Juergen Janek

List of Publications by Citations

462 papers	24,834 citations	78 h-index	141 g-index
505 ext. papers	30,451 ext. citations	7.7 avg, IF	7.67 L-index

#	Paper	IF	Citations
462	A rechargeable room-temperature sodium superoxide (NaO2) battery. *Nature Materials*, **2013**, 12, 228-32	27	626
461	New horizons for inorganic solid state ion conductors. *Energy and Environmental Science*, **2018**, 11, 1945-1976	35.4	601
460	Direct Observation of the Interfacial Instability of the Fast Ionic Conductor Li10GeP2S12 at the Lithium Metal Anode. *Chemistry of Materials*, **2016**, 28, 2400-2407	9.6	463
459	Room-temperature sodium-ion batteries: Improving the rate capability of carbon anode materials by templating strategies. *Energy and Environmental Science*, **2011**, 4, 3342	35.4	460
458	Tuning Transition Metal Oxide–Sulfur Interactions for Long Life Lithium Sulfur Batteries: The "Goldilocks" Principle. *Advanced Energy Materials*, **2016**, 6, 1501636	21.8	448
457	Structure and dynamics of the fast lithium ion conductor "Li7La3Zr2O12". *Physical Chemistry Chemical Physics*, **2011**, 13, 19378-92	3.6	446
456	Capacity Fade in Solid-State Batteries: Interphase Formation and Chemomechanical Processes in Nickel-Rich Layered Oxide Cathodes and Lithium Thiophosphate Solid Electrolytes. *Chemistry of Materials*, **2017**, 29, 5574-5582	9.6	413
455	TEMPO: a mobile catalyst for rechargeable Li-O2 batteries. *Journal of the American Chemical Society* , **2014**, 136, 15054-64	16.4	390
454	Benchmarking the performance of all-solid-state lithium batteries. *Nature Energy*, **2020**, 5, 259-270	62.3	342
453	Degradation of NASICON-Type Materials in Contact with Lithium Metal: Formation of Mixed Conducting Interphases (MCI) on Solid Electrolytes. *Journal of Physical Chemistry C*, **2013**, 117, 21064-21074	3.8	308
452	Chemo-mechanical expansion of lithium electrode materials – on the route to mechanically optimized all-solid-state batteries. *Energy and Environmental Science*, **2018**, 11, 2142-2158	35.4	308
451	From lithium to sodium: cell chemistry of room temperature sodium-air and sodium-sulfur batteries. *Beilstein Journal of Nanotechnology*, **2015**, 6, 1016-55	3	307
450	Influence of Lattice Polarizability on the Ionic Conductivity in the Lithium Superionic Argyrodites LiPSX (X = Cl, Br, I). *Journal of the American Chemical Society*, **2017**, 139, 10909-10918	16.4	304
449	Anisotropic Lattice Strain and Mechanical Degradation of High- and Low-Nickel NCM Cathode Materials for Li-Ion Batteries. *Journal of Physical Chemistry C*, **2017**, 121, 3286-3294	3.8	303
448	Interphase formation on lithium solid electrolytes—An in situ approach to study interfacial reactions by photoelectron spectroscopy. *Solid State Ionics*, **2015**, 278, 98-105	3.3	287
447	Interphase formation and degradation of charge transfer kinetics between a lithium metal anode and highly crystalline Li7P3S11 solid electrolyte. *Solid State Ionics*, **2016**, 286, 24-33	3.3	276
446	Toward a Fundamental Understanding of the Lithium Metal Anode in Solid-State Batteries-An Electrochemo-Mechanical Study on the Garnet-Type Solid Electrolyte LiAlLaZrO. *ACS Applied Materials & Interfaces*, **2019**, 11, 14463-14477	9.5	265

445	Dynamic formation of a solid-liquid electrolyte interphase and its consequences for hybrid-battery concepts. *Nature Chemistry*, **2016**, 8, 426-34	17.6	251
