

Peter Bieker

List of Publications by Year in descending order

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papers

3,794
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218677

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docs citations

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times ranked

4146
citing authors

#	ARTICLE	IF	CITATIONS
1	Lithium Powder Synthesis and Preparation of Powder-Based Composite Electrodes for Application in Lithium Metal Batteries. <i>Energy Technology</i> , 2022, 10, 2100871.	3.8	2
2	Negative sulfur-based electrodes and their application in battery cells: Dual-ion batteries as an example. <i>Journal of Solid State Electrochemistry</i> , 2022, 26, 2077-2088.	2.5	1
3	Single Component Protection Layers for Lithium Electrodes and Their Characterization in Lithium Metal Batteries. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 90-90.	0.0	0
4	A rechargeable zinc-air battery based on zinc peroxide chemistry. <i>Science</i> , 2021, 371, 46-51.	12.6	551
5	Insights into the Solubility of Poly(vinylphenothiazine) in Carbonate-Based Battery Electrolytes. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 12442-12453.	8.0	23
6	Dibenzo[<i>a,c</i>]Cyclooctatetraene-Functionalized Polymers as Potential Battery Electrode Materials. <i>Macromolecular Rapid Communications</i> , 2021, 42, e2000725.	3.9	9
7	Galvanic Couples in Ionic Liquid-Based Electrolyte Systems for Lithium Metal Batteries—An Overlooked Cause of Galvanic Corrosion?. <i>Advanced Energy Materials</i> , 2021, 11, 2101021.	19.5	22
8	Increasing the Lithium Ion Mobility in Poly(Phosphazene)-Based Solid Polymer Electrolytes through Tailored Cation Doping. <i>Journal of the Electrochemical Society</i> , 2021, 168, 070559.	2.9	4
9	Bridging the Gap between Small Molecular π -Interactions and Their Effect on Phenothiazine-Based Redox Polymers in Organic Batteries. <i>ACS Applied Energy Materials</i> , 2021, 4, 7622-7631.	5.1	9
10	Investigation of Polymer/Ceramic Composite Solid Electrolyte System: The Case of PEO/LGPS Composite Electrolytes. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 11314-11322.	6.7	32
11	Opportunities and Limitations of Ionic Liquid- and Organic Carbonate Solvent-Based Electrolytes for Mg-Based Dual-Ion Batteries. <i>ChemSusChem</i> , 2021, 14, 4480-4498.	6.8	22
12	Tailored 3D-Microstructured Electrode Substrates for Increased Performance in Zero-Excess Lithium Metal Batteries. <i>ECS Meeting Abstracts</i> , 2021, MA2021-02, 94-94.	0.0	0
13	Phenothiazine-Functionalized Poly(norbornene)s as High-Rate Cathode Materials for Organic Batteries. <i>ChemSusChem</i> , 2020, 13, 2232-2238.	6.8	43
14	Poly(vinylphenoxazine) as Fast-Charging Cathode Material for Organic Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 238-247.	6.7	56
15	Performance and behavior of LLZO-based composite polymer electrolyte for lithium metal electrode with high capacity utilization. <i>Nano Energy</i> , 2020, 77, 105196.	16.0	32
16	Solid Electrolyte Interphase Evolution on Lithium Metal Electrodes Followed by Scanning Electrochemical Microscopy Under Realistic Battery Cycling Current Densities. <i>ChemElectroChem</i> , 2020, 7, 3544-3544.	3.4	1
17	Sputter coating of lithium metal electrodes with lithiophilic metals for homogeneous and reversible lithium electrodeposition and electrodisolution. <i>Materials Today</i> , 2020, 39, 137-145.	14.2	32
18	Solid Electrolyte Interphase Evolution on Lithium Metal Electrodes Followed by Scanning Electrochemical Microscopy Under Realistic Battery Cycling Current Densities. <i>ChemElectroChem</i> , 2020, 7, 3590-3596.	3.4	17

