

K M Abraham

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

81
papers

8,511
citations

41
h-index

92
g-index

100
ext. papers

9,149
ext. citations

5
avg, IF

6.38
L-index

#	Paper	IF	Citations
81	A Polymer Electrolyte-Based Rechargeable Lithium/Oxygen Battery. <i>Journal of the Electrochemical Society</i> , 1996 , 143, 1-5	3.9	1780
80	Influence of Nonaqueous Solvents on the Electrochemistry of Oxygen in the Rechargeable Lithium-Air Battery. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 9178-9186	3.8	787
79	Elucidating the Mechanism of Oxygen Reduction for Lithium-Air Battery Applications. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 20127-20134	3.8	564
78	A Lithium/Dissolved Sulfur Battery with an Organic Electrolyte. <i>Journal of the Electrochemical Society</i> , 1979 , 126, 523-527	3.9	496
77	Rechargeable Lithium/TEGDME-LiPF ₆ Battery. <i>Journal of the Electrochemical Society</i> , 2011 , 158, A302	3.9	385
76	Highly Conductive PEO-like Polymer Electrolytes. <i>Chemistry of Materials</i> , 1997 , 9, 1978-1988	9.6	367
75	Li ⁺ -Conductive Solid Polymer Electrolytes with Liquid-Like Conductivity. <i>Journal of the Electrochemical Society</i> , 1990 , 137, 1657-1658	3.9	339
74	Lithium-air and lithium-sulfur batteries. <i>MRS Bulletin</i> , 2011 , 36, 506-512	3.2	255
73	Studies of Li-Air Cells Utilizing Dimethyl Sulfoxide-Based Electrolyte. <i>Journal of the Electrochemical Society</i> , 2013 , 160, A259-A267	3.9	224
72	A Solid-State, Rechargeable, Long Cycle Life Lithium-Air Battery. <i>Journal of the Electrochemical Society</i> , 2010 , 157, A50	3.9	220
71	Prospects and Limits of Energy Storage in Batteries. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 830-46.4	4.4	197
70	. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 20755-20764	3.8	183
69	Mitigation of Layered to Spinel Conversion of a Li-Rich Layered Metal Oxide Cathode Material for Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2014 , 161, A290-A301	3.9	158
68	Oxygen Electrode Rechargeability in an Ionic Liquid for the Li-Air Battery. <i>Journal of Physical Chemistry Letters</i> , 2011 , 2, 2420-2424	6.4	139
67	Characterization of Some Polyacrylonitrile-Based Electrolytes. <i>Chemistry of Materials</i> , 1997 , 9, 369-379	9.6	129
66	Suppression of Toxic Compounds Produced in the Decomposition of Lithium-Ion Battery Electrolytes. <i>Electrochemical and Solid-State Letters</i> , 2004 , 7, A194		127
65	Unifying the Hydrogen Evolution and Oxidation Reactions Kinetics in Base by Identifying the Catalytic Roles of Hydroxyl-Water-Cation Adducts. <i>Journal of the American Chemical Society</i> , 2019 , 141, 3232-3239	16.4	119

