

Manuel Hinterstein

List of Publications by Year in descending order

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93
papers

2,613
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172386

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docs citations

95
times ranked

2378
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhanced antiferroelectric phase stability in La-doped AgNbO ₃ : perspectives from the microstructure to energy storage properties. Journal of Materials Chemistry A, 2019, 7, 2225-2232.	5.2	218
2	Field-induced phase transition in Bi _{1/2} Na _{1/2} TiO ₃ -based lead-free piezoelectric ceramics. Journal of Applied Crystallography, 2010, 43, 1314-1321.	1.9	180
3	Design of zeolite by inverse sigma transformation. Nature Materials, 2012, 11, 1059-1064.	13.3	161
4	Structural Description of the Macroscopic Piezo- and Ferroelectric Properties of Lead Zirconate Titanate. Physical Review Letters, 2011, 107, 077602.	2.9	139
5	Average vs. local structure and composition-property phase diagram of K _{0.5} Na _{0.5} NbO ₃ -Bi ^{1/2} Na ^{1/2} TiO ₃ system. Journal of the European Ceramic Society, 2017, 37, 1387-1399.	2.8	118
6	Relaxor-ferroelectric transitions: Sodium bismuth titanate derivatives. MRS Bulletin, 2018, 43, 600-606.	1.7	111
7	Local structure, pseudosymmetry, and phase transitions in Na _{1-x} Bi _x TiO ₃ relaxor ferroelectrics. Physical Review B, 2013, 87, 114107.	1.1	97
8	Structural investigations on lead-free Bi _{1/2} Na _{1/2} TiO ₃ -based piezoceramics. Journal of Materials Science, 2011, 46, 4368-4376.	1.7	96
9	Stress-modulated relaxor-to-ferroelectric transition in lead-free Bi _{1-x} Na _x TiO ₃ piezoceramics. Journal of Applied Physics, 2012, 112, 044105.		

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19	Structural phase transitions and electrical properties of $(K_xNa_{1-x})NbO_3$ -based ceramics modified with Mn. <i>Journal of the European Ceramic Society</i> , 2012, 32, 4341-4352.	2.8	47
20	Structure and dielectric dispersion in cubic-like $0.5K_{0.5}Na_{0.5}NbO_3-0.5Na_{1/2}Bi_{1/2}TiO_3$ ceramic. <i>Europhysics Letters</i> , 2016, 114, 47011.	0.7	47
21	Electric-field-induced strain contributions in morphotropic phase boundary composition of $(Bi_{1/2}Na_{1/2})TiO_3-BaTiO_3$ during poling. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	43
22	Deciphering the phase transition-induced ultrahigh piezoresponse in $(K,Na)NbO_3$ -based piezoceramics. <i>Nature Communications</i> , 2022, 13, .	5.8	39
23	Looking underneath fullerenes on Au(110): Formation of dimples in the substrate. <i>Physical Review B</i> , 2008, 77, .	1.1	38
24	Comparative study of two lead-free piezoceramics using diffraction techniques. <i>Journal of Applied Crystallography</i> , 2010, 43, 805-810.	1.9	36
25	Electrical and structural characterization of $(K_xNa_{1-x})NbO_3$ ceramics modified with Li and Ta. <i>Journal of Applied Crystallography</i> , 2011, 44, 1080-1089.	1.9	35
26	Influence of lanthanum doping on the morphotropic phase boundary of lead zirconate titanate. <i>Journal of Applied Physics</i> , 2010, 108, .	1.1	32
27	Determining fundamental properties from diffraction: Electric field induced strain and piezoelectric coefficient. <i>Physical Review B</i> , 2019, 99, .	1.1	32
28	Coordination Polymer to Atomically Thin, Holey, Metal-Oxide Nanosheets for Tuning Band Alignment. <i>Advanced Materials</i> , 2019, 31, e1905288.	11.1	31
29	Relationships between Structural Changes and Electrochemical Kinetics of Li-Excess $Li_{1.13}Ni_{0.3}Mn_{0.57}O_2$ during the First Charge. <i>Journal of Physical Chemistry C</i> , 2013, 117, 3279-3286.	1.5	30
30	Structural contribution to the ferroelectric fatigue in lead zirconate titanate ceramics. <i>Physical Review B</i> , 2014, 90, .	1.1	27
31	Grain size effects in donor doped lead zirconate titanate ceramics. <i>Journal of Applied Physics</i> , 2020, 128, .	1.1	25
32	Electric-field-induced paraelectric to ferroelectric phase transformation in prototypical polycrystalline $BaTiO_3$. <i>Applied Physics Letters</i> , 2014, 105, .	1.5	23
33	Piezoelectricity and rotostriction through polar and non-polar coupled instabilities in bismuth-based piezoceramics. <i>Scientific Reports</i> , 2016, 6, 28742.	1.6	23
34	Structure and temperature-dependent phase transitions of lead-free $Bi_{1/2}Na_{1/2}TiO_3 \leftrightarrow Bi_{1/2}K_{1/2}TiO_3 \leftrightarrow K_{0.5}Na_{0.5}NbO_3$ piezoceramics. <i>Journal of Materials Research</i> , 2012, 27, 2466-2478.	1.2	20
35	Investigation of the Structure and Electrical Properties of $(K_xNa_{0.96-x}Li)NbO_3$ Piezoelectric Ceramics Modified with Manganese. <i>Journal of the American Ceramic Society</i> , 2013, 96, 201-208.	1.9	19
36	Multi-analyser detector (MAD) for high-resolution and high-energy powder X-ray diffraction. <i>Journal of Synchrotron Radiation</i> , 2021, 28, 146-157.	1.0	17

