Till FrÃ¶mling

List of Publications by Year
in descending order

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67 papers	2,895 citations	218592 26 h-index	168321 53 g-index
67 all docs	67 docs citations	67 times ranked	3578 citing authors

#	Article	IF	Citations
1	Role of matrix phase and electric field gradient in Na1/2Bi1/2TiO3BaTiO3:ZnO composites. Journal of Materiomics, 2022, 8, 498-510.	2.8	2
2	Roomâ€temperature dislocation plasticity in SrTiO₃ tuned by defect chemistry. Journal of the American Ceramic Society, 2022, 105, 1318-1329.	1.9	14
3	Suppression of high-temperature dielectric loss by designed thermal annealing treatment in (Bi1/2Na1/2)TiO3 ceramics. Journal of the European Ceramic Society, 2022, 42, 1388-1395.	2.8	8
4	Dramatic impact of the TiO₂ polymorph on the electrical properties of â€˜stoichiometricâ€™ Na_{0.5}Bi_{0.5}TiO₃ ceramics prepared by solid-state reaction. Journal of Materials Chemistry A, 2022, 10, 891-901.	5.2	9
5	Dislocation-enhanced electrical conductivity in rutile TiO2 accessed by room-temperature nanoindentation. Scripta Materialia, 2022, 212, 114543.	2.6	12
6	Blacklight sintering of ceramics. Materials Horizons, 2022, 9, 1717-1726.	6.4	15
7	Revealing the impact of acceptor dopant type on the electrical conductivity of sodium bismuth titanate. Acta Materialia, 2022, 229, 117808.	3.8	7
8	Enhanced Photoconductivity at Dislocations in SrTiO₃. Advanced Materials, 2022, 34, .	11.1	11
9	Conceptual Framework for Dislocation-Modified Conductivity in Oxide Ceramics Deconvoluting Mesoscopic Structure, Core, and Space Charge Exemplified for SrTiO₃. ACS Nano, 2021, 15, 9355-9367.	7.3	41
10	Reducing dielectric loss in Na0.5Bi0.5TiO3 based high temperature capacitor material. Journal of the European Ceramic Society, 2021, 41, 2587-2595.	2.8	16
11	High field electroformation of sodium bismuth titanate and its solid solutions with barium titanate. Journal of Materials Chemistry C, 2021, 9, 3334-3342.	2.7	12
12	Influence of Wettability on the Impedance of Ion Transport Through Mesoporous Silica Films. Advanced Materials Interfaces, 2021, 8, 2002095.	1.9	4
13	Influence of oxygen vacancies on coreâ€shell formation in solid solutions of (Na,Bi)TiO₃ and SrTiO₃. Journal of the American Ceramic Society, 2021, 104, 4341-4350.	1.9	14
14	Antibacterial ferroelectric materials: Advancements and future directions. Journal of Industrial and Engineering Chemistry, 2021, 97, 95-110.	2.9	30
15	Donor and acceptor-like self-doping by mechanically induced dislocations in bulk TiO2. Nano Energy, 2021, 85, 105944.	8.2	31
16	Decreasing polar-structure size: Achieving superior energy storage properties and temperature stability in Na0.5Bi0.5TiO3-based ceramics for low electric field and high-temperature applications. Journal of the European Ceramic Society, 2021, 41, 5890-5899.	2.8	41
17	A comprehensive comparative study of CO2-resistance and oxygen permeability of 60Âwt % Ce0.8M0.2O2â€“ (M = La, Pr, Nd, Sm, Gd) - 40Âwt % La0.5Sr0.5Fe0.8Cu0.2O3â€“ dual-phase membranes. Journal of Membrane Science, 2021, 639, 119783.	4.1	9
18	Modulus spectroscopy for the detection of parallel electric responses in electroceramics. Journal of Materiomics, 2021, 8, 556-556.	2.8	0

