# K M Abraham

List of Publications by Year
in descending order

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|---|---|---|---|
| 75<br>papers | 10,037<br>citations | 57719<br>44<br>h-index | 88593<br>70<br>g-index |
| 100<br>all docs | 100<br>docs citations | 100<br>times ranked | 7678<br>citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | A Polymer Electrolyteâ€Based Rechargeable Lithium/Oxygen Battery. Journal of the Electrochemical Society, 1996, 143, 1-5. | 1.3 | 1,968 |
| 2 | Influence of Nonaqueous Solvents on the Electrochemistry of Oxygen in the Rechargeable Lithiumâ^'Air Battery. Journal of Physical Chemistry C, 2010, 114, 9178-9186. | 1.5 | 894 |
| 3 | Elucidating the Mechanism of Oxygen Reduction for Lithium-Air Battery Applications. Journal of Physical Chemistry C, 2009, 113, 20127-20134. | 1.5 | 616 |
| 4 | A Lithium/Dissolved Sulfur Battery with an Organic Electrolyte. Journal of the Electrochemical Society, 1979, 126, 523-527. | 1.3 | 548 |
| 5 | Li+â€Conductive Solid Polymer Electrolytes with Liquidâ€Like Conductivity. Journal of the Electrochemical Society, 1990, 137, 1657-1658. | 1.3 | 438 |
| 6 | Highly Conductive PEO-like Polymer Electrolytes. Chemistry of Materials, 1997, 9, 1978-1988. | 3.2 | 419 |
| 7 | Rechargeable Lithium/TEGDME-LiPF[sub 6]â^•O[sub 2] Battery. Journal of the Electrochemical Society, 2011, 158, A302. | 1.3 | 403 |
| 8 | How Comparable Are Sodium-Ion Batteries to Lithium-Ion Counterparts?. ACS Energy Letters, 2020, 5, 3544-3547. | 8.8 | 325 |
| 9 | Lithium-air and lithium-sulfur batteries. MRS Bulletin, 2011, 36, 506-512. | 1.7 | 272 |
| 10 | Prospects and Limits of Energy Storage in Batteries. Journal of Physical Chemistry Letters, 2015, 6, 830-844. | 2.1 | 270 |
| 11 | Studies of Li-Air Cells Utilizing Dimethyl Sulfoxide-Based Electrolyte. Journal of the Electrochemical Society, 2013, 160, A259-A267. | 1.3 | 248 |
| 12 | A Solid-State, Rechargeable, Long Cycle Life Lithiumâ€"Air Battery. Journal of the Electrochemical Society, 2010, 157, A50. | 1.3 | 239 |
| 13 | Unifying the Hydrogen Evolution and Oxidation Reactions Kinetics in Base by Identifying the Catalytic Roles of Hydroxyl-Water-Cation Adducts. Journal of the American Chemical Society, 2019, 141, 3232-3239. | 6.6 | 220 |
| 14 | Oxygen Reduction Reactions in Ionic Liquids and the Formulation of a General ORR Mechanism for Liâ€"Air Batteries. Journal of Physical Chemistry C, 2012, 116, 20755-20764. | 1.5 | 193 |
| 15 | Mitigation of Layered to Spinel Conversion of a Li-Rich Layered Metal Oxide Cathode Material for Li-Ion Batteries. Journal of the Electrochemical Society, 2014, 161, A290-A301. | 1.3 | 177 |
| 16 | Oxygen Electrode Rechargeability in an Ionic Liquid for the Liâ€"Air Battery. Journal of Physical Chemistry Letters, 2011, 2, 2420-2424. | 2.1 | 147 |
| 17 | Suppression of Toxic Compounds Produced in the Decomposition of Lithium-Ion Battery Electrolytes. Electrochemical and Solid-State Letters, 2004, 7, A194. | 2.2 | 142 |
