Sagar Mitra

List of Publications by Year
in descending order

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118 papers	4,278 citations	76326 40 h-index	128289 60 g-index
120 all docs	120 docs citations	120 times ranked	6211 citing authors

#	Article	IF	Citations
1	Electrocatalytic Activity of Polyaniline in Magnesiumâ€“Sulfur Batteries. Journal of Physical Chemistry Letters, 2022, 13, 1337-1343.	4.6	7
2	Enhanced electrochemical properties of W-doped Na3V2(PO4)2F3@C as cathode material in sodium ion batteries. Electrochimica Acta, 2022, 415, 140256.	5.2	12
3	Direct-Contact Prelithiation of Siâ€“C Anode Study as a Function of Time, Pressure, Temperature, and the Cell Ideal Time. ACS Applied Materials & Interfaces, 2022, 14, 17208-17220.	8.0	16
4	Water-in-Salt Electrolyte-Based Extended Voltage Range, Safe, and Long-Cycle-Life Aqueous Calcium-Ion Cells. ACS Applied Materials & Interfaces, 2022, 14, 25501-25515.	8.0	15
5	Non-aqueous rechargeable calcium-ion batteries based on high voltage zirconium-doped ammonium vanadium oxide cathode. Journal of Power Sources, 2022, 541, 231669.	7.8	8
6	Kinetics of polysulfide on metal-sulfur batteries. , 2022, , 679-713.		0
7	Challenges and opportunities for energy storage technologies. , 2022, , 607-645.		0
8	Sodium-ion batteries: Chemistry of biomass derived disordered carbon in carbonate and ether-based electrolytes. Electrochimica Acta, 2022, 425, 140744.	5.2	23
9	Comprehensive Study of Sodium Copper Hexacyanoferrate, as a Sodium-Rich Low-Cost Positive Electrode for Sodium-Ion Batteries. Energy & Fuels, 2022, 36, 7816-7828.	5.1	4
10	Singleâ€crystal spinel Li1.08Mn1.92O4 octahedra cathode covered with Li-ion permeable robust NMC thin-layer protection for high voltage lithiumâ€ion batteries. Energy Storage Materials, 2022, 52, 169-179.	18.0	8
11	Approach to Increase the Utilization of Active Material in a High Sulfur-Loaded Cathode for High Areal Capacity Room-Temperature Sodiumâ€“Sulfur Batteries. ACS Applied Energy Materials, 2021, 4, 384-393.	5.1	11
12	Magnesium polysulfide catholyte (MgSx): Synthesis, electrochemical and computational study for magnesium-sulfur battery application. Journal of Power Sources, 2021, 486, 229326.	7.8	21
13	Sodiumâ€Ion Battery Fullâ€Cell Study with a Pseudocapacitive MoSe₂â€Porous Nâ€Doped Carbon Composite Anode and Intercalated Sodium Vanadium Fluorophosphate Cathode. Batteries and Supercaps, 2021, 4, 978-988.	4.7	15
14	Simple route to lithium dendrite prevention for long cycle-life lithium metal batteries. Applied Materials Today, 2021, 23, 101062.	4.3	8
15	Layered 2H-MoTe2: A novel anode material for lithium-ion batteries. Materials Today: Proceedings, 2021, , .	1.8	3
16	Zirconiumâ€Doped Vanadium Oxide and Ammonium Linked Layered Cathode to Construct a Fullâ€Cell Magnesiumâ€Ion Battery: A Realization and Structural, Electrochemical Study. Batteries and Supercaps, 2021, 4, 1757-1770.	4.7	10
17	Electrochemical properties of biomass-derived carbon and its composite along with Na2Ti3O7 as potential high-performance anodes for Na-ion and Li-ion batteries. Electrochimica Acta, 2021, 392, 139026.	5.2	27
18	Sub-zero and room-temperature sodiumâ€“sulfur battery cell operations: A rational current collector, catalyst and sulphur-host design and study. Energy Storage Materials, 2021, 42, 608-617.	18.0	14

