RÃ¼diger-Albert Eichel

List of Publications by Year
in descending order

224 papers	6,591 citations	71102 41 h-index	88630 70 g-index
233 all docs	233 docs citations	233 times ranked	6606 citing authors

#	Article	IF	Citations
1	Tuning the moisture stability of multiphase Î²â€Li₃PS₄ solid electrolyte materials. Electrochemical Science Advances, 2023, 3, .	2.8	3
2	Lithium intercalation into graphite: In operando analysis of Raman signal widths. Electrochemical Science Advances, 2022, 2, e2100068.	2.8	4
3	Solvation and Ionâ€Pairing Effects of Choline Acetate Electrolyte in Protic and Aprotic Solvents Studied by NMR Titrations. ChemPhysChem, 2022, 23, .	2.1	4
4	Independent component analysis combined with Laplace inversion of spectrally resolved spin-alignment echo/T ₁ 3D ⁷Li NMR of superionic Li₁₀GeP₂S₁₂. Zeitschrift Fur Physikalische Chemie, 2022, 236, 899-922.	2.8	1
5	Unraveling the State of Charge-Dependent Electronic and Ionic Structureâ€“Property Relationships in NCM622 Cells by Multiscale Characterization. ACS Applied Energy Materials, 2022, 5, 1731-1742.	5.1	10
6	Operando transmission electron microscopy of battery cycling: thickness dependent breaking of TiO₂ coating on Si/SiO₂ nanoparticles. Chemical Communications, 2022, 58, 3130-3133.	4.1	2
7	Control of oxygen-to-carbon ratio and fuel utilization with regard to solid oxide fuel cell systems with anode exhaust gas recirculation: A review. Journal of Power Sources, 2022, 524, 231077.	7.8	15
8	Investigating the Interface between Ceramic Particles and Polymer Matrix in Hybrid Electrolytes by Electrochemical Strain Microscopy. Nanomaterials, 2022, 12, 654.	4.1	4
9	The role of the double layer for the pseudocapacitance of the hydrogen adsorption on platinum. Scientific Reports, 2022, 12, 3375.	3.3	6
10	Boundary Investigation of High-Temperature Co-Electrolysis Towards Direct CO₂ Electrolysis. Journal of the Electrochemical Society, 2022, 169, 034531.	2.9	5
11	Sr Substituted La2â^'xSrxNi0.8Co0.2O4+Î´ (0 â‰¤ x â‰¤ 0.8): Impact on Oxygen Stoichiometry and Electrochemical Properties. Energies, 2022, 15, 2136.	3.1	1
12	Performance and Degradation of Electrolyte-Supported Single Cell Composed of Mo-Au-Ni/GDC Fuel Electrode and LSCF Oxygen Electrode during High Temperature Steam Electrolysis. Energies, 2022, 15, 2726.	3.1	18
13	ZnFe2O4 hollow rods enabling accelerated polysulfide conversion for advanced lithium-sulfur batteries. Electrochimica Acta, 2022, 414, 140231.	5.2	14
14	Soft-sensor based operation of a solid oxide fuel cell system with anode exhaust gas recirculation. Journal of Power Sources, 2022, 532, 231354.	7.8	1
15	Li+ concentration waves in a liquid electrolyte of Li-ion batteries with porous graphite-based electrodes. Energy Storage Materials, 2022, 48, 475-486.	18.0	10
16	Exploring the Solvation Sphere and Spatial Accumulation of Dissolved Transition-Metal Ions in Batteries: A Case Study of Vanadyl Ions Released from V₂O₅Cathodes. ACS Applied Energy Materials, 2022, 5, 449-460.	5.1	9
17	Instability of the Li₇SiPS₈ Solid Electrolyte at the Lithium Metal Anode and Interphase Formation. Chemistry of Materials, 2022, 34, 3659-3669.	6.7	12
18	Ion transport and limited currents in supporting electrolytes and ionic liquids. Scientific Reports, 2022, 12, 6215.	3.3	4