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37	Dielectric anomaly and magnetic properties of multiferroic GaFe _{0.75} Mn _{0.25} O ₃ . Materials Letters, 2012, 85, 102-105.	1.3	16
38	<i>In situ</i> neutron diffraction study of electric field induced structural transitions in lanthanum doped lead zirconate titanate. Zeitschrift für Kristallographie, 2011, 226, 155-162.	1.1	14
39	Spontaneous ferroelectric order in lead-free relaxor $\text{Pb}(\text{Mg}_{1-x}\text{Nb}_x)\text{O}_3$. Physical Review Letters, 2011, 106, 187601.	1.1	14
40	Electric-Field-Induced Phase Transformation and Frequency-Dependent Behavior of Bismuth Sodium Titanate-Barium Titanate. Materials, 2020, 13, 1054.	1.3	14
41	Nonlinear mechanical behaviour of Ba _{0.5} Sr _{0.5} Co _{0.8} Fe _{0.2} O ₃ and in situ stress dependent synchrotron X-ray diffraction study. Solid State Ionics, 2017, 300, 106-113.	1.3	12
42	Combining high time and angular resolutions: time-resolved X-ray powder diffraction using a multi-channel analyser detector. Journal of Applied Crystallography, 2015, 48, 970-974.	1.9	11
43	Influence of microstructure on symmetry determination of piezoceramics. Journal of Applied Crystallography, 2018, 51, 670-678.	1.9	11
44	In situ study of electric field induced ferroelectric and antiferromagnetic domain switching in polycrystalline BiFeO ₃ . Journal of the American Ceramic Society, 2019, 102, 1768-1775.	1.9	11
45	Influence of PbO stoichiometry on the properties of PZT ceramics and multilayer actuators. Journal of the American Ceramic Society, 2019, 102, 5401-5414.	1.9	11
46	Microstructural, optical, and electrical characteristics of Ni/C doped BST thin films. Ceramics International, 2019, 45, 5503-5510.	2.3	11
47	Revealing the role of local stress on the depolarization of BNT-BT-based relaxors. Physical Review Materials, 2019, 3, .	0.9	11
48	Temperature-dependent synchrotron powder diffraction phase studies of (K _{0.37} Na _{0.52} Li _{0.03})(Nb _{0.87} Ta _{0.13} Sb _{0.03})O ₃ ferroelectric ceramics. Zeitschrift für Kristallographie, 2011, 226, 138-144.	1.1	10
49	Processing and properties of translucent bismuth sodium titanate ceramics. Journal of the European Ceramic Society, 2021, 41, 1221-1229.	2.8	10
50	Dielectric Relaxation and Magnetic Structure of A-Site-Ordered Perovskite Oxide Semiconductor CaCu ₃ Fe ₂ Ta ₂ O ₁₂ . Inorganic Chemistry, 2021, 60, 6999-7007.	1.9	10
51	Uncovering the symmetry of the induced ferroelectric phase transformation in polycrystalline barium titanate. Journal of Applied Physics, 2021, 130, .	1.1	9
52	Neutron diffraction study of (K _x Na _{1-x})NbO ₃ -based ceramics from low to high temperatures. Journal of Applied Crystallography, 2016, 49, 891-901.	1.9	8
53	Observation of the second-order magnetic and reentrant spin-glass transitions in LiNi _{0.5} Mn _{0.5} O ₂ . Journal of Alloys and Compounds, 2015, 626, 150-153.	2.8	7
54	The complex structural mechanisms behind strain curves in bismuth sodium titanate-barium titanate. Applied Physics Letters, 2020, 116, .	1.5	7

