Elie Eg Paillard

List of Publications by Year
in descending order

93 papers	4,881 citations	87843 38 h-index	95218 68 g-index
98 all docs	98 docs citations	98 times ranked	6176 citing authors

#	Article	IF	Citations
1	The Lithium/Air Battery: Still an Emerging System or a Practical Reality?. Advanced Materials, 2015, 27, 784-800.	11.1	543
2	Carbon Coated ZnFe₂O₄ Nanoparticles for Advanced Lithiumâ€Ion Anodes. Advanced Energy Materials, 2013, 3, 513-523.	10.2	312
3	Lithiumâ€and Manganeseâ€Rich Oxide Cathode Materials for Highâ€Energy Lithium Ion Batteries. Advanced Energy Materials, 2016, 6, 1600906.	10.2	230
4	Nanostructured multi-block copolymer single-ion conductors for safer high-performance lithium batteries. Energy and Environmental Science, 2018, 11, 3298-3309.	15.6	167
5	Transition-Metal-Doped Zinc Oxide Nanoparticles as a New Lithium-Ion Anode Material. Chemistry of Materials, 2013, 25, 4977-4985.	3.2	165
6	Electrochemical and Physicochemical Properties of PY[sub 14]FSI-Based Electrolytes with LiFSI. Journal of the Electrochemical Society, 2009, 156, A891.	1.3	136
7	A high-capacity P2 Na2/3Ni1/3Mn2/3O2 cathode material for sodium ion batteries with oxygen activity. Journal of Power Sources, 2018, 395, 16-24.	4.0	133
8	Durable high-rate capability Na0.44MnO2 cathode material for sodium-ion batteries. Nano Energy, 2016, 27, 602-610.	8.2	126
9	Melting Behavior of Pyrrolidinium-Based Ionic Liquids and Their Binary Mixtures. Journal of Physical Chemistry C, 2010, 114, 12364-12369.	1.5	122
10	Improving the graphite/electrolyte interface in lithium-ion battery for fast charging and low temperature operation: Fluorosulfonyl isocyanate as electrolyte additive. Journal of Power Sources, 2019, 429, 67-74.	4.0	99
11	An electrochemical study of oxygen reduction in pyrrolidinium-based ionic liquids for lithium/oxygen batteries. Electrochimica Acta, 2012, 83, 94-104.	2.6	93
12	Homogeneous Lithium Electrodeposition with Pyrrolidinium-Based Ionic Liquid Electrolytes. ACS Applied Materials & Interfaces, 2015, 7, 5950-5958.	4.0	92
13	Influence of the carbonaceous conductive network on the electrochemical performance of ZnFe2O4 nanoparticles. Journal of Power Sources, 2013, 236, 87-94.	4.0	88
14	Fluorosulfonyl-(trifluoromethanesulfonyl)imide ionic liquids with enhanced asymmetry. Physical Chemistry Chemical Physics, 2013, 15, 2565.	1.3	86
15	Embedding tin nanoparticles in micron-sized disordered carbon for lithium- and sodium-ion anodes. Electrochimica Acta, 2014, 128, 163-171.	2.6	84
16	Investigation of different binding agents for nanocrystalline anatase TiO2 anodes and its application in a novel, green lithium-ion battery. Journal of Power Sources, 2013, 221, 419-426.	4.0	83
17	Percolating networks of TiO2 nanorods and carbon for high power lithium insertion electrodes. Journal of Power Sources, 2012, 206, 301-309.	4.0	81
18	Cationâ€Assisted Lithiumâ€Ion Transport for Highâ€Performance PEOâ€based Ternary Solid Polymer Electrolytes. Angewandte Chemie - International Edition, 2021, 60, 11919-11927.	7.2	80

