

Seung Woo Lee

List of Publications by Year in Descending Order

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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.

104 papers	7,492 citations	38 h-index	86 g-index
134 ext. papers	8,696 ext. citations	15.1 avg, IF	6.23 L-index

#	Paper	IF	Citations
104	Elastomeric electrolytes for high-energy solid-state lithium batteries.. <i>Nature</i> , 2022 , 601, 217-222	50.4	45
103	3D Hierarchical Host with Enhanced Sodiophilicity Enabling Anode-Free Sodium Metal Batteries.. <i>Advanced Materials</i> , 2022 , e2109767	24	9
102	Role of surface steps in activation of surface oxygen sites on Ir nanocrystals for oxygen evolution reaction in acidic media. <i>Applied Catalysis B: Environmental</i> , 2022 , 302, 120834	21.8	4
101	A 3D Hierarchical Host with Enhanced Sodiophilicity Enabling Anode-Free Sodium-Metal Batteries (Adv. Mater. 14/2022). <i>Advanced Materials</i> , 2022 , 34, 2270111	24	0
100	High-performance hybrid biofuel cells using amphiphilic assembly based enzyme electrodes. <i>Applied Physics Reviews</i> , 2022 , 9, 021413	17.3	0
99	3D Structured Graphene Anodes for Alkali Metal Ion Storage Applications. <i>ECS Meeting Abstracts</i> , 2021 , MA2021-02, 529-529	0	
98	Recent advances in non-precious group metal-based catalysts for water electrolysis and beyond. <i>Journal of Materials Chemistry A</i> , 2021 , 10, 50-88	13	4
97	Aluminum textile-based binder-free nanostructured battery cathodes using a layer-by-layer assembly of metal/metal oxide nanoparticles. <i>Applied Physics Reviews</i> , 2021 , 8, 011405	17.3	9
96	A Layer-by-Layer Assembly Route to Electroplated Fibril-Based 3D Porous Current Collectors for Energy Storage Devices. <i>Small</i> , 2021 , 17, e2007579	11	6
95	Layer-by-Layer Assembly-Based Electrocatalytic Fibril Electrodes Enabling Extremely Low Overpotentials and Stable Operation at 1 A/cm ² in Water-Splitting Reaction. <i>Advanced Functional Materials</i> , 2021 , 31, 2102530	15.6	3
94	Structure Sensitivity of Pd Facets for Enhanced Electrochemical Nitrate Reduction to Ammonia. <i>ACS Catalysis</i> , 2021 , 11, 7568-7577	13.1	35
93	Charge Transfer: Interfacial Design and Assembly for Flexible Energy Electrodes with Highly Efficient Energy Harvesting, Conversion, and Storage (Adv. Energy Mater. 27/2021). <i>Advanced Energy Materials</i> , 2021 , 11, 2170108	21.8	0
92	Textile-Type Lithium-Ion Battery Cathode Enabling High Specific/Areal Capacities and High Rate Capability through Ligand Replacement Reaction-Mediated Assembly. <i>Advanced Energy Materials</i> , 2021 , 11, 2101631	21.8	7
91	Understanding synergistic metal-oxide interactions of in situ exsolved metal nanoparticles on a pyrochlore oxide support for enhanced water splitting. <i>Energy and Environmental Science</i> , 2021 , 14, 3053-3063	35.4	17
90	High-capacity sulfur copolymer cathode with metallic fibril-based current collector and conductive capping layer. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 2334-2344	13	2
89	Interfacial Design and Assembly for Flexible Energy Electrodes with Highly Efficient Energy Harvesting, Conversion, and Storage. <i>Advanced Energy Materials</i> , 2021 , 11, 2002969	21.8	7
88	Two-Dimensional Polydopamine Positive Electrodes for High-Capacity Alkali Metal-Ion Storage. <i>ChemElectroChem</i> , 2021 , 8, 1070-1077	4.3	2

