

Seok Woo Lee

List of Publications by Year in descending order

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80
papers

11,892
citations

108046

37
h-index

120465

65
g-index

81
all docs

81
docs citations

81
times ranked

14898
citing authors

#	ARTICLE	IF	CITATIONS
1	Printed Zinc Paper Batteries. <i>Advanced Science</i> , 2022, 9, e2103894.	5.6	42
2	Tuning the Hydration Entropy of Cations during Electrochemical Intercalation for High Thermopower. <i>Advanced Energy and Sustainability Research</i> , 2022, 3, .	2.8	3
3	Mitigating Jahnâ€“Teller Effects by Fast Electrode Kinetics Inducing Charge Redistribution. <i>Advanced Functional Materials</i> , 2022, 32, 2111901.	7.8	18
4	Nitrogen Plasma-Assisted Functionalization of Silicon/Graphite Anodes to Enable Fast Kinetics. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 5237-5246.	4.0	14
5	Understanding the Role of a Water-Soluble Catechol-Functionalized Binder for Silicon Anodes by Diverse In Situ Analyses. , 2022, 4, 831-839.		15
6	Thermally Assisted Alkali/Zinc Ion Hybrid Battery for High Roundtrip Efficiency. <i>ACS Applied Energy Materials</i> , 2022, 5, 2780-2785.	2.5	1
7	Prussian Blue Nanolayer-Embedded Separator for Selective Segregation of Nickel Dissolution in High Nickel Cathodes. <i>Nano Letters</i> , 2022, 22, 1804-1811.	4.5	10
8	Editorial for Special Issue: Highly Efficient Energy Harvesting Based on Nanomaterials. <i>Nanomaterials</i> , 2022, 12, 1572.	1.9	0
9	Energy, Sustainability, and Climate Change. <i>Advanced Energy and Sustainability Research</i> , 2022, 3, .	2.8	0
10	Mitigating Jahnâ€“Teller Effects by Fast Electrode Kinetics Inducing Charge Redistribution (Adv. Funct.) Tj ETQq0 0 0 rgBT /Overlock 10 T	7.8	1
11	A polymer/small-molecule binary-blend hole transport layer for enhancing charge balance in blue perovskite light emitting diodes. <i>Journal of Materials Chemistry A</i> , 2022, 10, 13928-13935.	5.2	15
12	Continuous thermally regenerative electrochemical systems for directly converting low-grade heat to electricity. <i>Nano Energy</i> , 2022, 101, 107547.	8.2	17
13	Efficient Lowâ€“Grade Heat Harvesting Enabled by Tuning the Hydration Entropy in an Electrochemical System. <i>Advanced Materials</i> , 2021, 33, e2004717.	11.1	22
14	Tear-Based Aqueous Batteries for Smart Contact Lenses Enabled by Prussian Blue Analogue Nanocomposites. <i>Nano Letters</i> , 2021, 21, 1659-1665.	4.5	22
15	Thermally Controlled Localized Porous Graphene for Integrated Grapheneâ€“Paper Electronics. <i>Advanced Materials Technologies</i> , 2021, 6, 2001156.	3.0	9
16	Lowâ€“Grade Heat Harvesting: Efficient Lowâ€“Grade Heat Harvesting Enabled by Tuning the Hydration Entropy in an Electrochemical System (Adv. Mater. 13/2021). <i>Advanced Materials</i> , 2021, 33, 2170096.	11.1	0
17	Copper Hexacyanoferrate Thin Film Deposition and Its Application to a New Method for Diffusion Coefficient Measurement. <i>Nanomaterials</i> , 2021, 11, 1860.	1.9	3
18	Safe Battery Using Ions in Tear for Smart Contact Lens on 3D Printed Template. <i>ECS Meeting Abstracts</i> , 2021, MA2021-02, 709-709.	0.0	0