444	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	9.5	232
443	Interfacial reactivity and interphase growth of argyrodite solid electrolytes at lithium metal electrodes. *Solid State Ionics*, **2018**, 318, 102-112	3.3	227
442	A comprehensive study on the cell chemistry of the sodium superoxide (NaO2) battery. *Physical Chemistry Chemical Physics*, **2013**, 15, 11661-72	3.6	225
441	Elastic strain at interfaces and its influence on ionic conductivity in nanoscaled solid electrolyte thin films--theoretical considerations and experimental studies. *Physical Chemistry Chemical Physics*, **2009**, 11, 3043-8	3.6	200
440	Physicochemical Concepts of the Lithium Metal Anode in Solid-State Batteries. *Chemical Reviews*, **2020**, 120, 7745-7794	68.1	196
439	Mesoporous TiO(2): comparison of classical sol-gel and nanoparticle based photoelectrodes for the water splitting reaction. *ACS Nano*, **2010**, 4, 3147-54	16.7	192
438	Ionic conductivity and activation energy for oxygen ion transport in superlattices--the semicoherent multilayer system YSZ (ZrO2 + 9.5 mol% Y2O3)/Y2O3. *Physical Chemistry Chemical Physics*, **2008**, 10, 4623-35	3.6	187
437	There and Back Again-The Journey of LiNiO as a Cathode Active Material. *Angewandte Chemie - International Edition*, **2019**, 58, 10434-10458	16.4	181
436	Lithium-Metal Growth Kinetics on LLZO Garnet-Type Solid Electrolytes. *Joule*, **2019**, 3, 2030-2049	27.8	180
435	Lithium metal electrode kinetics and ionic conductivity of the solid lithium ion conductors □i7La3Zr2O12□and Li7□La3Zr2□TaxO12 with garnet-type structure. *Journal of Power Sources*, **2012**, 206, 236-244	8.9	179
434	Electrochemical stability of non-aqueous electrolytes for sodium-ion batteries and their compatibility with Na(0.7)CoO2. *Physical Chemistry Chemical Physics*, **2014**, 16, 1987-98	3.6	175
433	Systematical electrochemical study on the parasitic shuttle-effect in lithium-sulfur-cells at different temperatures and different rates. *Journal of Power Sources*, **2014**, 259, 289-299	8.9	174
432	Toward silicon anodes for next-generation lithium ion batteries: a comparative performance study of various polymer binders and silicon nanopowders. *ACS Applied Materials & Interfaces*, **2013**, 5, 7299-307	9.5	174
431	The critical role of lithium nitrate in the gas evolution of lithium□sulfur batteries. *Energy and Environmental Science*, **2016**, 9, 2603-2608	35.4	171
430	The Detrimental Effects of Carbon Additives in LiGePS-Based Solid-State Batteries. *ACS Applied Materials & Interfaces*, **2017**, 9, 35888-35896	9.5	169
429	On the Thermodynamics, the Role of the Carbon Cathode, and the Cycle Life of the Sodium Superoxide (NaO2) Battery. *Advanced Energy Materials*, **2014**, 4, 1301863	21.8	163
428	(Electro)chemical expansion during cycling: monitoring the pressure changes in operating solid-state lithium batteries. *Journal of Materials Chemistry A*, **2017**, 5, 9929-9936	13	161

427	Lithium ion conductivity in Li2S-P2S5 glasses-building units and local structure evolution during the crystallization of superionic conductors Li3PS4, Li7P3S11 and Li4P2S7. *Journal of Materials Chemistry A*, **2017**, 5, 18111-18119	13	159
426	Degradation Mechanisms at the LiGePS/LiCoO Cathode Interface in an All-Solid-State Lithium-Ion Battery. *ACS Applied Materials & Interfaces*, **2018**, 10, 22226-22236	9.5	158
