

Daiwon Choi

List of Publications by Year in descending order

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75
papers

15,455
citations

61984

43
h-index

110387

64
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78
all docs

78
docs citations

78
times ranked

18383
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrochemical Energy Storage for Green Grid. <i>Chemical Reviews</i> , 2011, 111, 3577-3613.	47.7	4,276
2	Self-Assembled TiO ₂ Graphene Hybrid Nanostructures for Enhanced Li-Ion Insertion. <i>ACS Nano</i> , 2009, 3, 907-914.	14.6	1,596
3	Nanostructures and lithium electrochemical reactivity of lithium titanites and titanium oxides: A review. <i>Journal of Power Sources</i> , 2009, 192, 588-598.	7.8	804
4	Ternary Self-Assembly of Ordered Metal Oxide Graphene Nanocomposites for Electrochemical Energy Storage. <i>ACS Nano</i> , 2010, 4, 1587-1595.	14.6	795
5	Fast and Reversible Surface Redox Reaction in Nanocrystalline Vanadium Nitride Supercapacitors. <i>Advanced Materials</i> , 2006, 18, 1178-1182.	21.0	720
6	Exfoliated MoS ₂ Nanocomposite as an Anode Material for Lithium Ion Batteries. <i>Chemistry of Materials</i> , 2010, 22, 4522-4524.	6.7	714
7	Reversible Sodium Ion Insertion in Single Crystalline Manganese Oxide Nanowires with Long Cycle Life. <i>Advanced Materials</i> , 2011, 23, 3155-3160.	21.0	638
8	High Performance LiNi _{0.5} Mn _{1.5} O ₄ Spinel Controlled by Mn ³⁺ Concentration and Site Disorder. <i>Advanced Materials</i> , 2012, 24, 2109-2116.	21.0	434
9	Chemically Bonded Phosphorus/Graphene Hybrid as a High Performance Anode for Sodium-Ion Batteries. <i>Nano Letters</i> , 2014, 14, 6329-6335.	9.1	434
10	LiMnPO ₄ Nanoplate Grown via Solid-State Reaction in Molten Hydrocarbon for Li-Ion Battery Cathode. <i>Nano Letters</i> , 2010, 10, 2799-2805.	9.1	354
11	Nanostructured calcium phosphates for biomedical applications: novel synthesis and characterization. <i>Acta Biomaterialia</i> , 2005, 1, 65-83.	8.3	325
12	Effect of entropy change of lithium intercalation in cathodes and anodes on Li-ion battery thermal management. <i>Journal of Power Sources</i> , 2010, 195, 3720-3729.	7.8	313
13	Surfactant based sol-gel approach to nanostructured LiFePO ₄ for high rate Li-ion batteries. <i>Journal of Power Sources</i> , 2007, 163, 1064-1069.	7.8	309
14	In Situ Transmission Electron Microscopy Observation of Microstructure and Phase Evolution in a SnO ₂ Nanowire during Lithium Intercalation. <i>Nano Letters</i> , 2011, 11, 1874-1880.	9.1	266
15	Synthesis and Li-Ion Insertion Properties of Highly Crystalline Mesoporous Rutile TiO ₂ . <i>Chemistry of Materials</i> , 2008, 20, 3435-3442.	6.7	254
16	Anthraquinone with tailored structure for a nonaqueous metal-organic redox flow battery. <i>Chemical Communications</i> , 2012, 48, 6669.	4.1	217
17	Controlling Porosity in Lignin-Derived Nanoporous Carbon for Supercapacitor Applications. <i>ChemSusChem</i> , 2015, 8, 428-432.	6.8	196
18	Nanocrystalline TiN Derived by a Two-Step Halide Approach for Electrochemical Capacitors. <i>Journal of the Electrochemical Society</i> , 2006, 153, A2298.	2.9	165

