

Dong-Hwa Seo

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

77 papers	11,920 citations	46 h-index	89 g-index
89 ext. papers	13,351 ext. citations	15 avg, IF	6.47 L-index

#	Paper	IF	Citations
77	Electrode Materials for Rechargeable Sodium-Ion Batteries: Potential Alternatives to Current Lithium-Ion Batteries. <i>Advanced Energy Materials</i> , 2012 , 2, 710-721	21.8	2590
76	The structural and chemical origin of the oxygen redox activity in layered and cation-disordered Li-excess cathode materials. <i>Nature Chemistry</i> , 2016 , 8, 692-7	17.6	713
75	Understanding the Degradation Mechanisms of LiNi _{0.5} Co _{0.2} Mn _{0.3} O ₂ Cathode Material in Lithium Ion Batteries. <i>Advanced Energy Materials</i> , 2014 , 4, 1300787	21.8	709
74	Flexible energy storage devices based on graphene paper. <i>Energy and Environmental Science</i> , 2011 , 4, 1277	35.4	497
73	Recent Progress and Perspective in Electrode Materials for K-Ion Batteries. <i>Advanced Energy Materials</i> , 2018 , 8, 1702384	21.8	428
72	Galvanic replacement reactions in metal oxide nanocrystals. <i>Science</i> , 2013 , 340, 964-8	33.3	421
71	A new high-energy cathode for a Na-ion battery with ultrahigh stability. <i>Journal of the American Chemical Society</i> , 2013 , 135, 13870-8	16.4	343
70	Highly reversible Co ₃ O ₄ /graphene hybrid anode for lithium rechargeable batteries. <i>Carbon</i> , 2011 , 49, 326-332	10.4	327
69	New iron-based mixed-polyanion cathodes for lithium and sodium rechargeable batteries: combined first principles calculations and experimental study. <i>Journal of the American Chemical Society</i> , 2012 , 134, 10369-72	16.4	323
68	Recent progress on flexible lithium rechargeable batteries. <i>Energy and Environmental Science</i> , 2014 , 7, 538-551	35.4	314
67	Computational understanding of Li-ion batteries. <i>Npj Computational Materials</i> , 2016 , 2,	10.9	299
66	Toward a lithium-"air" battery: the effect of CO ₂ on the chemistry of a lithium-oxygen cell. <i>Journal of the American Chemical Society</i> , 2013 , 135, 9733-42	16.4	262
65	A combined first principles and experimental study on Na ₃ V ₂ (PO ₄) ₂ F ₃ for rechargeable Na batteries. <i>Journal of Materials Chemistry</i> , 2012 , 22, 20535		253
64	Fabrication of FeF ₃ Nanoflowers on CNT branches and their application to high power lithium rechargeable batteries. <i>Advanced Materials</i> , 2010 , 22, 5260-4	24	242
63	Unexpected discovery of low-cost maricite NaFePO ₄ as a high-performance electrode for Na-ion batteries. <i>Energy and Environmental Science</i> , 2015 , 8, 540-545	35.4	236
62	A Family of High-Performance Cathode Materials for Na-ion Batteries, Na ₃ (VO _{1-x} PO ₄) ₂ F _{1+2x} (0 ≤ x ≤ 1): Combined First-Principles and Experimental Study. <i>Advanced Functional Materials</i> , 2014 , 24, 4603-4614	15.6	206
61	Investigation of Potassium Storage in Layered P ₃ -Type K MnO Cathode. <i>Advanced Materials</i> , 2017 , 29, 1702480	24	197

