Rdiger-Albert Eichel

List of Publications by Citations

196 papers	4,482 citations	36 h-index	58 g-index
233 ext. papers	5,463 ext. citations	5.9 avg, IF	6.03 L-index

#	Paper	IF	Citations
196	Nanodomain structure of Pb[Zr1−xTix]O3 at its morphotropic phase boundary: Investigations from local to average structure. *Physical Review B*, **2007**, 75,	3.3	250
195	Structural and dynamic properties of oxygen vacancies in perovskite oxides--analysis of defect chemistry by modern multi-frequency and pulsed EPR techniques. *Physical Chemistry Chemical Physics*, **2011**, 13, 368-84	3.6	174
194	Power-to-Syngas: An Enabling Technology for the Transition of the Energy System?. *Angewandte Chemie - International Edition*, **2017**, 56, 5402-5411	16.4	151
193	Singlet Oxygen Formation during the Charging Process of an Aprotic Lithium-Oxygen Battery. *Angewandte Chemie - International Edition*, **2016**, 55, 6892-5	16.4	115
192	Defect-Dipole Formation in Copper-Doped PbTiO3 Ferroelectrics. *Physical Review Letters*, **2008**, 100, 095504	7.4	108
191	Operando electron paramagnetic resonance spectroscopy formation of mossy lithium on lithium anodes during charge–discharge cycling. *Energy and Environmental Science*, **2015**, 8, 1358-1367	35.4	107
190	Defect structure of oxide ferroelectrics—valence state, site of incorporation, mechanisms of charge compensation and internal bias fields. *Journal of Electroceramics*, **2007**, 19, 11-23	1.5	106
189	Synthesis, Characterization, Defect Chemistry, and FET Properties of Microwave-Derived Nanoscaled Zinc Oxide. *Chemistry of Materials*, **2010**, 22, 2203-2212	9.6	105
188	Quantitative and time-resolved detection of lithium plating on graphite anodes in lithium ion batteries. *Materials Today*, **2018**, 21, 231-240	21.8	105
187	Reorientation of (MnTi″VO)× defect dipoles in acceptor-modified BaTiO3 single crystals: An electron paramagnetic resonance study. *Applied Physics Letters*, **2008**, 93, 202901	3.4	100
186	Host Materials Anchoring Polysulfides in Li–S Batteries Reviewed. *Advanced Energy Materials*, **2021**, 11, 2001304	21.8	91
185	Association of oxygen vacancies with impurity metal ions in lead titanate. *Physical Review B*, **2007**, 76,	3.3	86
184	Characterization of Defect Structure in Acceptor-Modified Piezoelectric Ceramics by Multifrequency and Multipulse Electron Paramagnetic Resonance Spectroscopy. *Journal of the American Ceramic Society*, **2008**, 91, 691-701	3.8	76
183	Singlet Oxygen Formation during the Charging Process of an Aprotic Lithium–Oxygen Battery. *Angewandte Chemie*, **2016**, 128, 7006-7009	3.6	71
182	Effect of Nb-donor and Fe-acceptor dopants in (Bi1/2Na1/2)TiO3–BaTiO3–(K0.5Na0.5)NbO3 lead-free piezoceramics. *Journal of Applied Physics*, **2010**, 108, 014110	2.5	66
181	Defect structure and materials hardening in Fe2O3-doped [Bi0.5Na0.5]TiO3 ferroelectrics. *Applied Physics Letters*, **2010**, 97, 012903	3.4	65
180	Position of defects with respect to domain walls in Fe3+-doped Pb[Zr0.52Ti0.48]O3 piezoelectric ceramics. *Applied Physics Letters*, **2011**, 98, 072907	3.4	64

179	Processing of Manganese-Doped [Bi0.5Na0.5]TiO3 Ferroelectrics: Reduction and Oxidation Reactions During Calcination and Sintering. *Journal of the American Ceramic Society*, **2011**, 94, 1363-1367	3.8	63
178	CuO as a sintering additive for (Bi1/2Na1/2)TiO3–BaTiO3–(K0.5Na0.5)NbO3 lead-free piezoceramics. *Journal of the European Ceramic Society*, **2011**, 31, 2107-2117	6	58
177	Local variations in defect polarization and covalent bonding in ferroelectric Cu(2+)-doped PZT and KNN functional ceramics at the morphotropic phase boundary. *Physical Chemistry Chemical Physics*, **2009**, 11, 8698-705	3.6	57
