Dominic Bresser

List of Publications by Citations

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120 papers	6,571 citations	42 h-index	80 g-index
131 ext. papers	8,164 ext. citations	10.6 avg, IF	6.46 L-index

#	Paper	IF	Citations
120	Safer Electrolytes for Lithium-Ion Batteries: State of the Art and Perspectives. *ChemSusChem*, **2015**, 8, 2154-75	8.3	474
119	Recent progress and remaining challenges in sulfur-based lithium secondary batteries--a review. *Chemical Communications*, **2013**, 49, 10545-62	5.8	430
118	Carbon Coated $ZnFe_2O_4$ Nanoparticles for Advanced Lithium-Ion Anodes. *Advanced Energy Materials*, **2013**, 3, 513-523	21.8	292
117	Hard carbons for sodium-ion batteries: Structure, analysis, sustainability, and electrochemistry. *Materials Today*, **2019**, 23, 87-104	21.8	276
116	Transition Metal Oxide Anodes for Electrochemical Energy Storage in Lithium- and Sodium-Ion Batteries. *Advanced Energy Materials*, **2020**, 10, 1902485	21.8	261
115	Anatase TiO_2 nanoparticles for high power sodium-ion anodes. *Journal of Power Sources*, **2014**, 251, 379-385	8.9	257
114	Unfolding the Mechanism of Sodium Insertion in Anatase TiO_2 Nanoparticles. *Advanced Energy Materials*, **2015**, 5, 1401142	21.8	255
113	Alternative binders for sustainable electrochemical energy storage – the transition to aqueous electrode processing and bio-derived polymers. *Energy and Environmental Science*, **2018**, 11, 3096-3127	35.4	234
112	The success story of graphite as a lithium-ion anode material – fundamentals, remaining challenges, and recent developments including silicon (oxide) composites. *Sustainable Energy and Fuels*, **2020**, 4, 5387-5416	5.8	188
111	ZnFeO-C/LiFePO-CNT: A Novel High-Power Lithium-Ion Battery with Excellent Cycling Performance. *Advanced Energy Materials*, **2014**, 4, 1-9	21.8	186
110	An advanced lithium-air battery exploiting an ionic liquid-based electrolyte. *Nano Letters*, **2014**, 14, 6572-7	11.5	178
109	Cobalt Disulfide Nanoparticles Embedded in Porous Carbonaceous Micro-Polyhedrons Interlinked by Carbon Nanotubes for Superior Lithium and Sodium Storage. *ACS Nano*, **2018**, 12, 7220-7231	16.7	158
108	Leveraging valuable synergies by combining alloying and conversion for lithium-ion anodes. *Energy and Environmental Science*, **2016**, 9, 3348-3367	35.4	153
107	Lithium-ion batteries – Current state of the art and anticipated developments. *Journal of Power Sources*, **2020**, 479, 228708	8.9	146
106	Perspectives of automotive battery R&D in China, Germany, Japan, and the USA. *Journal of Power Sources*, **2018**, 382, 176-178	8.9	124
105	Transition-Metal-Doped Zinc Oxide Nanoparticles as a New Lithium-Ion Anode Material. *Chemistry of Materials*, **2013**, 25, 4977-4985	9.6	122
104	Nanostructured multi-block copolymer single-ion conductors for safer high-performance lithium batteries. *Energy and Environmental Science*, **2018**, 11, 3298-3309	35.4	113

103	Nanocrystalline TiO2(B) as Anode Material for Sodium-Ion Batteries. *Journal of the Electrochemical Society*, **2015**, 162, A3052-A3058	3.9	93
102	Fe-doped SnO2 nanoparticles as new high capacity anode material for secondary lithium-ion batteries. *Journal of Power Sources*, **2015**, 299, 398-402	8.9	83
101	Decoupling segmental relaxation and ionic conductivity for lithium-ion polymer electrolytes. *Molecular Systems Design and Engineering*, **2019**, 4, 779-792	4.6	82