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19	Physicochemical properties of N-methoxyethyl-N-methylpyrrolidinum ionic liquids with perfluorinated anions. Electrochimica Acta, 2013, 91, 101-107.	2.6	76
20	High-energy lithium batteries based on single-ion conducting polymer electrolytes and Li[Ni0.8Co0.1Mn0.1]O2 cathodes. Nano Energy, 2020, 77, 105129.	8.2	76
21	P3 Na_{0.9}Ni_{0.5}Mn_{0.5}O₂ Cathode Material for Sodium Ion Batteries. Chemistry of Materials, 2019, 31, 5376-5383.	3.2	72
22	Fluorine-free water-in-ionomer electrolytes for sustainable lithium-ion batteries. Nature Communications, 2018, 9, 5320.	5.8	71
23	A Roadmap for Transforming Research to Invent the Batteries of the Future Designed within the European Large Scale Research Initiative BATTERY 2030+. Advanced Energy Materials, 2022, 12, .	10.2	70
24	New Insights to Selfâ€Aggregation in Ionic Liquid Electrolytes for Highâ€Energy Electrochemical Devices. Advanced Energy Materials, 2011, 1, 274-281.	10.2	69
25	High power, solvent-free electrochemical double layer capacitors based on pyrrolidinium dicyanamide ionic liquids. Journal of Power Sources, 2015, 293, 65-70.	4.0	68
26	The importance of â€œgoing nanoâ€• for high power battery materials. Journal of Power Sources, 2012, 219, 217-222.	4.0	65
27	Improved lithium ion dynamics in crosslinked PMMA gel polymer electrolyte. RSC Advances, 2019, 9, 27574-27582.	1.7	65
28	Physicochemical Properties of Binary Ionic Liquidâ€“Aprotic Solvent Electrolyte Mixtures. Journal of Physical Chemistry C, 2013, 117, 78-84.	1.5	64
29	Ionic Liquid Electrolytes for Liâ€“Air Batteries: Lithium Metal Cycling. International Journal of Molecular Sciences, 2014, 15, 8122-8137.	1.8	64
30	Probing Lithiation Kinetics of Carbon-Coated ZnFe₂O₄ Nanoparticle Battery Anodes. Journal of Physical Chemistry C, 2014, 118, 6069-6076.	1.5	62
31	In situ crosslinked PMMA gel electrolyte from a low viscosity precursor solution for cost-effective, long lasting and sustainable lithium-ion batteries. Journal of Membrane Science, 2020, 594, 117456.	4.1	60
32	Inhibition of Self-Aggregation in Ionic Liquid Electrolytes for High-Energy Electrochemical Devices. Journal of Physical Chemistry C, 2011, 115, 19431-19436.	1.5	58
33	Separators for Li-Ion and Li-Metal Battery Including Ionic Liquid Based Electrolytes Based on the TFSIâˆ’ and FSIâˆ’ Anions. International Journal of Molecular Sciences, 2014, 15, 14868-14890.	1.8	58
34	A joint theoretical/experimental study of the structure, dynamics, and Li+ transport in bis([tri]fluoro[methane]sulfonyl)imide [T]FSI-based ionic liquids. Journal of Chemical Physics, 2013, 139, 034502.	1.2	55
35	Hierarchical Ternary MoO₂/MoS₂/Heteroatomâ€Doped Carbon Hybrid Materials for Highâ€Performance Lithiumâ€Ion Storage. ChemElectroChem, 2016, 3, 922-932.	1.7	51
36	P2 â€“ Type Na0.67Mn0.8Cu0.1Mg0.1O2 as a new cathode material for sodium-ion batteries: Insights of the synergetic effects of multi-metal substitution and electrolyte optimization. Journal of Power Sources, 2019, 416, 184-192.	4.0	47