64	Electrolyte-Directed Reactions of the Oxygen Electrode in Lithium-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2015 , 162, A3021-A3031	3.9	113
63	The Electrochemical Intercalation of Li into Graphite in Li/Polymer Electrolyte/Graphite Cells. <i>Journal of the Electrochemical Society</i> , 1995 , 142, 333-340	3.9	101
62	How Comparable Are Sodium-Ion Batteries to Lithium-Ion Counterparts?. <i>ACS Energy Letters</i> , 2020 , 5, 3544-3547	20.1	94
61	Additives for Stabilizing LiPF ₆ -Based Electrolytes Against Thermal Decomposition. <i>Journal of the Electrochemical Society</i> , 2005 , 152, A1361	3.9	92
60	n-Butylferrocene for Overcharge Protection of Secondary Lithium Batteries. <i>Journal of the Electrochemical Society</i> , 1990 , 137, 1856-1857	3.9	81
59	A Study of the Influence of Lithium Salt Anions on Oxygen Reduction Reactions in Li-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2015 , 162, A1055-A1066	3.9	80
58	Rechargeable Lithium/Vanadium Oxide Cells Utilizing 2Me - THF / LiAsF ₆ . <i>Journal of the Electrochemical Society</i> , 1981 , 128, 2493-2501	3.9	75
57	A Li-Rich Layered Cathode Material with Enhanced Structural Stability and Rate Capability for Li-ion Batteries. <i>Journal of the Electrochemical Society</i> , 2014 , 161, A355-A363	3.9	71
56	Preparation and Electrochemical Characterization of Micron-Sized Spinel LiMn ₂ O ₄ . <i>Journal of the Electrochemical Society</i> , 1996 , 143, 1591-1598	3.9	66
55	The Lithium Surface Film in the Li / SO ₂ Cell. <i>Journal of the Electrochemical Society</i> , 1986 , 133, 1307-1311	3.9	66
54	Characterization of Ether Electrolytes for Rechargeable Lithium Cells. <i>Journal of the Electrochemical Society</i> , 1982 , 129, 2404-2409	3.9	65
53	Preparation and Characterization of Some Lithium Insertion Anodes for Secondary Lithium Batteries. <i>Journal of the Electrochemical Society</i> , 1990 , 137, 743-749	3.9	63
52	Formation and Growth of Surface Films on Graphitic Anode Materials for Li-Ion Batteries. <i>Electrochemical and Solid-State Letters</i> , 2005 , 8, A128		57
51	Synthesis, Structure and Electrochemistry of Lithium Vanadium Phosphate Cathode Materials. <i>Journal of the Electrochemical Society</i> , 2011 , 158, A1250	3.9	56
50	Discharge Rate Capability of the LiCoO ₂ Electrode. <i>Journal of the Electrochemical Society</i> , 1998 , 145, 482-486	3.9	53
49	Resolving the Iron Phthalocyanine Redox Transitions for ORR Catalysis in Aqueous Media. <i>Journal of Physical Chemistry Letters</i> , 2017 , 8, 2881-2886	6.4	52
48	Dimensionally stable MEEP-based polymer electrolytes and solid-state lithium batteries. <i>Chemistry of Materials</i> , 1991 , 3, 339-348	9.6	52
47	A Brief History of Non-Aqueous Metal-Air Batteries. <i>ECS Transactions</i> , 2006 , 3, 67-71	1	48

46	Polyphosphazene-Poly(Olefin Oxide) Mixed Polymer Electrolytes: I. Conductivity and Thermal Studies of. <i>Journal of the Electrochemical Society</i> , 1989 , 136, 3576-3582	3.9	46
45	Mixed Ether Electrolytes for Secondary Lithium Batteries with Improved Low Temperature Performance. <i>Journal of the Electrochemical Society</i> , 1986 , 133, 661-666	3.9	44
44	Characterization of Reactions and Products of the Discharge and Forced Overdischarge of Li / SO ₂ Cells. <i>Journal of the Electrochemical Society</i> , 1982 , 129, 1857-1861	3.9	44
43	A high rate Li-rich layered MNC cathode material for lithium-ion batteries. <i>RSC Advances</i> , 2015 , 5, 27375-27386	3.7	43
42	Microelectrode Diagnostics of Lithium-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2014 , 161, A381-A392	3.9	41
41	Cobalt Phthalocyanine Catalyzed Lithium-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2013 , 160, A1577-A1586	3.9	41
40	The Li ₄ Ti ₅ O ₁₂ /PAN Electrolyte// LiMn ₂ O ₄ Rechargeable Battery with Passivation-Free Electrodes. <i>Journal of the Electrochemical Society</i> , 1998 , 145, 2615-2622	3.9	41
39	Some Chemistry in the Li / SOCl ₂ Cell. <i>Journal of the Electrochemical Society</i> , 1980 , 127, 2091-2096	3.9	36
38	Rechargeable Solid-State Li Batteries Utilizing Polyphosphazene-Poly(Ethylene Oxide) Mixed Polymer Electrolytes. <i>Journal of the Electrochemical Society</i> , 1988 , 135, 535-536	3.9	35
37	Comment on "Cycling Li-O ₂ batteries via LiOH formation and decomposition". <i>Science</i> , 2016 , 352, 667	33.3	35
36	Solvent-Coupled Catalysis of the Oxygen Electrode Reactions in Lithium-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2014 , 161, A1706-A1715	3.9	33
35	The Role of Carbonate Solvents on Lithium Intercalation into Graphite. <i>Journal of the Electrochemical Society</i> , 2007 , 154, A185	3.9	32
34	Electronic Effects of Substituents on Redox Shuttles for Overcharge Protection of Li-ion Batteries. <i>Journal of the Electrochemical Society</i> , 2012 , 159, A1057-A1064	3.9	31
33	Highly conductive polymer electrolytes 1993 , 75-112		31
32	A Search for the Optimum Lithium Rich Layered Metal Oxide Cathode Material for Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2015 , 162, A1236-A1245	3.9	30
31	Synthesis of heteropolymetallic silanes. <i>Inorganic Chemistry</i> , 1973 , 12, 2850-2856	5.1	29
30	Moderate Temperature Sodium Cells: I. Transition Metal Disulfide Cathodes. <i>Journal of the Electrochemical Society</i> , 1980 , 127, 2545-2550	3.9	20
29	A Layered Carbon Nanotube Architecture for High Power Lithium Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2014 , 161, A989-A995	3.9	17