| 18 | Characterization of Some Polyacrylonitrile-Based Electrolytes. Chemistry of Materials, 1997, 9, 369-379. | 3.2 | 141 |

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|---|---|---|---|
| 19 | Electrolyte-Directed Reactions of the Oxygen Electrode in Lithium-Air Batteries. Journal of the Electrochemical Society, 2015, 162, A3021-A3031. | 1.3 | 126 |
| 20 | The Electrochemical Intercalation of Li into Graphite in Li/Polymer Electrolyte/Graphite Cells. Journal of the Electrochemical Society, 1995, 142, 333-340. | 1.3 | 113 |
| 21 | Rechargeable Lithium/Vanadium Oxide Cells Utilizing 2Meâ€‰â€â€‰â€‰THFâ€‰â€‰/â€‰LiAsF6. Journal of the Electrochemical Society, 1981, 128, 2493-2501. | 1.3 | 107 |
| 22 | Additives for Stabilizing LiPF[sub 6]-Based Electrolytes Against Thermal Decomposition. Journal of the Electrochemical Society, 2005, 152, A1361. | 1.3 | 103 |
| 23 | nâ€Butylferrocene for Overcharge Protection of Secondary Lithium Batteries. Journal of the Electrochemical Society, 1990, 137, 1856-1857. | 1.3 | 93 |
| 24 | A Study of the Influence of Lithium Salt Anions on Oxygen Reduction Reactions in Li-Air Batteries. Journal of the Electrochemical Society, 2015, 162, A1055-A1066. | 1.3 | 93 |
| 25 | Resolving the Iron Phthalocyanine Redox Transitions for ORR Catalysis in Aqueous Media. Journal of Physical Chemistry Letters, 2017, 8, 2881-2886. | 2.1 | 89 |
| 26 | Preparation and Electrochemical Characterization of Micronâ€Sized Spinel LiMn2â€‰Oâ€‰4. Journal of the Electrochemical Society, 1996, 143, 1591-1598. | 1.3 | 86 |
| 27 | The Lithium Surface Film in the Liâ€‰/â€‰â€‰SOâ€‰2 Cell. Journal of the Electrochemical Society, 1986, 133, 1307-1313. | 1.3 | 84 |
| 28 | Characterization of Ether Electrolytes for Rechargeable Lithium Cells. Journal of the Electrochemical Society, 1982, 129, 2404-2409. | 1.3 | 83 |
| 29 | A Li-Rich Layered Cathode Material with Enhanced Structural Stability and Rate Capability for Li-on Batteries. Journal of the Electrochemical Society, 2014, 161, A355-A363. | 1.3 | 81 |
| 30 | Formation and Growth of Surface Films on Graphitic Anode Materials for Li-Ion Batteries. Electrochemical and Solid-State Letters, 2005, 8, A128. | 2.2 | 73 |
| 31 | Preparation and Characterization of Some Lithium Insertion Anodes for Secondary Lithium Batteries. Journal of the Electrochemical Society, 1990, 137, 743-749. | 1.3 | 72 |
| 32 | Dimensionally stable MEEP-based polymer electrolytes and solid-state lithium batteries. Chemistry of Materials, 1991, 3, 339-348. | 3.2 | 61 |
| 33 | Discharge Rate Capability of the LiCoO2 Electrode. Journal of the Electrochemical Society, 1998, 145, 482-486. | 1.3 | 60 |
| 34 | Polyphosphazeneâ€Poly(Olefin Oxide) Mixed Polymer Electrolytes: I . Conductivity and Thermal Studies of. Journal of the Electrochemical Society, 1989, 136, 3576-3582. | 1.3 | 59 |
| 35 | Synthesis, Structure and Electrochemistry of Lithium Vanadium Phosphate Cathode Materials. Journal of the Electrochemical Society, 2011, 158, A1250. | 1.3 | 59 |
| 36 | A high rate Li-rich layered MNC cathode material for lithium-ion batteries. RSC Advances, 2015, 5, 27375-27386. | 1.7 | 58 |