#	Article	IF	Citations
19	Active Interphase Enables Stable Performance for an Allâ€Phosphateâ€Based Composite Cathode in an Allâ€Solidâ€State Battery. Small, 2022, 18, e2200266.	10.0	7
20	CO₂/N₂ Separation on Highly Selective Carbon Nanofibers Investigated by Dynamic Gas Adsorption. ChemSusChem, 2022, 15, .	6.8	7
21	Quantifying local pH changes in carbonate electrolyte during copper-catalysed $$hbox {CO}_2$$ electroreduction using in operando $$^{13}hbox {C}$$ NMR. Scientific Reports, 2022, 12, 8274.	3.3	11
22	Feasibility and Limitations of High-Voltage Lithium-Iron-Manganese Spinels. Journal of the Electrochemical Society, 2022, 169, 070518.	2.9	1
23	Host Materials Anchoring Polysulfides in Liâ€“S Batteries Reviewed. Advanced Energy Materials, 2021, 11, 2001304.	19.5	254
24	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.	7.8	32
25	Erosion behavior of Y₂O₃ in fluorineâ€based etching plasmas: Orientation dependency and reaction layer formation. Journal of the American Ceramic Society, 2021, 104, 1465-1474.	3.8	13
26	Polyethylene oxideâ€Li 6.5 La 3 Zr 1.5 Ta 0.5 O 12 hybrid electrolytes: Lithium salt concentration and biopolymer blending. Electrochemical Science Advances, 2021, 1, e2000029.	2.8	4
27	Exploring the Interface of Skinâ€Layered Titanium Fibers for Electrochemical Water Splitting. Advanced Energy Materials, 2021, 11, 2002926.	19.5	48
28	Double layer capacitances analysed with impedance spectroscopy and cyclic voltammetry: validity and limits of the constant phase element parameterization. Physical Chemistry Chemical Physics, 2021, 23, 21097-21105.	2.8	25
29	Strategies towards enabling lithium metal in batteries: interphases and electrodes. Energy and Environmental Science, 2021, 14, 5289-5314.	30.8	156
30	Transient morphology of lithium anodes in batteries monitored by in operando pulse electron paramagnetic resonance. Communications Materials, 2021, 2, .	6.9	11
31	Interface Aspects in Allâ€Solidâ€State Liâ€Based Batteries Reviewed. Advanced Energy Materials, 2021, 11, 2003939.	19.5	66
32	Signal Origin of Electrochemical Strain Microscopy and Link to Local Chemical Distribution in Solid State Electrolytes. Small Methods, 2021, 5, 2001279.	8.6	10
33	Physicochemical Mechanisms of the Double-Layer Capacitance Dispersion and Dynamics: An Impedance Analysis. Journal of Physical Chemistry C, 2021, 125, 5870-5879.	3.1	8
34	Enhanced sulfur utilization in lithium-sulfur batteries by hybrid modified separators. Materials Today Communications, 2021, 26, 102133.	1.9	6
35	Oxygen Nonstoichiometry and Valence State of Manganese in La_{1â€“x}Ca_xMnO_{3+Î´}. ACS Omega, 2021, 6, 9638-9652.	3.5	7
36	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.	7.8	40

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37	Integrated Coâ€Electrolysis and Syngas Methanation for the Direct Production of Synthetic Natural Gas from CO₂ and H₂O. ChemSusChem, 2021, 14, 2295-2302.	6.8	13
38	Study of CO₂ Sorption Kinetics on Electrospun Polyacrylonitrileâ€Based Carbon Nanofibers. Chemical Engineering and Technology, 2021, 44, 1168-1177.	1.5	4
39	An electrochemical cell for in operando ¹³C nuclear magnetic resonance investigations of carbon dioxide/carbonate processes in aqueous solution. Magnetic Resonance, 2021, 2, 265-280.	1.9	7
40	Nanoâ€Scale Complexions Facilitate Li Dendriteâ€Free Operation in LATP Solidâ€State Electrolyte. Advanced Energy Materials, 2021, 11, 2100707.	19.5	36
41	Ultrathin 2D Fe-Nanosheets Stabilized by 2D Mesoporous Silica: Synthesis and Application in Ammonia Synthesis. ACS Applied Materials & Interfaces, 2021, 13, 30187-30197.	8.0	3
42	Modeling of Multi-Physics Phenomena for High-Temperature Co-Electrolysis. ECS Meeting Abstracts, 2021, MA2021-03, 148-148.	0.0	0
43	Investigation of La_{2-X}Sr_xNi_{0.8}Co_{0.2}O_{4+d} (0.0 â‰¤ x â‰¤ 0.2) Materials as Oxygen Electrodes for Solid Oxide Cells. ECS Transactions, 2021, 103, 1517-1524.	0.5	1
44	Lithium deposition in single-ion conducting polymer electrolytes. Cell Reports Physical Science, 2021, 2, 100496.	5.6	10
45	Investigation of La2-XSrxNi0.8Co0.2O4+d (0.0 â‰¤ x â‰¤ 0.2) Materials as Oxygen Electrodes for Solid Oxide Cells. ECS Meeting Abstracts, 2021, MA2021-03, 139-139.	0.0	0
46	Performance and Stability of Nickelates Based Oxygen Electrodes for Solid Oxide Cells. ECS Transactions, 2021, 103, 1505-1515.	0.5	2
47	Visualizing the Atomic Structure Between YSZ and LSM: An Interface Stabilized by Complexions?. ECS Transactions, 2021, 103, 1331-1337.	0.5	2
48	Performance and Processes of Pure CO2 Electrolysis in Solid Oxide Cells. ECS Meeting Abstracts, 2021, MA2021-03, 216-216.	0.0	1
49	Performance and Processes of Pure CO₂ Electrolysis in Solid Oxide Cells. ECS Transactions, 2021, 103, 501-509.	0.5	1
50	Visualizing the Atomic Structure Between YSZ and LSM: An Interface Stabilized by Complexions?. ECS Meeting Abstracts, 2021, MA2021-03, 52-52.	0.0	0
51	Understanding High-Temperature Electrolysis. ECS Meeting Abstracts, 2021, MA2021-03, 214-214.	0.0	0
52	Modeling of Multi-Physics Phenomena for High-Temperature Co-Electrolysis. ECS Transactions, 2021, 103, 797-805.	0.5	2
53	Boundaries of High-Temperature Co-Electrolysis Towards Direct CO2-Electrolysis. ECS Transactions, 2021, 103, 493-500.	0.5	0
54	Analysis of the DRT as Evaluation Tool for EIS Data Analysis. ECS Meeting Abstracts, 2021, MA2021-03, 61-61.	0.0	0