425	Redox-active cathode interphases in solid-state batteries. *Journal of Materials Chemistry A*, **2017**, 5, 22750-22760	10	152
424	Chemical, Structural, and Electronic Aspects of Formation and Degradation Behavior on Different Length Scales of Ni-Rich NCM and Li-Rich HE-NCM Cathode Materials in Li-Ion Batteries. *Advanced Materials*, **2019**, 31, e1900985	24	152
423	Ordered Large-Pore Mesoporous Li4Ti5O12 Spinel Thin Film Electrodes with Nanocrystalline Framework for High Rate Rechargeable Lithium Batteries: Relationships among Charge Storage, Electrical Conductivity, and Nanoscale Structure. *Chemistry of Materials*, **2011**, 23, 4384-4393	9.6	152
422	Ionic conductivity and activation energy for oxygen ion transport in superlattices-The multilayer system CSZ (ZrO2 + CaO) / Al2O3. *Solid State Ionics*, **2007**, 178, 67-76	3.3	151
421	Between Scylla and Charybdis: Balancing Among Structural Stability and Energy Density of Layered NCM Cathode Materials for Advanced Lithium-Ion Batteries. *Journal of Physical Chemistry C*, **2017**, 121, 26163-26171	3.8	148
420	Charge-Transfer-Induced Lattice Collapse in Ni-Rich NCM Cathode Materials during Delithiation. *Journal of Physical Chemistry C*, **2017**, 121, 24381-24388	3.8	148
419	Volume Changes of Graphite Anodes Revisited: A Combined Operando X-ray Diffraction and In Situ Pressure Analysis Study. *Journal of Physical Chemistry C*, **2018**, 122, 8829-8835	3.8	143
418	Thermodynamics and cell chemistry of room temperature sodium/sulfur cells with liquid and liquid/solid electrolyte. *Journal of Power Sources*, **2013**, 243, 758-765	8.9	142
417	Electrochemical blackening of yttria-stabilized zirconia-morphological instability of the moving reaction front. *Solid State Ionics*, **1999**, 116, 181-195	3.3	142
416	Bone formation induced by strontium modified calcium phosphate cement in critical-size metaphyseal fracture defects in ovariectomized rats. *Biomaterials*, **2013**, 34, 8589-98	15.6	141
415	Visualization of the Interfacial Decomposition of Composite Cathodes in Argyrodite-Based All-Solid-State Batteries Using Time-of-Flight Secondary-Ion Mass Spectrometry. *Chemistry of Materials*, **2019**, 31, 3745-3755	9.6	138
414	Interfacial Reactivity Benchmarking of the Sodium Ion Conductors NaPS and Sodium-Alumina for Protected Sodium Metal Anodes and Sodium All-Solid-State Batteries. *ACS Applied Materials & Interfaces*, **2016**, 8, 28216-28224	9.5	138
413	Stabilization of cubic lithium-stuffed garnets of the type-i7La3Zr2O12-by addition of gallium. *Journal of Power Sources*, **2013**, 225, 13-19	8.9	136
412	A chemically driven insulator-metal transition in non-stoichiometric and amorphous gallium oxide. *Nature Materials*, **2008**, 7, 391-8	27	136
411	Structural Insights and 3D Diffusion Pathways within the Lithium Superionic Conductor Li10GeP2S12. *Chemistry of Materials*, **2016**, 28, 5905-5915	9.6	136
410	Impact of Cathode Material Particle Size on the Capacity of Bulk-Type All-Solid-State Batteries. *ACS Energy Letters*, **2018**, 3, 992-996	20.1	134

409	How To Improve Capacity and Cycling Stability for Next Generation Li-O2 Batteries: Approach with a Solid Electrolyte and Elevated Redox Mediator Concentrations. *ACS Applied Materials & Interfaces*, **2016**, 8, 7756-65	9.5	130
