

Paul R Shearing

List of Publications by Year in descending order

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406
papers

16,111
citations

15504

65
h-index

32842

100
g-index

417
all docs

417
docs citations

417
times ranked

12480
citing authors

#	ARTICLE	IF	CITATIONS
1	Strategic comparison of membrane-assisted and membrane-less water electrolyzers and their potential application in direct seawater splitting (DSS). <i>Green Energy and Environment</i> , 2023, 8, 989-1005.	8.7	15
2	Characteristics of a gold-doped electrode for application in high-performance lithium-sulfur battery. <i>Journal of Energy Chemistry</i> , 2022, 64, 116-128.	12.9	21
3	Determining the electrochemical transport parameters of sodium-ions in hard carbon composite electrodes. <i>Electrochimica Acta</i> , 2022, 401, 139481.	5.2	14
4	In-situ X-ray tomographic imaging study of gas and structural evolution in a commercial Li-ion pouch cell. <i>Journal of Power Sources</i> , 2022, 520, 230818.	7.8	17
5	Mass transport in PEM water electrolyzers: A review. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 30-56.	7.1	60
6	A Review of Lithium-Ion Battery Electrode Drying: Mechanisms and Metrology. <i>Advanced Energy Materials</i> , 2022, 12, .	19.5	70
7	The performance and durability of high-temperature proton exchange membrane fuel cells enhanced by single-layer graphene. <i>Nano Energy</i> , 2022, 93, 106829.	16.0	25
8	Neutron imaging of lithium batteries. <i>Joule</i> , 2022, 6, 35-52.	24.0	29
9	In-Situ Li-Ion Pouch Cell Diagnostics Utilising Plasmonic Based Optical Fibre Sensors. <i>Sensors</i> , 2022, 22, 738.	3.8	6
10	Spatially Resolved Operando Synchrotron-Based X-Ray Diffraction Measurements of Ni-Rich Cathodes for Li-Ion Batteries. <i>Frontiers in Chemical Engineering</i> , 2022, 3, .	2.7	9
11	Study of Tire Pyrolysis Oil Model Compound Structure on Carbon Nanomaterial Production. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 800-809.	6.7	7
12	Thermal Runaway of Li-Ion Cells: How Internal Dynamics, Mass Ejection, and Heat Vary with Cell Geometry and Abuse Type. <i>Journal of the Electrochemical Society</i> , 2022, 169, 020526.	2.9	11
13	The effect of non-uniform compression on the performance of polymer electrolyte fuel cells. <i>Journal of Power Sources</i> , 2022, 521, 230973.	7.8	10
14	The effect of cell geometry and trigger method on the risks associated with thermal runaway of lithium-ion batteries. <i>Journal of Power Sources</i> , 2022, 524, 230645.	7.8	28
15	An open-source platform for 3D-printed redox flow battery test cells. <i>Sustainable Energy and Fuels</i> , 2022, 6, 1529-1540.	4.9	7
16	Dynamic acoustic emission analysis of polymer electrolyte membrane fuel cells. <i>Energy Advances</i> , 2022, 1, 258-268.	3.3	2
17	liionpack: A Python package for simulating packs of batteries with PyBaMM. <i>Journal of Open Source Software</i> , 2022, 7, 4051.	4.6	3
18	High-speed 4D neutron computed tomography for quantifying water dynamics in polymer electrolyte fuel cells. <i>Nature Communications</i> , 2022, 13, 1616.	12.8	10