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55	Boundaries of High-Temperature Co-Electrolysis Towards Direct CO2-Electrolysis. ECS Meeting Abstracts, 2021, MA2021-03, 215-215.	0.0	0
56	Performance and Stability of Nickelates Based Oxygen Electrodes for Solid Oxide Cells. ECS Meeting Abstracts, 2021, MA2021-03, 137-137.	0.0	0
57	Understanding High-Temperature Electrolysis. ECS Transactions, 2021, 103, 487-492.	0.5	0
58	Analysis of the DRT as Evaluation Tool for EIS Data Analysis. ECS Transactions, 2021, 103, 1403-1412.	0.5	6
59	Complexions at the Electrolyte/Electrode Interface in Solid Oxide Cells. Advanced Materials Interfaces, 2021, 8, 2100967.	3.7	8
60	Fracture behavior of solid electrolyte LATP material based on micro-pillar splitting method. Journal of the European Ceramic Society, 2021, 41, 5240-5247.	5.7	8
61	Improved Electrochemical Performance of Zinc Anodes by EDTA in Nearâ€Neutral Zincâ˜Air Batteries. Batteries and Supercaps, 2021, 4, 1830-1842.	4.7	10
62	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.	16.0	12
63	Formation of a Stable Solid-Electrolyte Interphase at Metallic Lithium Anodes Induced by LiNbO₃ Protective Layers. ACS Applied Energy Materials, 2021, 4, 10333-10343.	5.1	11
64	Structural Study of Polyacrylonitrile-Based Carbon Nanofibers for Understanding Gas Adsorption. ACS Applied Materials & Interfaces, 2021, 13, 46665-46670.	8.0	11
65	Fabrication and interfacial characterization of Ni-rich thin-film cathodes for stable Li-ion batteries. Electrochimica Acta, 2021, 398, 139316.	5.2	13
66	Overpotential analysis of graphite-based Li-ion batteries seen from a porous electrode modeling perspective. Journal of Power Sources, 2021, 509, 230345.	7.8	33
67	Microstructural details of spindle-like lithium titanium phosphate revealed in three dimensions. RSC Advances, 2021, 11, 34605-34612.	3.6	1
68	The effect of cobalt on morphology, structure, and ORR activity of electrospun carbon fibre mats in aqueous alkaline environments. Beilstein Journal of Nanotechnology, 2021, 12, 1173-1186.	2.8	0
69	A Review of Degradation Mechanisms and Recent Achievements for Niâ€Rich Cathodeâ€Based Liâ€Ion Batteries. Advanced Energy Materials, 2021, 11, 2103005.	19.5	206
70	Single-Ion-Conducting â€œPolymer-in-Ceramicâ€•Hybrid Electrolyte with an Intertwined NASICON-Type Nanofiber Skeleton. ACS Applied Materials & Interfaces, 2021, 13, 61067-61077.	8.0	14
71	Defects and Phase Formation in Non-Stoichiometric LaFeO₃: a Combined Theoretical and Experimental Study. Chemistry of Materials, 2021, 33, 9473-9485.	6.7	9
72	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.	5.1	29