87	Fabrication of 3D structured composites of crumpled graphene, polyaniline and molybdenum disulfide nanosheets for high performance alkali metal ion storage. <i>Advanced Powder Technology</i> , 2021 , 32, 464-471	4.6	1
86	Improving Water Management and Performance of an Air-Cooled Fuel Cell System Using Pressurized Air for Aviation Applications. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 084503	3.9	2
85	Outstanding Low-Temperature Performance of Structure-Controlled Graphene Anode Based on Surface-Controlled Charge Storage Mechanism. <i>Advanced Functional Materials</i> , 2021 , 31, 2009397	15.6	13
84	Nanoparticle-Based Electrodes: Nanoparticle-Based Electrodes with High Charge Transfer Efficiency through Ligand Exchange Layer-by-Layer Assembly (Adv. Mater. 51/2020). <i>Advanced Materials</i> , 2020 , 32, 2070382	24	
83	All-Soft Supercapacitors Based on Liquid Metal Electrodes with Integrated Functionalized Carbon Nanotubes. <i>ACS Nano</i> , 2020 , 14, 5659-5667	16.7	27
82	Parametric study of passive air-cooled polymer electrolyte membrane fuel cell stacks. <i>International Journal of Heat and Mass Transfer</i> , 2020 , 156, 119886	4.9	11
81	Role of anions on electrochemical exfoliation of graphite into graphene in aqueous acids. <i>Carbon</i> , 2020 , 167, 816-825	10.4	27
80	Toward Efficient Electrocatalytic Oxygen Evolution: Emerging Opportunities with Metallic Pyrochlore Oxides for Electrocatalysts and Conductive Supports. <i>ACS Central Science</i> , 2020 , 6, 880-891	16.8	33
79	A Cost-Performance Analysis of a Sodium Heat Engine for Distributed Concentrating Solar Power. <i>Advanced Sustainable Systems</i> , 2020 , 4, 1900104	5.9	2
78	Effect of the Side-Chain Length in Perfluorinated Sulfonic and Phosphoric Acid-Based Membranes on Nanophase Segregation and Transport: A Molecular Dynamics Simulation Approach. <i>Journal of Physical Chemistry B</i> , 2020 , 124, 1571-1580	3.4	9
77	High Capacity Adsorption-Dominated Potassium and Sodium Ion Storage in Activated Crumpled Graphene. <i>Advanced Energy Materials</i> , 2020 , 10, 1903280	21.8	44
76	High-yield electrochemical hydrogen peroxide production from an enhanced two-electron oxygen reduction pathway by mesoporous nitrogen-doped carbon and manganese hybrid electrocatalysts. <i>Nanoscale Horizons</i> , 2020 , 5, 832-838	10.8	16
75	High purity hydrogen production via aqueous phase reforming of xylose over small Pt nanoparticles on a γ -Al ₂ O ₃ support. <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 13848-13861	6.7	10
74	Enhanced Lithium Storage of an Organic Cathode via the Bipolar Mechanism. <i>ACS Applied Energy Materials</i> , 2020 , 3, 3728-3735	6.1	12
73	Pd Shape-Controlled Nanoparticles Decorated with Metals for Electrochemical Nitrate and Nitrite Reduction. <i>ECS Meeting Abstracts</i> , 2020 , MA2020-02, 3268-3268	0	
72	Porous Strained Pt Nanostructured Thin-Film Electrocatalysts via Dealloying for PEM Fuel Cells. <i>Advanced Materials Interfaces</i> , 2020 , 7, 1901326	4.6	14
71	Nanoparticle-Based Electrodes with High Charge Transfer Efficiency through Ligand Exchange Layer-by-Layer Assembly. <i>Advanced Materials</i> , 2020 , 32, e2001924	24	8
70	CeO ₂ (111) Surface with Oxygen Vacancy for Radical Scavenging: A Density Functional Theory Approach. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 20950-20959	3.8	6