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19	Disentangling water, ion and polymer dynamics in an anion exchange membrane. <i>Nature Materials</i> , 2022, 21, 555-563.	27.5	32
20	Motion-enhancement assisted digital image correlation of lithium-ion batteries during lithiation. <i>Journal of Power Sources</i> , 2022, 527, 231150.	7.8	4
21	Cracking predictions of lithium-ion battery electrodes by X-ray computed tomography and modelling. <i>Journal of Power Sources</i> , 2022, 526, 231119.	7.8	47
22	Investigation of the Effect of Temperature on Lithium-Sulfur Cell Cycle Life Performance Using System Identification and X-Ray Tomography. <i>Batteries and Supercaps</i> , 2022, 5, .	4.7	5
23	Precisely visit the performance modulation of functionalized separator in Li-S batteries via consecutive multiscale analysis. <i>Energy Storage Materials</i> , 2022, 49, 85-92.	18.0	7
24	Effective Ultrasound Acoustic Measurement to Monitor the Lithium-Ion Battery Electrode Drying Process with Various Coating Thicknesses. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 2092-2101.	8.0	4
25	In situ x-ray computed tomography of zinc-air primary cells during discharge: correlating discharge rate to anode morphology. <i>JPhys Materials</i> , 2022, 5, 014001.	4.2	4
26	Applications of advanced metrology for understanding the effects of drying temperature in the lithium-ion battery electrode manufacturing process. <i>Journal of Materials Chemistry A</i> , 2022, 10, 10593-10603.	10.3	10
27	Operando Ultrasonic Monitoring of Lithium-Ion Battery Temperature and Behaviour at Different Cycling Rates and under Drive Cycle Conditions. <i>Journal of the Electrochemical Society</i> , 2022, 169, 040563.	2.9	16
28	Metabolically diverse primordial microbial communities in Earth's oldest seafloor-hydrothermal jasper. <i>Science Advances</i> , 2022, 8, eabm2296.	10.3	24
29	MOF-based nanomaterials for zinc-based battery cathodes. , 2022, , 315-340.		0
30	Asphericity Can Cause Nonuniform Lithium Intercalation in Battery Active Particles. <i>ACS Energy Letters</i> , 2022, 7, 1871-1879.	17.4	21
31	Fascicular Organisation and Neuroanatomy of the Porcine and Human Vagus Nerves: Allowing for Spatially Selective Vagus Nerve Stimulation. <i>FASEB Journal</i> , 2022, 36, .	0.5	1
32	Ultra high-resolution biomechanics suggest that substructures within insect mechanosensors decisively affect their sensitivity. <i>Journal of the Royal Society Interface</i> , 2022, 19, 20220102.	3.4	9
33	The Time-Dependent Role of Bisphosphonates on Atherosclerotic Plaque Calcification. <i>Journal of Cardiovascular Development and Disease</i> , 2022, 9, 168.	1.6	3
34	A greyscale erosion algorithm for tomography (GREAT) to rapidly detect battery particle defects. <i>Npj Materials Degradation</i> , 2022, 6, .	5.8	3
35	Comparative study of energy management systems for a hybrid fuel cell electric vehicle - A novel mutative fuzzy logic controller to prolong fuel cell lifetime. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 24042-24058.	7.1	33
36	Cover Feature: Investigation of the Effect of Temperature on Lithium-Sulfur Cell Cycle Life Performance Using System Identification and X-Ray Tomography (<i>Batteries & Supercaps</i> 8/2022). <i>Batteries and Supercaps</i> , 2022, 5, .	4.7	0