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19	Li-ion batteries from LiFePO ₄ cathode and anatase/graphene composite anode for stationary energy storage. <i>Electrochemistry Communications</i> , 2010, 12, 378-381.	4.7	145
20	GeO ₂ /Reduced Graphene Oxide Composite as an Anode for Li-ion Batteries: Enhanced Capacity via Reversible Utilization of Li ₂ O along with Improved Rate Performance. <i>Advanced Functional Materials</i> , 2014, 24, 1059-1066.	14.9	143
21	Enhanced performance of graphite anode materials by AlF ₃ coating for lithium-ion batteries. <i>Journal of Materials Chemistry</i> , 2012, 22, 12745.	6.7	129
22	Amorphous Zn ₂ GeO ₄ nanoparticles as anodes with high reversible capacity and long cycling life for Li-ion batteries. <i>Nano Energy</i> , 2013, 2, 498-504.	16.0	120
23	In situ transmission electron microscopy and spectroscopy studies of interfaces in Li ion batteries: Challenges and opportunities. <i>Journal of Materials Research</i> , 2010, 25, 1541-1547.	2.6	112
24	Stabilization of Silicon Anode for Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2010, 157, A1047.	2.9	108
25	Thermal stability and phase transformation of electrochemically charged/discharged LiMnPO ₄ cathode for Li-ion batteries. <i>Energy and Environmental Science</i> , 2011, 4, 4560.	30.8	107
26	Template free synthesis of LiV ₃ O ₈ nanorods as a cathode material for high-rate secondary lithium batteries. <i>Journal of Materials Chemistry</i> , 2011, 21, 1153-1161.	6.7	105
27	Chemical synthesis of hydroxyapatite/poly(μ -caprolactone) composites. <i>Materials Research Bulletin</i> , 2004, 39, 417-432.	5.2	101
28	Direct detection of Pb in urine and Cd, Pb, Cu, and Ag in natural waters using electrochemical sensors immobilized with DMSA functionalized magnetic nanoparticles. <i>Analyst</i> , 2008, 133, 348.	3.5	100
29	High-rate cathodes based on Li ₃ V ₂ (PO ₄) ₃ nanobelts prepared via surfactant-assisted fabrication. <i>Journal of Power Sources</i> , 2011, 196, 3646-3649.	7.8	100
30	Synthesis, Structure, and Electrochemical Characterization of Nanocrystalline Tantalum and Tungsten Nitrides. <i>Journal of the American Ceramic Society</i> , 2007, 90, 3113-3120.	3.8	97
31	Rechargeable Mg-Li hybrid batteries: status and challenges. <i>Journal of Materials Research</i> , 2016, 31, 3125-3141.	2.6	92
32	Li-ion battery technology for grid application. <i>Journal of Power Sources</i> , 2021, 511, 230419.	7.8	87
33	Chemically Synthesized Nanostructured VN for Pseudocapacitor Application. <i>Electrochemical and Solid-State Letters</i> , 2005, 8, A418.	2.2	81
34	Synthesis and Characterization of Lithium Manganese Phosphate by a Precipitation Method. <i>Journal of the Electrochemical Society</i> , 2010, 157, A142.	2.9	76
35	Nanostructured ceramics in medical devices: Applications and prospects. <i>Jom</i> , 2004, 56, 38-43.	1.9	73
36	Synthesis and Characterization of Nanostructured Niobium and Molybdenum Nitrides by a Two-Step Transition Metal Halide Approach. <i>Journal of the American Ceramic Society</i> , 2011, 94, 2371-2378.	3.8	71

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37	Mechano-chemical synthesis and characterization of nanostructured β -TCP powder. <i>Materials Science and Engineering C</i> , 2007, 27, 377-381.	7.3	66
38	EQCM immunoassay for phosphorylated acetylcholinesterase as a biomarker for organophosphate exposures based on selective zirconia adsorption and enzyme-catalytic precipitation. <i>Biosensors and Bioelectronics</i> , 2009, 24, 2377-2383.	10.1	65
39	Toward the design of high voltage magnesium–lithium hybrid batteries using dual-salt electrolytes. <i>Chemical Communications</i> , 2016, 52, 5379-5382.	4.1	60
40	Lithium-ion batteries for stationary energy storage. <i>Jom</i> , 2010, 62, 24-30.	1.9	59
41	Simply AlF ₃ -treated Li ₄ Ti ₅ O ₁₂ composite anode materials for stable and ultrahigh power lithium-ion batteries. <i>Journal of Power Sources</i> , 2013, 236, 169-174.	7.8	51
42	Lifecycle comparison of selected Li-ion battery chemistries under grid and electric vehicle duty cycle combinations. <i>Journal of Power Sources</i> , 2018, 380, 185-193.	7.8	49
43	An Alternative Chemical Route for the Synthesis and Thermal Stability of Chemically Enriched Hydroxyapatite. <i>Journal of the American Ceramic Society</i> , 2006, 89, 444-449.	3.8	46
44	Effects of water-based binders on electrochemical performance of manganese dioxide cathode in mild aqueous zinc batteries. , 2021, 3, 473-481.		44
45	Multi-electron redox reaction of an organic radical cathode induced by a mesopore carbon network with nitroxide polymers. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 20921.	2.8	40
46	Li-Ion Battery with LiFePO ₄ Cathode and Li ₄ Ti ₅ O ₁₂ Anode for Stationary Energy Storage. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013, 44, 21-25.	2.2	38
47	Synthesis of Nanostructured TiN Using a Two-Step Transition Metal Halide Approach. <i>Journal of the American Ceramic Society</i> , 2005, 88, 2030-2035.	3.8	32
48	Electrochemical performances of LiMnPO ₄ synthesized from non-stoichiometric Li/Mn ratio. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 18099.	2.8	31
49	Catalytic templating approaches for three-dimensional hollow carbon/graphene oxide nano-architectures. <i>Nanoscale</i> , 2013, 5, 6291.	5.6	31
50	Lithium-ion battery physics and statistics-based state of health model. <i>Journal of Power Sources</i> , 2021, 501, 230032.	7.8	23
51	Crystal and electronic structure of lithiated nanosized rutile TiO ₂ by electron diffraction and electron energy-loss spectroscopy. <i>Applied Physics Letters</i> , 2009, 94, .	3.3	21
52	Lithium Insertion Mechanism in Iron Fluoride Nanoparticles Prepared by Catalytic Decomposition of Fluoropolymer. <i>ACS Applied Energy Materials</i> , 2019, 2, 1832-1843.	5.1	21
53	Mechanistic investigation of redox processes in Zn–MnO ₂ battery in mild aqueous electrolytes. <i>Journal of Materials Chemistry A</i> , 2021, 9, 20766-20775.	10.3	18
54	Vapor-induced solid–liquid–solid process for silicon-based nanowire growth. <i>Journal of Power Sources</i> , 2010, 195, 1691-1697.	7.8	16