408	Ionic liquids as green electrolytes for the electrodeposition of nanomaterials. *Green Chemistry*, **2007**, 9, 549-553	10	127
407	On the Functionality of Coatings for Cathode Active Materials in Thiophosphate-Based All-Solid-State Batteries. *Advanced Energy Materials*, **2019**, 9, 1900626	21.8	125
406	Diffusion Limitation of Lithium Metal and Li□Mg Alloy Anodes on LLZO Type Solid Electrolytes as a Function of Temperature and Pressure. *Advanced Energy Materials*, **2019**, 9, 1902568	21.8	124
405	Evolution of Li2O2 growth and its effect on kinetics of Li-O2 batteries. *ACS Applied Materials & Interfaces*, **2014**, 6, 12083-92	9.5	117
404	Employing plasmas as gaseous electrodes at the free surface of ionic liquids: deposition of nanocrystalline silver particles. *ChemPhysChem*, **2007**, 8, 50-3	3.2	114
403	In Situ Monitoring of Fast Li-Ion Conductor Li7P3S11 Crystallization Inside a Hot-Press Setup. *Chemistry of Materials*, **2016**, 28, 6152-6165	9.6	113
402	Origin of Carbon Dioxide Evolved during Cycling of Nickel-Rich Layered NCM Cathodes. *ACS Applied Materials & Interfaces*, **2018**, 10, 38892-38899	9.5	111
401	Understanding the fundamentals of redox mediators in Li-O2 batteries: a case study on nitroxides. *Physical Chemistry Chemical Physics*, **2015**, 17, 31769-79	3.6	99
400	In situ study of electrochemical activation and surface segregation of the SOFC electrode material La0.75Sr0.25Cr0.5Mn0.5O(3□)□ *Physical Chemistry Chemical Physics*, **2012**, 14, 751-8	3.6	98
399	Suppression of atom motion and metal deposition in mixed ionic electronic conductors. *Nature Communications*, **2018**, 9, 2910	17.4	97
398	One- or Two-Electron Transfer? The Ambiguous Nature of the Discharge Products in Sodium-Oxygen Batteries. *Angewandte Chemie - International Edition*, **2016**, 55, 4640-9	16.4	96
397	Stabilizing Effect of a Hybrid Surface Coating on a Ni-Rich NCM Cathode Material in All-Solid-State Batteries. *Chemistry of Materials*, **2019**, 31, 9664-9672	9.6	94
396	Plasma electrochemistry in ionic liquids: deposition of copper nanoparticles. *Physical Chemistry Chemical Physics*, **2010**, 12, 1750-5	3.6	92
395	Pressure Dynamics in Metal□Oxygen (Metal□Air) Batteries: A Case Study on Sodium Superoxide Cells. *Journal of Physical Chemistry C*, **2014**, 118, 1461-1471	3.8	87
394	Influence of interface structure on mass transport in phase boundaries between different ionic materials: Experimental studies and formal considerations. *Monatshefte F□ Chemie*, **2009**, 140, 1069-1080	1.4	87
393	Experimental Assessment of the Practical Oxidative Stability of Lithium Thiophosphate Solid Electrolytes. *Chemistry of Materials*, **2019**, 31, 8328-8337	9.6	86
392	Tin-Assisted Synthesis of □a2O3 by Molecular Beam Epitaxy. *Physical Review Applied*, **2017**, 8,	4.3	86

391	Discharge and Charge Reaction Paths in Sodium–Oxygen Batteries: Does NaO_2 Form by Direct Electrochemical Growth or by Precipitation from Solution?. *Journal of Physical Chemistry C*, **2015**, 119, 22778-22786	3.8	85
390	Benchmarking Anode Concepts: The Future of Electrically Rechargeable Zinc–Air Batteries. *ACS Energy Letters*, **2019**, 4, 1287-1300	20.1	81
389	In situ study of activation and de-activation of LSM fuel cell cathodes – Electrochemistry and surface analysis of thin-film electrodes. *Journal of Catalysis*, **2012**, 294, 79-88	7.3	81