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55	Multigrain phase-field simulation in ferroelectrics with phase coexistences: An improved phase-field model. <i>Computational Materials Science</i> , 2022, 203, 111056.	1.4	7
56	Giant Functional Properties in Porous Electroceramics through Additive Manufacturing of Capillary Suspensions. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 3027-3037.	4.0	7
57	Stress-dependent crystal structure of lanthanum strontium cobalt ferrite by <i>in situ</i> synchrotron X-ray diffraction. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	6
58	Effect of varying Bi content on the temperature-dependent mechanical, dielectric, and structural properties of nominal $\text{Na}_{1/2}\text{Bi}_{1/2}\text{TiO}_3$. <i>Journal of Applied Physics</i> , 2021, 130, 185106.	1.1	6
59	The Impact of Heat Treatment on the Domain Configuration and Strain Behavior in $\text{Pb}[\text{Zr},\text{Ti}]\text{O}_3$ Ferroelectrics. <i>Journal of the American Ceramic Society</i> , 2015, 98, 269-277.	1.9	5
60	In Situ Neutron Diffraction Studies on Poling of the Hard PZT Ceramic PIC181. <i>Advanced Engineering Materials</i> , 2019, 21, 1900159.	1.6	5
61	Revealing intrinsic and extrinsic piezoelectric contributions in phase coexistence system of $\text{PbTiO}_3\text{-BiScO}_3$. <i>Science China Materials</i> , 2022, 65, 170-178.	3.5	5
62	Influence of the annealing conditions on temperature-dependent ferroelastic behavior of LSCF. <i>Materialia</i> , 2019, 6, 100297.	1.3	4
63	Structure and relaxor ferroelectric behavior of the novel tungsten bronze type ceramic $\text{Sr}_5\text{BiTi}_3\text{Nb}_7\text{O}_{30}$. <i>Journal of Applied Physics</i> , 2022, 131, .	1.1	4
64	A sample cell for <i>in situ</i> electric-field-dependent structural characterization and macroscopic strain measurements. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 694-699.	1.0	3
65	2D Materials: Coordination Polymer to Atomically Thin, Holey, Metal-Oxide Nanosheets for Tuning Band Alignment (<i>Adv. Mater.</i> 52/2019). <i>Advanced Materials</i> , 2019, 31, 1970370.	11.1	3
66	$\text{Li}_x(\text{Al}_{0.8}\text{Zn}_{0.2})$ alloys as anode materials for rechargeable Li-ion batteries. <i>Progress in Solid State Chemistry</i> , 2014, 42, 149-156.	3.9	2
67	Size Effect on Ferroelectricity in Nanoscaled BaTiO_3 . <i>Engineering Materials</i> , 2022, , 123-133.	0.3	2
68	Powder diffraction in external electric and magnetic fields. , 0, , 174-188.		1
69	Structural origin of the ferroelectric fatigue in lead zirconate titanate (PZT). <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2012, 68, s94-s94.	0.3	1
70	X-ray total scattering investigation of $\text{Al}_{0.57}\text{Sn}_{0.43}\text{O}_{1.71}$ nanoparticles. <i>Journal of Applied Crystallography</i> , 2015, 48, 1699-1705.	1.9	1
71	Combined refinement of high-resolution neutron and synchrotron data of PLZT. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2009, 65, s202-s202.	0.3	0
72	Comparative diffraction studies of lead-free piezoceramics. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2010, 66, s219-s219.	0.3	0