69	Innovative cathode flow-field design for passive air-cooled polymer electrolyte membrane (PEM) fuel cell stacks. <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 11704-11713	6.7	26
68	Analyzing oxygen transport resistance and Pt particle growth effect in the cathode catalyst layer of polymer electrolyte fuel cells. <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 13414-13427	6.7	9
67	Post-assembly modification of polymeric composite membranes using spin drying for fuel cell applications. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 7380-7388	13	9
66	Oxygen-Vacancy-Introduced BaSnO Photoanodes with Tunable Band Structures for Efficient Solar-Driven Water Splitting. <i>Advanced Materials</i> , 2019 , 31, e1903316	24	75
65	Reducing the Barrier Energy of Self-Reconstruction for Anchored Cobalt Nanoparticles as Highly Active Oxygen Evolution Electrocatalyst. <i>Advanced Materials</i> , 2019 , 31, e1901977	24	51
64	Polyethylenimine-assisted Synthesis of Au Nanoparticles for Efficient Syngas Production. <i>Electroanalysis</i> , 2019 , 31, 1401-1408	3	9
63	Room-Temperature Metallic Fusion-Induced Layer-by-Layer Assembly for Highly Flexible Electrode Applications. <i>Advanced Functional Materials</i> , 2019 , 29, 1806584	15.6	18
62	Highly conductive electrocatalytic gold nanoparticle-assembled carbon fiber electrode for high-performance glucose-based biofuel cells. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 13495-13505	13	23
61	Sodium Metal Anodes: Emerging Solutions to Dendrite Growth. <i>Chemical Reviews</i> , 2019 , 119, 5416-5460	68.1	309
60	Charge-Transfer-Modulated Transparent Supercapacitor Using Multidentate Molecular Linker and Conductive Transparent Nanoparticle Assembly. <i>ACS Nano</i> , 2019 , 13, 12719-12731	16.7	17
59	Unveiled correlations between electron affinity and solvation in redox potential of quinone-based sodium-ion batteries. <i>Energy Storage Materials</i> , 2019 , 19, 242-250	19.4	17
58	Flow-electrode capacitive deionization with highly enhanced salt removal performance utilizing high-aspect ratio functionalized carbon nanotubes. <i>Water Research</i> , 2019 , 151, 252-259	12.5	63
57	In Situ Self-Formed Nanosheet MoS/Reduced Graphene Oxide Material Showing Superior Performance as a Lithium-Ion Battery Cathode. <i>ACS Nano</i> , 2019 , 13, 1490-1498	16.7	42
56	Emergent Pseudocapacitance of 2D Nanomaterials. <i>Advanced Energy Materials</i> , 2018 , 8, 1702930	21.8	172
55	Improved capacity of redox-active functional carbon cathodes by dimension reduction for hybrid supercapacitors. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 3367-3375	13	25
54	Carbon Nanotube Web with Carboxylated Polythiophene "Assist" for High-Performance Battery Electrodes. <i>ACS Nano</i> , 2018 , 12, 3126-3139	16.7	35
53	Pseudocapacitance: Emergent Pseudocapacitance of 2D Nanomaterials (Adv. Energy Mater. 13/2018). <i>Advanced Energy Materials</i> , 2018 , 8, 1870058	21.8	7
52	Parallelized Reaction Pathway and Stronger Internal Band Bending by Partial Oxidation of Metal Sulfide/Graphene Composites: Important Factors of Synergistic Oxygen Evolution Reaction Enhancement. <i>ACS Catalysis</i> , 2018 , 8, 4091-4102	13.1	79

