Sagar Mitra

List of Publications by Year
in descending order

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Version: 2024-02-01

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	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
2	Exfoliated MoS2 Sheets and Reduced Graphene Oxide-An Excellent and Fast Anode for Sodium-ion Battery. Scientific Reports, 2015, 5, 12571.	3.3	184
3	Intermediate phases in sodium intercalation into MoS2 nanosheets and their implications for sodium-ion batteries. Nano Energy, 2017, 38, 342-349.	16.0	151
4	Sulfur Copolymer: A New Cathode Structure for Room-Temperature Sodiumâ€“Sulfur Batteries. ACS Energy Letters, 2017, 2, 2478-2485.	17.4	117
5	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
6	Tin sulfide (SnS) nanorods: structural, optical and lithium storage property study. RSC Advances, 2014, 4, 10358.	3.6	105
7	An experimental and computational study to understand the lithium storage mechanism in molybdenum disulfide. Nanoscale, 2014, 6, 10243-10254.	5.6	103
8	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
9	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
10	Practical Aqueous Calcium-Ion Battery Full-Cells for Future Stationary Storage. ACS Applied Materials & Interfaces, 2020, 12, 11489-11503.	8.0	85
11	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
12	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
13	Electrochemical activity of Î±-MoO3 nano-belts as lithium-ion battery cathode. RSC Advances, 2012, 2, 11123.	3.6	79
14	Intercalation Anode Material for Lithium Ion Battery Based on Molybdenum Dioxide. ACS Applied Materials & Interfaces, 2014, 6, 14311-14319.	8.0	79
15	High capacity lithium-ion battery cathode using LiV3O8 nanorods. Electrochimica Acta, 2013, 99, 242-252.	5.2	78
16	Excellent electrochemical performance of tin monosulphide (SnS) as a sodium-ion battery anode. RSC Advances, 2014, 4, 43155-43159.	3.6	78
17	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
18	Cardanol benzoxazines â€“ A sustainable linker for elemental sulphur based copolymers via inverse vulcanisation. Polymer, 2016, 99, 349-357.	3.8	71

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19	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
20	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
21	Sustainable Sulfur-rich Copolymer/Graphene Composite as Lithium-Sulfur Battery Cathode with Excellent Electrochemical Performance. Scientific Reports, 2016, 6, 25207.	3.3	68
22	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
23	Nickel ferrite as a stable, high capacity and high rate anode for Li-ion battery applications. RSC Advances, 2013, 3, 25058.	3.6	66
24	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
25	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
26	Three-Dimensionally Reinforced Freestanding Cathode for High-Energy Room-Temperature Sodiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2019, 11, 14101-14109.	8.0	55
27	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
28	High Performance Lithiumâ€Ion Batteries Using Layered 2Hâ€MoTe₂ as Anode. Small, 2020, 16, e2002669.	10.0	54
29	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
30	Improved electrochemical activity of nanostructured Li2FeSiO4/MWCNTs composite cathode. Electrochimica Acta, 2014, 123, 378-386.	5.2	51
31	Intercalation based tungsten disulfide (WS₂) Li-ion battery anode grown by atomic layer deposition. RSC Advances, 2016, 6, 38024-38032.	3.6	51
32	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
33	Exfoliated graphiteâ€“ruthenium oxide composite electrodes for electrochemical supercapacitors. Journal of Power Sources, 2008, 185, 1544-1549.	7.8	46
34	Electrochemical Properties of Spinel Cobalt Ferrite Nanoparticles with Sodium Alginate as Interactive Binder. ChemElectroChem, 2014, 1, 1068-1074.	3.4	45
35	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
36	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

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37	Electrochemical Capacitors Based on Exfoliated Graphite Electrodes. Electrochemical and Solid-State Letters, 2004, 7, A264.	2.2	43
38	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
39	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
40	Cardanol benzoxazineâ€Sulfur Copolymers for Liâ€S batteries: Symbiosis of Sustainability and Performance. ChemistrySelect, 2016, 1, 594-600.	1.5	42
41	Nitrogen and Sulfur Doped Carbon Cloth as Current Collector and Polysulfide Immobilizer for Magnesiumâ€Sulfur Batteries. ChemElectroChem, 2019, 6, 684-689.	3.4	41
42	Lewis Acidâ€“Base Interactions between Polysulfides and Boehmite Enables Stable Roomâ€Temperature Sodiumâ€“Sulfur Batteries. Advanced Functional Materials, 2020, 30, 2005669.	14.9	40
43	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
44	Thin copper phosphide films as conversion anode for lithium-ion battery applications. Electrochimica Acta, 2013, 92, 47-54.	5.2	37
45	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
46	Stability enhancing ionic liquid hybrid electrolyte for NVP@C cathode based sodium batteries. Sustainable Energy and Fuels, 2018, 2, 566-576.	4.9	37
47	Passivation behaviour of aluminium current collector in ionic liquid alkyl carbonate (hybrid) electrolytes. Npj Materials Degradation, 2018, 2, .	5.8	37
48	Halogen-free flame-retardant sulfur copolymers with stable Liâ€“S battery performance. Energy Storage Materials, 2020, 29, 350-360.	18.0	36
49	Synthesis of Molybdenum Oxides and their Electrochemical Properties against Li. Energy Procedia, 2014, 54, 740-747.	1.8	35
50	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
51	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
52	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
53	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
54	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