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19	Surface-Modified Lithium Cobalt Oxide (LiCoO₂) with Enhanced Performance at Higher Rates through Li-Vacancy Ordering in the Monoclinic Phase. ACS Applied Energy Materials, 2021, 4, 14260-14272.	5.1	14
20	Unique Structure-Induced Magnetic and Electrochemical Activity in Nanostructured Transition Metal Tellurates Co_{1Ââ€“Âx}Ni_xTeO₄ (x = 0, 0.5, and 1). ACS Applied Energy Materials, 2020, 3, 9436-9448.	5.1	10
21	High Performance Lithiumâ€Ion Batteries Using Layered 2Hâ€MoTe₂ as Anode. Small, 2020, 16, e2002669.	10.0	54
22	Lewis Acidâ€“Base Interactions between Polysulfides and Boehmite Enables Stable Roomâ€Temperature Sodiumâ€“Sulfur Batteries. Advanced Functional Materials, 2020, 30, 2005669.	14.9	40
23	Mechanical and Electrochemical Stability Improvement of SiC-Reinforced Silicon-Based Composite Anode for Li-Ion Batteries. ACS Applied Energy Materials, 2020, 3, 12613-12626.	5.1	14
24	Ultrathin Lithium Aluminate Nanoflake-Inlaid Sulfur as a Cathode Material for Lithiumâ€“Sulfur Batteries with High Areal Capacity. ACS Applied Energy Materials, 2020, 3, 5637-5645.	5.1	10
25	Free-Radical Catalysis and Enhancement of the Redox Kinetics for Room-Temperature Sodiumâ€“Sulfur Batteries. ACS Energy Letters, 2020, 5, 2112-2121.	17.4	45
26	Chemically sodiated ammonium vanadium oxide as a new generation high-performance cathode. Journal of Power Sources, 2020, 452, 227832.	7.8	7
27	Practical Aqueous Calcium-Ion Battery Full-Cells for Future Stationary Storage. ACS Applied Materials & Interfaces, 2020, 12, 11489-11503.	8.0	85
28	A simple approach to minimize the first cycle irreversible loss of sodium titanate anode towards the development of sodium-ion battery. Nano Energy, 2020, 70, 104520.	16.0	43
29	A novel chemical reduction/co-precipitation method to prepare sulfur functionalized reduced graphene oxide for lithium-sulfur batteries. Electrochimica Acta, 2020, 344, 136147.	5.2	35
30	Halogen-free flame-retardant sulfur copolymers with stable Liâ€“S battery performance. Energy Storage Materials, 2020, 29, 350-360.	18.0	36
31	High-Potential Cathode for Sodium-Ion Battery. Springer Proceedings in Energy, 2020, , 371-377.	0.3	0
32	Study of Higher Discharge Capacity, Phase Transition, and Relative Structural Stability in Li₂FeSiO₄ Cathode upon Lithium Extraction Using an Experimental and Theoretical Approach and Full Cell Prototype Study. ACS Applied Energy Materials, 2019, 2, 6584-6598.	5.1	21
33	Structural and electrochemical mechanism study of layered MoTe2 anode material for sodium-ion battery. AIP Conference Proceedings, 2019, , .	0.4	1
34	Blocks of molybdenum ditelluride: A high rate anode for sodium-ion battery and full cell prototype study. Nano Energy, 2019, 64, 103951.	16.0	57
35	Sulfur, Nitrogen Dual Doped Reduced Graphene Oxide Supported Twoâ€Dimensional Sb₂S₃ Nanostructures for the Anode Material of Sodiumâ€Ion Battery. ChemistrySelect, 2019, 4, 6679-6686.	1.5	18
36	Mechanism of Na-Ion Storage in BiOCl Anode and the Sodium-Ion Battery Formation. Journal of Physical Chemistry C, 2019, 123, 11500-11507.	3.1	18

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37	Three-Dimensionally Reinforced Freestanding Cathode for High-Energy Room-Temperature Sodiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2019, 11, 14101-14109.	8.0	55