388	Microstructural Modeling of Composite Cathodes for All-Solid-State Batteries. *Journal of Physical Chemistry C*, **2019**, 123, 1626-1634	3.8	81
387	Phase Transformation Behavior and Stability of LiNiO Cathode Material for Li-Ion Batteries Obtained from In Situ Gas Analysis and Operando X-Ray Diffraction. *ChemSusChem*, **2019**, 12, 2240-2250	8.3	79
386	Design Strategies to Enable the Efficient Use of Sodium Metal Anodes in High-Energy Batteries. *Advanced Materials*, **2020**, 32, e1903891	24	79
385	Li4PS4I: A Li+ Superionic Conductor Synthesized by a Solvent-Based Soft Chemistry Approach. *Chemistry of Materials*, **2017**, 29, 1830-1835	9.6	76
384	LiPON thin films with high nitrogen content for application in lithium batteries and electrochromic devices prepared by RF magnetron sputtering. *Solid State Ionics*, **2015**, 282, 63-69	3.3	76
383	The Critical Role of Fluoroethylene Carbonate in the Gassing of Silicon Anodes for Lithium-Ion Batteries. *ACS Energy Letters*, **2017**, 2, 2228-2233	20.1	76
382	Nitrogen-doped carbon fibers and membranes by carbonization of electrospun poly(ionic liquid)s. *Polymer Chemistry*, **2011**, 2, 1654	4.9	76
381	Local Structural Investigations, Defect Formation, and Ionic Conductivity of the Lithium Ionic Conductor $Li_4P_2S_6$. *Chemistry of Materials*, **2016**, 28, 8764-8773	9.6	74
380	Gas Evolution in Operating Lithium-Ion Batteries Studied In Situ by Neutron Imaging. *Scientific Reports*, **2015**, 5, 15627	4.9	73
379	Gas Evolution in $LiNi_{0.5}Mn_{1.5}O_4$/Graphite Cells Studied In Operando by a Combination of Differential Electrochemical Mass Spectrometry, Neutron Imaging, and Pressure Measurements. *Analytical Chemistry*, **2016**, 88, 2877-83	7.8	72
378	Ionic Liquid-Derived Nitrogen-Enriched Carbon/Sulfur Composite Cathodes with Hierarchical Microstructure–A Step Toward Durable High-Energy and High-Performance Lithium–Sulfur Batteries. *Chemistry of Materials*, **2015**, 27, 1674-1683	9.6	72
377	Defect chemistry of oxide nanomaterials with high surface area: ordered mesoporous thin films of the oxygen storage catalyst CeO_2-ZrO_2. *ACS Nano*, **2013**, 7, 2999-3013	16.7	72
376	Reversible Compositional Control of Oxide Surfaces by Electrochemical Potentials. *Journal of Physical Chemistry Letters*, **2012**, 3, 40-44	6.4	71
375	Observation of Chemomechanical Failure and the Influence of Cutoff Potentials in All-Solid-State Li_2S Batteries. *Chemistry of Materials*, **2019**, 31, 2930-2940	9.6	69
374	Synthesis, Structural Characterization, and Lithium Ion Conductivity of the Lithium Thiophosphate LiPS. *Inorganic Chemistry*, **2017**, 56, 6681-6687	5.1	67

373	Effect of Low-Temperature AlO ALD Coating on Ni-Rich Layered Oxide Composite Cathode on the Long-Term Cycling Performance of Lithium-Ion Batteries. *Scientific Reports*, **2019**, 9, 5328	4.9	66
372	Online Continuous Flow Differential Electrochemical Mass Spectrometry with a Realistic Battery Setup for High-Precision, Long-Term Cycling Tests. *Analytical Chemistry*, **2015**, 87, 5878-83	7.8	66
371	Polycrystalline and Single Crystalline NCM Cathode Materials Quantifying Particle Cracking, Active Surface Area, and Lithium Diffusion. *Advanced Energy Materials*, **2021**, 11, 2003400	21.8	66
370	Modeling Effective Ionic Conductivity and Binder Influence in Composite Cathodes for All-Solid-State Batteries. *ACS Applied Materials & Interfaces*, **2020**, 12, 12821-12833	9.5	65
