Saravanan Kuppan

List of Publications by Year in descending order

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49 papers	3,088 citations	279798 23 h-index	330143 37 g-index
49 all docs	49 docs citations	49 times ranked	4789 citing authors

#	Article	IF	Citations
1	Performance and Lifetime of Battery Desalination Cells Based on Nickel Hexacyanoferrate. ECS Meeting Abstracts, 2022, MA2022-01, 142-142.	0.0	0
2	Magnetic properties and vanadium oxidation state in Î±-Li3V2(PO4)3/C composite: Magnetization and ESR measurements. Solid State Communications, 2021, 323, 114108.	1.9	8
3	Reply to the â€˜Comment on â€œTechno-economic analysis of capacitive and intercalative water deionizationâ€â€™ by S. K. Patel, L. Wang and M. Elimelech, Energy Environ. Sci., 2021, 10.1039/D0EE03321A. Energy and Environmental Science, 2021, 14, 2499-2503.	30.8	3
4	A Study of Modelâ€Based Protective Fastâ€Charging and Associated Degradation in Commercial Smartphone Cells: Insights on Cathode Degradation as a Result of Lithium Depositions on the Anode. Advanced Energy Materials, 2021, 11, 2003019.	19.5	7
5	Key design considerations for synthesis of mesoporous Î±-Li3V2(PO4)3/C for high power lithium batteries. Electrochimica Acta, 2021, 372, 137831.	5.2	14
6	Probing Heterogeneous Degradation of Catalyst in PEM Fuel Cells under Realistic Automotive Conditions with Multiâ€Modal Techniques. Advanced Energy Materials, 2021, 11, 2101794.	19.5	25
7	Location-Dependent Cobalt Deposition in Smartphone Cells upon Long-Term Fast-Charging Visualized by Synchrotron X-ray Fluorescence. Chemistry of Materials, 2021, 33, 6318-6328.	6.7	1
8	Performance and lifetime of intercalative water deionization cells for mono- and divalent ion removal. Desalination, 2021, 517, 115218.	8.2	3
9	Effect of Commercial Gas Diffusion Layers on Catalyst Durability of Polymer Electrolyte Fuel Cells in Varied Cathode Gas Environment. ECS Meeting Abstracts, 2021, MA2021-02, 1193-1193.	0.0	0
10	Carbon Corrosion in Polymer Electrolyte Fuel Cells: A Complex Interplay between Morphological Changes and Electrochemical Performance. ECS Meeting Abstracts, 2021, MA2021-02, 1957-1957.	0.0	0
11	Removal of Na+ and Ca2+ with Prussian blue analogue electrodes for brackish water desalination. Desalination, 2020, 487, 114479.	8.2	23
12	Understanding the Overlithiation Properties of LiNi_{0.6}Mn_{0.2}Co_{0.2}O₂ Using Electrochemistry and Depth-Resolved X-ray Absorption Spectroscopy. Journal of the Electrochemical Society, 2020, 167, 080514.	2.9	17
13	Mapping of Heterogeneous Catalyst Degradation in Polymer Electrolyte Fuel Cells. Advanced Energy Materials, 2020, 10, 2000623.	19.5	24
14	Techno-economic analysis of capacitive and intercalative water deionization. Energy and Environmental Science, 2020, 13, 1544-1560.	30.8	76
15	Effect of Liquid Electrolyte Soaking on the Interfacial Resistance of Li₇La₃Zr₂O₁₂ for All-Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2020, 12, 20605-20612.	8.0	26
16	Analysis of the Impact of Fast Charging on Aging for Smartphone Cells: A Case Study Using Synchrotron Based Techniques. ECS Meeting Abstracts, 2020, MA2020-01, 101-101.	0.0	0
17	(Invited) Understanding Chemical, Mechanical and Thermal Stability of NCA in Polymer Solid-State Batteries. ECS Meeting Abstracts, 2020, MA2020-01, 249-249.	0.0	0
18	Investigation of Li+ Insertion in NMC622 Cathode Material upon Deep Lithiation Via Electrochemistry and x-Ray Absorption Spectroscopy. ECS Meeting Abstracts, 2020, MA2020-01, 67-67.	0.0	0