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73	Analysis on discharge behavior and performance of As- and B-doped silicon anodes in non-aqueous Siâ€“air batteries under pulsed discharge operation. Journal of Applied Electrochemistry, 2020, 50, 93-109.	2.9	11
74	Flexible All-Solid-State Li-Ion Battery Manufacturable in Ambient Atmosphere. ACS Applied Materials & Interfaces, 2020, 12, 37067-37078.	8.0	14
75	Accessing Lithiumâ€“Oxygen Battery Discharge Products in Their Native Environments via Transmission Electron Microscopy Grid Electrode. ACS Applied Energy Materials, 2020, 3, 9509-9515.	5.1	6
76	On the reaction rate distribution in porous electrodes. Electrochemistry Communications, 2020, 121, 106865.	4.7	10
77	Direct Solid Oxide Electrolysis of Carbon Dioxide: Analysis of Performance and Processes. Processes, 2020, 8, 1390.	2.8	12
78	Post-Test Raman Investigation of Silver Based Gas Diffusion Electrodes. Journal of the Electrochemical Society, 2020, 167, 086505.	2.9	4
79	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.	5.1	14
80	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.	5.1	37
81	Tailored Gas Adsorption Properties of Electrospun Carbon Nanofibers for Gas Separation and Storage. ChemSusChem, 2020, 13, 3180-3191.	6.8	40
82	Sustainable Syngas Production by Highâ€Temperature Coâ€electrolysis. Chemie-Ingenieur-Technik, 2020, 92, 40-44.	0.8	7
83	Warum wir uns mit Powerâ€toâ€X beschÃftigen. Chemie-Ingenieur-Technik, 2020, 92, 3-3.	0.8	3
84	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.	17.4	29
85	Morphology-controllable synthesis of LiCoPO4 and its influence on electrochemical performance for high-voltage lithium ion batteries. Journal of Power Sources, 2020, 450, 227726.	7.8	19
86	All-ceramic Li batteries based on garnet structured Li₇La₃Zr₂O₁₂. Materials Technology, 2020, 35, 656-674.	3.0	22
87	Anisotropy of the mechanical properties of Li1Â·3Al0Â·3Ti1Â·7(PO4)3 solid electrolyte material. Journal of Power Sources, 2019, 437, 226940.	7.8	15
88	Silicon and Iron as Resource-Efficient Anode Materials for Ambient-Temperature Metal-Air Batteries: A Review. Materials, 2019, 12, 2134.	2.9	46
89	Dynamics of [Pyr₁₃][Tf₂N] ionic liquid confined to carbon black. Physical Chemistry Chemical Physics, 2019, 21, 17018-17028.	2.8	10
90	Investigation of the Liâ€“Co antisite exchange in Fe-substituted LiCoPO4 cathode for high-voltage lithium ion batteries. Energy Storage Materials, 2019, 22, 138-146.	18.0	15

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91	Double-Shelled Co₃O₄/C Nanocages Enabling Polysulfides Adsorption for High-Performance Lithiumâ€“Sulfur Batteries. ACS Applied Energy Materials, 2019, 2, 8153-8162.	5.1	55
92	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.	5.1	31
93	Carbonisation temperature dependence of electrochemical activity of nitrogen-doped carbon fibres from electrospinning as air-cathodes for aqueous-alkaline metalâ€“air batteries. RSC Advances, 2019, 9, 27231-27241.	3.6	23
94	High-Temperature Co-Electrolysis: A Versatile Method to Sustainably Produce Tailored Syngas Compositions. Journal of the Electrochemical Society, 2019, 166, F971-F975.	2.9	19
95	Insights into Water Interaction at the Interface of Nitrogen-Functionalized Hydrothermal Carbons. Journal of Physical Chemistry C, 2019, 123, 25146-25156.	3.1	6
96	Sol Gel vs Solid State Synthesis of the Fast Lithium-Ion Conducting Solid State Electrolyte Li₇La₃Zr₂O₁₂Substituted withÂIron. Journal of the Electrochemical Society, 2019, 166, A5403-A5409.	2.9	25
97	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.	10.3	82
98	Electrode thickness-dependent formation of porous iron electrodes for secondary alkaline iron-air batteries. Electrochimica Acta, 2019, 314, 61-71.	5.2	12
99	Influence of sintering temperature on conductivity and mechanical behavior of the solid electrolyte LATP. Ceramics International, 2019, 45, 14697-14703.	4.8	43
100	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	11
101	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.	7.8	40
102	The carbonization of polyacrylonitrile-derived electrospun carbon nanofibers studied by in situ transmission electron microscopy. RSC Advances, 2019, 9, 6267-6277.	3.6	35
103	Influence of Al Alloying on the Electrochemical Behavior of Zn Electrodes for Znâ€“Air Batteries With Neutral Sodium Chloride Electrolyte. Frontiers in Chemistry, 2019, 7, 800.	3.6	21
104	In operando EPR investigation of redox mechanisms in LiCoO2. Chemical Physics Letters, 2019, 716, 231-236.	2.6	23
105	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.	1.2	14
106	Impact of the charging conditions on the discharge performance of rechargeable iron-anodes for alkaline ironâ€“air batteries. Journal of Applied Electrochemistry, 2018, 48, 451-462.	2.9	14
107	Long-run in operando NMR to investigate the evolution and degradation of battery cells. Physical Chemistry Chemical Physics, 2018, 20, 13765-13776.	2.8	30
108	Investigation of the corrosion behavior of highly As-doped crystalline Si in alkaline Siâ€“air batteries. Electrochimica Acta, 2018, 265, 292-302.	5.2	15

