

Diana Golodnitsky

List of Publications by Year in descending order

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130
papers

6,856
citations

53751

45
h-index

64755

79
g-index

137
all docs

137
docs citations

137
times ranked

6746
citing authors

#	ARTICLE	IF	CITATIONS
1	Advanced Model for Solid Electrolyte Interphase Electrodes in Liquid and Polymer Electrolytes. Journal of the Electrochemical Society, 1997, 144, L208-L210.	1.3	892
2	XPS analysis of the SEI formed on carbonaceous materials. Solid State Ionics, 2004, 170, 83-91.	1.3	241
3	3D lithium ion batteries— from fundamentals to fabrication. Journal of Materials Chemistry, 2011, 21, 9876.	6.7	231
4	Composition, depth profiles and lateral distribution of materials in the SEI built on HOPG-TOF SIMS and XPS studies. Journal of Power Sources, 2001, 97-98, 52-57.	4.0	230
5	An Advanced Tool for the Selection of Electrolyte Components for Rechargeable Lithium Batteries. Journal of the Electrochemical Society, 1998, 145, 3482-3486.	1.3	211
6	Review— On Order and Disorder in Polymer Electrolytes. Journal of the Electrochemical Society, 2015, 162, A2551-A2566.	1.3	197
7	The sei model— application to lithium-polymer electrolyte batteries. Electrochimica Acta, 1995, 40, 2197-2204.	2.6	192
8	Three-dimensional thin-film Li-ion microbatteries for autonomous MEMS. Journal of Microelectromechanical Systems, 2005, 14, 879-885.	1.7	159
9	Parameter analysis of a practical lithium- and sodium-air electric vehicle battery. Journal of Power Sources, 2011, 196, 6835-6840.	4.0	150
10	Pt-, PtNi- and PtCo-supported catalysts for oxygen reduction in PEM fuel cells. Journal of Power Sources, 2006, 161, 782-789.	4.0	146
11	Artificial solid-electrolyte interphase (SEI) for improved cycleability and safety of lithium— ion cells for EV applications. Electrochemistry Communications, 2009, 11, 1789-1791.	2.3	135
12	The role of anion additives in the electrodeposition of nickel— cobalt alloys from sulfamate electrolyte. Electrochimica Acta, 2002, 47, 2707-2714.	2.6	130
13	Progress in three-dimensional (3D) Li-ion microbatteries. Solid State Ionics, 2006, 177, 2811-2819.	1.3	124
14	Tissue-like Silicon Nanowires-Based Three-Dimensional Anodes for High-Capacity Lithium Ion Batteries. Nano Letters, 2015, 15, 3907-3916.	4.5	111
15	Advanced materials for the 3D microbattery. Journal of Power Sources, 2006, 153, 281-287.	4.0	104
16	Effect of carbon substrate on SEI composition and morphology. Electrochimica Acta, 2004, 50, 391-395.	2.6	102
17	Pyrite as cathode insertion material in rechargeable lithium/composite polymer electrolyte batteries. Electrochimica Acta, 1999, 45, 335-350.	2.6	96
18	Anion-Binding Calixarene Receptors: Synthesis, Microstructure, and Effect on Properties of Polyether Electrolytes. Chemistry of Materials, 2005, 17, 1535-1547.	3.2	91