38	Insights of Diffusion Doping in Formation of Dual-Layered Material and Doped Heterostructure SnSâ€“Sn:Sb‹sub›2‹/sub›S‹sub›3‹/sub› for Sodium Ion Storage. Journal of Physical Chemistry Letters, 2019, 10, 1024-1030.	4.6	14
39	Bio-derived mesoporous disordered carbon: An excellent anode in sodium-ion battery and full-cell lab prototype. Carbon, 2019, 143, 402-412.	10.3	102
40	Nanostructured vanadium tri-oxides, as a long life and high performance anode for sodium-ion battery. Electrochimica Acta, 2019, 299, 914-925.	5.2	30
41	Improved performance of silver doped titania/poly(vinylidine fluoride) nanofibers polymer electrolyte for lithium ion battery. Materials Letters, 2019, 236, 225-228.	2.6	12
42	Nitrogen and Sulfur Doped Carbon Cloth as Current Collector and Polysulfide Immobilizer for Magnesiumâ€Sulfur Batteries. ChemElectroChem, 2019, 6, 684-689.	3.4	41
43	High-energy density room temperature sodium-sulfur battery enabled by sodium polysulfide catholyte and carbon cloth current collector decorated with MnO2 nanoarrays. Energy Storage Materials, 2019, 20, 196-202.	18.0	82
44	MoTe2, A novel anode material for sodium ion battery. AIP Conference Proceedings, 2018, , .	0.4	4
45	An Aqueous Caâ€ion Full Cell Comprising BaHCF Cathode and MCMB Anode. ChemistrySelect, 2018, 3, 3687-3690.	1.5	24
46	Efficient conversion of sand to nano-silicon and its energetic Si-C composite anode design for high volumetric capacity lithium-ion battery. Journal of Power Sources, 2018, 382, 56-68.	7.8	48
47	Thermodynamic evaluation of chemical looping based nitric oxide and hydrogen production. Chemical Engineering Research and Design, 2018, 132, 252-275.	5.6	4
48	Reversible Mg insertion into chevrel phase Mo6S8 cathode: Preparation, electrochemistry and X-ray photoelectron spectroscopy study. Materials Research Bulletin, 2018, 101, 167-174.	5.2	24
49	Stability enhancing ionic liquid hybrid electrolyte for NVP@C cathode based sodium batteries. Sustainable Energy and Fuels, 2018, 2, 566-576.	4.9	37
50	Passivation behaviour of aluminium current collector in ionic liquid alkyl carbonate (hybrid) electrolytes. Npj Materials Degradation, 2018, 2, .	5.8	37
51	Ionic liquid electrolytes supporting high energy density in sodium-ion batteries based on sodium vanadium phosphate composites. Chemical Communications, 2018, 54, 3500-3503.	4.1	31
52	In Situ Surface Coating of Squaric Acid with Conductive Polyaniline for a Highâ€Capacity and Sustainable Lithium Battery Anode. ChemElectroChem, 2018, 5, 159-165.	3.4	9
53	Role of Nâ€Propylâ€Nâ€Methyl Pyrrolidinium bis(trifluoromethanesulfonyl)imide as an Electrolyte Additive in Sodium Battery Electrochemistry. Energy Technology, 2018, 6, 2232-2237.	3.8	13
54	Sustainable one step process for making carbon-free TiO2 anodes and sodium-ion battery electrochemistry. Sustainable Energy and Fuels, 2018, 2, 1582-1587.	4.9	5

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55	Iron oxide shell coating on nano silicon prepared from the sand for lithium-ion battery application. AIP Conference Proceedings, 2018, , .	0.4	1
56	A high-performance sodium anode composed of few-layer MoSe₂ and N, P doped reduced graphene oxide composites. Inorganic Chemistry Frontiers, 2018, 5, 2189-2197.	6.0	53
57	Covalent organic framework based microspheres as an anode material for rechargeable sodium batteries. Journal of Materials Chemistry A, 2018, 6, 16655-16663.	10.3	113