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55	In situ electrochemical-electron spin resonance investigations of multi-electron redox reaction for organic radical cathodes. Journal of Power Sources, 2016, 306, 812-816.	7.8	16
56	Electrochemically Controlled Ion-exchange Property of Carbon Nanotubes/Polypyrrole Nanocomposite in Various Electrolyte Solutions. Electroanalysis, 2017, 29, 929-936.	2.9	14
57	Composite organic radical-inorganic hybrid cathode for lithium-ion batteries. Journal of Power Sources, 2013, 233, 69-73.	7.8	11
58	LiCoPO ₄ cathode from a CoHPO ₄ ·xH ₂ O nanoplate precursor for high voltage Li-ion batteries. Heliyon, 2016, 2, e00081.	3.2	10
59	Synthesis, surface chemistry and pseudocapacitance mechanisms of VN nanocrystals derived by a simple two-step halide approach. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2018, 230, 8-19.	3.5	8
60	Controlling Porosity in Lignin-Derived Nanoporous Carbon for Supercapacitor Applications. ChemSusChem, 2015, 8, 411-411.	6.8	7
61	Transparent oxygen impermeable AlO _x thin films on polycarbonate deposited by reactive ion beam sputtering. Applied Surface Science, 2005, 249, 60-64.	6.1	4
62	Silicon-Based Anodes for Li-Ion Batteries. , 2013, , 471-504.		4
63	Silicon-Based Anodes for Li-Ion Batteries. , 2012, , 9293-9316.		4
64	Effect of assisted ion energy on properties of silicon oxide thin film deposited by dual ion-beam sputtering. Journal of Applied Polymer Science, 2007, 105, 2444-2452.	2.6	3
65	Nanomaterials-Enhanced Electrically Switched Ion Exchange Process for Water Treatment. , 2009, , 179-189.		2
66	In-Situ and Ex-situ TEM Imaging and Spectroscopy Study of Li-Ion Battery. Microscopy and Microanalysis, 2009, 15, 726-727.	0.4	1
67	Nanomaterials-Enhanced Electrically Switched Ion Exchange Process for Water Treatment. , 2014, , 271-280.		1
68	Exploring Lithium Deficiency in Layered Oxide Cathode for Li-Ion Battery. Advanced Sustainable Systems, 2017, 1, 1700026.	5.3	1
69	Porous LiFePO ₄ for High Rate Li-Ion Cathode by Carboxylic Surfactant Assisted Mechanochemical Approach. ECS Meeting Abstracts, 2008, , .	0.0	0
70	Full Cell Design and Performance for Stationary Li-Ion Battery System. ECS Meeting Abstracts, 2010, , .	0.0	0
71	Polyanion Type Cathodes for Stationary Lithium Ion Batteries. ECS Meeting Abstracts, 2012, , .	0.0	0
72	Olivine Type Cathodes for Stationary Lithium-Ion Batteries. ECS Meeting Abstracts, 2012, , .	0.0	0

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73	Li-ion Batteries: Exploring Lithium Deficiency in Layered Oxide Cathode for Li-ion Battery (Adv.) Tj ETQq1 1 0.784314 rgBT ₀ /Overlook	5.3	14
74	Development of Lithium-Organic Redox Flow Battery. ECS Meeting Abstracts, 2013, , .	0.0	0
75	(Invited) Comparative Reliability Testing of Li-ion Battery Chemistries Under Grid Services. ECS Meeting Abstracts, 2020, MA2020-02, 1064-1064.	0.0	0