Marco Tulio F Rodrigues

List of Publications by Year
in descending order

63 papers	3,832 citations	201674 27 h-index	123424 61 g-index
64 all docs	64 docs citations	64 times ranked	5736 citing authors

#	Article	IF	Citations
1	Evaluating the roles of electrolyte components on the passivation of silicon anodes. Journal of Power Sources, 2022, 523, 231021.	7.8	10
2	Electrochemical Modeling and Experimental Verification of Lithiation Gradients in Oxide Cathodes of Lithium-Ion Cells. Journal of the Electrochemical Society, 2022, 169, 040503.	2.9	1
3	Design of a Scavenging Pyrrole Additive for High Voltage Lithium-Ion Batteries. Journal of the Electrochemical Society, 2022, 169, 040507.	2.9	3
4	Concealed Cathode Degradation in Lithium-Ion Cells with a Ni-Rich Oxide. Journal of the Electrochemical Society, 2022, 169, 040539.	2.9	9
5	Developing extreme fast charge battery protocols â€“ A review spanning materials to systems. Journal of Power Sources, 2022, 526, 231129.	7.8	27
6	Examining Effects of Negative to Positive Capacity Ratio in Three-Electrode Lithium-Ion Cells with Layered Oxide Cathode and Si Anode. ACS Applied Energy Materials, 2022, 5, 5513-5518.	5.1	9
7	Critical Evaluation of Potentiostatic Holds as Accelerated Predictors of Capacity Fade during Calendar Aging. Journal of the Electrochemical Society, 2022, 169, 050531.	2.9	16
8	Carbon-Binder Weight Loading Optimization for Improved Lithium-Ion Battery Rate Capability. Journal of the Electrochemical Society, 2022, 169, 070519.	2.9	7
9	Spatially-resolved lithiation dynamics from operando X-ray diffraction and electrochemical modeling of lithium-ion cells. Journal of Power Sources, 2021, 484, 229247.	7.8	11
10	Fast Charging of Li-Ion Cells: Part V. Design and Demonstration of Protocols to Avoid Li-Plating. Journal of the Electrochemical Society, 2021, 168, 010512.	2.9	17
11	How Fast Can a Li-Ion Battery Be Charged? Determination of Limiting Fast Charging Conditions. ACS Applied Energy Materials, 2021, 4, 1063-1068.	5.1	37
12	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
13	Dual-Salt Electrolytes to Effectively Reduce Impedance Rise of High-Nickel Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2021, 13, 40502-40512.	8.0	13
14	Calendar aging of silicon-containing batteries. Nature Energy, 2021, 6, 866-872.	39.5	137
15	Increased Disorder at Graphite Particle Edges Revealed by Multi-length Scale Characterization of Anodes from Fast-Charged Lithium-Ion Cells. Journal of the Electrochemical Society, 2021, 168, 100509.	2.9	22
16	Time-Resolved X-ray Operando Observations of Lithiation Gradients across the Cathode Matrix and Individual Oxide Particles during Fast Cycling of a Li-Ion Cell. Journal of the Electrochemical Society, 2021, 168, 110555.	2.9	9
17	Modulating electrode utilization in lithium-ion cells with silicon-bearing anodes. Journal of Power Sources, 2020, 477, 229029.	7.8	13
18	<i>In situ</i> X-ray spatial profiling reveals uneven compression of electrode assemblies and steep lateral gradients in lithium-ion coin cells. Physical Chemistry Chemical Physics, 2020, 22, 21977-21987.	2.8	25