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109	Monitoring local redox processes in LiNi0.5Mn1.5O4 battery cathode material by in operando EPR spectroscopy. Journal of Chemical Physics, 2018, 148, 014705.	3.0	23
110	Electrochemical analysis and mixed potentials theory of ionic liquid based Metalâ€“Air batteries with Al/Si alloy anodes. Electrochimica Acta, 2018, 276, 399-411.	5.2	16
111	Modeling the degradation mechanisms of C6/LiFePO4 batteries. Journal of Power Sources, 2018, 375, 106-117.	7.8	30
112	Quantitative and time-resolved detection of lithium plating on graphite anodes in lithium ion batteries. Materials Today, 2018, 21, 231-240.	14.2	163
113	Transformation of carbon-supported Ptâ€“Ni octahedral electrocatalysts into cubes: toward stable electrocatalysis. Nanoscale, 2018, 10, 21353-21362.	5.6	7
114	Thin Film Batteries: Origin of Degradation in Si-Based All-Solid-State Li-Ion Microbatteries (Adv. Energy) Tj ETQq0 0 0 rgBT /Overlock 10 T	19.5	1
115	EPR Imaging of Metallic Lithium and its Application to Dendrite Localisation in Battery Separators. Scientific Reports, 2018, 8, 14331.	3.3	39
116	Origin of Degradation in Siâ€Based Allâ€Solidâ€State Liâ€Ion Microbatteries. Advanced Energy Materials, 2018, 8, 1801430.	19.5	29
117	Monitoring the reaction between lithium manganese spinel and Li2MnO3 during heat treatment using Electron Paramagnetic Resonance (EPR) spectroscopy. Solid State Ionics, 2018, 325, 201-208.	2.7	4
118	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.	10.3	44
119	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.	5.2	19
120	Electrochemical and Electronic Charge Transport Properties of Ni-Doped LiMn2O4 Spinel Obtained from Polyol-Mediated Synthesis. Materials, 2018, 11, 806.	2.9	19
121	Monolithic All-Phosphate Solid-State Lithium-Ion Battery with Improved Interfacial Compatibility. ACS Applied Materials & Interfaces, 2018, 10, 22264-22277.	8.0	68
122	Temperature-dependent cycling performance and ageing mechanisms of C6/LiNi1/3Mn1/3Co1/3O2 batteries. Journal of Power Sources, 2018, 396, 444-452.	7.8	55
123	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.	2.9	8
124	Powerâ€toâ€Syngas â€“ eine SchlÃ¼sseltechnologie fÃ¼r die Umstellung des Energiesystems?. Angewandte Chemie, 2017, 129, 5488-5498.	2.0	24
125	Coordination of the Mn⁴⁺-Center in Layered Li[Co_{0.98}Mn_{0.02}]O₂ Cathode Materials for Lithium-Ion Batteries. Zeitschrift Fur Physikalische Chemie, 2017, 231, 905-922.	2.8	8
126	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.	5.2	26

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127	Long run discharge, performance and efficiency of primary Siliconâ€“air cells with alkaline electrolyte. Electrochimica Acta, 2017, 225, 215-224.	5.2	30
128	Carbon-coated coreâ€“shell Li₂S@C nanocomposites as high performance cathode materials for lithiumâ€“sulfur batteries. Journal of Materials Chemistry A, 2017, 5, 1428-1433.	10.3	36
129	Observing different modes of mobility in lithium titanate spinel by nuclear magnetic resonance. RSC Advances, 2017, 7, 25276-25284.	3.6	17
130	Understanding the nanoscale redox-behavior of iron-anodes for rechargeable iron-air batteries. Nano Energy, 2017, 41, 706-716.	16.0	39
131	Superionic bulk conductivity in Li1.3Al0.3Ti1.7(PO4)3 solid electrolyte. Solid State Ionics, 2017, 309, 180-186.	2.7	60
132	LSC Infiltrated LSCF Oxygen Electrode for High Temperature Steam Electrolysis. ECS Transactions, 2017, 78, 3283-3295.	0.5	1
133	Co-Electrolysis, Quo Vadis?. ECS Transactions, 2017, 78, 3139-3147.	0.5	8
134	Influence of Dopant Type and Orientation of Silicon Anodes on Performance, Efficiency and Corrosion of Siliconâ€“Air Cells with EMIm(HF)_{2.3}F Electrolyte. Journal of the Electrochemical Society, 2017, 164, A2310-A2320.	2.9	18
135	Powerâ€toâ€Syngas: An Enabling Technology for the Transition of the Energy System?. Angewandte Chemie - International Edition, 2017, 56, 5402-5411.	13.8	212
136	LiTi₂(PO₄)₃/C Anode Material with a Spindleâ€Like Morphology for Batteries with High Rate Capability and Improved Cycle Life. ChemElectroChem, 2016, 3, 1157-1169.	3.4	19
137	Singlet Oxygen Formation during the Charging Process of an Aprotic Lithiumâ€“Oxygen Battery. Angewandte Chemie - International Edition, 2016, 55, 6892-6895.	13.8	146
138	Singlet Oxygen Formation during the Charging Process of an Aprotic Lithiumâ€“Oxygen Battery. Angewandte Chemie, 2016, 128, 7006-7009.	2.0	87
139	Hydrogen interstitial defects in acceptor-type CuO-doped PbTiO3â€”Uptake and dissolution of water vapor and formation of (CuTiâ€³â^'(OH)Oâ€¢)â€² defect complexes. Applied Physics Letters, 2016, 109, 122904.	3.3	3
140	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.	2.9	28
141	Modeling 3D-Deposition of TiO2 Using a Monte Carlo Chemical Kinetics Approach. Journal of Physical Chemistry C, 2016, 120, 23823-23835.	3.1	2
142	High Power and High Capacity 3D-Structured TiO₂Electrodes for Lithium-Ion Microbatteries. Journal of the Electrochemical Society, 2016, 163, A2385-A2389.	2.9	24
143	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	61
144	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.	7.8	33