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19	Wetting Phenomena and their Effect on the Electrochemical Performance of Surface-Tailored Lithium Metal Electrodes in Contact with Cross-Linked Polymeric Electrolytes. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 17145-17153.	13.8	21
20	Benetzungsvorgänge und ihr Einfluss auf die elektrochemischen Eigenschaften von oberflächenangepassten Lithium-Metall-Elektroden in Kontakt mit quervernetzten Polymer-Elektrolyten. <i>Angewandte Chemie</i> , 2020, 132, 17293-17302.	2.0	6
21	Galvanic Corrosion of Lithium-Powder-Based Electrodes. <i>Advanced Energy Materials</i> , 2020, 10, 2000017.	19.5	62
22	Solid-State Lithium-Sulfur Battery Enabled by Thio-LiSICON/Polymer Composite Electrolyte and Sulfurized Polyacrylonitrile Cathode. <i>Advanced Functional Materials</i> , 2020, 30, 1910123.	14.9	77
23	Approaching Electrochemical Limits of $Mg_{x}Cl_{y}Z_{z}$ Complex-Based Electrolytes for Mg Batteries by Tailoring the Solution Structure. <i>Journal of the Electrochemical Society</i> , 2020, 167, 160505.	2.9	9
24	High Capacity Utilization of Li Metal Anodes by Application of Celgard Separator-Reinforced Ternary Polymer Electrolyte. <i>Journal of the Electrochemical Society</i> , 2019, 166, A2142-A2150.	2.9	26
25	The Power of Stoichiometry: Conditioning and Speciation of $MgCl_{2}/AlCl_{3}$ in Tetraethylene Glycol Dimethyl Ether-Based Electrolytes. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 24057-24066.	8.0	34
26	Improved Interfaces of Mechanically Modified Lithium Electrodes with Solid Polymer Electrolytes. <i>Advanced Materials Interfaces</i> , 2019, 6, 1900518.	3.7	14
27	Lithium-Powder Based Electrodes Modified with Zn_{2} for Enhanced Electrochemical Performance of Lithium-Metal Batteries. <i>Journal of the Electrochemical Society</i> , 2019, 166, A1400-A1407.	2.9	14
28	Influence of Water Content on the Surface Morphology of Zinc Deposited from EMImOTf/Water Mixtures. <i>Journal of the Electrochemical Society</i> , 2019, 166, A909-A914.	2.9	18
29	Engineering Rice Husk into a High-Performance Electrode Material through an Ecofriendly Process and Assessing Its Application for Lithium-Ion Sulfur Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 7851-7861.	6.7	34
30	<i>In situ</i> ^{7}Li -NMR analysis of lithium metal surface deposits with varying electrolyte compositions and concentrations. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 26084-26094.	2.8	41
31	Revealing Hidden Facts of Li Anode in Cycled Lithium-Oxygen Batteries through X-ray and Neutron Tomography. <i>ACS Energy Letters</i> , 2019, 4, 306-316.	17.4	61
32	A Facile Preparation of S ₈ /C Composite Cathode for Lithium-Sulfur Cells: Influence of Intrinsic and Extrinsic Cathode Properties on the Electrochemical Performance. <i>Energy Technology</i> , 2019, 7, 1800789.	3.8	7
33	Unlocking Full Discharge Capacities of Poly(vinylphenothiazine) as Battery Cathode Material by Decreasing Polymer Mobility Through Cross-Linking. <i>Advanced Energy Materials</i> , 2018, 8, 1802151.	19.5	78
34	Cation-Dependent Electrochemistry of Polysulfides in Lithium and Magnesium Electrolyte Solutions. <i>Journal of Physical Chemistry C</i> , 2018, 122, 21770-21783.	3.1	49
35	Mechanism of Charge/Discharge of Poly(vinylphenothiazine)-Based Organic Batteries. <i>Chemistry of Materials</i> , 2018, 30, 6307-6317.	6.7	57
36	Synthesis of High-Purity Imidazolium Tetrafluoroborates and Bis(oxalato)borates. <i>Chemistry - A European Journal</i> , 2017, 23, 2261-2264.	3.3	5

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37	Influence of cations in lithium and magnesium polysulphide solutions: dependence of the solvent chemistry. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 11152-11162.	2.8	85
38	Decomposition of Imidazolium-Based Ionic Liquids in Contact with Lithium Metal. <i>ChemSusChem</i> , 2017, 10, 876-883.	6.8	24
39	Modified Imidazolium-Based Ionic Liquids With Improved Chemical Stability Against Lithium Metal. <i>ChemistrySelect</i> , 2017, 2, 6052-6056.	1.5	12
40	Ultra-high cycling stability of poly(vinylphenothiazine) as a battery cathode material resulting from π - π interactions. <i>Energy and Environmental Science</i> , 2017, 10, 2334-2341.	30.8	194
41	Counterintuitive trends of the wetting behavior of ionic liquid-based electrolytes on modified lithium electrodes. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 19178-19187.	2.8	12
42	Lithium-Metal Foil Surface Modification: An Effective Method to Improve the Cycling Performance of Lithium-Metal Batteries. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700166.	3.7	142
43	Chemical Stability Investigations of Polyisobutylene as New Binder for Application in Lithium Air-Batteries. <i>Electrochimica Acta</i> , 2015, 155, 110-115.	5.2	18
44	Fluoroethylene Carbonate as Electrolyte Additive in Tetraethylene Glycol Dimethyl Ether Based Electrolytes for Application in Lithium Ion and Lithium Metal Batteries. <i>Journal of the Electrochemical Society</i> , 2015, 162, A1094-A1101.	2.9	211
45	Electrochemical in situ investigations of SEI and dendrite formation on the lithium metal anode. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 8670-8679.	2.8	621
46	Mechanical Surface Modification of Lithium Metal: Towards Improved Li Metal Anode Performance by Directed Li Plating. <i>Advanced Functional Materials</i> , 2015, 25, 834-841.	14.9	343
47	Coated Lithium Powder (CLiP) Electrodes for Lithium-Metal Batteries. <i>Advanced Energy Materials</i> , 2014, 4, 1300815.	19.5	167
48	Using Polyisobutylene as a Non-Fluorinated Binder for Coated Lithium Powder (CLiP) Electrodes. <i>Electrochimica Acta</i> , 2014, 138, 288-293.	5.2	27
49	Reversible Intercalation of Bis(trifluoromethanesulfonyl)imide Anions from an Ionic Liquid Electrolyte into Graphite for High Performance Dual-Ion Cells. <i>Journal of the Electrochemical Society</i> , 2012, 159, A1755-A1765.	2.9	274
50	Dual-ion Cells Based on Anion Intercalation into Graphite from Ionic Liquid-Based Electrolytes. <i>Zeitschrift Fur Physikalische Chemie</i> , 2012, 226, 391-407.	2.8	108