58	Electrochemical investigation of MoTe2/rGO composite materials for sodium-ion battery application. AIP Conference Proceedings, 2018, , .	0.4	7
59	Free standing Cu2Te, new anode material for sodium-ion battery. AIP Conference Proceedings, 2018, , .	0.4	3
60	Highâ€Rate Capable Fullâ€Cell Lithiumâ€Ion Battery based on a Conversion Anode and an Intercalation Cathode. ChemElectroChem, 2017, 4, 686-691.	3.4	11
61	Intermediate phases in sodium intercalation into MoS2 nanosheets and their implications for sodium-ion batteries. Nano Energy, 2017, 38, 342-349.	16.0	151
62	Efficient sodium storage: Experimental study of anode with additive-free ether-based electrolyte system. Journal of Power Sources, 2017, 349, 152-162.	7.8	11
63	Sulfur Copolymer: A New Cathode Structure for Room-Temperature Sodiumâ€“Sulfur Batteries. ACS Energy Letters, 2017, 2, 2478-2485.	17.4	117
64	Advanced sodium storage property in an exfoliated MoO3 anode: the stability and performance improvement by in situ impedance mapping. Journal of Materials Chemistry A, 2017, 5, 20491-20496.	10.3	14
65	In-situ Electron Diffraction Studies of Sodium Electrochemistry in MoS2. Microscopy and Microanalysis, 2017, 23, 2050-2051.	0.4	0
66	Impact of Cl Doping on Electrochemical Performance in Orthosilicate (Li₂FeSiO₄): A Density Functional Theory Supported Experimental Approach. ACS Applied Materials & Interfaces, 2017, 9, 26885-26896.	8.0	37
67	Controlled 3D Carbon Nanotube Architecture Coated with MoO_x Material by ALD Technique: A High Energy Density Lithiumâ€Ion Battery Electrode. Advanced Materials Interfaces, 2017, 4, 1700332.	3.7	16
68	Exceptionally high sodium-ion battery cathode capacity based on doped ammonium vanadium oxide and a full cell SIB prototype study. Journal of Materials Chemistry A, 2017, 5, 24929-24941.	10.3	34
69	Understanding the Behavior of LiCoO₂ Cathodes at Extended Potentials in Ionic Liquidâ€“Alkyl Carbonate Hybrid Electrolytes. Journal of Physical Chemistry C, 2017, 121, 15630-15638.	3.1	12
70	Exfoliated MoS₂nanosheets confined in 3-D hierarchical carbon nanotube@graphene architecture with superior sodium-ion storage. Journal of Materials Chemistry A, 2017, 5, 355-363.	10.3	70
71	Intercalation based tungsten disulfide (WS₂) Li-ion battery anode grown by atomic layer deposition. RSC Advances, 2016, 6, 38024-38032.	3.6	51
72	Carbothermal reduction of beach sand to graphite silicate and silicon carbide. Materials Today: Proceedings, 2016, 3, 2672-2678.	1.8	2

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73	An alternative process for nitric oxide and hydrogen production using metal oxides. Chemical Engineering Research and Design, 2016, 112, 36-45.	5.6	8
74	Cardanol benzoxazineâ€Sulfur Copolymers for Liâ€S batteries: Symbiosis of Sustainability and Performance. ChemistrySelect, 2016, 1, 594-600.	1.5	42
75	Preparation, structure study and electrochemistry of layered H2V3O8 materials: High capacity lithium-ion battery cathode. Journal of Power Sources, 2016, 329, 179-189.	7.8	15
76	Cardanol benzoxazines â€“ A sustainable linker for elemental sulphur based copolymers via inverse vulcanisation. Polymer, 2016, 99, 349-357.	3.8	71
77	Sonochemical Synthesis of Nanostructured Spinel Li4Ti5O12 Negative Insertion Material for Li-ion and Na-ion Batteries. Electrochimica Acta, 2016, 222, 898-903.	5.2	14