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37	Correlative electrochemical acoustic time-of-flight spectroscopy and X-ray imaging to monitor the performance of single-crystal and polycrystalline NMC811/Gr lithium-ion batteries. <i>Journal of Power Sources</i> , 2022, 542, 231775.	7.8	5
38	Exploring the influence of porosity and thickness on lithium-ion battery electrodes using an image-based model. <i>Journal of Power Sources</i> , 2022, 542, 231779.	7.8	14
39	Synthesis of layered silicon-graphene hetero-structures by wet jet milling for high capacity anodes in Li-ion batteries. <i>2D Materials</i> , 2021, 8, 015012.	4.4	12
40	Controlling molten carbonate distribution in dual-phase molten salt-ceramic membranes to increase carbon dioxide permeation rates. <i>Journal of Membrane Science</i> , 2021, 617, 118640.	8.2	12
41	Novel laboratory investigation of huff-n-puff gas injection for shale oils under realistic reservoir conditions. <i>Fuel</i> , 2021, 284, 118950.	6.4	43
42	Self-activated cathode substrates in rechargeable zinc-air batteries. <i>Energy Storage Materials</i> , 2021, 35, 530-537.	18.0	11
43	3D Imaging of Lithium Protrusions in Solid-State Lithium Batteries using X-Ray Computed Tomography. <i>Advanced Functional Materials</i> , 2021, 31, 2007564.	14.9	31
44	Electrospinning as a route to advanced carbon fibre materials for selected low-temperature electrochemical devices: A review. <i>Journal of Energy Chemistry</i> , 2021, 59, 492-529.	12.9	56
45	Fabrication of high surface area ribbon electrodes for use in redox flow batteries via coaxial electrospinning. <i>Journal of Energy Storage</i> , 2021, 33, 102079.	8.1	21
46	Effect of reactant gas flow orientation on the current and temperature distribution in self-heating polymer electrolyte fuel cells. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 7502-7514.	7.1	11
47	The role of fluid chemistry on permeability evolution in granite: Applications to natural and anthropogenic systems. <i>Earth and Planetary Science Letters</i> , 2021, 553, 116641.	4.4	9
48	<i>Operando</i> Bragg Coherent Diffraction Imaging of $\text{LiNi}_{0.8}\text{Mn}_{0.1}\text{Co}_{0.1}\text{O}_2$ Primary Particles within Commercially Printed NMC811 Electrode Sheets. <i>ACS Nano</i> , 2021, 15, 1321-1330.	14.6	23
49	Hard Carbon Composite Electrodes for Sodium-Ion Batteries with Nano-Zeolite and Carbon Black Additives. <i>Batteries and Supercaps</i> , 2021, 4, 163-172.	4.7	17
50	Towards a mechanistic understanding of particle shrinkage during biomass pyrolysis via synchrotron X-ray microtomography and in-situ radiography. <i>Scientific Reports</i> , 2021, 11, 2656.	3.3	10
51	Alleviation of Dendrite Formation on Zinc Anodes via Electrolyte Additives. <i>ACS Energy Letters</i> , 2021, 6, 395-403.	17.4	340
52	Thermo-chemical conversion of carbonaceous wastes for CNT and hydrogen production: a review. <i>Sustainable Energy and Fuels</i> , 2021, 5, 4173-4208.	4.9	33
53	Palladium alloys used as electrocatalysts for the oxygen reduction reaction. <i>Energy and Environmental Science</i> , 2021, 14, 2639-2669.	30.8	158
54	A Dilatometric Study of Graphite Electrodes during Cycling with X-ray Computed Tomography. <i>Journal of the Electrochemical Society</i> , 2021, 168, 010507.	2.9	38

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55	3D X-Ray Characterization of Energy Storage and Conversion Devices. , 2021, , 513-544.		0
56	The prismatic surface cell cooling coefficient: A novel cell design optimisation tool & thermal parameterization method for a 3D discretised electro-thermal equivalent-circuit model. ETransportation, 2021, 7, 100099.	14.8	15
57	Multi-length scale characterization of compression on metal foam flow-field based fuel cells using X-ray computed tomography and neutron radiography. Energy Conversion and Management, 2021, 230, 113785.	9.2	19
58	Temperature, Ageing and Thermal Management of Lithium-Ion Batteries. Energies, 2021, 14, 1248.	3.1	54
59	Porous 3D graphene aerogel co-doped with nitrogen and sulfur for high-performance supercapacitors. Nanotechnology, 2021, 32, 195405.	2.6	12
60	Current Imbalance in Parallel Battery Strings Measured Using a Hallâ€Effect Sensor Array. Energy Technology, 2021, 9, 2001014.	3.8	9
61	Acoustic time-of-flight imaging of polymer electrolyte membrane water electrolyzers to probe internal structure and flow characteristics. International Journal of Hydrogen Energy, 2021, 46, 11523-11535.	7.1	5
62	Multivalent Ion Batteries: Cathode Design for Aqueous Rechargeable Multivalent Ion Batteries: Challenges and Opportunities (Adv. Funct. Mater. 13/2021). Advanced Functional Materials, 2021, 31, 2170089.	14.9	1
63	Prevention of lithium-ion battery thermal runaway using polymer-substrate current collectors. Cell Reports Physical Science, 2021, 2, 100360.	5.6	22
64	A Multiscale Xâ€Ray Tomography Study of the Cycledâ€Induced Degradation in Magnesiumâ€Sulfur Batteries. Small Methods, 2021, 5, e2001193.	8.6	10
65	2021 roadmap on lithium sulfur batteries. JPhys Energy, 2021, 3, 031501.	5.3	74
66	Opportunities for the State-of-the-Art Production of LIB Electrodesâ€A Review. Energies, 2021, 14, 1406.	3.1	55
67	Tracking lithium penetration in solid electrolytes in 3D by in-situ synchrotron X-ray computed tomography. Nano Energy, 2021, 82, 105744.	16.0	54
68	Guiding the Design of Heterogeneous Electrode Microstructures for Liâ€Ion Batteries: Microscopic Imaging, Predictive Modeling, and Machine Learning. Advanced Energy Materials, 2021, 11, 2003908.	19.5	66
69	Optimisation of Mass Transport Parameters in a Polymer Electrolyte Membrane Electrolyser Using Factorial Design-of-Experiment. Frontiers in Energy Research, 2021, 9, .	2.3	6
70	Developments in Dilatometry for Characterisation of Electrochemical Devices. Batteries and Supercaps, 2021, 4, 1378-1396.	4.7	12
71	Highâ€Density Ligninâ€Derived Carbon Nanofiber Supercapacitors with Enhanced Volumetric Energy Density. Advanced Science, 2021, 8, e2100016.	11.2	42
72	Evaluation and realization of safer Mg-S battery: The decisive role of the electrolyte. Nano Energy, 2021, 83, 105832.	16.0	10