369	Gas Evolution in All-Solid-State Battery Cells. *ACS Energy Letters*, **2018**, 3, 2539-2543	20.1	65
368	Fast Charging of Lithium-Ion Batteries: A Review of Materials Aspects. *Advanced Energy Materials*, **2021**, 11, 2101126	21.8	65
367	Fair performance comparison of different carbon blacks in lithium sulfur batteries with practical mass loadings Simple design competes with complex cathode architecture. *Journal of Power Sources*, **2015**, 296, 454-461	8.9	64
366	Side by Side Battery Technologies with Lithium-Ion Based Batteries. *Advanced Energy Materials*, **2020**, 10, 2000089	21.8	64
365	Novel anion conductors--conductivity, thermodynamic stability and hydration of anion-substituted mayenite-type cage compounds C12A7:X (X = O, OH, Cl, F, CN, S, N). *Physical Chemistry Chemical Physics*, **2015**, 17, 6844-57	3.6	63
364	Solid-state batteries enter EV fray. *MRS Bulletin*, **2014**, 39, 1046-1047	3.2	63
363	On the influence of strain on ion transport: microstructure and ionic conductivity of nanoscale YSZ|Sc2O3 multilayers. *Physical Chemistry Chemical Physics*, **2010**, 12, 14596-608	3.6	63
362	Influence of NCM Particle Cracking on Kinetics of Lithium-Ion Batteries with Liquid or Solid Electrolyte. *Journal of the Electrochemical Society*, **2020**, 167, 100532	3.9	61
361	Insights into the Chemical Nature and Formation Mechanisms of Discharge Products in NaO2 Batteries by Means of Operando X-ray Diffraction. *Journal of Physical Chemistry C*, **2016**, 120, 8472-8481	3.8	61
360	On the gassing behavior of lithium-ion batteries with NCM523 cathodes. *Journal of Solid State Electrochemistry*, **2016**, 20, 2961-2967	2.6	58
359	Oxide nitrides: From oxides to solids with mobile nitrogen ions. *Progress in Solid State Chemistry*, **2009**, 37, 81-131	8	58
358	New Insights into the Instability of Discharge Products in Na-O2 Batteries. *ACS Applied Materials & Interfaces*, **2016**, 8, 20120-7	9.5	56
357	Molecular Surface Modification of NCM622 Cathode Material Using Organophosphates for Improved Li-Ion Battery Full-Cells. *ACS Applied Materials & Interfaces*, **2018**, 10, 20487-20498	9.5	56
356	From Liquid- to Solid-State Batteries: Ion Transfer Kinetics of Heteroionic Interfaces. *Electrochemical Energy Reviews*, **2020**, 3, 221-238	29.3	55

355	High electrical conductivity and high porosity in a Guest@MOF material: evidence of TCNQ ordering within CuBTC micropores. *Chemical Science*, **2018**, 9, 7405-7412	9.4	55
354	Coherency strain and its effect on ionic conductivity and diffusion in solid electrolytes--an improved model for nanocrystalline thin films and a review of experimental data. *Physical Chemistry Chemical Physics*, **2014**, 16, 24575-91	3.6	55
353	In situ and operando atomic force microscopy of high-capacity nano-silicon based electrodes for lithium-ion batteries. *Nanoscale*, **2016**, 8, 14048-56	7.7	55
352	Li+-Ion Dynamics in ELi3PS4 Observed by NMR: Local Hopping and Long-Range Transport. *Journal of Physical Chemistry C*, **2018**, 122, 15954-15965	3.8	55
351	Investigation into Mechanical Degradation and Fatigue of High-Ni NCM Cathode Material: A Long-Term Cycling Study of Full Cells. *ACS Applied Energy Materials*, **2019**, 2, 7375-7384	6.1	54