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19	An electrochromic alarm system for smart contact lenses. <i>Sensors and Actuators B: Chemical</i> , 2020, 322, 128601.	4.0	20
20	Thermal Conductive 2D Boron Nitride for High-Performance All-Solid-State Lithium-Sulfur Batteries. <i>Advanced Science</i> , 2020, 7, 2001303.	5.6	46
21	Embedding sensors using selective laser melting for self-cognitive metal parts. <i>Additive Manufacturing</i> , 2020, 33, 101151.	1.7	11
22	Selective Ion Sweeping on Prussian Blue Analogue Nanoparticles and Activated Carbon for Electrochemical Kinetic Energy Harvesting. <i>Nano Letters</i> , 2020, 20, 1800-1807.	4.5	8
23	Electrochromic Alarm System with Computer Vision in Smart Contact Lens. <i>ECS Meeting Abstracts</i> , 2020, MA2020-02, 2081-2081.	0.0	1
24	(Invited) Study of Mechanical Behaviour of Si Anode upon Electrochemical Lithium Insertion. <i>ECS Meeting Abstracts</i> , 2020, MA2020-02, 355-355.	0.0	0
25	Enhanced Performance of an Electric Double Layer Microsupercapacitor Based on Novel Carbon-Encapsulated Cu Nanowire Network Structure As the Electrode. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 40481-40489.	4.0	40
26	Lithium Manganese Oxide in an Aqueous Electrochemical System for Low-Grade Thermal Energy Harvesting. <i>Chemistry of Materials</i> , 2019, 31, 4379-4384.	3.2	41
27	The Effect of Electrolyte Type on the Li Ion Intercalation in Copper Hexacyanoferrate. <i>Journal of the Electrochemical Society</i> , 2019, 166, A1732-A1737.	1.3	12
28	Highly robust silicon bimorph plate anode and its mechanical analysis upon electrochemical lithiation. <i>Energy Storage Materials</i> , 2019, 23, 292-298.	9.5	2
29	Nucleation and Growth of Lithium-Silicon Alloy on Crystalline Silicon. <i>Advanced Engineering Materials</i> , 2019, 21, 1800520.	1.6	3
30	(Invited) Electrochemical Energy Harvesting Systems from a Mechanical Perspective. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0
31	Engineering the Electrochemical Temperature Coefficient for Efficient Low-Grade Heat Harvesting. <i>Advanced Functional Materials</i> , 2018, 28, 1803129.	7.8	64
32	Insights into morphological evolution and cycling behaviour of lithium metal anode under mechanical pressure. <i>Nano Energy</i> , 2018, 50, 659-664.	8.2	90
33	Enhancing ionic conductivity in composite polymer electrolytes with well-aligned ceramic nanowires. <i>Nature Energy</i> , 2017, 2, .	19.8	763
34	Thermally Regenerative Electrochemical Cycle for Low-Grade Heat Harvesting. <i>ACS Energy Letters</i> , 2017, 2, 2326-2334.	8.8	106
35	Avoiding short circuits from zinc metal dendrites in anode by backside-plating configuration. <i>Nature Communications</i> , 2016, 7, 11801.	5.8	286
36	In situ measurement of lithiation-induced stress in silicon nanoparticles using micro-Raman spectroscopy. <i>Nano Energy</i> , 2016, 22, 105-110.	8.2	111

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37	in Situ Transmission Electron Microscopy Studies on Silicon Anodes in Lithium Ion Batteries. ECS Meeting Abstracts, 2016, , .	0.0	0
38	Fracture of crystalline germanium during electrochemical lithium insertion. Extreme Mechanics Letters, 2015, 2, 15-19.	2.0	51
39	Kinetics and fracture resistance of lithiated silicon nanostructure pairs controlled by their mechanical interaction. Nature Communications, 2015, 6, 7533.	5.8	107
40	A reaction-controlled diffusion model for the lithiation of silicon in lithium-ion batteries. Extreme Mechanics Letters, 2015, 4, 61-75.	2.0	22
41	Vertical nanopillars for in situ probing of nuclear mechanics in adherent cells. Nature Nanotechnology, 2015, 10, 554-562.	15.6	152
42	Mechanical behavior of electrochemically lithiated silicon. Journal of Power Sources, 2015, 273, 41-51.	4.0	118
43	An electrochemical system for efficiently harvesting low-grade heat energy. Nature Communications, 2014, 5, 3942.	5.8	324
44	Manganese hexacyanomanganate open framework as a high-capacity positive electrode material for sodium-ion batteries. Nature Communications, 2014, 5, 5280.	5.8	446
45	Charging-free electrochemical system for harvesting low-grade thermal energy. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17011-17016.	3.3	206
46	Membrane-Free Battery for Harvesting Low-Grade Thermal Energy. Nano Letters, 2014, 14, 6578-6583.	4.5	149
47	Interconnected hollow carbon nanospheres for stable lithium metal anodes. Nature Nanotechnology, 2014, 9, 618-623.	15.6	1,535
48	A nanoradio utilizing the mechanical resonance of a vertically aligned nanopillar array. Nanoscale, 2014, 6, 2087.	2.8	3
49	Microscopic model for fracture of crystalline Si nanopillars during lithiation. Journal of Power Sources, 2014, 255, 274-282.	4.0	71
50	Robustness of amorphous silicon during the initial lithiation/delithiation cycle. Journal of Power Sources, 2014, 258, 253-259.	4.0	56
51	25th Anniversary Article: Understanding the Lithiation of Silicon and Other Alloying Anodes for Lithium-ion Batteries. Advanced Materials, 2013, 25, 4966-4985.	11.1	1,233
52	In Situ TEM of Two-Phase Lithiation of Amorphous Silicon Nanospheres. Nano Letters, 2013, 13, 758-764.	4.5	680
53	Vertically aligned carbon nanopillars with size and spacing control for a transparent field emission display. Nanotechnology, 2013, 24, 025301.	1.3	7
54	Fracture of crystalline silicon nanopillars during electrochemical lithium insertion. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 4080-4085.	3.3	372

