Javier BareÃ±o

List of Publications by Year
in descending order

56 papers	3,929 citations	172386 29 h-index	168321 53 g-index
57 all docs	57 docs citations	57 times ranked	5536 citing authors

#	Article	IF	Citations
1	Approaching the capacity limit of lithium cobalt oxide in lithium ion batteries via lanthanum and aluminium doping. Nature Energy, 2018, 3, 936-943.	19.8	531
2	Observation of Microstructural Evolution in Li Battery Cathode Oxide Particles by In Situ Electron Microscopy. Advanced Energy Materials, 2013, 3, 1098-1103.	10.2	336
3	Growth of Semiconducting Graphene on Palladium. Nano Letters, 2009, 9, 3985-3990.	4.5	307
4	Long-Range and Local Structure in the Layered Oxide Li_{1.2}Co_{0.4}Mn_{0.4}O₂. Chemistry of Materials, 2011, 23, 2039-2050.	3.2	171
5	Role of Polysulfides in Selfâ€Healing Lithiumâ€“Sulfur Batteries. Advanced Energy Materials, 2013, 3, 833-838.	10.2	170
6	Local Structure of Layered Oxide Electrode Materials for Lithiumâ€Ion Batteries. Advanced Materials, 2010, 22, 1122-1127.	11.1	152
7	Cycling Behavior of NCM523/Graphite Lithium-Ion Cells in the 3â€“4.4 V Range: Diagnostic Studies of Full Cells and Harvested Electrodes. Journal of the Electrochemical Society, 2017, 164, A6054-A6065.	1.3	145
8	Interface structure in superhard TiN-SiN nanolaminates and nanocomposites: Film growth experiments andab initiocalculations. Physical Review B, 2007, 75, .	1.1	142
9	Local structure and composition studies of Li1.2Ni0.2Mn0.6O2 by analytical electron microscopy. Journal of Power Sources, 2008, 178, 422-433.	4.0	141
10	Chemical Weathering of Layered Ni-Rich Oxide Electrode Materials: Evidence for Cation Exchange. Journal of the Electrochemical Society, 2017, 164, A1489-A1498.	1.3	133
11	Wurtzite structure Sc1â^'xAlxN solid solution films grown by reactive magnetron sputter epitaxy: Structural characterization and first-principles calculations. Journal of Applied Physics, 2010, 107, .	1.1	122
12	Surface Structure, Morphology, and Stability of Li(Ni_{1/3}Mn_{1/3}Co_{1/3})O₂ Cathode Material. Journal of Physical Chemistry C, 2017, 121, 8290-8299.	1.5	101
13	Structural Evolution of Reversible Mg Insertion into a Bilayer Structure of V₂O₅Â·nH₂O Xerogel Material. Chemistry of Materials, 2016, 28, 2962-2969.	3.2	97
14	Enabling High-Energy, High-Voltage Lithium-Ion Cells: Standardization of Coin-Cell Assembly, Electrochemical Testing, and Evaluation of Full Cells. Journal of the Electrochemical Society, 2016, 163, A2999-A3009.	1.3	95
15	Effect of electrolyte composition on rock salt surface degradation in NMC cathodes during high-voltage potentiostatic holds. Nano Energy, 2019, 55, 216-225.	8.2	88
16	The effect of charging rate on the graphite electrode of commercial lithium-ion cells: A post-mortem study. Journal of Power Sources, 2016, 335, 189-196.	4.0	82
17	Compatibility of lithium salts with solvent of the non-aqueous electrolyte in Liâ€“O2 batteries. Physical Chemistry Chemical Physics, 2013, 15, 5572.	1.3	76
18	Analytical electron microscopy of Li1.2Co0.4Mn0.4O2 for lithium-ion batteries. Solid State Ionics, 2011, 182, 98-107.	1.3	65

