

Roland Schierholz

List of Publications by Year in descending order

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Version: 2024-02-01

50
papers

1,160
citations

361413

20
h-index

414414

32
g-index

54
all docs

54
docs citations

54
times ranked

1844
citing authors

#	ARTICLE	IF	CITATIONS
1	Nanodomains in morphotropic lead zirconate titanate ceramics: On the origin of the strong piezoelectric effect. Journal of Applied Physics, 2007, 102, .	2.5	128
2	FEI Titan G2 80-200 CREWLEY. Journal of Large-scale Research Facilities JLSRF, 0, 2, A43.	0.0	111
3	Monolithic All-Phosphate Solid-State Lithium-Ion Battery with Improved Interfacial Compatibility. ACS Applied Materials & Interfaces, 2018, 10, 22264-22277.	8.0	68
4	Influence of microstructure and AlPO_4 secondary-phase on the ionic conductivity of $\text{Li}_{1.3}\text{Al}_0.3\text{Ti}_{1.7}(\text{PO}_4)_3$ solid-state electrolyte. Functional Materials Letters, 2016, 09, 1650066.	1.2	61
5	Superionic bulk conductivity in $\text{Li}_{1.3}\text{Al}_0.3\text{Ti}_{1.7}(\text{PO}_4)_3$ solid electrolyte. Solid State Ionics, 2017, 309, 180-186.	2.7	60
6	Catalyst free growth of a carbon nanotube–alumina composite structure. Inorganica Chimica Acta, 2008, 361, 1770-1778.	2.4	59
7	On the origin of differential phase contrast at a locally charged and globally charge-compensated domain boundary in a polar-ordered material. Ultramicroscopy, 2015, 154, 57-63.	1.9	53
8	Exploring the Interface of Skin–Layered Titanium Fibers for Electrochemical Water Splitting. Advanced Energy Materials, 2021, 11, 2002926.	19.5	48
9	On the formation of the porous structure in nanostructured a-Si coatings deposited by dc magnetron sputtering at oblique angles. Nanotechnology, 2014, 25, 355705.	2.6	39
10	Nano–Scale Complexions Facilitate Li Dendrite–Free Operation in LATP Solid–State Electrolyte. Advanced Energy Materials, 2021, 11, 2100707.	19.5	36
11	The carbonization of polyacrylonitrile-derived electrospun carbon nanofibers studied by <i>in situ</i> transmission electron microscopy. RSC Advances, 2019, 9, 6267-6277.	3.6	35
12	Crystal symmetry in single domains of $\text{PbZr}_{0.54}\text{Ti}_{0.46}\text{O}_3$. Physical Review B, 2008, 78, .		
13	STEM–EELS analysis reveals stable high-density He in nanopores of amorphous silicon coatings deposited by magnetron sputtering. Nanotechnology, 2015, 26, 075703.	2.6	29
14	Photogrammetry of the three-dimensional shape and texture of a nanoscale particle using scanning electron microscopy and free software. Ultramicroscopy, 2016, 169, 80-88.	1.9	29
15	Correlative electrochemical strain and scanning electron microscopy for local characterization of the solid state electrolyte $\text{Li}_{1.3}\text{Al}_{0.3}\text{Ti}_{1.7}(\text{PO}_4)_3$. Beilstein Journal of Nanotechnology, 2018, 9, 1564-1572.	2.8	29
16	Combined quantitative microscopy on the microstructure and phase evolution in $\text{Li}_{1.3}\text{Al}_0.3\text{Ti}_{1.7}(\text{PO}_4)_3$ ceramics. Journal of Advanced Ceramics, 2020, 9, 149-161.	17.4	29
17	A new bottom-up methodology to produce silicon layers with a closed porosity nanostructure and reduced refractive index. Nanotechnology, 2013, 24, 275604.	2.6	28
18	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

