Daniel SchrÃ¶der

List of Publications by Year
in descending order

60 papers	2,738 citations	230014 27 h-index	206121 51 g-index
66 all docs	66 docs citations	66 times ranked	3713 citing authors

#	Article	IF	Citations
1	Digitalization Platform for Mechanistic Modeling of Battery Cell Production. Sustainability, 2022, 14, 1530.	1.6	5
2	Performance enhancement of alkaline organic redox flow battery using catalyst including titanium oxide and Ketjenblack. Korean Journal of Chemical Engineering, 2022, 39, 1624-1631.	1.2	10
3	Nonlinear Electrochemical Analysis: Worth the Effort to Reveal New Insights into Energy Materials. Advanced Energy Materials, 2022, 12, .	10.2	11
4	Elucidating the Solubility and Diffusivity of Atmospheric Gases in a Wide Variation of Liquid Electrolytes for Lithium-Air Batteries. ECS Meeting Abstracts, 2021, MA2021-01, 390-390.	0.0	0
5	Editorsâ€™ Choiceâ€"Quantification of the Impact of Chemo-Mechanical Degradation on the Performance and Cycling Stability of NCM-Based Cathodes in Solid-State Li-Ion Batteries. Journal of the Electrochemical Society, 2021, 168, 070546.	1.3	22
6	Understanding the Transport of Atmospheric Gases in Liquid Electrolytes for Lithiumâ€"Air Batteries. Journal of the Electrochemical Society, 2021, 168, 070504.	1.3	6
7	Electrochemical Lithiation/Delithiation of ZnO in 3D-Structured Electrodes: Elucidating the Mechanism and the Solid Electrolyte Interphase Formation. ACS Applied Materials & Interfaces, 2021, 13, 35625-35638.	4.0	10
8	Singlet Oxygen in Electrochemical Cells: A Critical Review of Literature and Theory. Chemical Reviews, 2021, 121, 12445-12464.	23.0	48
9	Hybridization of carbon nanotube tissue and MnO2 as a generic advanced air cathode in metalâ€"air batteries. Journal of Power Sources, 2021, 514, 230597.	4.0	5
10	A mechanistic investigation of the Li10GeP2S12 | LiNi1-x-yCoxMnyO2 interface stability in all-solid-state lithium batteries. Nature Communications, 2021, 12, 6669.	5.8	72
11	Nanomaterials for alkali metal/oxygen batteries. Frontiers of Nanoscience, 2021, 19, 199-227.	0.3	0
12	Design Strategies to Enable the Efficient Use of Sodium Metal Anodes in Highâ€Energy Batteries. Advanced Materials, 2020, 32, e1903891.	11.1	173
13	Pathways to Triplet or Singlet Oxygen during the Dissociation of Alkali Metal Superoxides: Insights by Multireference Calculations of Molecular Model Systems. Chemistry - A European Journal, 2020, 26, 2395-2404.	1.7	13
14	Reproducible and stable cycling performance data on secondary zinc oxygen batteries. Scientific Data, 2020, 7, 395.	2.4	5
15	Pulse Discharging of Sodium-Oxygen Batteries to Enhance Cathode Utilization. Energies, 2020, 13, 5650.	1.6	2
16	Partially methylated polybenzimidazoles as coating for alkaline zinc anodes. Journal of Membrane Science, 2020, 610, 118254.	4.1	12
17	From Liquid- to Solid-State Batteries: Ion Transfer Kinetics of Heteroionic Interfaces. Electrochemical Energy Reviews, 2020, 3, 221-238.	13.1	117
18	Implications of Testing a Zincâ€"Oxygen Battery with Zinc Foil Anode Revealed by Operando Gas Analysis. ACS Omega, 2020, 5, 626-633.	1.6	17