100	Influence of the carbonaceous conductive network on the electrochemical performance of ZnFe2O4 nanoparticles. *Journal of Power Sources*, **2013**, 236, 87-94	8.9	81
99	Room temperature ionic liquid (RTIL)-based electrolyte cocktails for safe, high working potential Li-based polymer batteries. *Journal of Power Sources*, **2019**, 412, 398-407	8.9	81
98	Beneficial influence of succinic anhydride as electrolyte additive on the self-discharge of 5 V LiNi0.4Mn1.6O4 cathodes. *Journal of Power Sources*, **2013**, 236, 39-46	8.9	79
97	Carbon coated lithium sulfide particles for lithium battery cathodes. *Journal of Power Sources*, **2013** , 235, 220-225	8.9	78
96	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	8.9	77
95	Percolating networks of TiO2 nanorods and carbon for high power lithium insertion electrodes. *Journal of Power Sources*, **2012**, 206, 301-309	8.9	75
94	Embedding tin nanoparticles in micron-sized disordered carbon for lithium- and sodium-ion anodes. *Electrochimica Acta*, **2014**, 128, 163-171	6.7	74
93	Carbon-Coated Anatase TiO2Nanotubes for Li- and Na-Ion Anodes. *Journal of the Electrochemical Society*, **2015**, 162, A3013-A3020	3.9	71
92	Manganese phosphate coated Li[Ni0.6Co0.2Mn0.2]O2 cathode material: Towards superior cycling stability at elevated temperature and high voltage. *Journal of Power Sources*, **2018**, 402, 263-271	8.9	69
91	MnPO4-Coated Li(Ni0.4Co0.2Mn0.4)O2 for Lithium(-Ion) Batteries with Outstanding Cycling Stability and Enhanced Lithiation Kinetics. *Advanced Energy Materials*, **2018**, 8, 1801573	21.8	64
90	Bringing forward the development of battery cells for automotive applications: Perspective of R&D activities in China, Japan, the EU and the USA. *Journal of Power Sources*, **2020**, 459, 228073	8.9	59
89	Probing Lithiation Kinetics of Carbon-Coated ZnFe2O4 Nanoparticle Battery Anodes. *Journal of Physical Chemistry C*, **2014**, 118, 6069-6076	3.8	59
88	Enabling LiTFSI-based electrolytes for safer lithium-ion batteries by using linear fluorinated carbonates as (Co)solvent. *ChemSusChem*, **2014**, 7, 2939-46	8.3	57
87	Secondary Lithium-Ion Battery Anodes: From First Commercial Batteries to Recent Research Activities. *Johnson Matthey Technology Review*, **2015**, 59, 34-44	2.5	57
86	Rechargeable-hybrid-seawater fuel cell. *NPG Asia Materials*, **2014**, 6, e144-e144	10.3	55

85	The importance of "going nano" for high power battery materials. *Journal of Power Sources*, **2012**, 219, 217-222	8.9	53
84	Cobalt orthosilicate as a new electrode material for secondary lithium-ion batteries. *Dalton Transactions*, **2014**, 43, 15013-21	4.3	49
83	Complementary Strategies Toward the Aqueous Processing of High-Voltage LiNi Mn O Lithium-Ion Cathodes. *ChemSusChem*, **2018**, 11, 562-573	8.3	49
82	Fluorine-free water-in-ionomer electrolytes for sustainable lithium-ion batteries. *Nature Communications*, **2018**, 9, 5320	17.4	48
81	Interphase Evolution of a Lithium-Ion/Oxygen Battery. *ACS Applied Materials & Interfaces*, **2015**, 7, 22638-43	9.5	46
80	The passivity of lithium electrodes in liquid electrolytes for secondary batteries. *Nature Reviews Materials*,	73.3	44
79	Manganese silicate hollow spheres enclosed in reduced graphene oxide as anode for lithium-ion batteries. *Electrochimica Acta*, **2017**, 258, 535-543	6.7	42
