

Mao-Hua Zhang

List of Publications by Year in descending order

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Version: 2024-02-01

30
papers

1,259
citations

394286

19
h-index

477173

29
g-index

30
all docs

30
docs citations

30
times ranked

1022
citing authors

#	ARTICLE	IF	CITATIONS
1	High and Temperature-Insensitive Piezoelectric Strain in Alkali Niobate Lead-free Perovskite. Journal of the American Chemical Society, 2017, 139, 3889-3895.	6.6	301
2	Thermally stable piezoelectric properties of (K, Na)NbO ₃ -based lead-free perovskite with rhombohedral-tetragonal coexisting phase. Acta Materialia, 2017, 122, 344-351.	3.8	150
3	Enhanced Temperature Stability and Defect Mechanism of BNT-based Lead-free Piezoceramics Investigated by a Quenching Process. Advanced Electronic Materials, 2019, 5, 1800756.	2.6	85
4	Electric-field-induced antiferroelectric to ferroelectric phase transition in polycrystalline NaNbO ₃ . Acta Materialia, 2020, 200, 127-135.	3.8	81
5	Poling engineering of (K,Na)NbO ₃ -based lead-free piezoceramics with orthorhombic-tetragonal coexisting phases. Journal of Materials Chemistry C, 2017, 5, 549-556.	2.7	69
6	Ultra-large electric field-induced strain in potassium sodium niobate crystals. Science Advances, 2020, 6, eaay5979.	4.7	53
7	Design of Lead-Free Antiferroelectric (1-x)NaNbO ₃ -xSrSnO ₃ Compositions Guided by First-Principles Calculations. Chemistry of Materials, 2021, 33, 266-274.	3.2	50
8	Deciphering the phase transition-induced ultrahigh piezoresponse in (K,Na)NbO ₃ -based piezoceramics. Nature Communications, 2022, 13, .	5.8	39
9	Large Piezoelectric Strain in Sub-10 Nanometer Two-Dimensional Polyvinylidene Fluoride Nanoflakes. ACS Nano, 2019, 13, 4496-4506.	7.3	37
10	Refreshing Piezoelectrics: Distinctive Role of Manganese in Lead-Free Perovskites. ACS Applied Materials & Interfaces, 2018, 10, 37298-37306.	4.0	36
11	Enhanced electric-field-induced strains in (K,Na)NbO ₃ piezoelectrics from heterogeneous structures. Materials Today, 2021, 46, 44-53.	8.3	36
12	(K,Na)NbO ₃ -based piezoelectric single crystals: Growth methods, properties, and applications. Journal of Materials Research, 2020, 35, 990-1016.	1.2	33
13	Electromechanical properties of CaZrO ₃ modified (K,Na)NbO ₃ -based lead-free piezoceramics under uniaxial stress conditions. Journal of the American Ceramic Society, 2017, 100, 2116-2122.	1.9	27
14	Identifying phase transition behavior in Bi _{1/2} Na _{1/2} TiO ₃ -BaTiO ₃ single crystals by piezoresponse force microscopy. Journal of Applied Physics, 2017, 121, .	1.1	26
15	Revealing the mechanism of electric-field-induced phase transition in antiferroelectric NaNbO ₃ by <i>in situ</i> high-energy x-ray diffraction. Applied Physics Letters, 2021, 118, .	1.5	25
16	Defect suppression in CaZrO ₃ -modified (K, Na)NbO ₃ -based lead-free piezoceramic by sintering atmosphere control. Journal of the American Ceramic Society, 2018, 101, 3393-3401.	1.9	24
17	Role of thermal gradients on the depolarization and conductivity in quenched Na _{1/2} Bi _{1/2} TiO ₃ -BaTiO ₃ . Applied Physics Letters, 2020, 116, .	1.5	24
18	NaNbO ₃ -based antiferroelectric multilayer ceramic capacitors for energy storage applications. Journal of the European Ceramic Society, 2021, 41, 5519-5525.	2.8	24

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19	(K,Na)NbO ₃ -based Lead-free Piezoelectric Materials: An Encounter with Scanning Probe Microscopy. Journal of the Korean Ceramic Society, 2017, 54, 261-271.	1.1	24
20	Temperature-Insensitive Piezoelectric Performance in Pb(Zr _{0.52} Ti _{0.42} Sn _{0.02} Nb _{0.04})O ₃ Ceramics Prepared by Spark Plasma Sintering. ACS Applied Materials & Interfaces, 2017, 9, 34078-34084.	4.0	20
21	Domain morphology of newly designed lead-free antiferroelectric NaNbO ₃ –SrSnO ₃ ceramics. Journal of the American Ceramic Society, 2021, 104, 3715-3725.	1.9	17
22	Preparation and characterization of Pb(Lu _{1/2} Nb _{1/2})O ₃ –Pb(In _{1/2} Nb _{1/2})O ₃ –PbTiO ₃ ternary ferroelectric ceramics with high phase transition temperatures. Journal of the American Ceramic Society, 2018, 101, 5514-5523.	1.9	13
23	Determination of polarization states in (K,Na)NbO ₃ lead-free piezoelectric crystal. Journal of Advanced Ceramics, 2020, 9, 204-209.	8.9	13
24	Origin of high electromechanical properties in BaZrO_3 -based lead-free piezoelectrics modified with BaZrO_3 . Physical Review Materials, 2020, 4, .	0.9	13
25	²³ Na NMR Spectroscopic Quantification of the Antiferroelectric–Ferroelectric Phase Coexistence in Sodium Niobate. Journal of Physical Chemistry C, 2020, 124, 23852-23858.	1.5	11
26	Polarization Rotation at Morphotropic Phase Boundary in New Lead-Free Na _{1/2} Bi _{1/2} V _{1/2} –Ti _{1/2} O ₃ Piezoceramics. ACS Applied Materials & Interfaces, 2021, 13, 5208-5215.	4.0	11
27	Revealing the solid-state processing mechanisms of antiferroelectric AgNbO ₃ for energy storage. Journal of the American Ceramic Society, 2022, 105, 451-460.	1.9	6
28	Multistep stochastic mechanism of polarization reversal in orthorhombic ferroelectrics. Physical Review B, 2021, 104, .	1.1	6
29	Enhanced Spontaneous Polarization by V ⁴⁺ Substitution in a Lead-Free Perovskite CaMnTi ₂ O ₆ . Inorganic Chemistry, 2020, 59, 11749-11756.	1.9	5
30	Dynamic scaling properties of multistep polarization response in ferroelectrics. Journal of Applied Physics, 2022, 131, .	1.1	0