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145	Processing of Al-doped ZnO protective thin films on aluminum current collectors for lithium ion batteries. Thin Solid Films, 2016, 619, 302-307.	1.8	18
146	Photoelectrochemical application of thinâ€film silicon tripleâ€junction solar cell in batteries. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 1926-1931.	1.8	16
147	Operando electron paramagnetic resonance spectroscopy â€“ formation of mossy lithium on lithium anodes during chargeâ€“discharge cycling. Energy and Environmental Science, 2015, 8, 1358-1367.	30.8	128
148	Mixed Ionicâ€“Electronic Conducting Li4Ti5O12 as Anode Material for Lithium Ion Batteries with Enhanced Rate Capability â€“ Impact of Oxygen Non-Stoichiometry and Aliovalent Mg2+-Doping Studied by Electron Paramagnetic Resonance. Zeitschrift Fur Physikalische Chemie, 2015, 229, 1439-1450.	2.8	15
149	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
150	Eu²⁺-doped CsBr photostimulable X-ray storage phosphors â€” analysis of defect structure by high-frequency EPR. Functional Materials Letters, 2014, 07, 1350073.	1.2	11
151	Microstructure of sodium-potassium niobate ceramics sintered under high alkaline vapor pressure atmosphere. Journal of the European Ceramic Society, 2014, 34, 4213-4221.	5.7	28
152	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, 1447-1455.	3.0	10
153	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.	7.8	55
154	SPACE-CHARGE LAYER, INTRINSIC "BULK" AND SURFACE COMPLEX DEFECTS IN ZnO NANOPARTICLES â€” A HIGH-FIELD ELECTRON PARAMAGNETIC RESONANCE ANALYSIS. Functional Materials Letters, 2013, 06, 1330004.	1.2	13
155	Heat treatment effects on domain configuration and strain under electric field in undoped Pb[Zr<inf>x</inf>Ti<inf>1−x</inf>]O<inf>3</inf> ferroelectrics. , 2013, , .		0
156	Molecular precursor derived and solution processed indiumâ€“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.	5.5	34
157	Interactions of defect complexes and domain walls in CuO-doped ferroelectric (K,Na)NbO3. Applied Physics Letters, 2013, 102, .	3.3	62
158	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.	3.1	17
159	Reference electrode assembly and its use in the study of fluorohydrogenate ionic liquid silicon electrochemistry. Physical Chemistry Chemical Physics, 2013, 15, 17837.	2.8	19
160	New insight into the discharge mechanism of siliconâ€“air batteries using electrochemical impedance spectroscopy. Physical Chemistry Chemical Physics, 2013, 15, 3256.	2.8	28
161	Defect structure of non-stoichiometric and aliovalently doped perovskite oxides. Materials Technology, 2013, 28, 241-246.	3.0	24
162	Influence of the A/B Stoichiometry on Defect Structure, Sintering, and Microstructure in Undoped and Cu-Doped KNN. , 2012, , 209-251.		2