78	High-energy lithium batteries based on single-ion conducting polymer electrolytes and Li[Ni0.8Co0.1Mn0.1]O2 cathodes. *Nano Energy*, **2020**, 77, 105129	17.1	42
77	Strategies towards enabling lithium metal in batteries: interphases and electrodes. *Energy and Environmental Science*,	35.4	39
76	Comparative Analysis of Aqueous Binders for High-Energy Li-Rich NMC as a Lithium-Ion Cathode and the Impact of Adding Phosphoric Acid. *ACS Applied Materials & Interfaces*, **2018**, 10, 17214-17222	9.5	35
75	Challenges of "going nano": enhanced electrochemical performance of cobalt oxide nanoparticles by carbothermal reduction and in situ carbon coating. *ChemPhysChem*, **2014**, 15, 2177-85	3.2	34
74	Conversion/alloying lithium-ion anodes –enhancing the energy density by transition metal doping. *Sustainable Energy and Fuels*, **2018**, 2, 2601-2608	5.8	34
73	Unveiling the Ion Conduction Mechanism in Imidazolium-Based Poly(ionic liquids): A Comprehensive Investigation of the Structure-to-Transport Interplay. *Macromolecules*, **2017**, 50, 4309-4321	5.5	33
72	Use of non-conventional electrolyte salt and additives in high-voltage graphite/LiNi0.4Mn1.6O4 batteries. *Journal of Power Sources*, **2013**, 238, 17-20	8.9	33
71	A Comparative Review of Electrolytes for Organic-Material-Based Energy-Storage Devices Employing Solid Electrodes and Redox Fluids. *ChemSusChem*, **2020**, 13, 2205-2219	8.3	32
70	Alloying Reaction Confinement Enables High-Capacity and Stable Anodes for Lithium-Ion Batteries. *ACS Nano*, **2019**, 13, 9511-9519	16.7	32
69	Elucidating the Impact of Cobalt Doping on the Lithium Storage Mechanism in Conversion/Alloying-Type Zinc Oxide Anodes. *ChemElectroChem*, **2016**, 3, 1311-1319	4.3	31
68	A new, high energy Sn-C/Li[Li(0.2)Ni(0.4)/3Co(0.4)/3Mn(1.6/3)]O2 lithium-ion battery. *ACS Applied Materials & Interfaces*, **2014**, 6, 12956-61	9.5	30

67	Insights into the effect of iron and cobalt doping on the structure of nanosized ZnO. *Inorganic Chemistry*, **2015**, 54, 9393-400	5.1	29
66	Influence of the doping ratio and the carbon coating content on the electrochemical performance of Co-doped SnO_2 for lithium-ion anodes. *Electrochimica Acta*, **2018**, 277, 100-109	6.7	29
65	Scaling up Nano $Li_4Ti_5O_{12}$for High-Power Lithium-Ion Anodes Using Large Scale Flame Spray Pyrolysis. *Journal of the Electrochemical Society*, **2015**, 162, A2331-A2338	3.9	28
64	Polyacrylonitrile block copolymers for the preparation of a thin carbon coating around TiO_2 nanorods for advanced lithium-ion batteries. *Macromolecular Rapid Communications*, **2013**, 34, 1693-700	4.8	28
63	Carbonaceous Anodes Derived from Sugarcane Bagasse for Sodium-Ion Batteries. *ChemSusChem*, **2019**, 12, 2302-2309	8.3	27
62	Precursor polymers for the carbon coating of Au@ZnO multipods for application as active material in lithium-ion batteries. *Macromolecular Rapid Communications*, **2015**, 36, 1075-82	4.8	27
61	Combining ionic liquid-based electrolytes and nanostructured anatase TiO_2 anodes for intrinsically safer sodium-ion batteries. *Electrochimica Acta*, **2016**, 203, 109-116	6.7	25
60	4-V flexible all-solid-state lithium polymer batteries. *Nano Energy*, **2019**, 64, 103986	17.1	22
59	From an Enhanced Understanding to Commercially Viable Electrodes: The Case of $PTCLi_4$ as Sustainable Organic Lithium-Ion Anode Material. *Advanced Sustainable Systems*, **2017**, 1, 1600032	5.9	21