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19	Novel Solid Polymer Electrolytes with Single Lithium-Ion Transport. <i>Journal of the Electrochemical Society</i> , 2004, 151, A1762.	1.3	86
20	Electrophoretic deposition of lithium iron phosphate cathode for thin-film 3D-microbatteries. <i>Journal of Power Sources</i> , 2012, 198, 264-272.	4.0	83
21	Li/CPE/FeS ₂ rechargeable battery. <i>Electrochimica Acta</i> , 1998, 43, 1593-1599.	2.6	80
22	Study of phase changes during 500 full cycles of Li/composite polymer electrolyte/FeS ₂ battery. <i>Electrochimica Acta</i> , 2000, 45, 1519-1525.	2.6	79
23	Effect of calixpyrrole in PEO-LiBF ₄ polymer electrolytes. <i>Electrochimica Acta</i> , 2005, 50, 3942-3948.	2.6	78
24	Three-dimensional high resolution X-ray imaging and quantification of lithium ion battery mesocarbon microbead anodes. <i>Journal of Power Sources</i> , 2014, 248, 1014-1020.	4.0	78
25	Stretching-induced conductivity enhancement of Li ⁺ -(PEO)-polymer electrolyte. <i>Electrochimica Acta</i> , 2000, 45, 1431-1436.	2.6	73
26	Study of Nickel-Cobalt Alloy Electrodeposition from a Sulfamate Electrolyte with Different Anion Additives. <i>Journal of the Electrochemical Society</i> , 2000, 147, 4156.	1.3	73
27	On the way to high-conductivity single lithium-ion conductors. <i>Journal of Solid State Electrochemistry</i> , 2017, 21, 1879-1905.	1.2	71
28	Lithium-7 NMR studies of concentrated LiI/PEO-based solid electrolytes. <i>Solid State Ionics</i> , 1998, 106, 25-32.	1.3	70
29	Electrical, thermal and NMR investigation of composite solid electrolytes based on PEO, LiI and high surface area inorganic oxides. <i>Electrochimica Acta</i> , 1998, 43, 1557-1561.	2.6	69
30	Liquid-Free Lithium-Oxygen Batteries. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 436-440.	7.2	68
31	Towards smart free form-factor 3D printable batteries. <i>Sustainable Energy and Fuels</i> , 2018, 2, 1542-1549.	2.5	67
32	Polymer-in-Salt Electrolytes Based on Acrylonitrile/Butyl Acrylate Copolymers and Lithium Salts. <i>Journal of Physical Chemistry B</i> , 2004, 108, 14907-14914.	1.2	66
33	Fast Ion Transport Phenomena in Oriented Semicrystalline Li ⁺ P(EO) _n -Based Polymer Electrolytes. <i>Journal of Physical Chemistry A</i> , 2001, 105, 10098-10106.	1.1	64
34	The Effect of Binders on the Performance and Degradation of the Lithium/Sulfur Battery Assembled in the Discharged State. <i>Journal of the Electrochemical Society</i> , 2017, 164, A5001-A5007.	1.3	63
35	Uniaxial Stress Effects in Poly(ethylene oxide)-LiI Polymer Electrolyte Film: A ⁷ Li Nuclear Magnetic Resonance Study. <i>Electrochemical and Solid-State Letters</i> , 1999, 2, 553.	2.2	60
36	In-Operando X-ray Tomography Study of Lithiation Induced Delamination of Si Based Anodes for Lithium-Ion Batteries. <i>ECS Electrochemistry Letters</i> , 2014, 3, A76-A78.	1.9	60

