Francois L E Usseglio-Viretta

List of Publications by Year
in descending order

22 papers	759 citations	623734 14 h-index	677142 22 g-index
25 all docs	25 docs citations	25 times ranked	804 citing authors

#	Article	IF	Citations
1	Resolving the Discrepancy in Tortuosity Factor Estimation for Li-Ion Battery Electrodes through Micro-Macro Modeling and Experiment. Journal of the Electrochemical Society, 2018, 165, A3403-A3426.	2.9	133
2	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.	19.5	114
3	3D phase mapping of solid oxide fuel cell YSZ/Ni cermet at the nanoscale by holographic X-ray nanotomography. Journal of Power Sources, 2013, 243, 841-849.	7.8	68
4	Fingerprinting Redox Heterogeneity in Electrodes during Extreme Fast Charging. Journal of the Electrochemical Society, 2020, 167, 090542.	2.9	64
5	Enabling fast charging of lithium-ion batteries through secondary- /dual- pore network: Part I - Analytical diffusion model. Electrochimica Acta, 2020, 342, 136034.	5.2	58
6	Quantitative Relationships Between Pore Tortuosity, Pore Topology, and Solid Particle Morphology Using a Novel Discrete Particle Size Algorithm. Journal of the Electrochemical Society, 2020, 167, 100513.	2.9	37
7	Laser ablation for structuring Li-ion electrodes for fast charging and its impact on material properties, rate capability, Li plating, and wetting. Journal of Power Sources, 2022, 537, 231464.	7.8	37
8	Mapping the architecture of single lithium ion electrode particles in 3D, using electron backscatter diffraction and machine learning segmentation. Journal of Power Sources, 2021, 483, 229148.	7.8	35
9	Electron Backscatter Diffraction for Investigating Lithium-Ion Electrode Particle Architectures. Cell Reports Physical Science, 2020, 1, 100137.	5.6	34
10	Quantifying the influence of charge rate and cathode-particle architectures on degradation of Li-ion cells through 3D continuum-level damage models. Journal of Power Sources, 2021, 512, 230415.	7.8	34
11	Multi-scale 3D imaging of absorbing porous materials for solid oxide fuel cells. Journal of Materials Science, 2014, 49, 5626-5634.	3.7	28
12	Microstructure reconstruction of battery polymer separators by fusing 2D and 3D image data for transport property analysis. Journal of Power Sources, 2020, 480, 229101.	7.8	23
13	Artificial generation of representative single Li-ion electrode particle architectures from microscopy data. Npj Computational Materials, 2021, 7, .	8.7	21
14	Mechanistic Analysis of Microstructural Attributes to Lithium Plating in Fast Charging. ACS Applied Materials & Interfaces, 2020, 12, 55795-55808.	8.0	19
15	Effect of Anode Porosity and Temperature on the Performance and Lithium Plating During Fastâ€Charging of Lithiumâ€Ion Cells. Energy Technology, 2021, 9, 2000666.	3.8	14
16	MATBOX: An Open-source Microstructure Analysis Toolbox for microstructure generation, segmentation, characterization, visualization, correlation, and meshing. SoftwareX, 2022, 17, 100915.	2.6	12
17	Carbon-Binder Weight Loading Optimization for Improved Lithium-Ion Battery Rate Capability. Journal of the Electrochemical Society, 2022, 169, 070519.	2.9	7
18	A Segregated Approach for Modeling the Electrochemistry in the 3-D Microstructure of Li-Ion Batteries and Its Acceleration Using Block Preconditioners. Journal of Scientific Computing, 2021, 86, 1.	2.3	6

#	Article	IF	Citations
19	Characterization of the Ni-8YSZ Cermet Creep and Its Impact on the Cell 'Redox' Tolerance. ECS Transactions, 2011, 35, 1463-1471.	0.5	5
20	Mass Transport Limitations and Kinetic Consequences of Corn Stover Deacetylation. Frontiers in Energy Research, 2022, 10, .	2.3	5
21	Measurement of Transport Properties of Woody Biomass Feedstock Particles Before and After Pyrolysis by Numerical Analysis of X-Ray Tomographic Reconstructions. Frontiers in Energy Research, 2022, 10, .	2.3	3
22	The Application of Electron Backscatter Diffraction for Investigating Intra-Particle Grain Architectures and Boundaries in Lithium Ion Electrodes. SSRN Electronic Journal, 0, , .	0.4	0