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19	Morphology Dependency of Li ₃ V ₂ (PO ₄) ₃ /C Cathode Material Regarding to Rate Capability and Cycle Life in Lithium-ion Batteries. <i>Electrochimica Acta</i> , 2017, 232, 310-322.	5.2	26
20	Carbonisation temperature dependence of electrochemical activity of nitrogen-doped carbon fibres from electrospinning as air-cathodes for aqueous-alkaline metal-air batteries. <i>RSC Advances</i> , 2019, 9, 27231-27241.	3.6	23
21	Domains in morphotropic PbZr _{1-x} Ti _x O ₃ ferroelectric. <i>Journal of Applied Physics</i> , 2017, 121, 084101.	3.2	22
22	LiTi ₂ (PO ₄) ₃ /C Anode Material with a Spindle-Like Morphology for Batteries with High Rate Capability and Improved Cycle Life. <i>ChemElectroChem</i> , 2016, 3, 1157-1169.	3.4	19
23	Analysis of the effects of different carbon coating strategies on structure and electrochemical behavior of LiCoPO ₄ material as a high-voltage cathode electrode for lithium ion batteries. <i>Electrochimica Acta</i> , 2018, 279, 108-117.	5.2	19
24	Observing different modes of mobility in lithium titanate spinel by nuclear magnetic resonance. <i>RSC Advances</i> , 2017, 7, 25276-25284.	3.6	17
25	Operando Transmission Electron Microscopy Study of All-Solid-State Battery Interface: Redistribution of Lithium among Interconnected Particles. <i>ACS Applied Energy Materials</i> , 2020, 3, 5101-5106.	5.1	14
26	Instability of Ga-substituted Li ₇ La ₃ Zr ₂ O ₁₂ toward metallic Li. <i>Journal of Materials Chemistry A</i> , 2022, 10, 10998-11009.	10.3	14
27	Ferroelectric domains in PZT ceramics at the morphotropic phase boundary. Can the splitting of reflections in SAED patterns be used for the distinction of different pseudo-cubic phases?. <i>Journal of Applied Crystallography</i> , 2012, 45, 766-777.	4.5	11
28	Analyzing the defect structure of CuO-Doped PZT and KNN piezoelectrics from electron paramagnetic resonance. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2014, 61, 1447-1455.	3.0	10
29	Signal Origin of Electrochemical Strain Microscopy and Link to Local Chemical Distribution in Solid State Electrolytes. <i>Small Methods</i> , 2021, 5, 2001279.	8.6	10
30	Full solution processed mesostructured optical resonators integrating colloidal semiconductor quantum dots. <i>Nanoscale</i> , 2015, 7, 16583-16589.	5.6	9
31	Defects and Phase Formation in Non-Stoichiometric LaFeO ₃ : a Combined Theoretical and Experimental Study. <i>Chemistry of Materials</i> , 2021, 33, 9473-9485.	6.7	9
32	An Advanced All Phosphate Lithium-Ion Battery Providing High Electrochemical Stability, High Rate Capability and Long-Term Cycling Performance. <i>Journal of the Electrochemical Society</i> , 2017, 164, A370-A379.	2.9	8
33	Transformation of carbon-supported Pt-Ni octahedral electrocatalysts into cubes: toward stable electrocatalysis. <i>Nanoscale</i> , 2018, 10, 21353-21362.	5.6	7
34	Oxygen Nonstoichiometry and Valence State of Manganese in LaCaMnO ₃ . <i>ACS Omega</i> , 2021, 6, 9638-9652.	3.5	7
35	The role of nonmagnetic phases in improving the magnetic properties of devitrified Pr ₂ Fe ₁₄ B-based nanocomposites. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2008, 149, 73-76.	3.5	5
36	Catalytic Induced Thermal Conversion of Amorphous Carbon into Single Walled Carbon Nanotubes. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2008, 634, 911-915.	1.2	5

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37	Silica Glass Segregation in 3 wt% LiF-Doped Hot-Pressed $Y_{2}Si_{2}O_{7}$. Journal of the American Ceramic Society, 2007, 90, 3307-3310.	3.8	4
38	Nanoscopic Porous Iridium/Iridium Dioxide Superstructures (15-...nm): Synthesis and Thermal Conversion by In-Situ Transmission Electron Microscopy. Chemistry - A European Journal, 2019, 25, 11048-11057.	3.3	4
39	Investigating the Interface between Ceramic Particles and Polymer Matrix in Hybrid Electrolytes by Electrochemical Strain Microscopy. Nanomaterials, 2022, 12, 654.	4.1	4
40	Hydrogen interstitial defects in acceptor-type CuO-doped $PbTiO_{3}$ Uptake and dissolution of water vapor and formation of $(CuTi_{3}^{3+}(OH)O_{4})^{2-}$ defect complexes. Applied Physics Letters, 2016, 109, 122904.	3.3	3
41	Local symmetry in $PbZr_{1-x}Ti_{x}O_{3}$ ceramics. Acta Crystallographica Section A: Foundations and Advances, 2005, 61, c400-c400.	0.3	2
42	Microstructural details of spindle-like lithium titanium phosphate revealed in three dimensions. RSC Advances, 2021, 11, 34605-34612.	3.6	1
43	Domain structure in $PbZr_{1-x}Ti_{x}O_{3}$. Acta Crystallographica Section A: Foundations and Advances, 2009, 65, s203-s203.	0.3	1
44	The system of $PbZr_{1-x}Ti_{x}O_{3}$ studied by convergent-beam electron diffraction. Acta Crystallographica Section A: Foundations and Advances, 2008, 64, C145-C145.	0.3	0
45	Combined refinement of high-resolution neutron and synchrotron data of PLZT. Acta Crystallographica Section A: Foundations and Advances, 2009, 65, s202-s202.	0.3	0
46	Refinement of structural parameters of $PbTiO_{3}$ by convergent-beam electron diffraction. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, s65-s65.	0.3	0
47	Frontispiece: Nanoscopic Porous Iridium/Iridium Dioxide Superstructures (15-...nm): Synthesis and Thermal Conversion by In-Situ Transmission Electron Microscopy. Chemistry - A European Journal, 2019, 25, .	3.3	0
48	Symmetry study of $PbZr_{1-x}Ti_{x}O_{3}$ by convergent-beam electron diffraction. Acta Crystallographica Section A: Foundations and Advances, 2007, 63, s65-s66.	0.3	0
49	Nature of the morphotropic phase boundary (MPB) in lead zirconate titanate (PZT). Acta Crystallographica Section A: Foundations and Advances, 2008, 64, C102-C102.	0.3	0
50	Refinement of structural parameters of $PbTiO_{3}$ by convergent-beam electron diffraction. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, s218-s218.	0.3	0