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37	A 3D porous Li-rich cathode material with an in situ modified surface for high performance lithium ion batteries with reduced voltage decay. Journal of Materials Chemistry A, 2016, 4, 7230-7237.	5.2	46
38	Truncated Octahedral High-Voltage Spinel LiNi_{0.5}Mn_{1.5}O₄Cathode Materials for Lithium Ion Batteries: Positive Influences of Ni/Mn Disordering and Oxygen Vacancies. Journal of the Electrochemical Society, 2018, 165, A1886-A1896.	1.3	44
39	Polymeric ionic liquid nanoparticles as binder for composite Li-ion electrodes. Journal of Power Sources, 2013, 240, 745-752.	4.0	38
40	Challenges of â€œGoing Nanoâ€• Enhanced Electrochemical Performance of Cobalt Oxide Nanoparticles by Carbothermal Reduction and In Situ Carbon Coating. ChemPhysChem, 2014, 15, 2177-2185.	1.0	38
41	Adiponitrile-based electrolytes for high voltage, graphite-based Li-ion battery. Journal of Power Sources, 2018, 397, 52-58.	4.0	38
42	The effect of Sn substitution on the structure and oxygen activity of Na0.67Ni0.33Mn0.67O2 cathode materials for sodium ion batteries. Journal of Power Sources, 2020, 449, 227554.	4.0	38
43	Ethylene carbonate-free electrolytes for Li-ion battery: Study of the solid electrolyte interphases formed on graphite anodes. Journal of Power Sources, 2020, 451, 227804.	4.0	37
44	In Situ Investigations on the Structural and Morphological Changes of Metal Phosphides as Anode Materials in Lithiumâ€Ion Batteries. Advanced Materials Interfaces, 2017, 4, 1601047.	1.9	36
45	All fluorine-free lithium battery electrolytes. Journal of Power Sources, 2014, 251, 451-458.	4.0	32
46	Recent advances toward high voltage, EC-free electrolytes for graphite-based Li-ion battery. Frontiers of Chemical Science and Engineering, 2018, 12, 577-591.	2.3	31
47	Superionicity in Ionic-Liquid-Based Electrolytes Induced by Positive Ionâ€“Ion Correlations. Journal of the American Chemical Society, 2022, 144, 4657-4666.	6.6	31
48	Stabilizing the Solidâ€Electrolyte Interphase with Polyacrylamide for Highâ€Voltage Aqueous Lithiumâ€Ion Batteries. Angewandte Chemie - International Edition, 2021, 60, 22812-22817.	7.2	30
49	Influence of oligo(ethylene oxide) substituents on pyrrolidinium-based ionic liquid properties, Li⁺ solvation and transport. Physical Chemistry Chemical Physics, 2016, 18, 21539-21547.	1.3	29
50	Enabling steady graphite anode cycling with high voltage, additive-free, sulfolane-based electrolyte: Role of the binder. Journal of Power Sources, 2017, 356, 97-102.	4.0	28
51	Investigation of the N -butyl- N -methyl pyrrolidinium trifluoromethanesulfonyl- N -cyanoamide (PYR 14) Tj ETQq1 1 0.784314 rgBT /Ov	2.6	28
52	Uniform lithium electrodeposition for stable lithium-metal batteries. Nano Energy, 2020, 67, 104172.	8.2	27
53	â€œWaterâ€inâ€Eutectogelâ€• Electrolytes for Quasiâ€Solidâ€State Aqueous Lithiumâ€Ion Batteries. Advanced Energy Materials, 2022, 12, .	10.2	27
54	Poly(oxyethylene) electrolytes based on lithium pentafluorobenzene sulfonate. Electrochimica Acta, 2007, 52, 3758-3765.	2.6	26

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55	Improving the Lithium Ion Transport in Polymer Electrolytes by Functionalized Ionic-Liquid Additives: Simulations and Modeling. Journal of the Electrochemical Society, 2017, 164, E3225-E3231.	1.3	26
56	Anion Coordination Interactions in Solvates with the Lithium Salts LiDCTA and LiTDI. Journal of Physical Chemistry C, 2014, 118, 7781-7787.	1.5	25
57	Insights into P2-Type Layered Positive Electrodes for Sodium Batteries: From Long- to Short-Range Order. ACS Applied Materials & Interfaces, 2020, 12, 5017-5024.	4.0	25
58	Tin modification of sodium manganese hexacyanoferrate as a superior cathode material for sodium ion batteries. Electrochimica Acta, 2020, 342, 135928.	2.6	21
59	Ionic Liquid-based Electrolytes for Li Metal/Air Batteries: A Review of Materials and the New 'LABOHR' Flow Cell Concept. Journal of Electrochemical Science and Technology, 2014, 5, 37-44.	0.9	21
60	Towards practical sulfolane based electrolytes: Choice of Li salt for graphite electrode operation. Journal of Power Sources, 2018, 395, 212-220.	4.0	20
61	Improved lithium-metal/vanadium pentoxide polymer battery incorporating crosslinked ternary polymer electrolyte with N-butyl-N-methylpyrrolidinium bis(perfluoromethanesulfonyl)imide. Journal of Power Sources, 2014, 271, 334-341.	4.0	19
62	Improved Rate Capability of Layered Li-Rich Cathode for Lithium Ion Battery by Electrochemical Treatment. ECS Electrochemistry Letters, 2013, 2, A78-A80.	1.9	17
63	Effective Solid Electrolyte Interphase Formation on Lithium Metal Anodes by Mechanochemical Modification. ACS Applied Materials & Interfaces, 2021, 13, 34227-34237.	4.0	17
64	Perspectives on Iron Oxide-Based Materials with Carbon as Anodes for Li- and K-Ion Batteries. Nanomaterials, 2022, 12, 1436.	1.9	17
65	Tailoring of Gradient Particles of Li-Rich Layered Cathodes with Mitigated Voltage Decay for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2020, 12, 43596-43604.	4.0	14
66	Li/air Flow Battery Employing Ionic Liquid Electrolytes. Energy Technology, 2016, 4, 85-89.	1.8	13
67	TiO2@LiTi2(PO4)3 enabling fast and stable lithium storage for high voltage aqueous lithium-ion batteries. Journal of Power Sources, 2021, 484, 229255.	4.0	13
68	Syntheses of a wide family of new aryl based perfluorosulfonimide lithium salts. Electrochemical performances of the related polymer electrolytes. Journal of Fluorine Chemistry, 2011, 132, 1213-1218.	0.9	12
69	Ethylene Carbonate-Free, Adiponitrile-Based Electrolytes Compatible with Graphite Anodes. ECS Transactions, 2017, 77, 11-20.	0.3	12
70	Simultaneous Formation of Interphases on both Positive and Negative Electrodes in Highâ€Voltage Aqueous Lithiumâ€Ion Batteries. Small, 2022, 18, e2104986.	5.2	12
71	Electrochemical investigation of polymer electrolytes based on lithium 2-(phenylsulfanyl)-1,1,2,2-tetrafluoro-ethansulfonate. Electrochimica Acta, 2007, 53, 1439-1443.	2.6	11
72	Polymer electrolytes based on new aryl-containing lithium perfluorosulfonates. Journal of Fluorine Chemistry, 2012, 134, 72-76.	0.9	11