78	A Facile Bottom-Up Approach to Construct Hybrid Flexible Cathode Scaffold for High-Performance Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2016, 8, 33775-33785.	8.0	44
79	Sustainable Sulfur-rich Copolymer/Graphene Composite as Lithium-Sulfur Battery Cathode with Excellent Electrochemical Performance. Scientific Reports, 2016, 6, 25207.	3.3	68
80	Solvent transfer of graphene oxide for synthesis of tin mono-sulfide graphene composite and application as anode of lithium-ion battery. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2016, 213, 69-82.	3.5	7
81	Exergy efficiency improvement in hydrogen production process by recovery of chemical energy versus thermal energy. Clean Technologies and Environmental Policy, 2016, 18, 1391-1404.	4.1	8
82	Atomic layer deposited tungsten nitride thin films as a new lithium-ion battery anode. Physical Chemistry Chemical Physics, 2015, 17, 17445-17453.	2.8	54
83	Facile synthesis of viologen and its reversible lithium storage property in organic lithium-ion batteries. RSC Advances, 2015, 5, 105632-105635.	3.6	10
84	Flagellar filament bio-templated inorganic oxide materials â€“ towards an efficient lithium battery anode. Scientific Reports, 2015, 5, 7736.	3.3	24
85	The influence of electrode structure on the performance of an SnS anode in Li-ion batteries: effect of the electrode particle, conductive support shape and additive. RSC Advances, 2015, 5, 23671-23682.	3.6	39
86	Exfoliated MoS2 Sheets and Reduced Graphene Oxide-An Excellent and Fast Anode for Sodium-ion Battery. Scientific Reports, 2015, 5, 12571.	3.3	184
87	Rechargeable Sodium-Ion Battery: High-Capacity Ammonium Vanadate Cathode with Enhanced Stability at High Rate. ACS Applied Materials & Interfaces, 2015, 7, 17044-17053.	8.0	63
88	Electrochemical studies of N-Methyl N-Propyl Pyrrolidinium bis(trifluoromethanesulfonyl) imide ionic liquid mixtures with conventional electrolytes in LiFePO4/Li cells. Electrochimica Acta, 2015, 180, 737-745.	5.2	42
89	Excellent electrochemical performance of tin monosulphide (SnS) as a sodium-ion battery anode. RSC Advances, 2014, 4, 43155-43159.	3.6	78
90	Electrodeposition of iron phosphide on copper substrate as conversion negative electrode for lithium-ion battery application. Ionics, 2014, 20, 137-140.	2.4	14

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91	Morphology controlled synthesis of layered NH4V4O10 and the impact of binder on stable high rate electrochemical performance. Electrochimica Acta, 2014, 132, 448-456.	5.2	68
92	Improved electrochemical activity of nanostructured Li2FeSiO4/MWCNTs composite cathode. Electrochimica Acta, 2014, 123, 378-386.	5.2	51
93	Tin sulfide (SnS) nanorods: structural, optical and lithium storage property study. RSC Advances, 2014, 4, 10358.	3.6	105
94	Oneâ€Dimensional, Additiveâ€Free, Singleâ€Crystal TiO₂ Nanostructured Anodes Synthesized by a Singleâ€Step Aerosol Process for Highâ€Rate Lithiumâ€Ion Batteries. Energy Technology, 2014, 2, 906-911.	3.8	17
95	Improved electrochemical performance of SnO2â€“mesoporous carbon hybrid as a negative electrode for lithium ion battery applications. Physical Chemistry Chemical Physics, 2014, 16, 6630.	2.8	83
96	Synthesis of Molybdenum Oxides and their Electrochemical Properties against Li. Energy Procedia, 2014, 54, 740-747.	1.8	35