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| 37 | Mixed Ether Electrolytes for Secondary Lithium Batteries with Improved Low Temperature Performance. Journal of the Electrochemical Society, 1986, 133, 661-666. | 1.3 | 57 |
| 38 | Rechargeable Solidâ€State Li Batteries Utilizing Polyphosphazeneâ€Poly(Ethylene Oxide) Mixed Polymer Electrolytes. Journal of the Electrochemical Society, 1988, 135, 535-536. | 1.3 | 56 |
| 39 | A Brief History of Non-Aqueous Metal-Air Batteries. ECS Transactions, 2008, 3, 67-71. | 0.3 | 53 |
| 40 | Characterization of Reactions and Products of the Discharge and Forced Overdischarge of Liâ€‰/â€‰â€‰SOâ€‰2 Cells. Journal of the Electrochemical Society, 1982, 129, 1857-1861. | 1.3 | 51 |
| 41 | Some Chemistry in the Liâ€‰/â€‰SOCl2 Cell. Journal of the Electrochemical Society, 1980, 127, 2091-2096. | 1.3 | 47 |
| 42 | The Li4Ti5â€‰Oâ€‰12/PAN Electrolyte// LiMn2â€‰Oâ€‰4 Rechargeable Battery with Passivationâ€Free Electrodes. Journal of the Electrochemical Society, 1998, 145, 2615-2622. | 1.3 | 47 |
| 43 | Cobalt Phthalocyanine Catalyzed Lithium-Air Batteries. Journal of the Electrochemical Society, 2013, 160, A1577-A1586. | 1.3 | 46 |
| 44 | Microelectrode Diagnostics of Lithium-Air Batteries. Journal of the Electrochemical Society, 2014, 161, A381-A392. | 1.3 | 46 |
| 45 | A Search for the Optimum Lithium Rich Layered Metal Oxide Cathode Material for Li-Ion Batteries. Journal of the Electrochemical Society, 2015, 162, A1236-A1245. | 1.3 | 39 |
| 46 | Comment on â€œCycling Li-O <sub>2</sub> batteries via LiOH formation and decompositionâ€. Science, 2016, 352, 667-667. | 6.0 | 38 |
| 47 | Solvent-Coupled Catalysis of the Oxygen Electrode Reactions in Lithium-Air Batteries. Journal of the Electrochemical Society, 2014, 161, A1706-A1715. | 1.3 | 37 |
| 48 | Synthesis of heteropolymetallic silanes. Inorganic Chemistry, 1973, 12, 2850-2856. | 1.9 | 35 |
| 49 | Electronic Effects of Substituents on Redox Shuttles for Overcharge Protection of Li-ion Batteries. Journal of the Electrochemical Society, 2012, 159, A1057-A1064. | 1.3 | 35 |
| 50 | Highly conductive polymer electrolytes. , 1993, , 75-112. | | 35 |
| 51 | The Role of Carbonate Solvents on Lithium Intercalation into Graphite. Journal of the Electrochemical Society, 2007, 154, A185. | 1.3 | 33 |
| 52 | Moderate Temperature Sodium Cells: I . Transition Metal Disulfide Cathodes. Journal of the Electrochemical Society, 1980, 127, 2545-2550. | 1.3 | 24 |
| 53 | A Layered Carbon Nanotube Architecture for High Power Lithium Ion Batteries. Journal of the Electrochemical Society, 2014, 161, A989-A995. | 1.3 | 19 |
| 54 | Rechargeability of the Ambient Temperature Cell Li/2Meâ€THF, LiAsF6â€‰/â€‰Cr0.5â€‰Vâ€‰0.5â€‰Sâ€‰2. Journal of the Electrochemical Society, 1983, 130, 2309-2314. | 1.3 | 17 |

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| 55 | Solid Phase FePC Catalysts for Increased Stability of Oxygen Reduction Reaction Intermediates at the Cathode/Electrolyte Interface in Lithium Air Batteries. Journal of the Electrochemical Society, 2017, 164, A760-A769. | 1.3 | 15 |