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73	Texture determination of ferroelectrics from in situ X-ray diffraction. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, s197-s198.	0.3	0
74	Poling behaviour of technical ferroelectrics studied by in-situ neutron diffraction. , 2012, , .		0
75	Heat treatment effects on domain configuration and strain under electric field in undoped $\text{Pb}[\text{Zr}_{1-x}\text{Ti}_x\text{O}_{3-3x}]$ ferroelectrics. , 2013, , .		0
76	Neutron diffraction on functional materials under electric field or mech. load. Acta Crystallographica Section A: Foundations and Advances, 2014, 70, C56-C56.	0.0	0
77	Phase Transitions at high-pressure and structural description of the macroscopic ferroelectric properties of the $\text{Pb}(\text{Zr}_{1-x}\text{Ti}_x)\text{O}_3$ solid solution. , 2014, , .		0
78	Probing the Giant Piezoelectric response of ferroelectric perovskites. Acta Crystallographica Section A: Foundations and Advances, 2014, 70, C150-C150.	0.0	0
79	Correlation of macroscopic and structural properties in Piezoceramics. Acta Crystallographica Section A: Foundations and Advances, 2014, 70, C46-C46.	0.0	0
80	Kinetics of strain mechanisms in functional materials: stroboscopic powder diffraction on piezoceramics. Acta Crystallographica Section A: Foundations and Advances, 2015, 71, s68-s68.	0.0	0
81	Effect of doping on the poling behaviour of $\text{PbZr}_{1-x}\text{Ti}_x\text{O}_3$ under electric field. Acta Crystallographica Section A: Foundations and Advances, 2008, 64, C521-C521.	0.3	0
82	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
83	In situ transmission electron microscopy experiments on ferroelectric materials under electrical field. Acta Crystallographica Section A: Foundations and Advances, 2009, 65, s58-s58.	0.3	0
84	Transmission electron microscopy of BNT-BTKNN. Acta Crystallographica Section A: Foundations and Advances, 2009, 65, s71-s72.	0.3	0
85	Neutron diffraction on functional materials at extreme conditions. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, s204-s205.	0.3	0
86	Fatigue mechanisms on the atomic scale in high-performance lead zirconate titanate (PZT). Acta Crystallographica Section A: Foundations and Advances, 2011, 67, C706-C706.	0.3	0
87	Atomic scale description of the macroscopic piezo-ferroelectric properties of high-performance lead zirconate titanate (PZT). Acta Crystallographica Section A: Foundations and Advances, 2011, 67, C705-C705.	0.3	0
88	Neutron diffraction on functional materials using special sample environments. Acta Crystallographica Section A: Foundations and Advances, 2011, 67, C239-C239.	0.3	0
89	Structural description of the macroscopic properties of lead zirconate titanate. Acta Crystallographica Section A: Foundations and Advances, 2013, 69, s620-s620.	0.3	0
90	In situ neutron diffraction on ferroelectrics under electric field. Acta Crystallographica Section A: Foundations and Advances, 2013, 69, s214-s214.	0.3	0

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91	Structural investigations of initial and fatigued $\text{Bi}_{1/2}\text{Na}_{1/2}\text{TiO}_3$ - $x\text{BaTiO}_3$ piezoceramics. Acta Crystallographica Section A: Foundations and Advances, 2013, 69, s617-s617.	0.3	0
92	Influence of microstructure on symmetry determination of piezoceramics. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, e264-e264.	0.0	0
93	Antiferroelectric Pnma phase: the missing element to understand morphotropic phase boundary lead-free $\text{Na}_{1/2}\text{Bi}_{1/2}\text{TiO}_3$ -based piezoceramics. Acta Crystallographica Section A: Foundations and Advances, 2019, 75, e268-e268.	0.0	0