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73	High-resolution imaging of depth filter structures using X-ray computed tomography. <i>Journal of Materials Science</i> , 2021, 56, 15313.	3.7	1
74	A novel fuel cell design for operando energy-dispersive x-ray absorption measurements. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 314002.	1.8	6
75	Microstructure analysis and image-based modelling of face masks for COVID-19 virus protection. <i>Communications Materials</i> , 2021, 2, .	6.9	30
76	Recent advances in acoustic diagnostics for electrochemical power systems. <i>JPhys Energy</i> , 2021, 3, 032011.	5.3	20
77	High CO ₂ permeability in supported molten-salt membranes with highly dense and aligned pores produced by directional solidification. <i>Journal of Membrane Science</i> , 2021, 630, 119057.	8.2	8
78	<i>In Situ</i> Ultrasound Acoustic Measurement of the Lithium-Ion Battery Electrode Drying Process. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 36605-36620.	8.0	18
79	Influence of Flow Field Design on Zinc Deposition and Performance in a Zinc-Iodide Flow Battery. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 41563-41572.	8.0	18
80	Engineering Catalyst Layers for Next-Generation Polymer Electrolyte Fuel Cells: A Review of Design, Materials, and Methods. <i>Advanced Energy Materials</i> , 2021, 11, 2101025.	19.5	85
81	Degradation of Layered Oxide Cathode in a Sodium Battery: A Detailed Investigation by X-Ray Tomography at the Nanoscale. <i>Small Methods</i> , 2021, 5, e2100596.	8.6	9
82	Characterizing Batteries by In Situ Electrochemical Atomic Force Microscopy: A Critical Review. <i>Advanced Energy Materials</i> , 2021, 11, 2101518.	19.5	40
83	Scalable Sacrificial Templating to Increase Porosity and Platinum Utilisation in Graphene-Based Polymer Electrolyte Fuel Cell Electrodes. <i>Nanomaterials</i> , 2021, 11, 2530.	4.1	3
84	Recovery of cobalt from lithium-ion batteries using fluidised cathode molten salt electrolysis. <i>Electrochimica Acta</i> , 2021, 391, 138846.	5.2	10
85	Lab-based X-ray micro-computed tomography coupled with machine-learning segmentation to investigate phosphoric acid leaching in high-temperature polymer electrolyte fuel cells. <i>Journal of Power Sources</i> , 2021, 509, 230347.	7.8	14
86	A grain refinement mechanism of cast commercial purity aluminium by vanadium. <i>Materials Characterization</i> , 2021, 181, 111468.	4.4	7
87	Dendrite suppression by anode polishing in zinc-ion batteries. <i>Journal of Materials Chemistry A</i> , 2021, 9, 15355-15362.	10.3	41
88	Oxygen evolution catalysts under proton exchange membrane conditions in a conventional three electrode cell vs. electrolyser device: a comparison study and a 3D-printed electrolyser for academic labs. <i>Journal of Materials Chemistry A</i> , 2021, 9, 9113-9123.	10.3	24
89	Cathode Design for Aqueous Rechargeable Multivalent Ion Batteries: Challenges and Opportunities. <i>Advanced Functional Materials</i> , 2021, 31, 2010445.	14.9	102
90	Supercapacitors: History, Theory, Emerging Technologies, and Applications. , 2021, , 417-449.		2