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37	Novel rechargeable 3D-Microbatteries on 3D-printed-polymer substrates: Feasibility study. <i>Electrochimica Acta</i> , 2018, 265, 690-701.	2.6	60
38	New Generation of Ordered Polymer Electrolytes for Lithium Batteries. <i>Electrochemical and Solid-State Letters</i> , 2004, 7, A412.	2.2	58
39	Ion-transport phenomena in concentrated PEO-based composite polymer electrolytes. <i>Solid State Ionics</i> , 2002, 147, 141-155.	1.3	56
40	Conduction Mechanisms in Concentrated LiAlO_2 -Polyethylene Oxide-Al ₂ O ₃ -Based Solid Electrolytes. <i>Journal of the Electrochemical Society</i> , 1997, 144, 3484-3491.	1.3	55
41	A search for a single-ion-conducting polymer electrolyte: Combined effect of anion trap and inorganic filler. <i>Journal of Power Sources</i> , 2008, 178, 736-743.	4.0	54
42	Large-Scale Self-Catalyzed Spongelike Silicon Nano-Network-Based 3D Anodes for High-Capacity Lithium-Ion Batteries. <i>Nano Letters</i> , 2019, 19, 1944-1954.	4.5	53
43	High Power Copper Sulfide Cathodes for Thin-Film Microbatteries. <i>Electrochemical and Solid-State Letters</i> , 2009, 12, A232.	2.2	51
44	Between Liquid and All Solid: A Prospect on Electrolyte Future in Lithium-Ion Batteries for Electric Vehicles. <i>Energy Technology</i> , 2020, 8, 2000580.	1.8	48
45	Rechargeable lithium/hybrid-electrolyte/pyrite battery. <i>Journal of Power Sources</i> , 2002, 110, 152-162.	4.0	47
46	Cathode Modification for Improved Performance of Rechargeable Lithium-Composite Polymer Electrolyte-Pyrite Battery. <i>Electrochemical and Solid-State Letters</i> , 1999, 2, 115.	2.2	46
47	Challenges and obstacles in the development of sodium-air batteries. <i>Journal of Power Sources</i> , 2013, 244, 771-776.	4.0	46
48	Review-Polymer/Ceramic Interface Barriers: The Fundamental Challenge for Advancing Composite Solid Electrolytes for Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2020, 167, 160514.	1.3	45
49	Lithium polymer electrolyte pyrite rechargeable battery: comparative characterization of natural pyrite from different sources as cathode material. <i>Journal of Power Sources</i> , 2000, 88, 206-218.	4.0	41
50	Development and characterization of bipolar lithium composite polymer electrolyte (CPE)-FeS ₂ battery for applications in electric vehicles. <i>Journal of Power Sources</i> , 1995, 54, 496-500.	4.0	40
51	X-ray absorption fine structure studies of FeS ₂ cathodes in lithium polymer electrolyte batteries. <i>Journal of Power Sources</i> , 1999, 81-82, 709-714.	4.0	37
52	Highly conductive oriented PEO-based polymer electrolytes. <i>Macromolecular Symposia</i> , 2003, 203, 27-46.	0.4	37
53	Lithium ion transport of solid electrolytes based on PEO/CF ₃ SO ₃ Li and aluminum carboxylate. <i>Journal of Power Sources</i> , 2007, 173, 734-742.	4.0	36
54	Effect of plasticizers on the CPE conductivity and on the Li-CPE interface. <i>Solid State Ionics</i> , 1996, 85, 231-238.	1.3	35

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55	The search for a solid electrolyte, as a polysulfide barrier, for lithium/sulfur batteries. <i>Journal of Solid State Electrochemistry</i> , 2016, 20, 3393-3404.	1.2	35
56	A new approach to the understanding of ion transport in semicrystalline polymer electrolytes. <i>Journal of Electroanalytical Chemistry</i> , 2000, 491, 203-210.	1.9	34
57	Thin-film iron sulfide cathodes for lithium and Li-ion/polymer electrolyte microbatteries. <i>Electrochimica Acta</i> , 2004, 50, 417-420.	2.6	34
58	Ion transport phenomena in polymeric electrolytes. <i>Electrochimica Acta</i> , 2007, 53, 1409-1416.	2.6	34
59	On the Road to a Multi-Coaxial-Cable Battery: Development of a Novel 3D-Printed Composite Solid Electrolyte. <i>Journal of the Electrochemical Society</i> , 2020, 167, 070503.	1.3	34
60	Thin-film lithium and lithium-ion batteries with electrochemically deposited molybdenum oxysulfide cathodes. <i>Journal of Power Sources</i> , 2003, 122, 169-173.	4.0	33
61	Charge and mass transport properties of LiI-P(EO) _n -Al ₂ O ₃ -based composite polymer electrolytes. <i>Electrochimica Acta</i> , 1998, 43, 1315-1320.	2.6	32
62	Bulk and interfacial ionic conduction in LiI/Al ₂ O ₃ mixtures. <i>Solid State Ionics</i> , 1998, 113-115, 477-485.	1.3	30
63	Evaluation of ion-transport in composite polymer-in-ceramic electrolytes. Case study of active and inert ceramics. <i>Electrochimica Acta</i> , 2019, 304, 447-455.	2.6	29
64	To the electrochemistry of pyrite in Li/solid composite-polymer-electrolyte battery. <i>Journal of Power Sources</i> , 2003, 115, 323-331.	4.0	27
65	Solid Polymer-in-Ceramic Electrolyte Formed by Electrophoretic Deposition. <i>Journal of the Electrochemical Society</i> , 2015, 162, D3084-D3089.	1.3	26
66	Stretching-induced changes in ion-polymer interactions in semicrystalline Li-P(EO) _n polymer electrolytes. <i>Solid State Ionics</i> , 2002, 147, 265-273.	1.3	25
67	Host-Guest Interactions in Single-Ion Lithium Polymer Electrolyte. <i>Journal of the Electrochemical Society</i> , 2007, 154, A547.	1.3	25
68	Study of the Formation of a Solid Electrolyte Interphase (SEI) on a Silicon Nanowire Anode in Liquid Disiloxane Electrolyte with Nitrile End Groups for Lithium-Ion Batteries. <i>Batteries and Supercaps</i> , 2019, 2, 213-222.	2.4	25
69	Simultaneous DTA-TG Study of Montmorillonite Mechanochemically Treated with Crystal-violet. <i>Magyar Árvizsgáló és Vizsgáló Értékelő Közlemények</i> , 2002, 67, 99-112.	1.4	24
70	Drop-on-Demand 3D Printing of Lithium Iron Phosphate Cathodes. <i>Journal of the Electrochemical Society</i> , 2019, 166, A5059-A5064.	1.3	24
71	Improving the Durability and Minimizing the Polysulfide Shuttle in the Li/S Battery. <i>Journal of the Electrochemical Society</i> , 2018, 165, A6051-A6057.	1.3	23
72	Highly conductive, oriented polymer electrolytes for lithium batteries. <i>Polymers for Advanced Technologies</i> , 2002, 13, 683-689.	1.6	22

