables precipitateâ€free growth at elevated pH and reduces ferric inhibition. Biotechnology and Bioengineering, 2014, 111, 1940-1948.	3.3	21
59	Effect of Morphology and Hydrogen Evolution on Porosity of Electroplated Cobalt Hard Gold. Journal of the Electrochemical Society, 2010, 157, D411.	2.9	23
60	Effect of additives and pulse plating on copper nucleation onto Ru. Electrochimica Acta, 2009, 54, 1177-1183.	5.2	48
61	An investigation of phosphate based ECMP electrolyte performance on feature scale planarization. Journal of Applied Electrochemistry, 2009, 39, 1719-1724.	2.9	5
62	Copper plating on titanium alloy 6-2-4-2 using an inÂsitu high voltage pulse followed by plate-up. Journal of Applied Electrochemistry, 2008, 38, 531-536.	2.9	3
63	Square wave voltammetric detection of 2,4,6-trinitrotoluene and 2,4-dinitrotoluene on a gold electrode modified with self-assembled monolayers. Sensors and Actuators B: Chemical, 2008, 133, 509-515.	7.8	38
64	Effect of Electrolyte Composition on Lithium Dendrite Growth. Journal of the Electrochemical Society, 2008, 155, A806.	2.9	240
65	Microfluidic Studies of Adsorption and Desorption of Polyethylene Glycol during Copper Electrodeposition. Journal of the Electrochemical Society, 2006, 153, C728.	2.9	59
66	Direct Numerical Simulation of Nucleation and Three-Dimensional, Diffusion-Controlled Growth. Journal of the Electrochemical Society, 2001, 148, C376.	2.9	43
67	Theory of Filling of High-Aspect Ratio Trenches and Vias in Presence of Additives. Journal of the Electrochemical Society, 2000, 147, 227.	2.9	133
68	Leveling and Microstructural Effects of Additives for Copper Electrodeposition. Journal of the Electrochemical Society, 1999, 146, 2540-2545.	2.9	222
69	Parallel finite element computation of unsteady incompressible flows. International Journal for Numerical Methods in Fluids, 1998, 26, 17-37.	1.6	20
70	Pulse Reverse Copper Electrodeposition in High Aspect Ratio Trenches and Vias. Journal of the Electrochemical Society, 1998, 145, 3070-3074.	2.9	83
71	Copper Deposition in the Presence of Polyethylene Glycol: I. Quartz Crystal Microbalance Study. Journal of the Electrochemical Society, 1998, 145, 3472-3476.	2.9	321
72	Copper Deposition in the Presence of Polyethylene Glycol: II. Electrochemical Impedance Spectroscopy. Journal of the Electrochemical Society, 1998, 145, 3477-3481.	2.9	218

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73	Flow Modulation as a Means of Studying Leveling Agents. Journal of the Electrochemical Society, 1998, 145, 560-564.	2.9	16
74	Electrochemical Impedance Spectroscopy Study of Nickelâ€Iron Deposition: I. Experimental Results. Journal of the Electrochemical Society, 1997, 144, 164-169.	2.9	38
75	Nickel Deposition in the Presence of Coumarin: An Electrochemical Impedance Spectroscopy Study. Journal of the Electrochemical Society, 1997, 144, 3050-3056.	2.9	38
76	Effect of Current Distribution on Quartz Crystal Microbalance Measurements. Materials Research Society Symposia Proceedings, 1997, 502, 145.	0.1	0
77	Electrochemical Impedance Spectroscopy Study of Nickelâ€Iron Deposition: II. Theoretical Interpretation. Journal of the Electrochemical Society, 1997, 144, 169-175.	2.9	42
78	Current distributions governed by coupled concentration and potential fields. AICHE Journal, 1997, 43, 811-817.	3.6	11
79	Copper Electropolishing in Concentrated Phosphoric Acid: I . Experimental Findings. Journal of the Electrochemical Society, 1995, 142, 2682-2689.	2.9	72
80	Copper Electropolishing in Concentrated Phosphoric Acid: II . Theoretical Interpretation. Journal of the Electrochemical Society, 1995, 142, 2689-2694.	2.9	42
81	Ohmic Interactions within Electrode Ensembles. Journal of the Electrochemical Society, 1993, 140, 134-139.	2.9	7