| 56 | Liâ€‰/â€‰MoSe3â€‰Sâ€‰ Secondary Battery. Journal of the Electrochemical Society, 1987, 134, 2661-2665. | 1.3 | 14 |
| 57 | Moderate Temperature Sodium Cells: V . Discharge Reactions and Rechargeability of and Positive Electrodes in Molten. Journal of the Electrochemical Society, 1984, 131, 2211-2217. | 1.3 | 13 |
| 58 | Economic analysis of CNT lithium-ion battery manufacturing. Environmental Science: Nano, 2015, 2, 463-476. | 2.2 | 12 |
| 59 | Rechargeable Batteries for the 300-Mile Electric Vehicle and Beyond. ECS Transactions, 2012, 41, 27-34. | 0.3 | 11 |
| 60 | Moderate Temperature Na Cells: III . Electrochemical and Structural Studies of and Its Na Intercalates. Journal of the Electrochemical Society, 1981, 128, 2574-2577. | 1.3 | 9 |
| 61 | Moderate Temperature Na Cells: II . Transition Metal Diselenide Cathodes. Journal of the Electrochemical Society, 1981, 128, 1060-1062. | 1.3 | 9 |
| 62 | Synthesis, characterization, and lithium battery applications of molybdenum oxysulfides. Chemistry of Materials, 1993, 5, 1233-1241. | 3.2 | 8 |
| 63 | In Situ Formed Layered-Layered Metal Oxide as Bifunctional Catalyst for Li-Air Batteries. Journal of the Electrochemical Society, 2016, 163, A2464-A2474. | 1.3 | 8 |
| 64 | Effect of silver coating on electrochemical performance of 0.5Li2MnO3.0.5 LiMn1/3Ni1/3Co1/3O2 cathode material for lithium-ion batteries. Journal of Solid State Electrochemistry, 2019, 23, 1593-1604. | 1.2 | 8 |
| 65 | Reactions at the Anode during Storage of Partially Discharged Liâ€‰/â€‰â€‰SOâ€‰2 Cells. Journal of the Electrochemical Society, 1983, 130, 1618-1620. | 1.3 | 7 |
| 66 | Some Chemistry in the Liâ€‰/â€‰â€‰â€³â€‰SOCl2â€‰+â€‰BrClâ€‰â€³â€‰ Cell. Journal of the Electrochemical Society, 1988 | 1.3 | 7 |
| 67 | Moderate Temperature Na Cells: IV . and as Rechargeable Cathodes in Molten. Journal of the Electrochemical Society, 1981, 128, 2700-2702. | 1.3 | 6 |
| 68 | Characterization of Liâ€‰/â€‰â€‰SOâ€‰2Cl2 and Liâ€‰/â€‰â€‰â€œâ€‰â€‰SOâ€‰2Cl2â€‰+â€‰Clâ€‰â€‰â€‰ Cells. 135, 2917-2922. | 1.3 | 6 |
| 69 | Correlating Ionic Conductivity, Oxygen Transport and ORR with Structure of Dialkylacetamide-Based Electrolytes for Lithium-Air Batteries. Journal of the Electrochemical Society, 2019, 166, A305-A317. | 1.3 | 5 |
| 70 | Li2-xFe0.5(VO)0.5(PO4)F0.5, a New Mixed Metal Phosphate Cathode Material. Journal of the Electrochemical Society, 2012, 159, A1659-A1663. | 1.3 | 3 |
| 71 | High Power Lithium Ion Battery Facilitated by an Advanced Cathode. , 2008, , . | | 1 |
| 72 | Polymer electrolyte-based Li ion batteries for space power. , 1997, , . | | 0 |

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| 73 | Preparation and Battery Applications of Micron Sized Li4Ti5O2. Materials Research Society Symposia Proceedings, 1997, 496, 359. | 0.1 | 0 |
| 74 | Lithium Organic Liquid Electrolyte Batteries. , 1985, , 337-349. | | 0 |
| 75 | Non-Electrical Techniques of Cell Characterization. , 1985, , 283-296. | | 0 |