176	Interactions of defect complexes and domain walls in CuO-doped ferroelectric (K,Na)NbO3. *Applied Physics Letters*, **2013**, 102, 242908	3.4	55
175	A small paramagnetic platinum cluster in an NaY zeolite: characterization and hydrogen adsorption and desorption. *Journal of Physical Chemistry B*, **2006**, 110, 2013-23	3.4	50
174	High-frequency electron paramagnetic resonance investigation of the Fe3+ impurity center in polycrystalline PbTiO3 in its ferroelectric phase. *Journal of Applied Physics*, **2004**, 96, 7440-7444	2.5	50
173	Monolithic All-Phosphate Solid-State Lithium-Ion Battery with Improved Interfacial Compatibility. *ACS Applied Materials & Interfaces*, **2018**, 10, 22264-22277	9.5	49
172	Insights into a layered hybrid solid electrolyte and its application in long lifespan high-voltage all-solid-state lithium batteries. *Journal of Materials Chemistry A*, **2019**, 7, 3882-3894	13	48
171	Axial solvent coordination in "base-fff" cob(II)alamin and related co(II)-corrinates revealed by 2D-EPR. *Journal of the American Chemical Society*, **2003**, 125, 5915-27	16.4	48
170	Luminescence of heat-treated silicon-based polymers: promising materials for LED applications. *Journal of Materials Science*, **2008**, 43, 5790-5796	4.3	45
169	Iron-oxygen vacancy defect association in polycrystalline iron-modified PbZrO3 antiferroelectrics: Multifrequency electron paramagnetic resonance and Newman superposition model analysis. *Physical Review B*, **2006**, 73,	3.3	45
168	Improving the rate capability of high voltage lithium-ion battery cathode material LiNi0.5Mn1.5O4 by ruthenium doping. *Journal of Power Sources*, **2014**, 267, 533-541	8.9	42
167	Influence of microstructure and AlPO4 secondary-phase on the ionic conductivity of Li1.3Al0.3Ti1.7(PO4)3 solid-state electrolyte. *Functional Materials Letters*, **2016**, 09, 1650066	1.2	41
166	Size effects in Fe3+-doped PbTiO3 nanocrystals: formation and orientation of defect-dipoles. *Journal of the European Ceramic Society*, **2010**, 30, 289-293	6	40
165	Formation of magnetic grains in ferroelectric Pb[Zr0.6Ti0.4]O3 ceramics doped with Fe3+ above the solubility limit. *Applied Physics Letters*, **2009**, 94, 142901	3.4	39
164	Strategies towards enabling lithium metal in batteries: interphases and electrodes. *Energy and Environmental Science*,	35.4	39
163	High-field/high-frequency EPR of paramagnetic functional centers in Cu2+- and Fe3+-modified polycrystalline Pb[Zr(x)Ti(1-x)]O3 ferroelectrics. *Magnetic Resonance in Chemistry*, **2005**, 43 Spec no., S166-73	2.1	38
162	Superionic bulk conductivity in Li1.3Al0.3Ti1.7(PO4)3 solid electrolyte. *Solid State Ionics*, **2017**, 309, 180-186	3.3	37

161	Manganese-doped (1?x)BiScO3?xPbTiO3 high-temperature ferroelectrics: Defect structure and mechanism of enhanced electric resistivity. *Physical Review B*, **2011**, 84,	3.3	36
160	RECENT DEVELOPMENTS AND FUTURE PERSPECTIVES OF LEAD-FREE FERROELECTRICS. *Functional Materials Letters*, **2010**, 03, 1-4	1.2	36
159	Defect structure and formation of defect complexes in Cu2+-modified metal oxides derived from a spin-Hamiltonian parameter analysis. *Molecular Physics*, **2009**, 107, 1981-1986	1.7	36
158	Temperature-dependent cycling performance and ageing mechanisms of C6/LiNi1/3Mn1/3Co1/3O2 batteries. *Journal of Power Sources*, **2018**, 396, 444-452	8.9	34
157	Characterization of (Fe'Zr,Ti - VO..). defect dipoles in (La,Fe)-codoped PZT 52.5/47.5 piezoelectric ceramics by multifrequency electron paramagnetic resonance spectroscopy. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2008**, 55, 1061-8	3.2	34
156	Self-standing NASICON-type electrodes with high mass loading for fast-cycling all-phosphate sodium-ion batteries. *Journal of Materials Chemistry A*, **2018**, 6, 18304-18317	13	34