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55	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
56	Flagellar filament bio-templated inorganic oxide materials â€“ towards an efficient lithium battery anode. Scientific Reports, 2015, 5, 7736.	3.3	24
57	An Aqueous Caâ€ion Full Cell Comprising BaHCF Cathode and MCMB Anode. ChemistrySelect, 2018, 3, 3687-3690.	1.5	24
58	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
59	Sodium-ion batteries: Chemistry of biomass derived disordered carbon in carbonate and ether-based electrolytes. Electrochimica Acta, 2022, 425, 140744.	5.2	23
60	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
61	Magnesium polysulfide catholyte (MgSx): Synthesis, electrochemical and computational study for magnesium-sulfur battery application. Journal of Power Sources, 2021, 486, 229326.	7.8	21
62	Ecofriendly Approach to Making Grapheneâ€“Tin/Tin Oxide Nanocomposite Electrodes for Energy Storage. ChemElectroChem, 2014, 1, 1327-1337.	3.4	18
63	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
64	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
65	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
66	Solâ€“gel derived, magnesium based ionically conducting composites. Journal of Materials Chemistry, 2002, 12, 2531-2537.	6.7	16
67	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
68	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
69	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
70	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
71	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
72	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

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73	Electrodeposition of iron phosphide on copper substrate as conversion negative electrode for lithium-ion battery application. Ionics, 2014, 20, 137-140.	2.4	14
74	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
75	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
76	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
77	Insights of Diffusion Doping in Formation of Dual-Layered Material and Doped Heterostructure SnSâ€“Sn:Sb₂S₃ for Sodium Ion Storage. Journal of Physical Chemistry Letters, 2019, 10, 1024-1030.	4.6	14
78	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
79	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
80	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
81	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
82	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
83	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
84	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
85	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
86	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
87	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
88	Facile synthesis of viologen and its reversible lithium storage property in organic lithium-ion batteries. RSC Advances, 2015, 5, 105632-105635.	3.6	10
89	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
90	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

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91	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
92	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
93	An alternative process for nitric oxide and hydrogen production using metal oxides. Chemical Engineering Research and Design, 2016, 112, 36-45.	5.6	8
94	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
95	Simple route to lithium dendrite prevention for long cycle-life lithium metal batteries. Applied Materials Today, 2021, 23, 101062.	4.3	8
96	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
97	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
98	Green template-free synthesis of SnO2 nanospheres â€“ a physical understanding and electrochemistry. RSC Advances, 2013, 3, 19423.	3.6	7
99	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
100	Electrochemical investigation of MoTe2/rGO composite materials for sodium-ion battery application. AIP Conference Proceedings, 2018, , .	0.4	7
101	Chemically sodiated ammonium vanadium oxide as a new generation high-performance cathode. Journal of Power Sources, 2020, 452, 227832.	7.8	7
102	Electrocatalytic Activity of Polyaniline in Magnesiumâ€“Sulfur Batteries. Journal of Physical Chemistry Letters, 2022, 13, 1337-1343.	4.6	7
103	Electrochemical Capacitors Based on Sol-Gel Derived, Ionically Conducting Composite Solid Electrolytes. Electrochemical and Solid-State Letters, 2003, 6, A149.	2.2	6
104	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
105	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
106	MoTe2, A novel anode material for sodium ion battery. AIP Conference Proceedings, 2018, , .	0.4	4
107	Thermodynamic evaluation of chemical looping based nitric oxide and hydrogen production. Chemical Engineering Research and Design, 2018, 132, 252-275.	5.6	4
108	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

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109	Free standing Cu2Te, new anode material for sodium-ion battery. AIP Conference Proceedings, 2018, , .	0.4	3
110	Layered 2H-MoTe2: A novel anode material for lithium-ion batteries. Materials Today: Proceedings, 2021, , .	1.8	3
111	A way to identify archaellins in Halobacterium salinarum archaella by FLAG-tagging. Open Life Sciences, 2013, 8, 828-834.	1.4	2
112	Carbothermal reduction of beach sand to graphite silicate and silicon carbide. Materials Today: Proceedings, 2016, 3, 2672-2678.	1.8	2
113	Iron oxide shell coating on nano silicon prepared from the sand for lithium-ion battery application. AIP Conference Proceedings, 2018, , .	0.4	1
114	Structural and electrochemical mechanism study of layered MoTe2 anode material for sodium-ion battery. AIP Conference Proceedings, 2019, , .	0.4	1
115	In-situ Electron Diffraction Studies of Sodium Electrochemistry in MoS2. Microscopy and Microanalysis, 2017, 23, 2050-2051.	0.4	0
116	High-Potential Cathode for Sodium-Ion Battery. Springer Proceedings in Energy, 2020, , 371-377.	0.3	0
117	Kinetics of polysulfide on metal-sulfur batteries. , 2022, , 679-713.		0
118	Challenges and opportunities for energy storage technologies. , 2022, , 607-645.		0