350	Interphase Formation of PEO:LiTFSI-LiPSCl Composite Electrolytes with Lithium Metal. *ACS Applied Materials & Interfaces*, **2020**, 12, 11713-11723	9.5	54
349	Room temperature, liquid-phase AlO surface coating approach for Ni-rich layered oxide cathode material. *Chemical Communications*, **2019**, 55, 2174-2177	5.8	53
348	Reaction Mechanism and Surface Film Formation of Conversion Materials for Lithium- and Sodium-Ion Batteries: An XPS Case Study on Sputtered Copper Oxide (CuO) Thin Film Model Electrodes. *Journal of Physical Chemistry C*, **2016**, 120, 1400-1414	3.8	53
347	Simple cathode design for LiB batteries: cell performance and mechanistic insights by in operando X-ray diffraction. *Physical Chemistry Chemical Physics*, **2014**, 16, 18765-71	3.6	53
346	Mesoporous tin-doped indium oxide thin films: effect of mesostructure on electrical conductivity. *Science and Technology of Advanced Materials*, **2011**, 12, 025005	7.1	53
345	Guidelines for All-Solid-State Battery Design and Electrode Buffer Layers Based on Chemical Potential Profile Calculation. *ACS Applied Materials & Interfaces*, **2019**, 11, 19968-19976	9.5	52
344	Correlating Transport and Structural Properties in LiAl Ge(PO) (LAGP) Prepared from Aqueous Solution. *ACS Applied Materials & Interfaces*, **2018**, 10, 10935-10944	9.5	52
343	Influence of Carbon Additives on the Decomposition Pathways in Cathodes of Lithium Thiophosphate-Based All-Solid-State Batteries. *Chemistry of Materials*, **2020**, 32, 6123-6136	9.6	51
342	Spectroscopic characterization of lithium thiophosphates by XPS and XAS - a model to help monitor interfacial reactions in all-solid-state batteries. *Physical Chemistry Chemical Physics*, **2018**, 20, 20088-20095	3.6	51
341	Defect chemistry of the cage compound, Ca(12)Al(14)O(33-delta)-understanding the route from a solid electrolyte to a semiconductor and electride. *Physical Chemistry Chemical Physics*, **2009**, 11, 3105-14	3.6	49
340	Properties of the Interphase Formed between Argyrodite-Type LiPSCl and Polymer-Based PEO:LiTFSI. *ACS Applied Materials & Interfaces*, **2019**, 11, 42186-42196	9.5	48
339	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	8.9	48
338	The Role of Intragranular Nanopores in Capacity Fade of Nickel-Rich Layered Li(NiCoMn)O Cathode Materials. *ACS Nano*, **2019**, 13, 10694-10704	16.7	47

337	In situ imaging of electrochemically induced oxygen spillover on Pt/YSZ catalysts. *Angewandte Chemie - International Edition*, **2006**, 45, 1473-6	16.4	47
336	Lithium-Metal Anode Instability of the Superionic Halide Solid Electrolytes and the Implications for Solid-State Batteries. *Angewandte Chemie - International Edition*, **2021**, 60, 6718-6723	16.4	47
335	Simultaneous acquisition of differential electrochemical mass spectrometry and infrared spectroscopy data for in situ characterization of gas evolution reactions in lithium-ion batteries. *Electrochemistry Communications*, **2015**, 60, 64-69	5.1	46
334	Manipulation of matter by electric and magnetic fields: Toward novel synthesis and processing routes of inorganic materials. *Materials Today*, **2018**, 21, 527-536	21.8	46
333	Origins of Dendrite Formation in Sodium□Oxygen Batteries and Possible Countermeasures. *Energy Technology*, **2017**, 5, 2265-2274	3.5	46
332	Free-standing and binder-free highly N-doped carbon/sulfur cathodes with tailorable loading for high-areal-capacity lithium□sulfur batteries. *Journal of Materials Chemistry A*, **2015**, 3, 20482-20486	13	45