58	Effect of carbonates fluorination on the properties of LiTFSI-based electrolytes for Li-ion batteries. *Electrochimica Acta*, **2015**, 161, 159-170	6.7	21
57	Introducing Highly Redox-Active Atomic Centers into Insertion-Type Electrodes for Lithium-Ion Batteries. *Advanced Energy Materials*, **2020**, 10, 2000783	21.8	20
56	Fluorinated Carbamates as Suitable Solvents for LiTFSI-Based Lithium-Ion Electrolytes: Physicochemical Properties and Electrochemical Characterization. *Journal of Physical Chemistry C*, **2015**, 119, 22404-22414	3.8	19
55	Crystal engineering of TMPOx-coated $LiNi_{0.5}Mn_{1.5}O_4$ cathodes for high-performance lithium-ion batteries. *Materials Today*, **2020**, 39, 127-136	21.8	19
54	Structural and Electrochemical Characterization of ZnFeO-Effect of Aliovalent Doping on the Li^+ Storage Mechanism. *Materials*, **2017**, 11,	3.5	19
53	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	3.2	19
52	Iron-Doped ZnO for Lithium-Ion Anodes: Impact of the Dopant Ratio and Carbon Coating Content. *Journal of the Electrochemical Society*, **2017**, 164, A6123-A6130	3.9	17
51	In-Situ Electrochemical SHINERS Investigation of SEI Composition on Carbon-Coated $Zn_{0.9}Fe_{0.1}O$ Anode for Lithium-Ion Batteries. *Batteries and Supercaps*, **2019**, 2, 168-177	5.6	17
50	Composition Modulation of Ionic Liquid Hybrid Electrolyte for 5 V Lithium-Ion Batteries. *ACS Applied Materials & Interfaces*, **2019**, 11, 42049-42056	9.5	16

49	Co-Crosslinked Water-Soluble Biopolymers as a Binder for High-Voltage LiNi Mn O |Graphite Lithium-Ion Full Cells. *ChemSusChem*, **2020**, 13, 2650-2660	8.3	15
48	Stabilizing nanostructured lithium insertion materials via organic hybridization: A step forward towards high-power batteries. *Journal of Power Sources*, **2014**, 248, 852-860	8.9	14
47	Tailoring the Charge/Discharge Potentials and Electrochemical Performance of SnO2 Lithium-Ion Anodes by Transition Metal Co-Doping. *Batteries and Supercaps*, **2020**, 3, 284-292	5.6	14
46	Probing the 3-step Lithium Storage Mechanism in CH3NH3PbBr3 Perovskite Electrode by Operando-XRD Analysis. *ChemElectroChem*, **2019**, 6, 456-460	4.3	14
45	Unveiling and Amplifying the Benefits of Carbon-Coated Aluminum Current Collectors for Sustainable LiNi0.5Mn1.5O4 Cathodes. *ACS Applied Energy Materials*, **2020**, 3, 218-230	6.1	13
44	Synergistic electrolyte additives for enhancing the performance of high-voltage lithium-ion cathodes in half-cells and full-cells. *Journal of Power Sources*, **2021**, 482, 228975	8.9	13
43	Mechanistic Insights into the Lithiation and Delithiation of Iron-Doped Zinc Oxide: The Nucleation Site Model. *ACS Applied Materials & Interfaces*, **2020**, 12, 8206-8218	9.5	12
42	Lithium Phosphonate Functionalized Polymer Coating for High-Energy Li[Ni0.8Co0.1Mn0.1]O2 with Superior Performance at Ambient and Elevated Temperatures. *Advanced Functional Materials*, **2021** , 31, 2105343	15.6	11
41	In Situ Investigation of Layered Oxides with Mixed Structures for Sodium-Ion Batteries. *Small Methods*, **2019**, 3, 1900239	12.8	10
40	Transforming anatase TiO2 nanorods into ultrafine nanoparticles for advanced electrochemical performance. *Journal of Power Sources*, **2015**, 294, 406-413	8.9	10