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55	Reaction Front Evolution during Electrochemical Lithiation of Crystalline Silicon Nanopillars. Israel Journal of Chemistry, 2012, 52, 1118-1123.	1.0	18
56	The effect of metallic coatings and crystallinity on the volume expansion of silicon during electrochemical lithiation/delithiation. Nano Energy, 2012, 1, 401-410.	8.2	156
57	Stable cycling of double-walled silicon nanotube battery anodes through solidâ€electrolyte interphase control. Nature Nanotechnology, 2012, 7, 310-315.	15.6	2,144
58	Studying the Kinetics of Crystalline Silicon Nanoparticle Lithiation with In Situ Transmission Electron Microscopy. Advanced Materials, 2012, 24, 6034-6041.	11.1	529
59	Novel Size and Surface Oxide Effects in Silicon Nanowires as Lithium Battery Anodes. Nano Letters, 2011, 11, 4018-4025.	4.5	284
60	Anomalous Shape Changes of Silicon Nanopillars by Electrochemical Lithiation. Nano Letters, 2011, 11, 3034-3039.	4.5	364
61	Transparent lithium-ion batteries. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 13013-13018.	3.3	234
62	Field Emission of ITO-Coated Vertically Aligned Nanowire Array. Nanoscale Research Letters, 2010, 5, 1128-1131.	3.1	4
63	Nanoantenna using mechanical resonance. , 2010, , .		0
64	A Study on Field Emission Characteristics of Planar Graphene Layers Obtained from a Highly Oriented Pyrolyzed Graphite Block. Nanoscale Research Letters, 2009, 4, 1218-1221.	3.1	55
65	Braille dot display module with a PDMS membrane driven by a thermopneumatic actuator. Sensors and Actuators A: Physical, 2009, 154, 238-246.	2.0	58
66	Field emission from vertically aligned indium tin oxide tip array. , 2009, , .		0
67	Rotation effect in split and recombination micromixing. Sensors and Actuators B: Chemical, 2008, 129, 364-371.	4.0	44
68	Application of Huygens-Fresnel diffraction principle for high aspect ratio SU-8 micro-/nanotip array. Optics Letters, 2008, 33, 40.	1.7	42
69	Fabrication and characterization of freestanding 3D carbon microstructures using multi-exposures and resist pyrolysis. Journal of Micromechanics and Microengineering, 2008, 18, 035012.	1.5	41
70	Braille code display device with a PDMS membrane and thermopneumatic actuator. Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS), 2008, , .	0.0	7
71	Focal tunable liquid lens integrated with an electromagnetic actuator. Applied Physics Letters, 2007, 90, 121129.	1.5	120
72	Shrinkage ratio of PDMS and its alignment method for the wafer level process. Microsystem Technologies, 2007, 14, 205-208.	1.2	122

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73	A split and recombination micromixer fabricated in a PDMS three-dimensional structure. Journal of Micromechanics and Microengineering, 2006, 16, 1067-1072.	1.5	116
74	Micro-channel flow analysis by a fringe element reconstruction method. Journal of Micromechanics and Microengineering, 2006, 16, 571-579.	1.5	1
75	PDMS Membrane Microactuator for Focal Tunable Microlens. , 2006, , .		0
76	Microfabrication of the Split and Recombination Micromixer and the Effect of Its Cross-Sectional Rotation. , 2005, , 317.		4
77	A barrier embedded chaotic micromixer. Journal of Micromechanics and Microengineering, 2004, 14, 798-805.	1.5	215
78	Barrier Embedded Chaotic Micromixer. , 2002, , 757-759.		5
79	Fabrication of circular diaphragm for piezoelectric acoustic devices. , 0, , .		0
80	Split and recombination micromixer based on PDMS three-dimensional micro structure. , 0, , .		1