60	Ab Initio Study of the Sodium Intercalation and Intermediate Phases in Na _{0.44} MnO ₂ for Sodium-Ion Battery. <i>Chemistry of Materials</i> , 2012 , 24, 1205-1211	9.6	195
59	Biologically inspired pteridine redox centres for rechargeable batteries. <i>Nature Communications</i> , 2014 , 5, 5335	17.4	188
58	Structural evolution of layered Li _{1.2} Ni _{0.2} Mn _{0.6} O ₂ upon electrochemical cycling in a Li rechargeable battery. <i>Journal of Materials Chemistry</i> , 2010 , 20, 10179		184
57	Metal-oxygen decoordination stabilizes anion redox in Li-rich oxides. <i>Nature Materials</i> , 2019 , 18, 256-265	27	178
56	SnO ₂ /graphene composite with high lithium storage capability for lithium rechargeable batteries. <i>Nano Research</i> , 2010 , 3, 813-821	10	171
55	A new class of high capacity cation-disordered oxides for rechargeable lithium batteries: LiNi _{1/3} Ti _{1/3} Mo oxides. <i>Energy and Environmental Science</i> , 2015 , 8, 3255-3265	35.4	169
54	Electrochemical performance and ex situ analysis of ZnMn ₂ O ₄ nanowires as anode materials for lithium rechargeable batteries. <i>Nano Research</i> , 2011 , 4, 505-510	10	154
53	Multicomponent Effects on the Crystal Structures and Electrochemical Properties of Spinel-Structured M ₃ O ₄ (M = Fe, Mn, Co) Anodes in Lithium Rechargeable Batteries. <i>Chemistry of Materials</i> , 2012 , 24, 720-725	9.6	122
52	A disordered rock-salt Li-excess cathode material with high capacity and substantial oxygen redox activity: Li _{1.25} Nb _{0.25} Mn _{0.5} O ₂ . <i>Electrochemistry Communications</i> , 2015 , 60, 70-73	5.1	115
51	Redox cofactor from biological energy transduction as molecularly tunable energy-storage compound. <i>Angewandte Chemie - International Edition</i> , 2013 , 52, 8322-8	16.4	113
50	Combined First-Principle Calculations and Experimental Study on Multi-Component Olivine Cathode for Lithium Rechargeable Batteries. <i>Advanced Functional Materials</i> , 2009 , 19, 3285-3292	15.6	112
49	Ternary metal fluorides as high-energy cathodes with low cycling hysteresis. <i>Nature Communications</i> , 2015 , 6, 6668	17.4	104
48	Calibrating transition-metal energy levels and oxygen bands in first-principles calculations: Accurate prediction of redox potentials and charge transfer in lithium transition-metal oxides. <i>Physical Review B</i> , 2015 , 92,	3.3	98
47	Kinetic pathways of ionic transport in fast-charging lithium titanate. <i>Science</i> , 2020 , 367, 1030-1034	33.3	95
46	A New Strategy for High-Voltage Cathodes for K-Ion Batteries: Stoichiometric KVPO ₄ F. <i>Advanced Energy Materials</i> , 2018 , 8, 1801591	21.8	90
45	A comparative study on Na ₂ MnPO ₄ F and Li ₂ MnPO ₄ F for rechargeable battery cathodes. <i>Physical Chemistry Chemical Physics</i> , 2012 , 14, 3299-303	3.6	87
44	First-Principles Study of the Reaction Mechanism in Sodium-Oxygen Batteries. <i>Chemistry of Materials</i> , 2014 , 26, 1048-1055	9.6	82
43	Multicomponent Olivine Cathode for Lithium Rechargeable Batteries: A First-Principles Study. <i>Chemistry of Materials</i> , 2010 , 22, 518-523	9.6	81

42	Scalable functionalized graphene nano-platelets as tunable cathodes for high-performance lithium rechargeable batteries. <i>Scientific Reports</i> , 2013 , 3, 1506	4.9	79
41	Tailored Oxygen Framework of Li ₄ Ti ₅ O ₁₂ Nanorods for High-Power Li Ion Battery. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 1368-73	6.4	74
40	Mn based olivine electrode material with high power and energy. <i>Chemical Communications</i> , 2010 , 46, 1305-7	5.8	73
39	Tailoring a fluorophosphate as a novel 4 V cathode for lithium-ion batteries. <i>Scientific Reports</i> , 2012 , 2, 704	4.9	73
38	Stoichiometric Layered Potassium Transition Metal Oxide for Rechargeable Potassium Batteries. <i>Chemistry of Materials</i> , 2018 , 30, 6532-6539	9.6	73
37	The Reaction Mechanism and Capacity Degradation Model in Lithium Insertion Organic Cathodes, Li ₂ C ₆ O ₆ , Using Combined Experimental and First Principle Studies. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 3086-92	6.4	71
36	Simple preparation of high-quality graphene flakes without oxidation using potassium salts. <i>Small</i> , 2011 , 7, 864-8	11	65
35	First-principles study on lithium metal borate cathodes for lithium rechargeable batteries. <i>Physical Review B</i> , 2011 , 83,	3.3	61
34	Synthesis of Multicomponent Olivine by a Novel Mixed Transition Metal Oxalate Coprecipitation Method and Electrochemical Characterization. <i>Chemistry of Materials</i> , 2010 , 22, 2573-2581	9.6	59
33	Factors Affecting the Exfoliation of Graphite Intercalation Compounds for Graphene Synthesis. <i>Chemistry of Materials</i> , 2015 , 27, 2067-2073	9.6	50
32	A High-Energy NASICON-Type Cathode Material for Na-Ion Batteries. <i>Advanced Energy Materials</i> , 2020 , 10, 1903968	21.8	50
31	Electrochemical properties and structural evolution of O3-type layered sodium mixed transition metal oxides with trivalent nickel. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 4596-4606	13	46
30	Mg and Fe Co-doped Mn Based Olivine Cathode Material for High Power Capability. <i>Journal of the Electrochemical Society</i> , 2011 , 158, A250	3.9	46
29	Energy storage in composites of a redox couple host and a lithium ion host. <i>Nano Today</i> , 2012 , 7, 168-173	7.9	38
28	The predicted crystal structure of Li ₄ C ₆ O ₆ , an organic cathode material for Li-ion batteries, from first-principles multi-level computational methods. <i>Energy and Environmental Science</i> , 2011 , 4, 4938	35.4	38
27	Polymorphism and phase transformations of Li ₂ FeSiO ₄ (0?x?2) from first principles. <i>Physical Review B</i> , 2011 , 84,	3.3	34
26	Transition metal-doped Ni-rich layered cathode materials for durable Li-ion batteries. <i>Nature Communications</i> , 2021 , 12, 6552	17.4	28
25	Theoretical capacity achieved in a LiMn _{0.5} Fe _{0.4} Mg _{0.1} BO ₃ cathode by using topological disorder. <i>Energy and Environmental Science</i> , 2015 , 8, 1790-1798	35.4	27