97	Intercalation Anode Material for Lithium Ion Battery Based on Molybdenum Dioxide. ACS Applied Materials & Interfaces, 2014, 6, 14311-14319.	8.0	79
98	Atomic Layer Deposited MoS 2 as a Carbon and Binder Free Anode in Li-ion Battery. Electrochimica Acta, 2014, 146, 706-713.	5.2	73
99	Ecofriendly Approach to Making Grapheneâ€“Tin/Tin Oxide Nanocomposite Electrodes for Energy Storage. ChemElectroChem, 2014, 1, 1327-1337.	3.4	18
100	Atomic Layer Deposited Molybdenum Nitride Thin Film: A Promising Anode Material for Li Ion Batteries. ACS Applied Materials & Interfaces, 2014, 6, 6606-6615.	8.0	100
101	Cost-benefit analysis of different hydrogen production technologies using AHP and Fuzzy AHP. International Journal of Hydrogen Energy, 2014, 39, 15293-15306.	7.1	67
102	Improved electrode fabrication method to enhance performance and stability of MoS2-based lithium-ion battery anode. Journal of Solid State Electrochemistry, 2014, 18, 2701-2708.	2.5	14
103	Electrochemical Properties of Spinel Cobalt Ferrite Nanoparticles with Sodium Alginate as Interactive Binder. ChemElectroChem, 2014, 1, 1068-1074.	3.4	45
104	An experimental and computational study to understand the lithium storage mechanism in molybdenum disulfide. Nanoscale, 2014, 6, 10243-10254.	5.6	103
105	Li3V2(PO4)3 Addition to the Olivine Phase: Understanding the Effect in Electrochemical Performance. Journal of Physical Chemistry C, 2014, 118, 11512-11525.	3.1	16
106	Li2MnO3 rich-LiMn0.33Co0.33Ni0.33O2 integrated nano-composites as high energy density lithium-ion battery cathode materials. Electrochimica Acta, 2013, 108, 135-144.	5.2	26
107	A way to identify archaellins in Halobacterium salinarum archaella by FLAG-tagging. Open Life Sciences, 2013, 8, 828-834.	1.4	2
108	Green template-free synthesis of SnO2 nanospheres â€“ a physical understanding and electrochemistry. RSC Advances, 2013, 3, 19423.	3.6	7

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109	Thin copper phosphide films as conversion anode for lithium-ion battery applications. Electrochimica Acta, 2013, 92, 47-54.	5.2	37
110	High-Rate and High-Energy-Density Lithium-Ion Battery Anode Containing 2D MoS₂ Nanowall and Cellulose Binder. ACS Applied Materials & Interfaces, 2013, 5, 1240-1247.	8.0	223
111	High capacity lithium-ion battery cathode using LiV3O8 nanorods. Electrochimica Acta, 2013, 99, 242-252.	5.2	78
112	Nickel ferrite as a stable, high capacity and high rate anode for Li-ion battery applications. RSC Advances, 2013, 3, 25058.	3.6	66
113	Electrochemical activity of Î±-MoO3 nano-belts as lithium-ion battery cathode. RSC Advances, 2012, 2, 11123.	3.6	79
114	Exfoliated graphiteâ€“ruthenium oxide composite electrodes for electrochemical supercapacitors. Journal of Power Sources, 2008, 185, 1544-1549.	7.8	46
115	Alternating Current Conductivity and Spectroscopic Studies on Solâ^'Gel Derived, Trivalent Ion Containing Silicateâ^'Tetra(ethylene glycol)-Based Composites. Macromolecules, 2005, 38, 134-144.	4.8	4
116	Electrochemical Capacitors Based on Exfoliated Graphite Electrodes. Electrochemical and Solid-State Letters, 2004, 7, A264.	2.2	43
117	Electrochemical Capacitors Based on Sol-Gel Derived, Ionically Conducting Composite Solid Electrolytes. Electrochemical and Solid-State Letters, 2003, 6, A149.	2.2	6
118	Solâ€“gel derived, magnesium based ionically conducting composites. Journal of Materials Chemistry, 2002, 12, 2531-2537.	6.7	16