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73	Transforming anatase TiO2 nanorods into ultrafine nanoparticles for advanced electrochemical performance. Journal of Power Sources, 2015, 294, 406-413.	4.0	11
74	Lithium bis(2-methyllactato)borate monohydrate. Acta Crystallographica Section E: Structure Reports Online, 2012, 68, m749-m749.	0.2	10
75	Ionic liquid plasticizers comprising solvating cations for lithium metal polymer batteries. Electrochimica Acta, 2021, 398, 139333.	2.6	10
76	A Post-Mortem Study of Stacked 16 Ah Graphite//LiFePO4 Pouch Cells Cycled at 5 Â°C. Batteries, 2019, 5, 45.	2.1	8
77	Advanced Block Copolymer Design for Polymer Electrolytes: Prospects of Microphase Separation. Macromolecules, 2021, 54, 11101-11112.	2.2	7
78	Beyond fluorine: sustainable ternary polymer electrolytes for lithium batteries. Green Chemistry, 2021, 23, 9935-9944.	4.6	7
79	Dendriteâ€Free Zinc Deposition Induced by Zincâ€Phytate Coating for Longâ€Life Aqueous Zinc Batteries. Batteries and Supercaps, 2022, 5, .	2.4	7
80	Aerosolâ€“gel deposition of photocurable ORMOSIL films doped with a terbium complex. Optical Materials, 2004, 25, 179-184.	1.7	6
81	Poly(oxyethylene) electrolytes based on lithium nitrophenyl sulfonamide and hexanitrodiphenylamide. Electrochimica Acta, 2011, 57, 20-26.	2.6	6
82	Cationâ€Assisted Lithiumâ€Ion Transport for Highâ€Performance PEOâ€based Ternary Solid Polymer Electrolytes. Angewandte Chemie, 2021, 133, 12026-12034.	1.6	6
83	A high-voltage symmetric sodium ion battery using sodium vanadium pyrophosphate with superior power density and long lifespan. Journal of Power Sources, 2021, 507, 230183.	4.0	6
84	Electrochemical and Physicochemical Properties of PYR14-FSI Based Electrolytes with LiFSI. ECS Transactions, 2009, 16, 51-57.	0.3	5
85	Local superconcentration via solvating ionic liquid electrolytes for safe 4.3V lithium metal batteries. Electrochimica Acta, 2022, 415, 140181.	2.6	4
86	Stabilizing the Solidâ€Electrolyte Interphase with Polyacrylamide for Highâ€Voltage Aqueous Lithiumâ€Ion Batteries. Angewandte Chemie, 2021, 133, 22994.	1.6	2
87	Development of Sulfolane-Based Electrolytes for Li-ion batteries. ECS Meeting Abstracts, 2016, , .	0.0	0
88	Practical Sulfolane-Based Electrolytes: Choice of Li Salt for Graphite Anode Operation. ECS Meeting Abstracts, 2016, , .	0.0	0
89	Ethylene Carbonate-Free, Adiponitrile-Based Electrolytes Compatible with Graphite Anodes. ECS Meeting Abstracts, 2017, , .	0.0	0
90	Characterization of Ionic Liquid Electrolytes Based on Trifluoromethanesulfonyl-N-Cyanoamide for Li-Ion Battery Application. ECS Meeting Abstracts, 2017, , .	0.0	0

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91	(Invited) Tailored Design of Polymer Electrolytes for Advanced High-Capacity and High-Voltage Lithium Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 843-843.	0.0	0
92	A Novel Mechanochemical Approach to Form an Effective SEI on Lithium Metal Anodes. ECS Meeting Abstracts, 2020, MA2020-02, 745-745.	0.0	0
93	The Importance of Solid Electrolyte Interphase Formation on Metal Anodes for Next Generation Batteries. ECS Meeting Abstracts, 2022, MA2022-01, 129-129.	0.0	0