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91	Multi-length scale microstructural design of lithium-ion battery electrodes for improved discharge rate performance. <i>Energy and Environmental Science</i> , 2021, 14, 5929-5946.	30.8	48
92	Electro-thermal mapping of polymer electrolyte membrane fuel cells with a fractal flow-field. <i>Energy Conversion and Management</i> , 2021, 250, 114924.	9.2	8
93	Rechargeable aqueous Zn-based energy storage devices. <i>Joule</i> , 2021, 5, 2845-2903.	24.0	201
94	A nanoscale analysis method to reveal oxygen exchange between environment, oxide, and electrodes in ReRAM devices. <i>APL Materials</i> , 2021, 9, .	5.1	6
95	Nanoscale state-of-charge heterogeneities within polycrystalline nickel-rich layered oxide cathode materials. <i>Cell Reports Physical Science</i> , 2021, 2, 100647.	5.6	12
96	Liposome Sterile Filtration Characterization via X-ray Computed Tomography and Confocal Microscopy. <i>Membranes</i> , 2021, 11, 905.	3.0	1
97	Design of Scalable, Next-Generation Thick Electrodes: Opportunities and Challenges. <i>ACS Nano</i> , 2021, 15, 18624-18632.	14.6	54
98	Emerging X-ray imaging technologies for energy materials. <i>Materials Today</i> , 2020, 34, 132-147.	14.2	70
99	Packed bed compression visualisation and flow simulation using an erosion-dilation approach. <i>Journal of Chromatography A</i> , 2020, 1611, 460601.	3.7	7
100	Lignin-derived electrospun freestanding carbons as alternative electrodes for redox flow batteries. <i>Carbon</i> , 2020, 157, 847-856.	10.3	37
101	Fine structural changes of fluid catalytic catalysts and characterization of coke formed resulting from heavy oil devolatilization. <i>Applied Catalysis B: Environmental</i> , 2020, 263, 118329.	20.2	28
102	Characterization of water management in metal foam flow-field based polymer electrolyte fuel cells using in-operando neutron radiography. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 2195-2205.	7.1	41
103	Evidence of structural cavities in 3D printed acetabular cups for total hip arthroplasty. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2020, 108, 1779-1789.	3.4	14
104	The role of synthesis pathway on the microstructural characteristics of sulfur-carbon composites: X-ray imaging and electrochemistry in lithium battery. <i>Journal of Power Sources</i> , 2020, 472, 228424.	7.8	26
105	Dimensional analysis of 3D-printed acetabular cups for hip arthroplasty using X-ray microcomputed tomography. <i>Rapid Prototyping Journal</i> , 2020, 26, 567-576.	3.2	4
106	Operando Electrochemical Atomic Force Microscopy of Solidâ€“Electrolyte Interphase Formation on Graphite Anodes: The Evolution of SEI Morphology and Mechanical Properties. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 35132-35141.	8.0	65
107	Toward Practical Demonstration of High-Energy-Density Batteries. <i>Joule</i> , 2020, 4, 1359-1361.	24.0	15
108	Realizing optimal hydrogen evolution reaction properties via tuning phosphorous and transition metal interactions. <i>Green Energy and Environment</i> , 2020, 5, 506-512.	8.7	19