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73	Quasi-solid polymer-in-ceramic membrane for Li-ion batteries. <i>Electrochimica Acta</i> , 2013, 114, 325-333.	2.6	22
74	The role of the confined water in the dynamic crossover of hydrated lysozyme powders. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 10992-10999.	1.3	22
75	New insights into structural and electrochemical properties of anisotropic polymer electrolytes. <i>Electrochimica Acta</i> , 2005, 50, 3805-3814.	2.6	21
76	Polymer geometry and Li ⁺ conduction in poly(ethylene oxide). <i>Journal of Computational Physics</i> , 2008, 227, 8437-8447.	1.9	21
77	Nanotin alloys supported by multiwall carbon nanotubes as high-capacity and safer anode materials for EV lithium batteries. <i>Journal of Power Sources</i> , 2014, 245, 345-351.	4.0	21
78	Development of a bipolar Li/composite polymer electrolyte/pyrite battery for electric vehicles. <i>Journal of Power Sources</i> , 2001, 97-98, 782-785.	4.0	19
79	New boron compounds as additives for lithium polymer electrolytes. <i>Electrochimica Acta</i> , 2007, 53, 1481-1489.	2.6	19
80	Electroless nickel current collector for 3D-microbatteries. <i>Journal of Applied Electrochemistry</i> , 2010, 40, 435-444.	1.5	18
81	Advanced Multiphase Silicon-Based Anodes for High-Energy-Density Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2015, 162, A1072-A1079.	1.3	18
82	Conductivity enhancement induced by casting of polymer electrolytes under a magnetic field. <i>Electrochimica Acta</i> , 2011, 57, 27-35.	2.6	17
83	A novel PTFE-based proton-conductive membrane. <i>Journal of Power Sources</i> , 2006, 153, 228-233.	4.0	16
84	Novel porous-silicon structures for 3D-interlaced microbatteries. <i>Electrochimica Acta</i> , 2010, 56, 37-41.	2.6	16
85	Elucidation of the charge-discharge mechanism of lithium/polymer electrolyte/pyrite batteries. <i>Journal of Solid State Electrochemistry</i> , 2002, 6, 468-474.	1.2	15
86	Modeling and simulation of Li-ion conduction in poly(ethylene oxide). <i>Journal of Computational Physics</i> , 2007, 227, 1162-1175.	1.9	15
87	Disiloxane with nitrile end groups as Co-solvent for electrolytes in lithium sulfur batteries – A feasible approach to replace LiNO ₃ . <i>Electrochimica Acta</i> , 2019, 307, 76-82.	2.6	15
88	Analysis of Scale-up Parameters in 3D Silicon-Nanowire Lithium-Battery Anodes. <i>Journal of the Electrochemical Society</i> , 2020, 167, 050511.	1.3	15
89	X-ray Photoelectron Spectroscopy and Time-Of-Flight Secondary Ion Mass Spectroscopy studies of electrodeposited molybdenum oxysulfide cathodes for lithium and lithium-ion microbatteries. <i>Journal of Solid State Electrochemistry</i> , 2008, 12, 273-285.	1.2	14
90	Oxygen redox processes in PEGDME-based electrolytes for the Na-air battery. <i>Journal of Solid State Electrochemistry</i> , 2018, 22, 1015-1022.	1.2	14

