Peter Bieker

List of Publications by Year
in descending order

50 papers	3,794 citations	218677 26 h-index	175258 52 g-index
55 all docs	55 docs citations	55 times ranked	4146 citing authors

#	Article	IF	Citations
1	Electrochemical in situ investigations of SEI and dendrite formation on the lithium metal anode. Physical Chemistry Chemical Physics, 2015, 17, 8670-8679.	2.8	621
2	A rechargeable zinc-air battery based on zinc peroxide chemistry. Science, 2021, 371, 46-51.	12.6	551
3	Mechanical Surface Modification of Lithium Metal: Towards Improved Li Metal Anode Performance by Directed Li Plating. Advanced Functional Materials, 2015, 25, 834-841.	14.9	343
4	Reversible Intercalation of Bis(trifluoromethanesulfonyl)imide Anions from an Ionic Liquid Electrolyte into Graphite for High Performance Dual-Ion Cells. Journal of the Electrochemical Society, 2012, 159, A1755-A1765.	2.9	274
5	Fluoroethylene Carbonate as Electrolyte Additive in Tetraethylene Glycol Dimethyl Ether Based Electrolytes for Application in Lithium Ion and Lithium Metal Batteries. Journal of the Electrochemical Society, 2015, 162, A1094-A1101.	2.9	211
6	Ultra-high cycling stability of poly(vinylphenothiazine) as a battery cathode material resulting from Ï€â€“Ï€ interactions. Energy and Environmental Science, 2017, 10, 2334-2341.	30.8	194
7	Coated Lithium Powder (CLiP) Electrodes for Lithiumâ€Metal Batteries. Advanced Energy Materials, 2014, 4, 1300815.	19.5	167
8	Lithiumâ€Metal Foil Surface Modification: An Effective Method to Improve the Cycling Performance of Lithiumâ€Metal Batteries. Advanced Materials Interfaces, 2017, 4, 1700166.	3.7	142
9	Dual-ion Cells Based on Anion Intercalation into Graphite from Ionic Liquid-Based Electrolytes. Zeitschrift Fur Physikalische Chemie, 2012, 226, 391-407.	2.8	108
10	Influence of cations in lithium and magnesium polysulphide solutions: dependence of the solvent chemistry. Physical Chemistry Chemical Physics, 2017, 19, 11152-11162.	2.8	85
11	Unlocking Full Discharge Capacities of Poly(vinylphenothiazine) as Battery Cathode Material by Decreasing Polymer Mobility Through Crossâ€Linking. Advanced Energy Materials, 2018, 8, 1802151.	19.5	78
12	Solidâ€State Lithiumâ€“Sulfur Battery Enabled by Thioâ€LiSICON/Polymer Composite Electrolyte and Sulfurized Polyacrylonitrile Cathode. Advanced Functional Materials, 2020, 30, 1910123.	14.9	77
13	Galvanic Corrosion of Lithiumâ€Powderâ€Based Electrodes. Advanced Energy Materials, 2020, 10, 2000017.	19.5	62
14	Revealing Hidden Facts of Li Anode in Cycled Lithiumâ€“Oxygen Batteries through X-ray and Neutron Tomography. ACS Energy Letters, 2019, 4, 306-316.	17.4	61
15	Mechanism of Charge/Discharge of Poly(vinylphenothiazine)-Based Liâ€“Organic Batteries. Chemistry of Materials, 2018, 30, 6307-6317.	6.7	57
16	Poly(vinylphenoxazine) as Fast-Charging Cathode Material for Organic Batteries. ACS Sustainable Chemistry and Engineering, 2020, 8, 238-247.	6.7	56
17	Cation-Dependent Electrochemistry of Polysulfides in Lithium and Magnesium Electrolyte Solutions. Journal of Physical Chemistry C, 2018, 122, 21770-21783.	3.1	49
18	Phenothiazineâ€Functionalized Poly(norbornene)s as Highâ€Rate Cathode Materials for Organic Batteries. ChemSusChem, 2020, 13, 2232-2238.	6.8	43

