Thomas Diemant

List of Publications by Year
in descending order

81 papers	3,602 citations	136950 32 h-index	138484 58 g-index
88 all docs	88 docs citations	88 times ranked	4612 citing authors

#	Article	IF	Citations
1	Performance Improvement of Magnesium Sulfur Batteries with Modified Nonâ€Nucleophilic Electrolytes. Advanced Energy Materials, 2015, 5, 1401155.	19.5	308
2	Performance study of magnesiumâ€“sulfur battery using a graphene based sulfur composite cathode electrode and a non-nucleophilic Mg electrolyte. Nanoscale, 2016, 8, 3296-3306.	5.6	247
3	Toward Highly Reversible Magnesiumâ€“Sulfur Batteries with Efficient and Practical Mg[B(hfip)₄]₂ Electrolyte. ACS Energy Letters, 2018, 3, 2005-2013.	17.4	234
4	In-Depth Interfacial Chemistry and Reactivity Focused Investigation of Lithiumâ€“Imide- and Lithiumâ€“Imidazole-Based Electrolytes. ACS Applied Materials & Interfaces, 2016, 8, 16087-16100.	8.0	159
5	Single step transformation of sulphur to Li2S2/Li2S in Li-S batteries. Scientific Reports, 2015, 5, 12146.	3.3	154
6	Pectin, Hemicellulose, or Lignin? Impact of the Biowaste Source on the Performance of Hard Carbons for Sodiumâ€Ion Batteries. ChemSusChem, 2017, 10, 2668-2676.	6.8	125
7	Dendrite Growth in Mg Metal Cells Containing Mg(TFSI)₂/Glyme Electrolytes. Journal of the Electrochemical Society, 2018, 165, A1983-A1990.	2.9	124
8	Fast kinetics of multivalent intercalation chemistry enabled by solvated magnesium-ions into self-established metallic layered materials. Nature Communications, 2018, 9, 5115.	12.8	114
9	Insights into the reversibility of aluminum graphite batteries. Journal of Materials Chemistry A, 2017, 5, 9682-9690.	10.3	112
10	CuF₂ as Reversible Cathode for Fluoride Ion Batteries. Advanced Functional Materials, 2017, 27, 1701051.	14.9	112
11	Superior Lithium Storage Capacity of Î±â€MnS Nanoparticles Embedded in Sâ€Doped Carbonaceous Mesoporous Frameworks. Advanced Energy Materials, 2019, 9, 1902077.	19.5	108
12	ZnO/ZnFe2O4/N-doped C micro-polyhedrons with hierarchical hollow structure as high-performance anodes for lithium-ion batteries. Nano Energy, 2017, 42, 341-352.	16.0	103
13	A Porphyrin Complex as a Selfâ€Conditioned Electrode Material for Highâ€Performance Energy Storage. Angewandte Chemie - International Edition, 2017, 56, 10341-10346.	13.8	94
14	MnPO₄â€Coated Li(Ni_{0.4}Co_{0.2}Mn_{0.4})O₂ for Lithium(â€Ion) Batteries with Outstanding Cycling Stability and Enhanced Lithiation Kinetics. Advanced Energy Materials, 2018, 8, 1801573.	19.5	87
15	VOCl as a Cathode for Rechargeable Chloride Ion Batteries. Angewandte Chemie - International Edition, 2016, 55, 4285-4290.	13.8	81
16	Inâ€…Situ Coating of Li[Ni_{0.33}Mn_{0.33}Co_{0.33}]O₂ Particles to Enable Aqueous Electrode Processing. ChemSusChem, 2016, 9, 1112-1117.	6.8	74
17	Complementary Strategies Toward the Aqueous Processing of Highâ€Voltage LiNi_{0.5}Mn_{1.5}O₄ Lithiumâ€Ion Cathodes. ChemSusChem, 2018, 11, 562-573.	6.8	70
18	Precise Control of Polydopamine Film Formation by Electropolymerization. Macromolecular Symposia, 2014, 346, 73-81.	0.7	55