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91	Elucidation of the Losses in Cycling Lithium-Metal Anodes in Carbonate-Based Electrolytes. Journal of the Electrochemical Society, 2020, 167, 100520.	1.3	14
92	Recent advances in solid-state beyond lithium batteries. Journal of Solid State Electrochemistry, 2022, 26, 1851-1869.	1.2	14
93	Novel composite proton-exchange membrane based on silica-anchored sulfonic acid (SASA). Journal of Power Sources, 2006, 161, 1069-1075.	4.0	13
94	Development and Characterization of Composite YSZ α -PEI Electrophoretically Deposited Membrane for Li-Ion Battery. Journal of Physical Chemistry B, 2013, 117, 1577-1584.	1.2	12
95	Adsorption of Li ₂ O, Na ₂ O, and NaO ₂ on TiC(111) Surface for Metal-Air Rechargeable Batteries: A Theoretical Study. Journal of Physical Chemistry C, 2018, 122, 16473-16480.	1.5	12
96	X-ray absorption spectroscopy of highly cycled Li/composite polymer electrolyte/FeS ₂ cells. Solid State Ionics, 2003, 164, 51-63.	1.3	11
97	SEI ON LITHIUM, GRAPHITE, DISORDERED CARBONS AND TIN-BASED ALLOYS. , 2004, , 1-69.		11
98	Peculiarities of ion transport in confined-in-ceramics concentrated polymer electrolytes. Electrochimica Acta, 2016, 208, 71-79.	2.6	11
99	Comparative Characterization of Silicon Alloy Anodes, Containing Single-Wall or Multi-Wall Carbon Nanotubes. Journal of the Electrochemical Society, 2019, 166, A740-A746.	1.3	11
100	Effect of mild oxidation of natural graphite (NG7) on anode-electrolyte thermal reactions. Journal of Solid State Electrochemistry, 2001, 5, 81-87.	1.2	10
101	Effect of peptide nanotube filler on structural and ion-transport properties of solid polymer electrolytes. Solid State Ionics, 2012, 220, 39-46.	1.3	10
102	Toward High Performance All Solid-State Na Batteries: Investigation of Electrolytes Comprising NaPF ₆ , Poly(ethylene oxide) and TiO ₂ . Journal of the Electrochemical Society, 2021, 168, 110553.	1.3	10
103	Plasticized 3D-Printed Polymer Electrolytes for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2021, 168, 110549.	1.3	10
104	SECONDARY BATTERIES – LITHIUM RECHARGEABLE SYSTEMS Electrolytes: Single Lithium Ion Conducting Polymers. , 2009, , 112-128.		9
105	Stochastic model of lithium ion conduction in poly(ethylene oxide). Journal of Applied Physics, 2010, 107, 064318.	1.1	9
106	Novel one-step electrophoretic deposition of the membrane-electrode assembly for flexible-battery applications. Journal of Materials Chemistry A, 2020, 8, 11391-11398.	5.2	8
107	How to Pack a Punch – Why 3D Batteries are Essential. Israel Journal of Chemistry, 2021, 61, 38-50.	1.0	7
108	A Study of Composite Solid Electrolytes: The Effect of Inorganic Additives on the Polyethylene Oxide-Sodium Metal Interface. Journal of the Electrochemical Society, 2022, 169, 020504.	1.3	7