39	Understanding the Role of Nanoparticles in PEO-Based Hybrid Polymer Electrolytes for Solid-State Lithium-Polymer Batteries. *Journal of Physical Chemistry C*, **2020**, 124, 27907-27915	3.8	10
38	Manipulation of Nitrogen-Heteroatom Configuration for Enhanced Charge-Storage Performance and Reliability of Nanoporous Carbon Electrodes. *ACS Applied Materials & Interfaces*, **2020**, 12, 32797-32805	9.5	10
37	Increased Cycling Performance of Li-Ion Batteries by Phosphoric Acid Modified LiNi0.5Mn1.5O4 Cathodes in the Presence of LiBOB. *International Journal of Electrochemistry*, **2019**, 2019, 1-7	2.4	10
36	Deriving Structure-Performance Relations of Chemically Modified Chitosan Binders for Sustainable High-Voltage LiNi0.5Mn1.5O4 Cathodes. *Batteries and Supercaps*, **2020**, 3, 155-164	5.6	10
35	Revisiting the energy efficiency and (potential) full-cell performance of lithium-ion batteries employing conversion/alloying-type negative electrodes. *Journal of Power Sources*, **2020**, 473, 228583	8.9	10
34	An Alternative Charge-Storage Mechanism for High-Performance Sodium-Ion and Potassium-Ion Anodes. *ACS Energy Letters*, **2021**, 6, 915-924	20.1	10
33	Sodium Biphenyl as Anolyte for Sodium-Seawater Batteries. *Advanced Functional Materials*, **2020**, 30, 2001249	15.6	9
32	Partially Oxidized Cellulose grafted with Polyethylene Glycol mono-Methyl Ether (m-PEG) as Electrolyte Material for Lithium Polymer Battery. *Carbohydrate Polymers*, **2020**, 240, 116339	10.3	9

31	Structure rearrangements induced by lithium insertion in metal alloying oxide mixed spinel structure studied by x-ray absorption near-edge spectroscopy. *Journal of Physics and Chemistry of Solids*, **2020**, 136, 109172	3.9	9
30	Scalable Synthesis of Microsized, Nanocrystalline Zn Fe O-C Secondary Particles and Their Use in Zn Fe O-C/LiNi Mn O Lithium-Ion Full Cells. *ChemSusChem*, **2020**, 13, 3504-3513	8.3	9
29	Impact of the Transition Metal Dopant in Zinc Oxide Lithium-Ion Anodes on the Solid Electrolyte Interphase Formation.. *Small Methods*, **2021**, 5, e2001021	12.8	9
28	Lithium-ion batteries (LIBs) for medium- and large-scale energy storage:: current cell materials and components **2015**, 125-211		7
27	Determination of the Volume Changes Occurring for Conversion/Alloying-Type Li-Ion Anodes upon Lithiation/Delithiation. *Journal of Physical Chemistry Letters*, **2020**, 11, 8238-8245	6.4	7
26	MnPO4-Coated Li-NCM: MnPO4-Coated Li(Ni0.4Co0.2Mn0.4)O2 for Lithium(-Ion) Batteries with Outstanding Cycling Stability and Enhanced Lithiation Kinetics (Adv. Energy Mater. 27/2018). *Advanced Energy Materials*, **2018**, 8, 1870123	21.8	7
25	High-Li+-fraction ether-side-chain pyrrolidiniumasymmetric imide ionic liquid electrolyte for high-energy-density Si//Ni-rich layered oxide Li-ion batteries. *Chemical Engineering Journal*, **2021**, 430, 132693	14.7	6
24	Lithium-Ion Batteries: ZnFe2O4-C/LiFePO4-CNT: A Novel High-Power Lithium-Ion Battery with Excellent Cycling Performance (Adv. Energy Mater. 10/2014). *Advanced Energy Materials*, **2014**, 4, n/a-n/a	21.8	5
23	Transition Metal Oxide Anodes for Electrochemical Energy Storage in Lithium- and Sodium-Ion Batteries* **2022**, 55-99		5
22	Lithium-ion batteries (LIBs) for medium- and large-scale energy storage **2015**, 213-289		4
21	Optimizing the Mg Doping Concentration of Na3V2Mgx(PO4)2F3/C for Enhanced Sodiation/Desodiation Properties. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 6962-6971	8.3	4