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19	Influence of Flow Rate on Catalyst Layer Degradation in Polymer Electrolyte Fuel Cells. ECS Meeting Abstracts, 2020, MA2020-02, 2345-2345.	0.0	1
20	Investigation of Li⁺ Insertion in NMC622 Cathode Material upon Deep Lithiation Via Electrochemistry and x-Ray Absorption Spectroscopy. ECS Meeting Abstracts, 2020, MA2020-02, 122-122.	0.0	0
21	Mapping of Heterogeneous Catalyst Degradation in Polymer Electrolyte Fuel Cells. ECS Meeting Abstracts, 2020, MA2020-02, 2163-2163.	0.0	0
22	Catalyst Degradation in Polymer Electrolyte Fuel Cells with Multi-Modal Techniques: Understanding Phenomena Under Varied Gas and Relative Humidity. ECS Meeting Abstracts, 2020, MA2020-02, 2325-2325.	0.0	0
23	Analysis of the Impact of Fast Charging on Aging for Smartphone Cells: A Case Study Using Synchrotron Based Techniques. ECS Meeting Abstracts, 2020, MA2020-02, 598-598.	0.0	0
24	Thermally-driven mesopore formation and oxygen release in delithiated NCA cathode particles. Journal of Materials Chemistry A, 2019, 7, 12593-12603.	10.3	41
25	Long-term chemothermal stability of delithiated NCA in polymer solid-state batteries. Journal of Materials Chemistry A, 2019, 7, 27135-27147.	10.3	10
26	Mesoscale Chemomechanical Interplay of the LiNi_{0.8}Co_{0.15}Al_{0.05}O₂ Cathode in Solid-State Polymer Batteries. Chemistry of Materials, 2019, 31, 491-501.	6.7	89
27	Mesoscale Chemomechanical Interplay of the LiNi0.8Co0.15Al0.05O2 Cathode in Solid-State Polymer Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
28	Revealing Anisotropic Spinel Formation on Pristine Liâ€•and Mnâ€Rich Layered Oxide Surface and Its Impact on Cathode Performance. Advanced Energy Materials, 2017, 7, 1602010.	19.5	57
29	Phase transformation mechanism in lithium manganese nickel oxide revealed by single-crystal hard X-ray microscopy. Nature Communications, 2017, 8, 14309.	12.8	124
30	Crystal Chemistry and Electrochemistry of LixMn1.5Ni0.5O4 Solid Solution Cathode Materials. Chemistry of Materials, 2017, 29, 6818-6828.	6.7	24
31	Ni and Co Segregations on Selective Surface Facets and Rational Design of Layered Lithium Transitionâ€Metal Oxide Cathodes. Advanced Energy Materials, 2016, 6, 1502455.	19.5	100
32	Investigating Side Reactions and Coating Effects on High Voltage Layered Cathodes for Lithium Ion Batteries. Microscopy and Microanalysis, 2016, 22, 1312-1313.	0.4	0
33	Cathode Materials: Ni and Co Segregations on Selective Surface Facets and Rational Design of Layered Lithium Transition-Metal Oxide Cathodes (Adv. Energy Mater. 9/2016). Advanced Energy Materials, 2016, 6, .	19.5	2
34	Atomic-Resolution Visualization of Distinctive Chemical Mixing Behavior of Ni, Co, and Mn with Li in Layered Lithium Transition-Metal Oxide Cathode Materials. Chemistry of Materials, 2015, 27, 5393-5401.	6.7	108
35	Beyond Divalent Copper: A Redox Couple for Sodium Ion Battery Cathode Materials. ECS Electrochemistry Letters, 2015, 4, A41-A44.	1.9	38
36	Phosphorus Enrichment as a New Composition in the Solid Electrolyte Interphase of High-Voltage Cathodes and Its Effects on Battery Cycling. Chemistry of Materials, 2015, 27, 7447-7451.	6.7	37

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37	Synthesis, Structure, and Electrochemical Performance of High Capacity Li₂Cu_{0.5}Ni_{0.5}O₂ Cathodes. Chemistry of Materials, 2015, 27, 6746-6754.	6.7	31
38	Controlling side reactions and self-discharge in high-voltage spinel cathodes: the critical role of surface crystallographic facets. Physical Chemistry Chemical Physics, 2015, 17, 26471-26481.	2.8	35
39	The effect of synthesis parameters on the lithium storage performance of LiMnPO4/C. Electrochimica Acta, 2013, 105, 496-505.	5.2	40
40	A rationally designed dual role anode material for lithium-ion and sodium-ion batteries: case study of eco-friendly Fe3O4. Physical Chemistry Chemical Physics, 2013, 15, 2945.	2.8	154
41	The First Report on Excellent Cycling Stability and Superior Rate Capability of Na₃V₂(PO₄)₃ for Sodium Ion Batteries. Advanced Energy Materials, 2013, 3, 444-450.	19.5	672
42	Na2Ti3O7: an intercalation based anode for sodium-ion battery applications. Journal of Materials Chemistry A, 2013, 1, 2653.	10.3	385
43	Î±-MoO3: A high performance anode material for sodium-ion batteries. Electrochemistry Communications, 2013, 31, 5-9.	4.7	162
44	Li(MnxFe1â^'x)PO4/C (x = 0.5, 0.75 and 1) nanoplates for lithium storage application. Journal of Materials Chemistry, 2011, 21, 14925.	6.7	95
45	Mesoporous TiO2 with high packing density for superior lithium storage. Energy and Environmental Science, 2010, 3, 939.	30.8	267
46	Morphology controlled synthesis of LiFePO4/C nanoplates for Li-ion batteries. Energy and Environmental Science, 2010, 3, 457.	30.8	243
47	Storage performance of LiFe1â€‰â^'â€‰x Mn x PO4 nanoplates (xâ€‰=â€‰0, 0.5, and 1). Journal of Solid State Electrochemistry, 2010, 14, 1755-1760.	2.5	53
48	Lithium Storage Using Conversion Reaction in Maghemite and Hematite. Electrochemical and Solid-State Letters, 2010, 13, A132.	2.2	33
49	Hollow Nanospheres and Flowers of CuS from Self-Assembled Cu(II) Coordination Polymer and Hydrogen-Bonded Complexes of N-(2-Hydroxybenzyl)-l-serine. Crystal Growth and Design, 2009, 9, 4461-4470.	3.0	60