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19	Insights into the electrochemical processes of rechargeable magnesiumâ€“sulfur batteries with a new cathode design. Journal of Materials Chemistry A, 2019, 7, 25490-25502.	10.3	53
20	Metalâ€“Organic Framework Derived Fe₇S₈ Nanoparticles Embedded in Heteroatomâ€Doped Carbon with Lithium and Sodium Storage Capability. Small Methods, 2020, 4, 2000637.	8.6	46
21	Investigation on the formation of Mg metal anode/electrolyte interfaces in Mg/S batteries with electrolyte additives. Journal of Materials Chemistry A, 2020, 8, 22998-23010.	10.3	46
22	Electrochemical and compositional characterization of solid interphase layers in an interface-modified solid-state Liâ€“sulfur battery. Journal of Materials Chemistry A, 2020, 8, 16451-16462.	10.3	44
23	Insight into Sulfur Confined in Ultramicroporous Carbon. ACS Omega, 2018, 3, 11290-11299.	3.5	42
24	Reducing Capacity and Voltage Decay of Coâ€Free Li_{1.2}Ni_{0.2}Mn_{0.6}O₂ as Positive Electrode Material for Lithium Batteries Employing an Ionic Liquidâ€Based Electrolyte. Advanced Energy Materials, 2020, 10, 2001830.	19.5	42
25	Conversion/alloying lithium-ion anodes â€“ enhancing the energy density by transition metal doping. Sustainable Energy and Fuels, 2018, 2, 2601-2608.	4.9	41
26	Interaction of CO with planar Au/TiO2 model catalysts at elevated pressures. Topics in Catalysis, 2007, 44, 83-93.	2.8	39
27	Revisiting the Electrochemical Lithiation Mechanism of Aluminum and the Role of Liâ€rich Phases (Li_{1+<i>x</i>}Al) on Capacity Fading. ChemSusChem, 2019, 12, 2609-2619.	6.8	39
28	Unveiling the Intricate Intercalation Mechanism in Manganese Sesquioxide as Positive Electrode in Aqueous Znâ€Metal Battery. Advanced Energy Materials, 2021, 11, 2100962.	19.5	39
29	Highly Reversible Sodiation of Tin in Glyme Electrolytes: The Critical Role of the Solid Electrolyte Interphase and Its Formation Mechanism. ACS Applied Materials & Interfaces, 2020, 12, 3697-3708.	8.0	37
30	Nitrogen Rich Hierarchically Organized Porous Carbon/Sulfur Composite Cathode Electrode for High Performance Li/S Battery: A Mechanistic Investigation by Operando Spectroscopic Studies. Advanced Materials Interfaces, 2016, 3, 1600372.	3.7	36
31	Iron encapsulated nitrogen and sulfur co-doped few layer graphene as a non-precious ORR catalyst for PEMFC application. RSC Advances, 2015, 5, 66494-66501.	3.6	34
32	Establishing a Stable Anodeâ€“Electrolyte Interface in Mg Batteries by Electrolyte Additive. ACS Applied Materials & Interfaces, 2021, 13, 33123-33132.	8.0	34
33	Oxygen Activity in Li-Rich Disordered Rock-Salt Oxide and the Influence of LiNbO₃ Surface Modification on the Electrochemical Performance. Chemistry of Materials, 2019, 31, 4330-4340.	6.7	33
34	Excellent Cycling Stability and Superior Rate Capability of Na₃V₂(PO₄)₃ Cathodes Enabled by Nitrogenâ€Doped Carbon Interpenetration for Sodiumâ€Ion Batteries. ChemElectroChem, 2017, 4, 1256-1263.	3.4	32
35	Study of all solid-state rechargeable fluoride ion batteries based on thin-film electrolyte. Journal of Solid State Electrochemistry, 2017, 21, 1243-1251.	2.5	31
36	A Porphyrin Complex as a Selfâ€Conditioned Electrode Material for Highâ€Performance Energy Storage. Angewandte Chemie, 2017, 129, 10477-10482.	2.0	31