20	Organic Liquid Crystals as Single-Ion Li Conductors. *ChemSusChem*, **2021**, 14, 655-661	8.3	4
19	Diagnosis tools for humidity-born surface contaminants on Li[Ni0.8Mn0.1Co0.1]O2 cathode materials for lithium batteries. *Journal of Power Sources*, **2022**, 525, 231111	8.9	3
18	Effect of Applying a Carbon Coating on the Crystal Structure and De-/Lithiation Mechanism of Mn-Doped ZnO Lithium-Ion Anodes. *Journal of the Electrochemical Society*, **2021**, 168, 030503	3.9	3
17	Isovalent vs. aliovalent transition metal doping of zinc oxide lithium-ion battery anodes In-depth investigation by ex situ and operando X-ray absorption spectroscopy. *Materials Today Chemistry*, **2021**, 20, 100478	6.2	3
16	Initial lithiation of carbon-coated zinc ferrite anodes studied by in-situ X-ray absorption spectroscopy. *Radiation Physics and Chemistry*, **2020**, 175, 108468	2.5	3
15	Single-ion conducting polymer electrolyte for Li||LiNi0.6Mn0.2Co0.2O2 batteriesImpact of the anodic cutoff voltage and ambient temperature. *Journal of Solid State Electrochemistry*,1	2.6	3
14	Polysiloxane-Based Single-Ion Conducting Polymer Blend Electrolyte Comprising Small-Molecule Organic Carbonates for High-Energy and High-Power Lithium-Metal Batteries. *Advanced Energy Materials*,2200013	21.8	3

13	Critical Evaluation of the Use of 3D Carbon Networks Enhancing the Long-Term Stability of Lithium Metal Anodes. *Frontiers in Materials*, **2019**, 6,	4	2
12	Hydride-ion-conducting KNiF-type Ba-Li oxyhydride solid electrolyte.. *Nature Materials*, **2022**,	27	2
11	Impact of Crystal Density on the Electrochemical Behavior of Lithium-Ion Anode Materials: Exemplary Investigation of (Fe-Doped) GeO2. *Journal of Physical Chemistry C*, **2021**, 125, 8947-8958	3.8	2
10	ZnO-Based Conversion/Alloying Negative Electrodes for Lithium-Ion Batteries: Impact of Mixing Intimacy. *Energy Technology*, **2021**, 9, 2001084	3.5	2
9	Effect of the Secondary Rutile Phase in Single-Step Synthesized Carbon-Coated Anatase TiO2 Nanoparticles as Lithium-Ion Anode Material. *Energy Technology*, **2021**, 9, 2001067	3.5	2
8	Deriving Structure-Performance Relations of Chemically Modified Chitosan Binders for Sustainable High-Voltage LiNi0.5Mn1.5O4 Cathodes. *Batteries and Supercaps*, **2020**, 3, 129-129	5.6	1
7	Photo-Crosslinked Single-Ion Conducting Polymer Electrolyte for Lithium-Metal Batteries.. *Macromolecular Rapid Communications*, **2022**, e2100820	4.8	1
6	Gravure-Printed Conversion/Alloying Anodes for Lithium-Ion Batteries. *Energy Technology*, **2021**, 9, 2100315	3.5	1
5	The Role of Batteries for the Successful Transition to Renewable Energy Sources **2020**, 1-9		0
4	Lithium-Ion Batteries: Introducing Highly Redox-Active Atomic Centers into Insertion-Type Electrodes for Lithium-Ion Batteries (Adv. Energy Mater. 25/2020). *Advanced Energy Materials*, **2020**, 10, 2070112	21.8	0
3	Synergistic Effect of Co and Mn Co-Doping on SnO2 Lithium-Ion Anodes. *Inorganics*, **2022**, 10, 46	2.9	0
2	Quantification of charge compensation in lithium- and manganese-rich Li-ion cathode materials by x-ray spectroscopies. *Materials Today Physics*, **2022**, 24, 100687	8	0
1	Comprehensive Approach to Investigate the De-/Lithiation Mechanism of Fe-Doped SnO 2 as Lithium-Ion Anode Material. *Advanced Sustainable Systems*,2200102	5.9	0