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109	Probing Heterogeneity in Li-Ion Batteries with Coupled Multiscale Models of Electrochemistry and Thermal Transport using Tomographic Domains. <i>Journal of the Electrochemical Society</i> , 2020, 167, 110538.	2.9	27
110	Diagnosing Stagnant Gas Bubbles in a Polymer Electrolyte Membrane Water Electrolyser Using Acoustic Emission. <i>Frontiers in Energy Research</i> , 2020, 8, .	2.3	10
111	Microstructural Evolution of Battery Electrodes During Calendaring. <i>Joule</i> , 2020, 4, 2746-2768.	24.0	95
112	Using In-Situ Laboratory and Synchrotron-Based X-ray Diffraction for Lithium-Ion Batteries Characterization: A Review on Recent Developments. <i>Condensed Matter</i> , 2020, 5, 75.	1.8	37
113	Elucidating the Sodiation Mechanism in Hard Carbon by Operando Raman Spectroscopy. <i>ACS Applied Energy Materials</i> , 2020, 3, 7474-7484.	5.1	56
114	The Role of Bi-Polar Plate Design and the Start-Up Protocol in the Spatiotemporal Dynamics during Solid Oxide Fuel Cell Anode Reduction. <i>Energies</i> , 2020, 13, 3552.	3.1	4
115	Data for an Advanced Microstructural and Electrochemical Datasheet on 18650 Li-ion Batteries with Nickel-Rich NMC811 Cathodes and Graphite-Silicon Anodes. <i>Data in Brief</i> , 2020, 32, 106033.	1.0	11
116	High-Performance Zinc-Air Batteries with Scalable Metal-Organic Frameworks and Platinum Carbon Black Bifunctional Catalysts. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 42696-42703.	8.0	41
117	A universal pH range and a highly efficient Mo ₂ C-based electrocatalyst for the hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2020, 8, 19879-19886.	10.3	50
118	Study of H ₂ S Removal Capability from Simulated Biogas by Using Waste-Derived Adsorbent Materials. <i>Processes</i> , 2020, 8, 1030.	2.8	17
119	4D Bragg Edge Tomography of Directional Ice Templated Graphite Electrodes. <i>Journal of Imaging</i> , 2020, 6, 136.	3.0	8
120	Imaging fascicular organization of rat sciatic nerves with fast neural electrical impedance tomography. <i>Nature Communications</i> , 2020, 11, 6241.	12.8	24
121	The Detection of Monoclinic Zirconia and Non-Uniform 3D Crystallographic Strain in a Re-Oxidized Ni-YSZ Solid Oxide Fuel Cell Anode. <i>Crystals</i> , 2020, 10, 941.	2.2	4
122	Identifying the Origins of Microstructural Defects Such as Cracking within Ni-Rich NMC811 Cathode Particles for Lithium-Ion Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 2002655.	19.5	119
123	Rapid Preparation of Geometrically Optimal Battery Electrode Samples for Nano Scale X-ray Characterisation. <i>Journal of the Electrochemical Society</i> , 2020, 167, 060512.	2.9	7
124	X-ray Micro-Computed Tomography of Polymer Electrolyte Fuel Cells: What is the Representative Elementary Area?. <i>Journal of the Electrochemical Society</i> , 2020, 167, 013545.	2.9	30
125	Correlative acoustic time-of-flight spectroscopy and X-ray imaging to investigate gas-induced delamination in lithium-ion pouch cells during thermal runaway. <i>Journal of Power Sources</i> , 2020, 470, 228039.	7.8	30
126	In situ visualization by X-Ray computed tomography on sulfur stabilization and lithium polysulfides immobilization in S@HCS/MnO cathode. <i>Energy Storage Materials</i> , 2020, 31, 164-171.	18.0	12