#	Article	IF	Citations
163	Characterization of tetravalent vanadium functional centres in metal oxides derived from a spin-Hamiltonian analysis. Molecular Physics, 2012, 110, 277-282.	1.7	12
164	Limitation of Discharge Capacity and Mechanisms of Airâ€Electrode Deactivation in Siliconâ€“Air Batteries. ChemSusChem, 2012, 5, 2278-2285.	6.8	25
165	High-Frequency EPR Analysis of MnO₂-Doped [Bi_{0.5}Na_{0.5}]TiO₃-BaTiO₃Piezoelectric Ceramics â€“ Manganese Oxidation States and Materials â€˜Hardeningâ€™. Ferroelectrics, 2012, 428, 116-121.	0.6	17
166	Characterization of non-stoichiometric co-sputtered Ba0.6Sr0.4(Ti1â€‰â€™â€‰x Fe x)1â€‰+â€‰x O3â€‰â€™â€‰Î´ thin films for tunable passive microwave applications. Analytical and Bioanalytical Chemistry, 2012, 403, 643-650.	3.7	6
167	Local coordination of Fe3+ in Li[Co0.98Fe0.02]O2 as cathode material for lithium ion batteriesâ€”multi-frequency EPR and Monte-Carlo Newman-superposition model analysis. Physical Chemistry Chemical Physics, 2011, 13, 9344.	2.8	18
168	Structural and dynamic properties of oxygen vacancies in perovskite oxidesâ€”analysis of defect chemistry by modern multi-frequency and pulsed EPR techniques. Physical Chemistry Chemical Physics, 2011, 13, 368-384.	2.8	202
169	display= "inline" ><mml:mrow><mml:mo>(</mml:mo><mml:mn>1</mml:mn><mml:mo>â€’</mml:mo><mml:mi>x</mml:mi><mml:mo> xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>â€“<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>x</mml:mi></mml:math>PbTiO<mml:math	3.2	39
170	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	70
171	CuO as a sintering additive for (Bi1/2Na1/2)TiO3â€“BaTiO3â€“(K0.5Na0.5)NbO3 lead-free piezoceramics. Journal of the European Ceramic Society, 2011, 31, 2107-2117.	5.7	72
172	CuO-doped NaNbO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>antiferroelectrics: Impact of aliovalent doping and nonstoichiometry on the defect structure and formation of secondary phases. Physical Review B, 2011, 84, .	3.2	24
173	Defect structure of the mixed ionicâ€“electronic conducting Sr[Ti,Fe]Ox solid-solution system â€“ Change in iron oxidation states and defect complexation. Solid State Ionics, 2011, 184, 47-51.	2.7	35
174	Interplay between Defect Structure and Catalytic Activity in the Mo_{10â€‰x}V_xO_y Mixedâ€Oxide System. ChemPhysChem, 2011, 12, 3578-3583.	2.1	5
175	Position of defects with respect to domain walls in Fe3+-doped Pb[Zr0.52Ti0.48]O3 piezoelectric ceramics. Applied Physics Letters, 2011, 98, .	3.3	77
176	Size effects in Fe3+-doped PbTiO3 nanocrystalsâ€”Formation and orientation of defect-dipoles. Journal of the European Ceramic Society, 2010, 30, 289-293.	5.7	42
177	FORMATION OF $({m Ti}'_{m Ti} - V_{m O}^{ullet ullet})^{ullet}$ DEFECT DIPOLES IN BaTiO3 CERAMICS HEAT-TREATED UNDER REDUCED OXYGEN PARTIAL-PRESSURE. Functional Materials Letters, 2010, 03, 65-68.	1.2	30
178	Effect of Nb-donor and Fe-acceptor dopants in (Bi1/2Na1/2)TiO3â€“BaTiO3â€“(K0.5Na0.5)NbO3 lead-free piezoceramics. Journal of Applied Physics, 2010, 108, .	2.5	75
179	DEFECT STRUCTURE OF COPPER DOPED POTASSIUM NIOBATE CERAMICS. Functional Materials Letters, 2010, 03, 19-24.	1.2	26
180	RECENT DEVELOPMENTS AND FUTURE PERSPECTIVES OF LEAD-FREE FERROELECTRICS. Functional Materials Letters, 2010, 03, 1-4.	1.2	42

#	Article	IF	Citations
181	Synthesis, Characterization, Defect Chemistry, and FET Properties of Microwave-Derived Nanoscaled Zinc Oxide. Chemistry of Materials, 2010, 22, 2203-2212.	6.7	117
182	Defect structure in aliovalently-doped and isovalently-substituted PbTiO₃nano-powders. Journal of Physics Condensed Matter, 2010, 22, 345901.	1.8	32
183	Defect structure and materials â€œhardeningâ€•in Fe2O3-doped [Bi0.5Na0.5]TiO3 ferroelectrics. Applied Physics Letters, 2010, 97, .	3.3	79
184	Structural Characterization of Cu²⁺Functional Centers In â€˜Lead-Freeâ€™ KNN Piezoelectrics. Materials Research Society Symposia Proceedings, 2009, 1199, 7.	0.1	2
185	Local variations in defect polarization and covalent bonding in ferroelectric Cu2+-doped PZT and KNN functional ceramics at the morphotropic phase boundary. Physical Chemistry Chemical Physics, 2009, 11, 8698.	2.8	62
186	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.	3.3	41
187	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	37
188	Defect structure in lithium-doped polymer-derived SiCN ceramics characterized by Raman and electron paramagnetic resonance spectroscopy. Physical Chemistry Chemical Physics, 2009, 11, 5628.	2.8	37
189	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.	3.1	25
190	Nitrogen oxide reaction with six-atom silver clusters supported on LTA zeolite. Physical Chemistry Chemical Physics, 2009, 11, 6664.	2.8	17
191	Luminescence of heat-treated silicon-based polymers: promising materials for LED applications. Journal of Materials Science, 2008, 43, 5790-5796.	3.7	46
192	DEFECT STRUCTURE IN "SOFT" (Gd,Fe)-CODOPED PZT 52.5/47.5 PIEZOELECTRIC CERAMICS. Functional Materials Letters, 2008, 01, 7-11.	1.2	15
193	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	82
194	Characterization of (Fe_{Zr,Ti}-V_o ^{ldrldr})^{ldr} 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, 1061-1068.	3.0	37
195	Reorientation of (MnTiâ€³â^'VOâ€¢â€¢)Ã— defect dipoles in acceptor-modified BaTiO3 single crystals: An electron paramagnetic resonance study. Applied Physics Letters, 2008, 93, .	3.3	111
196	Defect-Dipole Formation in Copper-Doped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>PbTiO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>Ferroelectrics. Physical Review Letters, 2008, 100, 095504.	7.8	118
197	Association of oxygen vacancies with impurity metal ions in lead titanate. Physical Review B, 2007, 76, .	3.2	94
198	Characterization of the defect structure in acceptor- and donor-doped PZT ceramics. Applications of Ferroelectrics, IEEE International Symposium on, 2007, , .	0.0	0