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109	Recent Advances in Three Dimensional Thin Film Microbatteries. Materials Research Society Symposia Proceedings, 2004, 835, K10.10.1.	0.1	6
110	Solid Composite Polymer Electrolytes with High Cation Transference Number. Israel Journal of Chemistry, 2008, 48, 259-268.	1.0	6
111	Synthesis and electrochemical performance of silicon-nanowire alloy anodes. RSC Advances, 2021, 11, 26586-26593.	1.7	6
112	Thermal characterization of social vespid silk. Journal of Thermal Analysis and Calorimetry, 2003, 73, 85-96.	2.0	5
113	Synthesis and characterization of lithium-salt complexes with difluoroalkoxyborates for application as lithium electrolytes. Electrochimica Acta, 2015, 175, 104-112.	2.6	5
114	Drop-on-demand 3D-printed silicon-based anodes for lithium-ion batteries. Journal of Solid State Electrochemistry, 2022, 26, 183-193.	1.2	5
115	Electrostatic Potential of Polyelectrolyte Molecules Grafted on Charged Surfaces: A Poisson-Boltzmann Model. Journal of the Electrochemical Society, 2014, 161, E3049-E3058.	1.3	4
116	FTO Darkening Rate as a Qualitative, High-Throughput Mapping Method for Screening Li-Ionic Conduction in Thin Solid Electrolytes. ACS Combinatorial Science, 2020, 22, 18-24.	3.8	4
117	<i>Operando</i> Terahertz Spectroscopy of Solid Electrolyte Interphase Evolution on Silicon Anodes. Batteries and Supercaps, 2022, 5, .	2.4	4
118	3D printable solid and quasi-solid electrolytes for advanced batteries. Electrochemical Science Advances, 2022, 2, e2100167.	1.2	4
119	Polymer Electrolytes. Materials and Energy, 2015, , 523-589.	2.5	3
120	Low-cost open-space scaffold structure for high-capacity silicon anode. Solid State Ionics, 2018, 319, 228-233.	1.3	3
121	Comparison of the Catalytic Activity of Carbon, Spinel-Based, and Carbide Materials in the Na-Air Battery. Frontiers in Materials, 2019, 6, .	1.2	3
122	Enhancing Performance of Anode-Free Li-Metal Batteries by Addition of Ceramic Nanoparticles: Part I.. Journal of the Electrochemical Society, 2021, 168, 090541.	1.3	3
123	Evaluating the Passivation Layer of Freshly Cleaved Silicon Surfaces by Binary Silane-Based Electrolytes. Batteries and Supercaps, 2021, 4, 1611.	2.4	2
124	Study of polymer electrolytes with grafted Au- ¹³ Fe ₂ O ₃ nanoparticles. International Journal of Hydrogen Energy, 2014, 39, 2909-2916.	3.8	1
125	PSi-Based Supercapacitors. , 2016, , 347-374.		1
126	Enhancing performance of anode-free Li-metal batteries by addition of ceramic nanoparticles Part II. Journal of Solid State Electrochemistry, 2022, 26, 2027-2038.	1.2	1

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127	Study of the High-Voltage Spike in Lithium/Polymer Electrolyte/Pyrite Rechargeable Batteries. Reviews in Analytical Chemistry, 1999, 18, .	1.5	0
128	Foreword to the special issue of the Journal of Solid State Electrochemistry. Journal of Solid State Electrochemistry, 2017, 21, 3379-3379.	1.2	0
129	Pyrite-based mixtures as composite electrodes for lithium-sulfur batteries. Journal of Solid State Electrochemistry, 2019, 23, 419-431.	1.2	0
130	Pouchâ€Cell Architecture Downscaled to Coin Cells for Electrochemical Characterization of Bilateral Electrodes**. Batteries and Supercaps, 2021, 4, 767-770.	2.4	0