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19	On the Localized Nature of the Structural Transformations of Li₂MnO₃ Following Electrochemical Cycling. Advanced Energy Materials, 2015, 5, 1501252.	10.2	63
20	Tris(trimethylsilyl) Phosphite (TMSPi) and Triethyl Phosphite (TEPi) as Electrolyte Additives for Lithium Ion Batteries: Mechanistic Insights into Differences during LiNi_{0.5}Mn_{0.3}Co_{0.2}O₂-Graphite Full Cell Cycling. Journal of the Electrochemical Society, 2017, 164, A1579-A1586.	1.3	59
21	Capacity Fade and Its Mitigation in Li-Ion Cells with Silicon-Graphite Electrodes. Journal of Physical Chemistry C, 2017, 121, 20640-20649.	1.5	59
22	Cubic Sc1â^'xAlxN solid solution thin films deposited by reactive magnetron sputter epitaxy onto ScN(111). Journal of Applied Physics, 2009, 105, .	1.1	58
23	On Disrupting the Na⁺-Ion/Vacancy Ordering in P2-Type Sodiumâ€“Manganeseâ€“Nickel Oxide Cathodes for Na⁺-Ion Batteries. Journal of Physical Chemistry C, 2018, 122, 23251-23260.	1.5	55
24	Probing Thermally Induced Decomposition of Delithiated Li_{1.2â€“x}Ni_{0.15}Mn_{0.55}Co_{0.1}O₂ by in Situ High-Energy X-ray Diffraction. ACS Applied Materials & Interfaces, 2014, 6, 12692-12697.	4.0	47
25	Hard BCxNy thin films grown by dual ion beam sputtering. Thin Solid Films, 2006, 515, 207-211.	0.8	45
26	Evaluating electrolyte additives for lithium-ion cells: A new FigureÂof Merit approach. Journal of Power Sources, 2017, 365, 201-209.	4.0	40
27	Investigations of Si Thin Films as Anode of Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 3487-3494.	4.0	40
28	The Effect of Pre-Analysis Washing on the Surface Film of Graphite Electrodes. Electrochimica Acta, 2016, 206, 70-76.	2.6	34
29	Low-energy electron microscopy studies of interlayer mass transport kinetics on TiN(111). Surface Science, 2004, 560, 53-62.	0.8	32
30	Effect of overcharge on Li(Ni0.5Mn0.3Co0.2)O2/graphite lithium ion cells with poly(vinylidene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 30	4.0	29
31	Exploring Electrochemistry and Interface Characteristics of Lithium-Ion Cells with Li_{1.2}Ni_{0.15}Mn_{0.55}Co_{0.1}O₂Positive and Li₄Ti₅O₁₂Negative Electrodes. Journal of the Electrochemical Society, 2015, 162, A7049-A7059.	1.3	28
32	Physical Theory of Voltage Fade in Lithium- and Manganese-Rich Transition Metal Oxides. Journal of the Electrochemical Society, 2015, 162, A897-A904.	1.3	27
33	Experimental and theoretical investigations of functionalized boron nitride as electrode materials for Li-ion batteries. RSC Advances, 2016, 6, 27901-27914.	1.7	27
34	Effect of overcharge on Li(Ni0.5Mn0.3Co0.2)O2/Graphite lithium ion cells with poly(vinylidene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 14 148-155.	4.0	26
35	Differentiating allotropic LiCoO2/Li2Co2O4: A structural and electrochemical study. Journal of Power Sources, 2014, 271, 97-103.	4.0	24
36	Methodology for understanding interactions between electrolyte additives and cathodes: a case of the tris(2,2,2-trifluoroethyl)phosphite additive. Journal of Materials Chemistry A, 2018, 6, 198-211.	5.2	24