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19	Si powders and electrodes for high-energy lithium-ion cells. Surface Science Spectra, 2020, 27, 016801.	1.3	14
20	Insights on the cycling behavior of a highly-prelithiated siliconâ€“graphite electrode in lithium-ion cells. JPhys Energy, 2020, 2, 024002.	5.3	18
21	Rate-Dependent Aging Resulting from Fast Charging of Li-Ion Cells. Journal of the Electrochemical Society, 2020, 167, 120517.	2.9	27
22	Apparent Increasing Lithium Diffusion Coefficient with Applied Current in Graphite. Journal of the Electrochemical Society, 2020, 167, 120528.	2.9	34
23	Fast Charging of Li-Ion Cells: Part IV. Temperature Effects and â€œSafe Linesâ€•to Avoid Lithium Plating. Journal of the Electrochemical Society, 2020, 167, 130508.	2.9	32
24	Electrochemical Dilatometry of Si-Bearing Electrodes: Dimensional Changes and Experiment Design. Journal of the Electrochemical Society, 2020, 167, 160551.	2.9	31
25	Exploring Heterogeneity in Li Battery Electrodes using FIB-SEM Integrated with Raman and TOF-SIMS. Microscopy and Microanalysis, 2019, 25, 862-863.	0.4	3
26	Dehydration Rather Than HF Capture Explains Performance Improvements of Li-Ion Cells by Ceramic Nanoparticles. ACS Applied Energy Materials, 2019, 2, 5380-5385.	5.1	19
27	Insights from incorporating reference electrodes in symmetric lithium-ion cells with layered oxide or graphite electrodes. Journal of Power Sources, 2019, 438, 227033.	7.8	4
28	Fast Charging of Li-Ion Cells: Part II. Nonlinear Contributions to Cell and Electrode Polarization. Journal of the Electrochemical Society, 2019, 166, A3305-A3313.	2.9	24
29	Revealing anion chemistry above 3V in Li-ion capacitors. Electrochimica Acta, 2019, 324, 134871.	5.2	10
30	Fast Charging of Li-Ion Cells: Part I. Using Li/Cu Reference Electrodes to Probe Individual Electrode Potentials. Journal of the Electrochemical Society, 2019, 166, A996-A1003.	2.9	79
31	Deep eutectic solvents for cathode recycling of Li-ion batteries. Nature Energy, 2019, 4, 339-345.	39.5	422
32	Fast Charging of Li-Ion Cells: Part III. Relaxation Dynamics and Trap-Controlled Lithium Ion Transport. Journal of the Electrochemical Society, 2019, 166, A4168-A4174.	2.9	12
33	Lithium Acetylide: A Spectroscopic Marker for Lithium Deposition During Fast Charging of Li-Ion Cells. ACS Applied Energy Materials, 2019, 2, 873-881.	5.1	32
34	High-temperature solid electrolyte interphases (SEI) in graphite electrodes. Journal of Power Sources, 2018, 381, 107-115.	7.8	52
35	In Situ Lithiated Reference Electrode: Four Electrode Design for In-operando Impedance Spectroscopy. Journal of Visualized Experiments, 2018, , .	0.3	1
36	Calendar-life versus cycle-life aging of lithium-ion cells with silicon-graphite composite electrodes. Electrochimica Acta, 2018, 280, 221-228.	5.2	67