#	Article	IF	Citations
199	Local symmetry-reduction in tetragonal (La,Fe)-codoped Pb[Zr_{0.4}Ti_{0.6}]O₃piezoelectric ceramics. Physica Scripta, 2007, T129, 12-16.	2.5	30
200	Characterization of the high-spin Mn 2â€‰+ -functional centre in BaTiO_3 by means of right-angle wiggling electron paramagnetic resonance spectroscopy. Molecular Physics, 2007, 105, 2195-2201.	1.7	12
201	Nanodomain structure ofPb[Zr1âˆ’xTix]O3at its morphotropic phase boundary: Investigations from local to average structure. Physical Review B, 2007, 75, .	3.2	264
202	Defect structure of oxide ferroelectricsâ€”valence state, site of incorporation, mechanisms of charge compensation and internal bias fields. Journal of Electroceramics, 2007, 19, 11-23.	2.0	120
203	Iron-oxygen vacancy defect association in polycrystalline iron-modifiedPbZrO3antiferroelectrics: Multifrequency electron paramagnetic resonance and Newman superposition model analysis. Physical Review B, 2006, 73, .	3.2	48
204	A Small Paramagnetic Platinum Cluster in an NaY Zeolite:Â Characterization and Hydrogen Adsorption and Desorption. Journal of Physical Chemistry B, 2006, 110, 2013-2023.	2.6	55
205	Multifrequency electron paramagnetic resonance analysis of polycrystalline gadolinium-doped PbTiO3â€”Charge compensation and site of incorporation. Applied Physics Letters, 2006, 88, 122506.	3.3	36
206	Complexation of Copper(II)âˆ’Chelidamate:Â A Multifrequency-Pulsed Electron Paramagnetic Resonance and Electron Nuclear Double Resonance Analysis. Journal of Physical Chemistry B, 2006, 110, 20655-20663.	2.6	7
207	Electron Paramagnetic Resonance Structure Investigation of Copper Complexation in a Hemicarcerand. Journal of Physical Chemistry B, 2006, 110, 15012-15020.	2.6	3
208	Electron spin echo envelope modulation spectroscopy with g-value and orientation filters. Chemical Physics Letters, 2006, 417, 222-229.	2.6	2
209	High-field/high-frequency EPR of paramagnetic functional centers in Cu2+- and Fe3+-modified polycrystalline Pb[ZrxTi1âˆ’x]O3 ferroelectrics. Magnetic Resonance in Chemistry, 2005, 43, S166-S173.	1.9	41
210	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	28
211	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	55
212	Measurement of spinâ€“lattice relaxation times in EPR with enhanced orientation selectivity. Journal of Magnetic Resonance, 2003, 162, 380-384.	2.1	5
213	Axial Solvent Coordination in â€œBase-Offâ€•Cob(II)alamin and Related Co(II)-Corrinates Revealed by 2D-EPR. Journal of the American Chemical Society, 2003, 125, 5915-5927.	13.7	62
214	Electron paramagnetic resonance studies of a platinum cluster in Linde L and faujasite zeolites. Physical Chemistry Chemical Physics, 2003, 5, 3076.	2.8	18
215	Coherence-transfer right-angle wiggling EPR. Molecular Physics, 2002, 100, 3661-3665.	1.7	3
216	Polarization-transfer electron-Zeeman resolved EPR. Chemical Physics Letters, 2002, 358, 271-277.	2.6	6

#	Article	IF	Citations
217	Electron-Zeeman Resolved Electron Paramagnetic Resonance Spectroscopy. Journal of Magnetic Resonance, 2001, 152, 276-287.	2.1	15
218	Right-angle wiggling electron paramagnetic resonance spectroscopy. Journal of Chemical Physics, 2001, 115, 9126-9135.	3.0	11
219	Identification of LiPF 6 Decomposition Products in Liâ€ion Batteries with Endogenous Vanadyl Sensors Using Pulse Electron Paramagnetic Resonance and Density Functional Theory. Advanced Energy and Sustainability Research, 0, , 2100121.	5.8	5
220	Online characterization of operational parameters in an SOFC system with anodeâ€exhaust gas recirculation by oxygen sensors. Fuel Cells, 0, , .	2.4	0
221	A Dynamic Transmission Line Model to Describe the Potential Dependence of Double-Layer Capacitances in Cyclic Voltammetry. Journal of Physical Chemistry C, 0, , .	3.1	3
222	Inâ€situ hydrogen evolution monitoring during the electrochemical formation and cycling of pressedâ€plate carbonyl iron electrodes in alkaline electrolyte. Batteries and Supercaps, 0, , .	4.7	0
223	Ionic transport modeling for liquid electrolytes â€Experimental evaluation by concentration gradients and limited currents. Electrochemical Science Advances, 0, , .	2.8	3
224	In Situ Hydrogen Evolution Monitoring During the Electrochemical Formation and Cycling of Pressedâ€Plate Carbonyl Iron Electrodes in Alkaline Electrolyte. Batteries and Supercaps, 0, , .	4.7	0