#	ARTICLE	IF	CITATIONS
19	Incorporating Diamondoids as Electrolyte Additive in the Sodium Metal Anode to Mitigate Dendrite Growth. ChemSusChem, 2020, 13, 2661-2670.	3.6	30
20	A Comparative Review of Electrolytes for Organicâ€Materialâ€Based Energyâ€Storage Devices Employing Solid Electrodes and Redox Fluids. ChemSusChem, 2020, 13, 2205-2219.	3.6	64
21	Tailoring Dihydroxyphthalazines to Enable Their Stable and Efficient Use in the Catholyte of Aqueous Redox Flow Batteries. Chemistry of Materials, 2020, 32, 3427-3438.	3.2	22
22	Understanding the Impact of Compression on the Active Area of Carbon Felt Electrodes for Redox Flow Batteries. ACS Applied Energy Materials, 2020, 3, 4384-4393.	2.5	24
23	Looking Deep inside the Cathode of Li-O2 Batteries: Unraveling the Local Distribution of Li2O2 with a Combined Experimental and Model-Based Approach. ECS Meeting Abstracts, 2020, MA2020-01, 445-445.	0.0	0
24	Benchmarking Anode Concepts: The Future of Electrically Rechargeable Zincâ€“Air Batteries. ACS Energy Letters, 2019, 4, 1287-1300.	8.8	136
25	Practical Implications of Using a Solid Electrolyte in Batteries with a Sodium Anode: A Combined Xâ€Ray Tomography and Modelâ€Based Study. Energy Technology, 2019, 7, 1801146.	1.8	14
26	Which Parameter is Governing for Aqueous Redox Flow Batteries with Organic Active Material?. Chemie-Ingenieur-Technik, 2019, 91, 786-794.	0.4	27
27	Unraveling the Formation Mechanism of Solidâ€“Liquid Electrolyte Interphases on LiPON Thin Films. ACS Applied Materials & Interfaces, 2019, 11, 9539-9547.	4.0	29
28	Operando Analysis of Reactant Conversion and Material Stability in Nextâ€Generation Batteries. Chemie-Ingenieur-Technik, 2019, 91, 555-559.	0.4	0
29	Homogeneous Coating with an Anion-Exchange Ionomer Improves the Cycling Stability of Secondary Batteries with Zinc Anodes. ACS Applied Materials & Interfaces, 2018, 10, 8640-8648.	4.0	61
30	Quest for Organic Active Materials for Redox Flow Batteries: 2,3-Diaza-anthraquinones and Their Electrochemical Properties. Chemistry of Materials, 2018, 30, 762-774.	3.2	44
31	Diffusivity and Solubility of Oxygen in Solvents for Metal/Oxygen Batteries: A Combined Theoretical and Experimental Study. Journal of the Electrochemical Society, 2018, 165, A3095-A3099.	1.3	24
32	Next-Generation Rechargeable Batteries: Challenges for Developing Rechargeable Room-Temperature Sodium Oxygen Batteries (Adv. Mater. Technol. 9/2018). Advanced Materials Technologies, 2018, 3, 1870035.	3.0	2
33	Towards zinc-oxygen batteries with enhanced cycling stability: The benefit of anion-exchange ionomer for zinc sponge anodes. Journal of Power Sources, 2018, 395, 195-204.	4.0	65
34	Challenges for Developing Rechargeable Roomâ€Temperature Sodium Oxygen Batteries. Advanced Materials Technologies, 2018, 3, 1800110.	3.0	29
35	Controlled Electrodeposition of Zinc Oxide on Conductive Meshes and Foams Enabling Its Use as Secondary Anode. Journal of the Electrochemical Society, 2018, 165, D461-D466.	1.3	17
36	Charge Transfer Characteristics of Diaza-Anthraquinones in Different Solvents and Their Application As Organic Active Material in Redox Flow Batteries. ECS Meeting Abstracts, 2018, , .	0.0	0