51	In Situ Polymerization of Dopamine on Graphene Framework for Charge Storage Applications. <i>Small</i> , 2018 , 14, e1801236	11	31
50	Stacking-Controlled Assembly of Cabbage-Like Graphene Microsphere for Charge Storage Applications. <i>Small</i> , 2018 , 14, e1801948	11	6
49	Stitchable supercapacitors with high energy density and high rate capability using metal nanoparticle-assembled cotton threads. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 20421-20432	13	17
48	Thin-Film Electrode Design for High Volumetric Electrochemical Performance Using Metal Sputtering-Combined Ligand Exchange Layer-by-Layer Assembly. <i>Advanced Functional Materials</i> , 2018 , 28, 1804926	15.6	15
47	Techno-Economic Analysis of Dual-Stage Sodium Thermal Electrochemical Converter (Na-TEC) Power Block for Distributed CSP 2018 ,		1
46	High-power hybrid biofuel cells using layer-by-layer assembled glucose oxidase-coated metallic cotton fibers. <i>Nature Communications</i> , 2018 , 9, 4479	17.4	84
45	Systematic Molecular Design of Ketone Derivatives of Aromatic Molecules for Lithium-Ion Batteries: First-Principles DFT Modeling. <i>ChemSusChem</i> , 2017 , 10, 1584-1591	8.3	32
44	Submicron silicon encapsulated with graphene and carbon as a scalable anode for lithium-ion batteries. <i>Carbon</i> , 2017 , 119, 438-445	10.4	43
43	Flexible supercapacitor electrodes based on real metal-like cellulose papers. <i>Nature Communications</i> , 2017 , 8, 536	17.4	237
42	Interfacial Li-Ion Storage between Graphene Layers. <i>ECS Transactions</i> , 2017 , 77, 19-25	1	1
41	A dual-stage sodium thermal electrochemical converter (Na-TEC). <i>Journal of Power Sources</i> , 2017 , 371, 217-224	8.9	13
40	Self-polymerized dopamine as an organic cathode for Li- and Na-ion batteries. <i>Energy and Environmental Science</i> , 2017 , 10, 205-215	35.4	181
39	High surface area carbon from polyacrylonitrile for high-performance electrochemical capacitive energy storage. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 18294-18299	13	20
38	Hierarchical networks of redox-active reduced crumpled graphene oxide and functionalized few-walled carbon nanotubes for rapid electrochemical energy storage. <i>Nanoscale</i> , 2016 , 8, 12330-8	7.7	30
37	Hydrothermally Oxidized Single-Walled Carbon Nanotube Networks for High Volumetric Electrochemical Energy Storage. <i>Small</i> , 2016 , 12, 3423-31	11	14
36	Biomass-derived carbonaceous positive electrodes for sustainable lithium-ion storage. <i>Nanoscale</i> , 2016 , 8, 3671-7	7.7	35
35	First-Principles Density Functional Theory Modeling of Li Binding: Thermodynamics and Redox Properties of Quinone Derivatives for Lithium-Ion Batteries. <i>Journal of the American Chemical Society</i> , 2016 , 138, 2374-82	16.4	142
34	PtNi octahedral nanocrystals as a class of highly active electrocatalysts toward the hydrogen evolution reaction in an alkaline electrolyte. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 12392-12397	13	82

33	Thermodynamic and redox properties of graphene oxides for lithium-ion battery applications: a first principles density functional theory modeling approach. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 20600-6	3.6	30
32	Piezoelectric-driven self-charging supercapacitor power cell. <i>ACS Nano</i> , 2015 , 9, 4337-45	16.7	170
31	High-Density Lithium-Ion Energy Storage Utilizing the Surface Redox Reactions in Folded Graphene Films. <i>Chemistry of Materials</i> , 2015 , 27, 3291-3298	9.6	64
30	Electrochemical polymerization of pyrene derivatives on functionalized carbon nanotubes for pseudocapacitive electrodes. <i>Nature Communications</i> , 2015 , 6, 7040	17.4	132
29	Ice-templated Self-assembly of VOPO ₄ -Graphene Nanocomposites for Vertically Porous 3D Supercapacitor Electrodes. <i>Scientific Reports</i> , 2015 , 5, 13696	4.9	53
28	Ultrathin supercapacitor electrodes with high volumetric capacitance and stability using direct covalent-bonding between pseudocapacitive nanoparticles and conducting materials. <i>Nano Energy</i> , 2015 , 12, 612-625	17.1	43
27	Improved stability of nano-Sn electrode with high-quality nano-SEI formation for lithium ion battery. <i>Nano Energy</i> , 2015 , 12, 314-321	17.1	85
26	Electrochemical Performance of Thin-Film Functionalized Carbon Nanotube Electrodes in Nonaqueous Cells. <i>Journal of the Electrochemical Society</i> , 2014 , 161, A1625-A1633	3.9	9
25	Vacuum-Assisted Layer-by-Layer Nanocomposites for Self-Standing 3D Mesoporous Electrodes. <i>Chemistry of Materials</i> , 2014 , 26, 5310-5318	9.6	36
24	Structural Evolution and Pulverization of Tin Nanoparticles during Lithiation-Delithiation Cycling. <i>Journal of the Electrochemical Society</i> , 2014 , 161, F3019-F3024	3.9	80
23	Self-Assembled, Redox-Active Graphene Electrodes for High-Performance Energy Storage Devices. <i>Journal of Physical Chemistry Letters</i> , 2014 , 5, 4324-30	6.4	27
22	Role of Oxygen Functional Groups in Carbon Nanotube/Graphene Freestanding Electrodes for High Performance Lithium Batteries. <i>Advanced Functional Materials</i> , 2013 , 23, 1037-1045	15.6	264
21	Surface composition tuning of Au-Pt bimetallic nanoparticles for enhanced carbon monoxide and methanol electro-oxidation. <i>Journal of the American Chemical Society</i> , 2013 , 135, 7985-91	16.4	240
20	Rapid fabrication of thick spray-layer-by-layer carbon nanotube electrodes for high power and energy devices. <i>Energy and Environmental Science</i> , 2013 , 6, 888	35.4	76
19	Self-standing positive electrodes of oxidized few-walled carbon nanotubes for light-weight and high-power lithium batteries. <i>Energy and Environmental Science</i> , 2012 , 5, 5437-5444	35.4	109
18	The nature of lithium battery materials under oxygen evolution reaction conditions. <i>Journal of the American Chemical Society</i> , 2012 , 134, 16959-62	16.4	241
17	Pt-Covered Multiwall Carbon Nanotubes for Oxygen Reduction in Fuel Cell Applications. <i>Journal of Physical Chemistry Letters</i> , 2011 , 2, 1332-6	6.4	42
16	Nanostructured carbon-based electrodes: bridging the gap between thin-film lithium-ion batteries and electrochemical capacitors. <i>Energy and Environmental Science</i> , 2011 , 4, 1972	35.4	319