28	Rechargeability of the Ambient Temperature Cell Li/2Me-THF, LiAsF ₆ / Cr _{0.5} V _{0.5} S ₂ . <i>Journal of the Electrochemical Society</i> , 1983 , 130, 2309-2314	3.9	14
27	Economic analysis of CNT lithium-ion battery manufacturing. <i>Environmental Science: Nano</i> , 2015 , 2, 463-476	3.9	10
26	Li / MoSe ₃ S Secondary Battery. <i>Journal of the Electrochemical Society</i> , 1987 , 134, 2661-2665	3.9	10
25	Moderate Temperature Sodium Cells: V . Discharge Reactions and Rechargeability of and Positive Electrodes in Molten. <i>Journal of the Electrochemical Society</i> , 1984 , 131, 2211-2217	3.9	10
24	Solid Phase FePC Catalysts for Increased Stability of Oxygen Reduction Reaction Intermediates at the Cathode/Electrolyte Interface in Lithium Air Batteries. <i>Journal of the Electrochemical Society</i> , 2017 , 164, A760-A769	3.9	8
23	Rechargeable Batteries for the 300-Mile Electric Vehicle and Beyond. <i>ECS Transactions</i> , 2012 , 41, 27-34	1	8
22	Reactions at the Anode during Storage of Partially Discharged Li / SO ₂ Cells. <i>Journal of the Electrochemical Society</i> , 1983 , 130, 1618-1620	3.9	7
21	In Situ Formed Layered-Layered Metal Oxide as Bifunctional Catalyst for Li-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2016 , 163, A2464-A2474	3.9	6
20	Lithium Batteries: from early stages to the future 2013 , 21-38		6
19	Moderate Temperature Na Cells: III . Electrochemical and Structural Studies of and Its Na Intercalates. <i>Journal of the Electrochemical Society</i> , 1981 , 128, 2574-2577	3.9	6
18	Moderate Temperature Na Cells: II . Transition Metal Diselenide Cathodes. <i>Journal of the Electrochemical Society</i> , 1981 , 128, 1060-1062	3.9	6
17	Synthesis, characterization, and lithium battery applications of molybdenum oxysulfides. <i>Chemistry of Materials</i> , 1993 , 5, 1233-1241	9.6	5
16	Some Chemistry in the Li / ? SOCl ₂ + BrCl ? Cell. <i>Journal of the Electrochemical Society</i> , 1988 , 135, 2686-2691	3.9	5
15	Additives in Organic Electrolytes for Lithium Batteries 2013 , 39-70		4
14	Moderate Temperature Na Cells: IV . and as Rechargeable Cathodes in Molten. <i>Journal of the Electrochemical Society</i> , 1981 , 128, 2700-2702	3.9	4
13	Correlating Ionic Conductivity, Oxygen Transport and ORR with Structure of Dialkylacetamide-Based Electrolytes for Lithium-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2019 , 166, A305-A317	3.9	3
12	Effect of silver coating on electrochemical performance of 0.5Li ₂ MnO ₃ .0.5 LiMn ₁ /3Ni ₁ /3Co ₁ /3O ₂ cathode material for lithium-ion batteries. <i>Journal of Solid State Electrochemistry</i> , 2019 , 23, 1593-1604	2.6	3
11	Lithium Air and Other Batteries Beyond Lithium-Ion Batteries 2013 , 161-190		3

10	Li _{2-x} Fe _{0.5} (VO) _{0.5} (PO ₄)F _{0.5} , a New Mixed Metal Phosphate Cathode Material. <i>Journal of the Electrochemical Society</i> , 2012 , 159, A1659-A1663	3.9	3
9	Characterization of Li / SO ₂ Cl ₂ and Li / β -SO ₂ Cl ₂ + Cl ₂ β Cells. <i>Journal of the Electrochemical Society</i> , 1988 , 135, 2917-2922	3.9	3
8	Electrolytes for Lithium-Ion Batteries with High-Voltage Cathodes 2013 , 71-87		2
7	Rechargeable Sodium and Sodium-Ion Batteries 2013 , 349-367		1
6	High Power Lithium Ion Battery Facilitated by an Advanced Cathode 2008 ,		1
5	Kinetics of the Oxygen Electrode in Lithium/Air Cells 2013 , 233-264		
4	Aqueous Lithium/Air Systems 2013 , 191-215		
3	Preparation and Battery Applications of Micron Sized Li ₄ Ti ₅ O ₂ . <i>Materials Research Society Symposia Proceedings</i> , 1997 , 496, 359		
2	Lithium Organic Liquid Electrolyte Batteries 1985 , 337-349		
1	Non-Electrical Techniques of Cell Characterization 1985 , 283-296		