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37	Introducing Highly Redoxâ€Active Atomic Centers into Insertionâ€Type Electrodes for Lithiumâ€Ion Batteries. Advanced Energy Materials, 2020, 10, 2000783.	19.5	30
38	Reversible Copper Sulfide Conversion in Nonflammable Trimethyl Phosphate Electrolytes for Safe Sodiumâ€Ion Batteries. Small Structures, 2021, 2, 2100035.	12.0	30
39	From Adlayer Islands to Surface Alloy: Structural and Chemical Changes on Bimetallic PtRu/Ru(0001) Surfaces. ChemPhysChem, 2010, 11, 3123-3132.	2.1	29
40	Ultrafast Ionic Liquid-Assisted Microwave Synthesis of SnO Microflowers and Their Superior Sodium-Ion Storage Performance. ACS Applied Materials & Interfaces, 2017, 9, 26797-26804.	8.0	29
41	VOCl as a Cathode for Rechargeable Chloride Ion Batteries. Angewandte Chemie, 2016, 128, 4357-4362.	2.0	26
42	Rechargeable Calciumâ€“Sulfur Batteries Enabled by an Efficient Borateâ€Based Electrolyte. Small, 2020, 16, e2001806.	10.0	24
43	Synthesis of amorphous and graphitized porous nitrogen-doped carbon spheres as oxygen reduction reaction catalysts. Beilstein Journal of Nanotechnology, 2020, 11, 1-15.	2.8	23
44	Interlayerâ€Expanded Vanadium Oxychloride as an Electrode Material for Magnesiumâ€Based Batteries. ChemElectroChem, 2017, 4, 738-745.	3.4	22
45	Embedding Heterostructured Î±â€MnS/MnO Nanoparticles in Sâ€Doped Carbonaceous Porous Framework as Highâ€Performance Anode for Lithiumâ€Ion Batteries. ChemElectroChem, 2021, 8, 918-927.	3.4	21
46	Polymeric carbon nitride coupled with a molecular thiomolybdate catalyst: exciton and charge dynamics in light-driven hydrogen evolution. Sustainable Energy and Fuels, 2020, 4, 6085-6095.	4.9	20
47	Study of the Na Storage Mechanism in Silicon Oxycarbideâ€"Evidence for Reversible Silicon Redox Activity. Small Methods, 2019, 3, 1800177.	8.6	19
48	Solvent-Dictated Sodium Sulfur Redox Reactions: Investigation of Carbonate and Ether Electrolytes. Energies, 2020, 13, 836.	3.1	19
49	Insights into solid electrolyte interphase formation on alternative anode materials in lithium-ion batteries. Journal of Applied Electrochemistry, 2017, 47, 249-259.	2.9	17
50	Planar Au/TiO₂ Model Catalysts: Fabrication, Characterization and Catalytic Activity. ChemPhysChem, 2010, 11, 1430-1437.	2.1	16
51	Understanding the Origin of Higher Capacity for Ni-Based Disordered Rock-Salt Cathodes. Chemistry of Materials, 2020, 32, 3447-3461.	6.7	16
52	Coadsorption of hydrogen and CO on well-defined Pt35Ru65/Ru(0001) surface alloysâ€"site specificity vs. adsorbateâ€"adsorbate interactions. Physical Chemistry Chemical Physics, 2010, 12, 9801.	2.8	15
53	A Lithiumâ€Ion Battery with Enhanced Safety Prepared using an Environmentally Friendly Process. ChemSusChem, 2016, 9, 1290-1298.	6.8	15
54	Coadsorption of Hydrogen and CO on Hydrogen Preâ€Covered PtRu/Ru(0001) Surface Alloys. ChemPhysChem, 2010, 11, 1482-1490.	2.1	14