24	The Effect of Antisite Disorder and Particle Size on Li Intercalation Kinetics in Monoclinic LiMnBO ₃ . <i>Advanced Energy Materials</i> , 2015 , 5, 1401916	21.8	24
23	Redox Cofactor from Biological Energy Transduction as Molecularly Tunable Energy-Storage Compound. <i>Angewandte Chemie</i> , 2013 , 125, 8480-8486	3.6	22
22	First-Principles Design of Hydrogen Dissociation Catalysts Based on Isoelectronic Metal Solid Solutions. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 1819-24	6.4	21
21	Molecular Dynamics Simulation of the Diffusion of Au and Pt Nanoclusters on Carbon Nanotubes. <i>Journal of Physical Chemistry C</i> , 2009 , 113, 10416-10421	3.8	18
20	Direct Observation of Alternating Octahedral and Prismatic Sodium Layers in O3-Type Transition Metal Oxides. <i>Advanced Energy Materials</i> , 2020 , 10, 2001151	21.8	16
19	Factors that Affect the Phase Behavior of Multi-Component Olivine (LiFe _x Mn _y Co _{1-x-y} PO ₄ ; 0 . <i>Journal of the Electrochemical Society</i> , 2013 , 160, A444-A448	3.9	15
18	The Effect of Particle Size on Phase Stability of the Delithiated Li _x MnPO ₄ . <i>Journal of the Electrochemical Society</i> , 2011 , 159, A55-A59	3.9	15
17	Immobilization of Au Nanoclusters Supported on Graphite: Molecular Dynamics Simulations. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 2022-2026	3.8	13
16	Mixed Ionic/Electronic Conductor of Perovskite Li _x La _{1-x} MO ₃ toward Carbon-Free Cathode for Reversible Lithium-Air Batteries. <i>Advanced Energy Materials</i> , 2020 , 10, 2001767	21.8	13
15	Ni-stabilizing additives for completion of Ni-rich layered cathode systems in lithium-ion batteries: An Ab initio study. <i>Journal of Power Sources</i> , 2019 , 418, 74-83	8.9	12
14	Molecular dynamics simulations of the diffusion and rotation of Pt nanoclusters supported on graphite. <i>Physical Chemistry Chemical Physics</i> , 2009 , 11, 503-7	3.6	11
13	Intrinsic Nanodomains in Triphite LiFeSO ₄ F and Its Implication in Lithium-Ion Diffusion. <i>Advanced Energy Materials</i> , 2018 , 8, 1701408	21.8	10
12	Invited paper: Preparation and electrochemical characterization of doped spinel LiMn _{1.88} Ge _{0.1} Li _{0.02} O ₄ cathode material. <i>Electronic Materials Letters</i> , 2011 , 7, 105-108	2.9	9
11	Lattice-Oxygen-Stabilized Li- and Mn-Rich Cathodes with Sub-Micrometer Particles by Modifying the Excess-Li Distribution. <i>Advanced Materials</i> , 2021 , 33, e2100352	24	8
10	Determining the Criticality of Li-Excess for Disordered-Rocksalt Li-Ion Battery Cathodes. <i>Advanced Energy Materials</i> , 2021 , 11, 2100204	21.8	8
9	Toward high-energy Mn-based disordered-rocksalt Li-ion cathodes. <i>Joule</i> , 2022 , 6, 53-91	27.8	7
8	Revealing the structural degradation mechanism of the Ni-rich cathode surface: How thick is the surface?. <i>Journal of Power Sources</i> , 2021 , 490, 229542	8.9	4
7	Carbon-free high-performance cathode for solid-state Li-O battery.. <i>Science Advances</i> , 2022 , 8, eabm8584	44.3	4

- 6 Alkali-Metal-Mediated Reversible Chemical Hydrogen Storage Using Seawater.. *Jacs Au*, **2021**, 1, 2339-2348 2
- 5 Titelbild: Redox Cofactor from Biological Energy Transduction as Molecularly Tunable Energy-Storage Compound (Angew. Chem. 32/2013). *Angewandte Chemie*, **2013**, 125, 8329-8329 3.6 1
- 4 Abnormally High-Lithium Storage in Pure Crystalline C Nanoparticles. *Advanced Materials*, **2021**, 33, e2104763 1
- 3 Bonding dependent lithium storage behavior of molybdenum oxides for next-generation Li-ion batteries. *Journal of Materials Chemistry A*, **2022**, 10, 7718-7727 13 1
- 2 Investigation of Ordering on Oxygen-Deficient LiNi Mn O Thin Films for Boosting Electrochemical Performance in All-Solid-State Thin-Film Batteries.. *Small*, **2022**, e2201134 11 1
- 1 Abnormally High-Lithium Storage in Pure Crystalline C60 Nanoparticles (Adv. Mater. 43/2021). *Advanced Materials*, **2021**, 33, 2170343 24 0