155	Defect structure of the mixed ionic?electronic conducting Sr[Ti,Fe]Ox solid-solution system ? Change in iron oxidation states and defect complexation. *Solid State Ionics*, **2011**, 184, 47-51	3.3	33
154	Defect structure in lithium-doped polymer-derived SiCN ceramics characterized by Raman and electron paramagnetic resonance spectroscopy. *Physical Chemistry Chemical Physics*, **2009**, 11, 5628-33	3.6	33
153	Double-Shelled Co3O4/C Nanocages Enabling Polysulfides Adsorption for High-Performance Lithium?Sulfur Batteries. *ACS Applied Energy Materials*, **2019**, 2, 8153-8162	6.1	32
152	Molecular precursor derived and solution processed indium?zinc oxide as a semiconductor in a field-effect transistor device. Towards an improved understanding of semiconductor film composition. *Journal of Materials Chemistry C*, **2013**, 1, 2577	7.1	32
151	Multifrequency electron paramagnetic resonance analysis of polycrystalline gadolinium-doped PbTiO3?Charge compensation and site of incorporation. *Applied Physics Letters*, **2006**, 88, 122506	3.4	31
150	Understanding the nanoscale redox-behavior of iron-anodes for rechargeable iron-air batteries. *Nano Energy*, **2017**, 41, 706-716	17.1	30
149	Defect structure in aliovalently-doped and isovalently-substituted PbTiO3 nano-powders. *Journal of Physics Condensed Matter*, **2010**, 22, 345901	1.8	29
148	A Review of Degradation Mechanisms and Recent Achievements for Ni-Rich Cathode-Based Li-Ion Batteries. *Advanced Energy Materials*, **2021**, 11, 2103005	21.8	29
147	Carbon-coated core?shell Li2S@C nanocomposites as high performance cathode materials for lithium?sulfur batteries. *Journal of Materials Chemistry A*, **2017**, 5, 1428-1433	13	28
146	FORMATION OF $({rm Ti}'_{rm Ti} - V_{rm O}^{bullet bullet})^{bullet}$ DEFECT DIPOLES IN BaTiO3 CERAMICS HEAT-TREATED UNDER REDUCED OXYGEN PARTIAL-PRESSURE. *Functional Materials Letters*, **2010**, 03, 65-68	1.2	27
145	Determination of functional center local environment in copper-modified Pb[Zr0.54Ti0.46]O3 ceramics. *Journal of Applied Physics*, **2004**, 95, 8092-8096	2.5	27
144	DEFECT STRUCTURE OF COPPER DOPED POTASSIUM NIOBATE CERAMICS. *Functional Materials Letters*, **2010**, 03, 19-24	1.2	26

143	Local symmetry-reduction in tetragonal (La,Fe)-codoped Pb[Zr0.4Ti0.6]O3piezoelectric ceramics. *Physica Scripta*, **2007**, T129, 12-16	2.6	26
142	EPR Imaging of Metallic Lithium and its Application to Dendrite Localisation in Battery Separators. *Scientific Reports*, **2018**, 8, 14331	4.9	26
141	Development towards cell-to-cell monolithic integration of a thin-film solar cell and lithium-ion accumulator. *Journal of Power Sources*, **2016**, 327, 340-344	8.9	25
140	Morphology Dependency of Li3V2(PO4)3/C Cathode Material Regarding to Rate Capability and Cycle Life in Lithium-ion Batteries. *Electrochimica Acta*, **2017**, 232, 310-322	6.7	23
139	Direct Observation of SEI Formation and Lithiation in Thin-Film Silicon Electrodes via in Situ Electrochemical Atomic Force Microscopy. *ACS Applied Energy Materials*, **2019**, 2, 6761-6767	6.1	23
138	Degradation mechanisms of C6/LiNi0.5Mn0.3Co0.2O2 Li-ion batteries unraveled by non-destructive and post-mortem methods. *Journal of Power Sources*, **2019**, 416, 163-174	8.9	23
137	CuO-doped NaNbO3 antiferroelectrics: Impact of aliovalent doping and nonstoichiometry on the defect structure and formation of secondary phases. *Physical Review B*, **2011**, 84,	3.3	23
136	Quantitative Analysis of Time-Domain Supported Electrochemical Impedance Spectroscopy Data of Li-Ion Batteries: Reliable Activation Energy Determination at Low Frequencies. *Journal of the Electrochemical Society*, **2016**, 163, H521-H527	3.9	23