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37	Doping stabilized Li3V2(PO4)3 cathode for high voltage, temperature enduring Li-ion batteries. Journal of Power Sources, 2018, 390, 100-107.	7.8	23
38	Coulombic inefficiency of graphite anode at high temperature. Electrochimica Acta, 2018, 285, 1-8.	5.2	6
39	Quantitative in situ fracture testing of tin oxide nanowires for lithium ion battery applications. Nano Energy, 2018, 53, 277-285.	16.0	17
40	Quantifying gas generation from slurries used in fabrication of Si-containing electrodes for lithium-ion cells. Journal of Power Sources, 2018, 395, 289-294.	7.8	16
41	Anode-Dependent Impedance Rise in Layered-Oxide Cathodes ofÂLithium-Ion Cells. Journal of the Electrochemical Society, 2018, 165, A1697-A1705.	2.9	40
42	Facile Synthesis of 3D Anode Assembly with Si Nanoparticles Sealed in Highly Pure Few Layer Graphene Deposited on Porous Current Collector for Long Life Liâ€Ion Battery. Advanced Materials Interfaces, 2017, 4, 1601043.	3.7	65
43	Reversible Formation of gâ€C₃N₄ 3D Hydrogels through Ionic Liquid Activation: Gelation Behavior and Roomâ€Temperature Gasâ€Sensing Properties. Advanced Functional Materials, 2017, 27, 1700653.	14.9	90
44	High Efficiency Photocatalytic Water Splitting Using 2D Î±â€Fe₂O₃/gâ€C₃N₄ Zâ€Scheme Catalysts. Advanced Energy Materials, 2017, 7, 1700025.	19.5	664
45	Hydrogels: Reversible Formation of gâ€C₃N₄ 3D Hydrogels through Ionic Liquid Activation: Gelation Behavior and Roomâ€Temperature Gasâ€Sensing Properties (Adv. Funct. Mater.) Tj ETQq1 1 0.784314 rg BT /Overlo	14.9	1
46	Carbon Dioxide Hydrogenation over a Metal-Free Carbon-Based Catalyst. ACS Catalysis, 2017, 7, 4497-4503.	11.2	71
47	A flexible solar cell/supercapacitor integrated energy device. Nano Energy, 2017, 42, 181-186.	16.0	92
48	2D material integrated macroporous electrodes for Li-ion batteries. RSC Advances, 2017, 7, 32737-32742.	3.6	12
49	A materials perspective on Li-ion batteries at extreme temperatures. Nature Energy, 2017, 2, .	39.5	542
50	Curious Case of Positive Current Collectors: Corrosion and Passivation at High Temperature. ACS Applied Materials & Interfaces, 2017, 9, 43623-43631.	8.0	25
51	Phase Transformations During Li-Insertion into V2O5 at Elevated Temperature. Jom, 2017, 69, 1509-1512.	1.9	3
52	Rate limiting activity of charge transfer during lithiation from ionic liquids. Journal of Power Sources, 2016, 330, 84-91.	7.8	20
53	Tuning the Electrochemical Reactivity of Boronâ€•and Nitrogenâ€Substituted Graphene. Advanced Materials, 2016, 28, 6239-6246.	21.0	107
54	Hexagonal Boron Nitrideâ€Based Electrolyte Composite for Liâ€Ion Battery Operation from Room Temperature to 150 Â°C. Advanced Energy Materials, 2016, 6, 1600218.	19.5	112

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55	Ionic Liquidâ€“Organic Carbonate Electrolyte Blends To Stabilize Silicon Electrodes for Extending Lithium Ion Battery Operability to 100 Â°C. ACS Applied Materials & Interfaces, 2016, 8, 15242-15249.	8.0	51
56	CoNi₂S₄â€Grapheneâ€2Dâ€MoSe₂ as an Advanced Electrode Material for Supercapacitors. Advanced Energy Materials, 2016, 6, 1600341.	19.5	145
57	Density Variant Carbon Nanotube Interconnected Solids. Advanced Materials, 2015, 27, 1842-1850.	21.0	49
58	3D Nanostructured Molybdenum Diselenide/Graphene Foam as Anodes for Long-Cycle Life Lithium-ion Batteries. Electrochimica Acta, 2015, 176, 103-111.	5.2	107
59	Quasi-Solid Electrolytes for High Temperature Lithium Ion Batteries. ACS Applied Materials & Interfaces, 2015, 7, 25777-25783.	8.0	54
60	Glass transition improvement in epoxy/graphene composites. Journal of Materials Science, 2013, 48, 7883-7892.	3.7	50
61	Supercapacitor Operating At 200 Degrees Celsius. Scientific Reports, 2013, 3, 2572.	3.3	89
62	Fast Vortex-Assisted Self-Assembly of Carbon Nanoparticles on an Airâ€“Water Interface. Journal of Physical Chemistry B, 2013, 117, 6524-6533.	2.6	7
63	Thermoplastic Polyurethane Nanocomposites Produced via Impregnation of Long Carbon Nanotube Forests. Macromolecular Materials and Engineering, 2011, 296, 53-58.	3.6	13