15	Layer-by-layer assembled polyaniline nanofiber/multiwall carbon nanotube thin film electrodes for high-power and high-energy storage applications. <i>ACS Nano</i> , 2011 , 5, 8552-61	16.7	238
14	Synthesis, Activity and Durability of Pt Nanoparticles Supported on Multi-walled Carbon Nanotubes for Oxygen Reduction. <i>Journal of the Electrochemical Society</i> , 2011 , 158, B1398	3.9	32
13	Oxygen Reduction Activity of Pt _x Ni _{1-x} Alloy Nanoparticles on Multiwall Carbon Nanotubes. <i>Electrochemical and Solid-State Letters</i> , 2011 , 14, B110		24
12	Thin films of carbon nanotubes and chemically reduced graphenes for electrochemical micro-capacitors. <i>Carbon</i> , 2011 , 49, 457-467	10.4	237
11	Synthesis and Oxygen Reduction Reaction Activity of Atomic and Nanoparticle Gold on Thiol-Functionalized Multiwall Carbon Nanotubes. <i>Electrochemical and Solid-State Letters</i> , 2011 , 14, B105		7
10	High-power lithium batteries from functionalized carbon-nanotube electrodes. <i>Nature Nanotechnology</i> , 2010 , 5, 531-7	28.7	946
9	Role of Surface Steps of Pt Nanoparticles on the Electrochemical Activity for Oxygen Reduction. <i>Journal of Physical Chemistry Letters</i> , 2010 , 1, 1316-1320	6.4	115
8	Carbon nanotube/manganese oxide ultrathin film electrodes for electrochemical capacitors. <i>ACS Nano</i> , 2010 , 4, 3889-96	16.7	632
7	Pattern Transfer Printing of Multiwalled Carbon Nanotube Multilayers and Application in Biosensors. <i>Chemistry of Materials</i> , 2010 , 22, 4791-4797	9.6	50
6	Layer-by-layer assembly of all carbon nanotube ultrathin films for electrochemical applications. <i>Journal of the American Chemical Society</i> , 2009 , 131, 671-9	16.4	557
5	Roles of surface steps on Pt nanoparticles in electro-oxidation of carbon monoxide and methanol. <i>Journal of the American Chemical Society</i> , 2009 , 131, 15669-77	16.4	179
4	Electrostatic Layer-by-Layer Assembled Au Nanoparticle/MWNT Thin Films: Microstructure, Optical Property, and Electrocatalytic Activity for Methanol Oxidation. <i>Chemistry of Materials</i> , 2009 , 21, 2993-3001	8.6	61
3	Covalent organic frameworks: Design and applications in electrochemical energy storage devices. <i>Information Materials</i> , 2009 , 1, 1-10	23.1	2
2	Unveiled Correlations between Electron Affinity and Solvation in Redox Potential of Quinone-Based Sodium-Ion Batteries. <i>SSRN Electronic Journal</i> , 2009 , 1, 1-10	1	1
1	Ammonia and Nitric Acid Demands for Fertilizer Use in 2050. <i>ACS Energy Letters</i> , 2010 , 1, 3676-3685	20.1	30