135	Influence of sintering temperature on conductivity and mechanical behavior of the solid electrolyte LATP. *Ceramics International*, **2019**, 45, 14697-14703	5.1	22
134	Silicon and Iron as Resource-Efficient Anode Materials for Ambient-Temperature Metal-Air Batteries: A Review. *Materials*, **2019**, 12,	3.5	22
133	Microstructure of sodium-potassium niobate ceramics sintered under high alkaline vapor pressure atmosphere. *Journal of the European Ceramic Society*, **2014**, 34, 4213-4221	6	22
132	The carbonization of polyacrylonitrile-derived electrospun carbon nanofibers studied by transmission electron microscopy.. *RSC Advances*, **2019**, 9, 6267-6277	3.7	22
131	Interaction and Reaction of Ethylene and Oxygen on Six-Atom Silver Clusters Supported on LTA Zeolite. *Journal of Physical Chemistry C*, **2009**, 113, 19623-19632	3.8	21
130	Long-run in operando NMR to investigate the evolution and degradation of battery cells. *Physical Chemistry Chemical Physics*, **2018**, 20, 13765-13776	3.6	20
129	Defect structure of non-stoichiometric and aliovalently doped perovskite oxides. *Materials Technology*, **2013**, 28, 241-246	2.1	20
128	Modeling the degradation mechanisms of C6/LiFePO4 batteries. *Journal of Power Sources*, **2018**, 375, 106-117	8.9	20
127	Power-to-Syngas □eine Schl□sseltechnologie f□ die Umstellung des Energiesystems?. *Angewandte Chemie*, **2017**, 129, 5488-5498	3.6	19
126	New insight into the discharge mechanism of silicon-air batteries using electrochemical impedance spectroscopy. *Physical Chemistry Chemical Physics*, **2013**, 15, 3256-63	3.6	19

125	High Power and High Capacity 3D-Structured TiO2 Electrodes for Lithium-Ion Microbatteries. *Journal of the Electrochemical Society*, **2016**, 163, A2385-A2389	3.9	19
124	Long run discharge, performance and efficiency of primary Silicon□ir cells with alkaline electrolyte. *Electrochimica Acta*, **2017**, 225, 215-224	6.7	18
123	Limitation of discharge capacity and mechanisms of air-electrode deactivation in silicon-air batteries. *ChemSusChem*, **2012**, 5, 2278-85	8.3	18
122	Interface Aspects in All-Solid-State Li-Based Batteries Reviewed. *Advanced Energy Materials*, **2021**, 11, 2003939	21.8	18
121	Origin of Degradation in Si-Based All-Solid-State Li-Ion Microbatteries. *Advanced Energy Materials*, **2018**, 8, 1801430	21.8	18
120	Sol Gel vs Solid State Synthesis of the Fast Lithium-Ion Conducting Solid State Electrolyte Li7La3Zr2O12Substituted with□ron. *Journal of the Electrochemical Society*, **2019**, 166, A5403-A5409	3.9	17
119	LiTi2(PO4)3/C Anode Material with a Spindle-Like Morphology for Batteries with High Rate Capability and Improved Cycle Life. *ChemElectroChem*, **2016**, 3, 1157-1169	4.3	17
118	Exploring the Interface of Skin-Layered Titanium Fibers for Electrochemical Water Splitting. *Advanced Energy Materials*, **2021**, 11, 2002926	21.8	17
117	Tailored Gas Adsorption Properties of Electrospun Carbon Nanofibers for Gas Separation and Storage. *ChemSusChem*, **2020**, 13, 3180-3191	8.3	16
116	Local coordination of Fe3+ in Li[Co(0.98)Fe(0.02)]O2 as cathode material for lithium ion batteries-multi-frequency EPR and Monte-Carlo Newman-superposition model analysis. *Physical Chemistry Chemical Physics*, **2011**, 13, 9344-52	3.6	16
115	Nitrogen oxide reaction with six-atom silver clusters supported on LTA zeolite. *Physical Chemistry Chemical Physics*, **2009**, 11, 6664-75	3.6	16
114	DEFECT STRUCTURE IN "SOFT" (Gd,Fe)-CODOPED PZT 52.5/47.5 PIEZOELECTRIC CERAMICS. *Functional Materials Letters*, **2008**, 01, 7-11	1.2	15
113	Electron-Zeeman Resolved Electron Paramagnetic Resonance Spectroscopy. *Journal of Magnetic Resonance*, **2001**, 152, 276-287	3	15