#	Article	IF	Citations
19	<i>In situ</i>⁷Li-NMR analysis of lithium metal surface deposits with varying electrolyte compositions and concentrations. Physical Chemistry Chemical Physics, 2019, 21, 26084-26094.	2.8	41
20	The Power of Stoichiometry: Conditioning and Speciation of MgCl₂/AlCl₃ in Tetraethylene Glycol Dimethyl Ether-Based Electrolytes. ACS Applied Materials & Interfaces, 2019, 11, 24057-24066.	8.0	34
21	Engineering Rice Husk into a High-Performance Electrode Material through an Ecofriendly Process and Assessing Its Application for Lithium-Ion Sulfur Batteries. ACS Sustainable Chemistry and Engineering, 2019, 7, 7851-7861.	6.7	34
22	Performance and behavior of LLZO-based composite polymer electrolyte for lithium metal electrode with high capacity utilization. Nano Energy, 2020, 77, 105196.	16.0	32
23	Sputter coating of lithium metal electrodes with lithiophilic metals for homogeneous and reversible lithium electrodeposition and electrodissolution. Materials Today, 2020, 39, 137-145.	14.2	32
24	Investigation of Polymer/Ceramic Composite Solid Electrolyte System: The Case of PEO/LGPS Composite Electrolytes. ACS Sustainable Chemistry and Engineering, 2021, 9, 11314-11322.	6.7	32
25	Using Polyisobutylene as a Non-Fluorinated Binder for Coated Lithium Powder (CLiP) Electrodes. Electrochimica Acta, 2014, 138, 288-293.	5.2	27
26	High Capacity Utilization of Li Metal Anodes by Application of Celgard Separator-Reinforced Ternary Polymer Electrolyte. Journal of the Electrochemical Society, 2019, 166, A2142-A2150.	2.9	26
27	Decomposition of Imidazoliumâ€Based Ionic Liquids in Contact with Lithium Metal. ChemSusChem, 2017, 10, 876-883.	6.8	24
28	Insights into the Solubility of Poly(vinylphenothiazine) in Carbonate-Based Battery Electrolytes. ACS Applied Materials & Interfaces, 2021, 13, 12442-12453.	8.0	23
29	Galvanic Couples in Ionic Liquidâ€Based Electrolyte Systems for Lithium Metal Batteriesâ€"An Overlooked Cause of Galvanic Corrosion?. Advanced Energy Materials, 2021, 11, 2101021.	19.5	22
30	Opportunities and Limitations of Ionic Liquidâ€•and Organic Carbonate Solventâ€Based Electrolytes for Mgâ€Ionâ€Based Dualâ€Ion Batteries. ChemSusChem, 2021, 14, 4480-4498.	6.8	22
31	Wetting Phenomena and their Effect on the Electrochemical Performance of Surfaceâ€Tailored Lithium Metal Electrodes in Contact with Crossâ€Linked Polymeric Electrolytes. Angewandte Chemie - International Edition, 2020, 59, 17145-17153.	13.8	21
32	Chemical Stability Investigations of Polyisobutylene as New Binder for Application in Lithium Air-Batteries. Electrochimica Acta, 2015, 155, 110-115.	5.2	18
33	Influence of Water Content on the Surface Morphology of Zinc Deposited from EMImOTf/Water Mixtures. Journal of the Electrochemical Society, 2019, 166, A909-A914.	2.9	18
34	Solid Electrolyte Interphase Evolution on Lithium Metal Electrodes Followed by Scanning Electrochemical Microscopy Under Realistic Battery Cycling Current Densities. ChemElectroChem, 2020, 7, 3590-3596.	3.4	17
35	Improved Interfaces of Mechanically Modified Lithium Electrodes with Solid Polymer Electrolytes. Advanced Materials Interfaces, 2019, 6, 1900518.	3.7	14
36	Lithium-Powder Based Electrodes Modified with ZnI₂ for Enhanced Electrochemical Performance of Lithium-Metal Batteries. Journal of the Electrochemical Society, 2019, 166, A1400-A1407.	2.9	14

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37	Modified Imidazoliumâ€Based Ionic Liquids With Improved Chemical Stability Against Lithium Metal. ChemistrySelect, 2017, 2, 6052-6056.	1.5	12
38	Counterintuitive trends of the wetting behavior of ionic liquid-based electrolytes on modified lithium electrodes. Physical Chemistry Chemical Physics, 2017, 19, 19178-19187.	2.8	12
39	Dibenzo[<i>a</i>,<i>e</i>]Cyclooctatetraeneâ€Functionalized Polymers as Potential Battery Electrode Materials. Macromolecular Rapid Communications, 2021, 42, e2000725.	3.9	9
40	Bridging the Gap between Small Molecular Ï€-Interactions and Their Effect on Phenothiazine-Based Redox Polymers in Organic Batteries. ACS Applied Energy Materials, 2021, 4, 7622-7631.	5.1	9
41	Approaching Electrochemical Limits of Mg _x Cl _y ^{z+} Complex-Based Electrolytes for Mg Batteries by Tailoring the Solution Structure. Journal of the Electrochemical Society, 2020, 167, 160505.	2.9	9
42	A Facile Preparation of S 8 /C Composite Cathode for Lithiumâ€Sulfur Cells: Influence of Intrinsic and Extrinsic Cathode Properties on the Electrochemical Performance. Energy Technology, 2019, 7, 1800789.	3.8	7
43	BenetzungsvorgÃnge und ihr Einfluss auf die elektrochemischen Eigenschaften von oberflÃchenangepassten Lithiumâ€Metallâ€Elektroden in Kontakt mit quervernetzten Polymerâ€Elektrolyten. Angewandte Chemie, 2020, 132, 17293-17302.	2.0	6
44	Synthesis of Highâ€Purity Imidazolium Tetrafluoroborates and Bis(oxalato)borates. Chemistry - A European Journal, 2017, 23, 2261-2264.	3.3	5
45	Increasing the Lithium Ion Mobility in Poly(Phosphazene)-Based Solid Polymer Electrolytes through Tailored Cation Doping. Journal of the Electrochemical Society, 2021, 168, 070559.	2.9	4
46	Lithium Powder Synthesis and Preparation of Powderâ€Based Composite Electrodes for Application in Lithium Metal Batteries. Energy Technology, 2022, 10, 2100871.	3.8	2
47	Solid Electrolyte Interphase Evolution on Lithium Metal Electrodes Followed by Scanning Electrochemical Microscopy Under Realistic Battery Cycling Current Densities. ChemElectroChem, 2020, 7, 3544-3544.	3.4	1
48	Negative sulfur-based electrodes and their application in battery cells: Dual-ion batteries as an example. Journal of Solid State Electrochemistry, 2022, 26, 2077-2088.	2.5	1
49	Tailored 3D-Microstructured Electrode Substrates for Increased Performance in Zero-Excess Lithium Metal Batteries. ECS Meeting Abstracts, 2021, MA2021-02, 94-94.	0.0	0
50	Single Component Protection Layers for Lithium Electrodes and Their Characterization in Lithium Metal Batteries. ECS Meeting Abstracts, 2022, MA2022-01, 90-90.	0.0	0