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55	Performance Improvement of Vâ€“Feâ€“Crâ€“Ti Solid State Hydrogen Storage Materials in Impure Hydrogen Gas. ACS Applied Materials & Interfaces, 2018, 10, 1662-1671.	8.0	14
56	Model Studies on the Solid Electrolyte Interphase Formation on Graphite Electrodes in Ethylene Carbonate and Dimethyl Carbonate: Highly Oriented Pyrolytic Graphite. ChemElectroChem, 2019, 6, 4985-4997.	3.4	14
57	High-pressure study on the adsorption and oxidation of CO on gold/titania model catalysts. Surface Science, 2007, 601, 3801-3804.	1.9	12
58	Ag on Pt(111): Changes in Electronic and CO Adsorption Properties upon PtAg/Pt(111) Monolayer Surface Alloy Formation. ChemPhysChem, 2015, 16, 2943-2952.	2.1	12
59	Thermochemical Energy Storage through De/Hydrogenation of Organic Liquids: Reactions of Organic Liquids on Metal Hydrides. ACS Applied Materials & Interfaces, 2016, 8, 13993-14003.	8.0	11
60	Electrocatalytic Oxygen Reduction and Oxygen Evolution in Mgâ€Free and Mgâ€“Containing Ionic Liquid 1â€Butylâ€1â€Methylpyrrolidinium Bis (Trifluoromethanesulfonyl) Imide. ChemElectroChem, 2018, 5, 2600-2611.	3.4	10
61	Electrochemical Formation and Characterization of Surface Blocking Layers on Gold and Platinum by Oxygen Reduction in Mg(ClO₄)₂in DMSO. Journal of the Electrochemical Society, 2018, 165, A2037-A2046.	2.9	10
62	MnPO4 -Coated Li-NCM: MnPO4 -Coated Li(Ni0.4 Co0.2 Mn0.4)O2 for Lithium(-Ion) Batteries with Outstanding Cycling Stability and Enhanced Lithiation Kinetics (Adv. Energy Mater. 27/2018). Advanced Energy Materials, 2018, 8, 1870123.	19.5	9
63	Model Studies on Solid Electrolyte Interphase Formation on Graphite Electrodes in Ethylene Carbonate and Dimethyl Carbonate II: Graphite Powder Electrodes. ChemElectroChem, 2020, 7, 4794-4809.	3.4	8
64	Investigation of the Anodeâ€Electrolyte Interface in a Magnesium Fullâ€Cell with Fluorinated Alkoxyborateâ€Based Electrolyte. Batteries and Supercaps, 2022, 5, .	4.7	8
65	Stability and chemisorption properties of ultrathin TiOx/Pt(111) films and Au/TiOx/Pt(111) model catalysts in reactive atmospheres. Physical Chemistry Chemical Physics, 2010, 12, 6864.	2.8	7
66	Selective Binding of Inhibitorâ€Assisted Surfaceâ€Imprinted Core/Shell Microbeads in Protein Mixtures. ChemistrySelect, 2018, 3, 4277-4282.	1.5	7
67	Lithium-Magnesium Hybrid Battery with Vanadium Oxychloride as Electrode Material. ChemistrySelect, 2017, 2, 7558-7564.	1.5	6
68	Calciumâ€“Sulfur Batteries: Rechargeable Calciumâ€“Sulfur Batteries Enabled by an Efficient Borateâ€Based Electrolyte (Small 39/2020). Small, 2020, 16, 2070216.	10.0	5
69	Molecular and Dissociative Hydrogen Adsorption on Bimetallic PdAg/Pd(111) Surface Alloys: A Combined Experimental and Theoretical Study. Journal of Physical Chemistry C, 2022, 126, 3060-3077.	3.1	4
70	Impact of Surface Chemistry and Doping Concentrations on Biofunctionalization of GaN/Gaâ€'Inâ€'N Quantum Wells. Sensors, 2020, 20, 4179.	3.8	3
71	Tungsten Oxytetrachloride as a Positive Electrode for Chlorideâ€Ion Batteries. Energy Technology, 2022, 10, .	3.8	3
72	Batteries: Performance Improvement of Magnesium Sulfur Batteries with Modified Nonâ€Nucleophilic Electrolytes (Adv. Energy Mater. 3/2015). Advanced Energy Materials, 2015, 5, .	19.5	2

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73	Silanization of Sapphire Surfaces for Optical Sensing Applications. ACS Sensors, 2017, 2, 522-530.	7.8	2
74	Revisiting the Electrochemical Lithiation Mechanism of Aluminum and the Role of Liâ€rich Phases (Li 1+ x) Tj ETQq0 0 0 rgBT /Overlock 1	6.8	2
75	CO Oxidation on Planar Au/TiO₂ Model Catalysts under Realistic Conditions: A Combined Kinetic and IR Study. ChemPhysChem, 2021, 22, 542-552.	2.1	2
76	Resolving the structure of V₃O₇Â·H₂O and Mo-substituted V₃O₇Â·H₂O. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2022, 78, 637-642.	1.1	2
77	Ag on Pt(111): Changes in Electronic and CO Adsorption Properties upon PtAg/Pt(111) Monolayer Surface Alloy Formation. ChemPhysChem, 2015, 16, 2907-2907.	2.1	1
78	Lithiumâ€Ion Batteries: Introducing Highly Redoxâ€Active Atomic Centers into Insertionâ€Type Electrodes for Lithiumâ€Ion Batteries (Adv. Energy Mater. 25/2020). Advanced Energy Materials, 2020, 10, 2070112.	19.5	1
79	Battery Technology: Nitrogen Rich Hierarchically Organized Porous Carbon/Sulfur Composite Cathode Electrode for High Performance Li/S Battery: A Mechanistic Investigation by Operando Spectroscopic Studies (Adv. Mater. Interfaces 19/2016). Advanced Materials Interfaces, 2016, 3, .	3.7	0
80	Lithium Metal Batteries: Reducing Capacity and Voltage Decay of Coâ€Free Li_{1.2}Ni_{0.2}Mn_{0.6}O₂ as Positive Electrode Material for Lithium Batteries Employing an Ionic Liquidâ€Based Electrolyte (Adv. Energy Mater. 34/2020). Advanced Energy Materials, 2020, 10, 2070142.	19.5	0
81	Unveiling the Intricate Intercalation Mechanism in Manganese Sesquioxide as Positive Electrode in Aqueous Znâ€Metal Battery (Adv. Energy Mater. 35/2021). Advanced Energy Materials, 2021, 11, 2170136.	19.5	0