112	Efficient Area Matched Converter Aided Solar Charging of Lithium Ion Batteries Using High Voltage Perovskite Solar Cells. *ACS Applied Energy Materials*, **2020**, 3, 431-439	6.1	15
111	Observing different modes of mobility in lithium titanate spinel by nuclear magnetic resonance. *RSC Advances*, **2017**, 7, 25276-25284	3.7	14
110	Synthesis of Ni-Rich Layered-Oxide Nanomaterials with Enhanced Li-Ion Diffusion Pathways as High-Rate Cathodes for Li-Ion Batteries. *ACS Applied Energy Materials*, **2020**, 3, 6583-6590	6.1	14
109	Processing of Al-doped ZnO protective thin films on aluminum current collectors for lithium ion batteries. *Thin Solid Films*, **2016**, 619, 302-307	2.2	14
108	Electron paramagnetic resonance studies of a platinum cluster in Linde L and faujasite zeolites. *Physical Chemistry Chemical Physics*, **2003**, 5, 3076	3.6	14

107	Support Effects on Hydrogen Desorption, Isotope Exchange, Chemical Reactivity, and Magnetism of Platinum Nanoclusters in KL Zeolite. *Journal of Physical Chemistry C*, **2013**, 117, 22732-22745	3.8	13
106	All-ceramic Li batteries based on garnet structured Li7La3Zr2O12. *Materials Technology*, **2020**, 35, 656-674	2.1	13
105	Nano-Scale Complexions Facilitate Li Dendrite-Free Operation in LATP Solid-State Electrolyte. *Advanced Energy Materials*, **2021**, 11, 2100707	21.8	13
104	Influence of Al Alloying on the Electrochemical Behavior of Zn Electrodes for Zn-Air Batteries With Neutral Sodium Chloride Electrolyte. *Frontiers in Chemistry*, **2019**, 7, 800	5	13
103	In operando EPR investigation of redox mechanisms in LiCoO2. *Chemical Physics Letters*, **2019**, 716, 231-236	2.5	13
102	Mixed Ionic□Electronic Conducting Li4Ti5O12 as Anode Material for Lithium Ion Batteries with Enhanced Rate Capability □Impact of Oxygen Non-Stoichiometry and Aliovalent Mg2+-Doping Studied by Electron Paramagnetic Resonance. *Zeitschrift Fur Physikalische Chemie*, **2015**, 229, 1439-1450	3.1	12
101	Combined quantitative microscopy on the microstructure and phase evolution in Li1.3Al0.3Ti1.7(PO4)3 ceramics. *Journal of Advanced Ceramics*, **2020**, 9, 149-161	10.7	12
100	SPACE-CHARGE LAYER, INTRINSIC "BULK" AND SURFACE COMPLEX DEFECTS IN ZnO NANOPARTICLES □A HIGH-FIELD ELECTRON PARAMAGNETIC RESONANCE ANALYSIS. *Functional Materials Letters*, **2013**, 06, 1330004	1.2	12
99	Reference electrode assembly and its use in the study of fluorohydrogenate ionic liquid silicon electrochemistry. *Physical Chemistry Chemical Physics*, **2013**, 15, 17837-45	3.6	12
98	Photoelectrochemical application of thin-film silicon triple-junction solar cell in batteries. *Physica Status Solidi (A) Applications and Materials Science*, **2016**, 213, 1926-1931	1.6	11
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96	Anisotropy of the mechanical properties of Li1□3Al0□3Ti1□7(PO4)3 solid electrolyte material. *Journal of Power Sources*, **2019**, 437, 226940	8.9	11
95	Eu2+-doped CsBr photostimulable X-ray storage phosphors □analysis of defect structure by high-frequency EPR. *Functional Materials Letters*, **2014**, 07, 1350073	1.2	11
94	High-Frequency EPR Analysis of MnO2-Doped [Bi0.5Na0.5]TiO3-BaTiO3 Piezoelectric Ceramics □ Manganese Oxidation States and Materials □Hardening□*Ferroelectrics*, **2012**, 428, 116-121	0.6	11
93	Characterization of tetravalent vanadium functional centres in metal oxides derived from a spin-Hamiltonian analysis. *Molecular Physics*, **2012**, 110, 277-282	1.7	11
92	Characterization of the high-spin Mn 2 + -functional centre in BaTiO_3 by means of right-angle wiggling electron paramagnetic resonance spectroscopy. *Molecular Physics*, **2007**, 105, 2195-2201	1.7	11