331	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	9.5	45
330	Hierarchical Carbon with High Nitrogen Doping Level: A Versatile Anode and Cathode Host Material for Long-Life Lithium-Ion and Lithium-Sulfur Batteries. *ACS Applied Materials & Interfaces*, **2016**, 8, 10274-82	9.5	45
329	An electrolyte partially-wetted cathode improving oxygen diffusion in cathodes of non-aqueous Li□air batteries. *Electrochemistry Communications*, **2013**, 26, 93-96	5.1	45
328	Correlation of electrochromic properties and oxidation states in nanocrystalline tungsten trioxide. *Physical Chemistry Chemical Physics*, **2015**, 17, 15903-11	3.6	45
327	The Interface between Li6.5La3Zr1.5Ta0.5O12 and Liquid Electrolyte. *Joule*, **2020**, 4, 101-108	27.8	45
326	The Fast Charge Transfer Kinetics of the Lithium Metal Anode on the Garnet-Type Solid Electrolyte Li6.25Al0.25La3Zr2O12. *Advanced Energy Materials*, **2020**, 10, 2000945	21.8	44
325	Epitaxial Pt(111) thin film electrodes on YSZ(111) and YSZ(100) □Preparation and characterisation. *Solid State Ionics*, **2007**, 178, 327-337	3.3	44
324	Microspectroscopy at a moving reduction front in zirconia solid electrolyte. *Physical Chemistry Chemical Physics*, **2002**, 4, 2673-2679	3.6	44
323	Sodiated carbon: a reversible anode for sodium□oxygen batteries and route for the chemical synthesis of sodium superoxide (NaO2). *Journal of Materials Chemistry A*, **2015**, 3, 20633-20641	13	43
322	Graphene mediated improved sodium storage in nanocrystalline anatase TiO2 for sodium ion batteries with ether electrolyte. *Chemical Communications*, **2016**, 52, 1428-31	5.8	43
321	Oxygen tracer diffusion along interfaces of strained Y2O3/YSZ multilayers. *Physical Chemistry Chemical Physics*, **2013**, 15, 1944-55	3.6	43
320	Electrochemical Cross-Talk Leading to Gas Evolution and Capacity Fade in LiNi0.5Mn1.5O4/Graphite Full-Cells. *Journal of Physical Chemistry C*, **2017**, 121, 211-216	3.8	41

319	Amorphous and highly nonstoichiometric titania (TiOx) thin films close to metal-like conductivity. *Journal of Materials Chemistry A*, **2014**, 2, 6631	13	41
318	Analysis of Interfacial Effects in All-Solid-State Batteries with Thiophosphate Solid Electrolytes. *ACS Applied Materials & Interfaces*, **2020**, 12, 9277-9291	9.5	40
317	Applicability of ToF-SIMS for monitoring compositional changes in bone in a long-term animal model. *Journal of the Royal Society Interface*, **2013**, 10, 20130332	4.1	40
316	Photoelectron spectromicroscopy of electrochemically induced oxygen spillover at the Pt/YSZ interface. *Chemical Physics Letters*, **2000**, 316, 331-335	2.5	40
315	Preparation and electrical properties of garnet-type Li6BaLa2Ta2O12 lithium solid electrolyte thin films prepared by pulsed laser deposition. *Solid State Ionics*, **2014**, 258, 1-7	3.3	39
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313	High areal capacity, long cycle life 4 V ceramic all-solid-state Li-ion batteries enabled by chloride solid electrolytes. *Nature Energy*,	62.3	39
312	Interfacial Stability of Phosphate-NASICON Solid Electrolytes in Ni-Rich NCM Cathode-Based Solid-State Batteries. *ACS Applied Materials & Interfaces*, **2019**, 11, 23244-23253	9.5	38
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