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127	Exploring cycling induced crystallographic change in NMC with X-ray diffraction computed tomography. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 17814-17823.	2.8	28
128	Pore Network Modelling of Capillary Transport and Relative Diffusivity in Gas Diffusion Layers with Patterned Wettability. <i>Journal of the Electrochemical Society</i> , 2020, 167, 114512.	2.9	22
129	Hydration state diagnosis in fractal flow-field based polymer electrolyte membrane fuel cells using acoustic emission analysis. <i>Energy Conversion and Management</i> , 2020, 220, 113083.	9.2	21
130	Investigating high-performance sulfur-metal nanocomposites for lithium batteries. <i>Sustainable Energy and Fuels</i> , 2020, 4, 2907-2923.	4.9	22
131	MicroCT optimisation for imaging fascicular anatomy in peripheral nerves. <i>Journal of Neuroscience Methods</i> , 2020, 338, 108652.	2.5	29
132	Theoretical transmissions for X-ray computed tomography studies of lithium-ion battery cathodes. <i>Materials and Design</i> , 2020, 191, 108585.	7.0	9
133	Mass transport in polymer electrolyte membrane water electrolyser liquid-gas diffusion layers: A combined neutron imaging and X-ray computed tomography study. <i>Journal of Power Sources</i> , 2020, 455, 227968.	7.8	41
134	Probing the Structure-Performance Relationship of Lithium-Ion Battery Cathodes Using Pore-Networks Extracted from Three-Phase Tomograms. <i>Journal of the Electrochemical Society</i> , 2020, 167, 040528.	2.9	17
135	Nanoporous Carbons: Superior Multifunctional Activity of Nanoporous Carbons with Widely Tunable Porosity: Enhanced Storage Capacities for Carbon Dioxide, Hydrogen, Water, and Electric Charge (Adv.) <i>Tj ETQq119.6.784314 rgBT</i>	19.6	14
136	Realising the electrochemical stability of graphene: scalable synthesis of an ultra-durable platinum catalyst for the oxygen reduction reaction. <i>Nanoscale</i> , 2020, 12, 16113-16122.	5.6	11
137	Spatial dynamics of lithiation and lithium plating during high-rate operation of graphite electrodes. <i>Energy and Environmental Science</i> , 2020, 13, 2570-2584.	30.8	124
138	MoS ₂ /NiS core-shell structures for improved electrocatalytic process of hydrogen evolution. <i>Journal of Power Sources</i> , 2020, 472, 228497.	7.8	33
139	Defected vanadium bronzes as superb cathodes in aqueous zinc-ion batteries. <i>Nanoscale</i> , 2020, 12, 20638-20648.	5.6	61
140	Quantitative Relationships Between Pore Tortuosity, Pore Topology, and Solid Particle Morphology Using a Novel Discrete Particle Size Algorithm. <i>Journal of the Electrochemical Society</i> , 2020, 167, 100513.	2.9	37
141	4D imaging of lithium-batteries using correlative neutron and X-ray tomography with a virtual unrolling technique. <i>Nature Communications</i> , 2020, 11, 777.	12.8	104
142	Multi-scale Investigations of Ni _{0.25} V ₂ O ₅ ·nH ₂ O Cathode Materials in Aqueous Zinc-ion Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 2000058.	19.5	173
143	The multiscale hierarchical structure of <i>Heloderma suspectum</i> osteoderms and their mechanical properties. <i>Acta Biomaterialia</i> , 2020, 107, 194-203.	8.3	16
144	Tuning the interlayer spacing of graphene laminate films for efficient pore utilization towards compact capacitive energy storage. <i>Nature Energy</i> , 2020, 5, 160-168.	39.5	381

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145	Spatial quantification of dynamic inter and intra particle crystallographic heterogeneities within lithium ion electrodes. <i>Nature Communications</i> , 2020, 11, 631.	12.8	73
146	Application of Photo-Electrochemically Generated Hydrogen with Fuel Cell Based Micro-Combined Heat and Power: A Dynamic System Modelling Study. <i>Molecules</i> , 2020, 25, 123.	3.8	5
147	Superior Multifunctional Activity of Nanoporous Carbons with Widely Tunable Porosity: Enhanced Storage Capacities for Carbon Dioxide, Hydrogen, Water, and Electric Charge. <i>Advanced Energy Materials</i> , 2020, 10, 1903649.	19.5	41
148	Dendritic silver self-assembly in molten-carbonate membranes for efficient carbon dioxide capture. <i>Energy and Environmental Science</i> , 2020, 13, 1766-1775.	30.8	15
149	Resolving Li-Ion Battery Electrode Particles Using Rapid Lab-Based X-Ray Nano-Computed Tomography for High-Throughput Quantification. <i>Advanced Science</i> , 2020, 7, 2000362.	11.2	26
150	3D microstructure design of lithium-ion battery electrodes assisted by X-ray nano-computed tomography and modelling. <i>Nature Communications</i> , 2020, 11, 2079.	12.8	217
151	Electrochemical behavior of nanostructured NiO@C anode in a lithium-ion battery using LiNi _{0.8} Co _{0.1} Mn _{0.1} O ₂ cathode. <i>Journal of Alloys and Compounds</i> , 2020, 844, 155365.	5.5	13
152	Carbon monoxide poisoning and mitigation strategies for polymer electrolyte membrane fuel cells – A review. <i>Progress in Energy and Combustion Science</i> , 2020, 79, 100842.	31.2	87
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