91	Right-angle wiggling electron paramagnetic resonance spectroscopy. *Journal of Chemical Physics*, **2001**, 115, 9126-9135	3.9	11
90	Insights into the reactive sintering and separated specific grain/grain boundary conductivities of Li1.3Al0.3Ti1.7(PO4)3. *Journal of Power Sources*, **2021**, 492, 229631	8.9	11

89	Analysis of the effects of different carbon coating strategies on structure and electrochemical behavior of LiCoPO4 material as a high-voltage cathode electrode for lithium ion batteries. *Electrochimica Acta*, **2018**, 279, 108-117	6.7	11
88	Electrode thickness-dependent formation of porous iron electrodes for secondary alkaline iron-air batteries. *Electrochimica Acta*, **2019**, 314, 61-71	6.7	10
87	Impact of the charging conditions on the discharge performance of rechargeable iron-anodes for alkaline iron?air batteries. *Journal of Applied Electrochemistry*, **2018**, 48, 451-462	2.6	10
86	Monitoring local redox processes in LiNiMnO battery cathode material by in operando EPR spectroscopy. *Journal of Chemical Physics*, **2018**, 148, 014705	3.9	10
85	Electrochemical analysis and mixed potentials theory of ionic liquid based Metal?Air batteries with Al/Si alloy anodes. *Electrochimica Acta*, **2018**, 276, 399-411	6.7	10
84	Investigation of the Li?Co antisite exchange in Fe-substituted LiCoPO4 cathode for high-voltage lithium ion batteries. *Energy Storage Materials*, **2019**, 22, 138-146	19.4	10
83	Morphology-controllable synthesis of LiCoPO4 and its influence on electrochemical performance for high-voltage lithium ion batteries. *Journal of Power Sources*, **2020**, 450, 227726	8.9	10
82	Carbonisation temperature dependence of electrochemical activity of nitrogen-doped carbon fibres from electrospinning as air-cathodes for aqueous-alkaline metal-air batteries.. *RSC Advances*, **2019**, 9, 27231-27241	3.7	9
81	High-Temperature Co-Electrolysis: A Versatile Method to Sustainably Produce Tailored Syngas Compositions. *Journal of the Electrochemical Society*, **2019**, 166, F971-F975	3.9	9
80	Analyzing the defect structure of CuO-doped PZT and KNN piezoelectrics from electron paramagnetic resonance. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2014**, 61, 1447-55	3.2	9
79	Coordination of the Mn4+-Center in Layered Li[Co0.98Mn0.02]O2 Cathode Materials for Lithium-Ion Batteries. *Zeitschrift Fur Physikalische Chemie*, **2017**, 231,	3.1	8
78	Operando Transmission Electron Microscopy Study of All-Solid-State Battery Interface: Redistribution of Lithium among Interconnected Particles. *ACS Applied Energy Materials*, **2020**, 3, 5101-5106	6.1	8
77	Influence of Dopant Type and Orientation of Silicon Anodes on Performance, Efficiency and Corrosion of Silicon?Air Cells with EMIm(HF)2.3F Electrolyte. *Journal of the Electrochemical Society*, **2017**, 164, A2310-A2320	3.9	8
76	An Advanced All Phosphate Lithium-Ion Battery Providing High Electrochemical Stability, High Rate Capability and Long-Term Cycling Performance. *Journal of the Electrochemical Society*, **2017**, 164, A370-A379	3.9	7
75	Secondary-Phase Formation in Spinel-Type LiMn2O4-Cathode Materials for Lithium-Ion Batteries: Quantifying Trace Amounts of Li2MnO3 by Electron Paramagnetic Resonance Spectroscopy. *Applied Magnetic Resonance*, **2018**, 49, 415-427	0.8	7
74	Flexible All-Solid-State Li-Ion Battery Manufacturable in Ambient Atmosphere. *ACS Applied Materials & Interfaces*, **2020**, 12, 37067-37078	9.5	7
73	Insights into Water Interaction at the Interface of Nitrogen-Functionalized Hydrothermal Carbons. *Journal of Physical Chemistry C*, **2019**, 123, 25146-25156	3.8	6
72	Influence of PbO stoichiometry on the properties of PZT ceramics and multilayer actuators. *Journal of the American Ceramic Society*, **2019**, 102, 5401-5414	3.8	6