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37	Lithiumâ€“sulfur battery with partially fluorinated ether electrolytes: Interplay between capacity, coulombic efficiency and Li anode protection. Journal of Power Sources, 2019, 438, 226939.	4.0	23
38	Nanoscale LiNi0.5Co0.2Mn0.3O2 cathode materials for lithium ion batteries via a polymer-assisted chemical solution method. Applied Materials Today, 2019, 16, 342-350.	2.3	23
39	Growth and physical properties of epitaxial metastable Hf1â^'xAlxN alloys deposited on MgO(001) by ultrahigh vacuum reactive magnetron sputtering. Surface and Coatings Technology, 2007, 202, 809-814.	2.2	21
40	Unexpected Voltage Fade in LMR-NMC Oxides Cycled below the â€œActivationâ€•Plateau. Journal of the Electrochemical Society, 2015, 162, A155-A161.	1.3	21
41	Formation of Li2MnO3 investigated by in situ synchrotron probes. Journal of Power Sources, 2014, 266, 341-346.	4.0	20
42	Auger Electrons as Probes for Composite Micro- and Nanostructured Materials: Application to Solid Electrolyte Interphases in Graphite and Silicon-Graphite Electrodes. Journal of Physical Chemistry C, 2017, 121, 23333-23346.	1.5	20
43	Phosphorus incorporation during Si(001):P gas-source molecular beam epitaxy: Effects on growth kinetics and surface morphology. Journal of Applied Physics, 2008, 103, 123530.	1.1	19
44	Effect of overcharge on Li(Ni0.5Mn0.3Co0.2)O2 cathodes: NMP-soluble binder. II â€” Chemical changes in the anode. Journal of Power Sources, 2018, 385, 156-164.	4.0	18
45	Chemical â€œPicklingâ€•of Phosphite Additives Mitigates Impedance Rise in Li Ion Batteries. Journal of Physical Chemistry C, 2018, 122, 9811-9824.	1.5	18
46	Effects of cycling temperatures on the voltage fade phenomenon in 0.5Li2MnO3Â·0.5LiNi0.375Mn0.375Co0.25O2 cathodes. Journal of Power Sources, 2015, 280, 155-158.	4.0	17
47	Pristine-state structure of lithium-ion-battery cathode material Li_{1.2}Mn_{0.4}Co_{0.4}O₂ derived from NMR bond pathway analysis. Journal of Materials Chemistry A, 2015, 3, 11471-11477.	5.2	17
48	Stability of Li- and Mn-Rich Layered-Oxide Cathodes within the First-Charge Voltage Plateau. Journal of the Electrochemical Society, 2016, 163, A1784-A1789.	1.3	11
49	Effect of composition on the voltage fade phenomenon in lithium-, manganese-rich xLiMnO3Â·(1â^'x)LiNiaMnbCocO2: A combinatorial synthesis approach. Journal of Power Sources, 2015, 294, 711-718.	4.0	9
50	Strain-driven surface reconstruction and cation segregation in layered Li(Ni_{1â^'xâ^'y}Mn_xCo_y)O₂ (NMC) cathode materials. Physical Chemistry Chemical Physics, 2020, 22, 24490-24497.	1.3	8
51	Orientation-dependent mobilities from analyses of two-dimensional TiN(111) island decay kinetics. Thin Solid Films, 2006, 510, 339-345.	0.8	7
52	Insights from incorporating reference electrodes in symmetric lithium-ion cells with layered oxide or graphite electrodes. Journal of Power Sources, 2019, 438, 227033.	4.0	4
53	Microstructural Evolution in Transition-metal-oxide Cathode Materials for Lithium-Ion Batteries. Microscopy and Microanalysis, 2016, 22, 1300-1301.	0.2	2
54	Lithium And Transition Metal Ordering In Overlithiated Layered Oxides For Lithium-Ion Batteries. Microscopy and Microanalysis, 2012, 18, 1318-1319.	0.2	0

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55	Post-Test Analysis of Battery Materials: Another Part of the Question. ECS Transactions, 2014, 61, 145-154.	0.3	0
56	Meso to Atomic Scale Microstructural Changes During Ageing of NCM Li-ion Battery Materials. Microscopy and Microanalysis, 2019, 25, 764-765.	0.2	0