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37	Interfacial Processes and Influence of Composite Cathode Microstructure Controlling the Performance of All-Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2017, 9, 17835-17845.	4.0	353
38	(Electro)chemical expansion during cycling: monitoring the pressure changes in operating solid-state lithium batteries. Journal of Materials Chemistry A, 2017, 5, 9929-9936.	5.2	222
39	Origins of Dendrite Formation in Sodiumâ€“Oxygen Batteries and Possible Countermeasures. Energy Technology, 2017, 5, 2265-2274.	1.8	56
40	How to Control the Discharge Product in Sodiumâ€“Oxygen Batteries: Proposing New Pathways for Sodium Peroxide Formation. Energy Technology, 2017, 5, 1242-1249.	1.8	18
41	Visualizing Current-Dependent Morphology and Distribution of Discharge Products in Sodium-Oxygen Battery Cathodes. Scientific Reports, 2016, 6, 24288.	1.6	38
42	Insights into the Chemical Nature and Formation Mechanisms of Discharge Products in Naâ€“O₂ Batteries by Means of <i>Operando</i> X-ray Diffraction. Journal of Physical Chemistry C, 2016, 120, 8472-8481.	1.5	68
43	Simulating the Impact of Particle Size Distribution on the Performance of Graphite Electrodes in Lithiumâ€Ion Batteries. Energy Technology, 2016, 4, 1588-1597.	1.8	58
44	Multistep Reaction Mechanisms in Nonaqueous Lithiumâ€“Oxygen Batteries with Redox Mediator: A Model-Based Study. Journal of Physical Chemistry C, 2016, 120, 24623-24636.	1.5	28
45	<i>In Situ</i> Monitoring of Fast Li-Ion Conductor Li₇P₃S₁₁ Crystallization Inside a Hot-Press Setup. Chemistry of Materials, 2016, 28, 6152-6165.	3.2	138
46	Ein- oder Zwei-Elektronen-Transfer? - Zur Bestimmung des Entladeprodukts in Natrium-Sauerstoff-Batterien. Angewandte Chemie, 2016, 128, 4716-4726.	1.6	16
47	Oneâ€•or Twoâ€Electron Transfer? The Ambiguous Nature of the Discharge Products in Sodiumâ€“Oxygen Batteries. Angewandte Chemie - International Edition, 2016, 55, 4640-4649.	7.2	108
48	How To Improve Capacity and Cycling Stability for Next Generation Liâ€“O₂ Batteries: Approach with a Solid Electrolyte and Elevated Redox Mediator Concentrations. ACS Applied Materials & Interfaces, 2016, 8, 7756-7765.	4.0	151
49	Numerical simulation of gas-diffusion-electrodes with moving gasâ€“liquid interface: A study on pulse-current operation and electrode flooding. Computers and Chemical Engineering, 2016, 84, 217-225.	2.0	14
50	Redox Mediators in Next Generation Metal-Oxygen Batteries: A Systematic Study on Homogeneous Catalysts for Li-, Na-, and Zn-O2 Cells. ECS Meeting Abstracts, 2016, , .	0.0	0
51	On the Ambiguous Nature of the Discharge Products in Sodium-Oxygen Batteries: From Theoretical Considerations to Operando XRD Analyses. ECS Meeting Abstracts, 2016, , .	0.0	0
52	Towards Improved Li-O2 Batteries: Understanding the Role of Dissolved Redox Mediators. ECS Meeting Abstracts, 2016, , .	0.0	0
53	Understanding the fundamentals of redox mediators in Liâ€“O₂ batteries: a case study on nitroxides. Physical Chemistry Chemical Physics, 2015, 17, 31769-31779.	1.3	111
54	Performance of zinc air batteries with added $$hbox {K}_{2}hbox {CO}_{3}$$ K 2 CO 3 in the alkaline electrolyte. Journal of Applied Electrochemistry, 2015, 45, 427-437.	1.5	52

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55	Analyzing transport paths in the air electrode of a zinc air battery using X-ray tomography. Electrochemistry Communications, 2014, 40, 88-91.	2.3	51
56	<i>In operando</i> monitoring of the state of charge and species distribution in zinc air batteries using X-ray tomography and model-based simulations. Physical Chemistry Chemical Physics, 2014, 16, 22273-22280.	1.3	56
57	Model based quantification of air-composition impact on secondary zinc air batteries. Electrochimica Acta, 2014, 117, 541-553.	2.6	55
58	Model-based analysis of anion-exchanger positioning in direct methanol fuel cell systems. Journal of Power Sources, 2014, 262, 364-371.	4.0	1
59	Scenario-based Analysis of Potential and Constraints of Alkaline Electrochemical Cells. Computer Aided Chemical Engineering, 2014, , 1237-1242.	0.3	2
60	Design Strategy for Zinc Anodes with Enhanced Utilization and Retention: Electrodeposited Zinc Oxide on Carbon Mesh Protected by Ionomeric Layers. ACS Applied Energy Materials, 0, , .	2.5	15