71	Investigation of the corrosion behavior of highly As-doped crystalline Si in alkaline Si–air batteries. *Electrochimica Acta*, **2018**, 265, 292-302	6.7	6
70	Polarization-transfer electron-Zeeman resolved EPR. *Chemical Physics Letters*, **2002**, 358, 271-277	2.5	6
69	Transient morphology of lithium anodes in batteries monitored by in operando pulse electron paramagnetic resonance. *Communications Materials*, **2021**, 2,	6	6
68	Atomic-scale investigation of Na3V2(PO4)3 formation process in chemical infiltration via in situ transmission electron microscope for solid-state sodium batteries. *Nano Energy*, **2021**, 87, 106144	17.1	6
67	The Impact of Heat Treatment on the Domain Configuration and Strain Behavior in Pb[Zr,Ti]O3 Ferroelectrics. *Journal of the American Ceramic Society*, **2015**, 98, 269-277	3.8	5
66	Dynamics of [Pyr][TfN] ionic liquid confined to carbon black. *Physical Chemistry Chemical Physics*, **2019**, 21, 17018-17028	3.6	5
65	Co-Electrolysis, Quo Vadis?. *ECS Transactions*, **2017**, 78, 3139-3147	1	5
64	Characterization of non-stoichiometric co-sputtered Ba0.6Sr0.4(Ti (1-x)Fe(x))(1+x)O(3-δ) thin films for tunable passive microwave applications. *Analytical and Bioanalytical Chemistry*, **2012**, 403, 643-50	4.4	5
63	Interplay between defect structure and catalytic activity in the Mo(10-x)V(x)O(y) mixed-oxide system. *ChemPhysChem*, **2011**, 12, 3578-83	3.2	5
62	Measurement of spin-lattice relaxation times in EPR with enhanced orientation selectivity. *Journal of Magnetic Resonance*, **2003**, 162, 380-4	3	5
61	Cobalt substituted Pr2Ni1-Co O4+ (x = 0, 0.1, 0.2) oxygen electrodes: Impact on electrochemical performance and durability of solid oxide electrolysis cells. *Journal of Power Sources*, **2021**, 482, 228909	8.9	5
60	Transformation of carbon-supported Pt-Ni octahedral electrocatalysts into cubes: toward stable electrocatalysis. *Nanoscale*, **2018**, 10, 21353-21362	7.7	5
59	Fabrication and interfacial characterization of Ni-rich thin-film cathodes for stable Li-ion batteries. *Electrochimica Acta*, **2021**, 398, 139316	6.7	5
58	Direct Solid Oxide Electrolysis of Carbon Dioxide: Analysis of Performance and Processes. *Processes* , **2020**, 8, 1390	2.9	4
57	Sustainable Syngas Production by High-Temperature Co-electrolysis. *Chemie-Ingenieur-Technik*, **2020**, 92, 40-44	0.8	4
56	Complexation of copper(II)-Chelidamate: A multifrequency-pulsed electron paramagnetic resonance and electron nuclear double resonance analysis. *Journal of Physical Chemistry B*, **2006**, 110, 20655-63	3.4	4
55	Analysis on discharge behavior and performance of As- and B-doped silicon anodes in non-aqueous Si–air batteries under pulsed discharge operation. *Journal of Applied Electrochemistry*, **2020**, 50, 93-109	2.6	4
54	Signal Origin of Electrochemical Strain Microscopy and Link to Local Chemical Distribution in Solid State Electrolytes.. *Small Methods*, **2021**, 5, e2001279	12.8	4

53	On the reaction rate distribution in porous electrodes. *Electrochemistry Communications*, **2020**, 121, 106865	5.2	3
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49	Physicochemical Mechanisms of the Double-Layer Capacitance Dispersion and Dynamics: An Impedance Analysis. *Journal of Physical Chemistry C*, **2021**, 125, 5870-5879	3.8	3
48	Oxygen Nonstoichiometry and Valence State of Manganese in La Ca MnO. *ACS Omega*, **2021**, 6, 9638-9652	3.9	3
47	Integrated Co-Electrolysis and Syngas Methanation for the Direct Production of Synthetic Natural Gas from CO and H O. *ChemSusChem*, **2021**, 14, 2295-2302	8.3	3
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