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19	High temperature creepâ€mediated functionality in polycrystalline barium titanate. Journal of the American Ceramic Society, 2020, 103, 1891-1902.	1.9	26
20	Segregation and properties at curved vs straight (000) inversion boundaries in piezotronic ZnO bicrystals. Journal of the American Ceramic Society, 2020, 103, 2817-2827.	1.9	3
21	Nanoscale to microscale reversal in room-temperature plasticity in SrTiO3 by tuning defect concentration. Scripta Materialia, 2020, 188, 228-232.	2.6	26
22	The fate of aluminium in (Na,Bi)TiO₃-based ionic conductors. Journal of Materials Chemistry A, 2020, 8, 18188-18197.	5.2	12
23	Ultrawide Temperature Range with Stable Permittivity and Low Dielectric Loss in (1 â^') Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 58 System. Advanced Electronic Materials, 2020, 6, 1901429.	2.6	29
24	Role of thermal gradients on the depolarization and conductivity in quenched Na1/2Bi1/2TiO3-BaTiO3. Applied Physics Letters, 2020, 116, .	1.5	24
25	Mechanically tuned conductivity at individual grain boundaries in polycrystalline ZnO varistor ceramics. Journal of Applied Physics, 2020, 127, .	1.1	8
26	Domain wall-grain boundary interactions in polycrystalline Pb(Zr0.7Ti0.3)O3 piezoceramics. Journal of the European Ceramic Society, 2020, 40, 3965-3973.	2.8	30
27	High-temperature dielectrics based on (1-y)[(1-x)Bi0.5Na0.5TiO3-xBiAlO3]-yCaZrO3 ternary system with stable permittivity and low dielectric loss in a wide temperature range. Journal of the European Ceramic Society, 2019, 39, 4160-4167.	2.8	40
28	Influence of the annealing conditions on temperature-dependent ferroelastic behavior of LSCF. Materialia, 2019, 6, 100297.	1.3	4
29	The effect of Feâ€acceptor doping on the electrical properties of Na_{1/2}Bi_{1/2}TiO₃ and 0.94 (Na_{1/2}Bi_{1/2})TiO₃â€“0.06 BaTiO₃. Journal of the American Ceramic Society, 2019, 102, 5295-5304.	1.9	54
30	Finite element simulations on piezoelectric modulation of ZnO grain boundary barrier height. Journal of Applied Physics, 2019, 126, 205101.	1.1	3
31	Structural mechanism behind piezoelectric enhancement in off-stoichiometric Na0.5Bi0.5TiO3 based lead-free piezoceramics. Acta Materialia, 2019, 164, 761-775.	3.8	38
32	Influence of metal/semiconductor interface on attainable piezoelectric and energy harvesting properties of ZnO. Acta Materialia, 2019, 162, 277-283.	3.8	23
33	Optimizing the defect chemistry of Na_{1/2}Bi_{1/2}TiO₃-based materials: paving the way for excellent high temperature capacitors. Journal of Materials Chemistry C, 2018, 6, 4769-4776.	2.7	68
34	High-performance piezoelectric (K,Na,Li)(Nb,Ta,Sb)O3 single crystals by oxygen annealing. Acta Materialia, 2018, 148, 499-507.	3.8	42
35	Requirements for the transfer of lead-free piezoceramics into application. Journal of Materiomics, 2018, 4, 13-26.	2.8	187
36	Piezotronic Tuning of Potential Barriers in ZnO Bicrystals. Advanced Materials, 2018, 30, 1705573.	11.1	25

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37	Defect mechanisms in BaTiO₃â€Bi<scp>MO</scp>₃ ceramics. Journal of the American Ceramic Society, 2018, 101, 2376-2390.	1.9	30
38	Long term stability of electrocaloric response in barium zirconate titanate. Journal of the European Ceramic Society, 2018, 38, 551-556.	2.8	40
39	Designing properties of (Na_{1/2}Bi_x)TiO₃-based materials through A-site non-stoichiometry. Journal of Materials Chemistry C, 2018, 6, 738-744.	2.7	37
40	An extended grain boundary barrier height model including the impact of internal electric field. AIP Advances, 2018, 8, .	0.6	6
41	Piezotronic sensors. MRS Bulletin, 2018, 43, 941-945.	1.7	32
42	ZnOâ€based single crystalâ€polycrystal structures for piezotronic applications. Journal of the American Ceramic Society, 2018, 102, 2640.	1.9	10
43	Impact of mechanical stress on barium titanate-based positive temperature coefficient resistive material. Journal of Materials Science, 2018, 53, 16243-16251.	1.7	2
44	Pyroelectric and impedance studies of the 0.5Ba(Zr0.2Ti0.8)O3-0.5(Ba0.7Sr0.3)TiO3 ceramics. Ceramics International, 2018, 44, 21976-21981.	2.3	17
45	Piezotronic effect at Schottky barrier of a metal-ZnO single crystal interface. Journal of Applied Physics, 2017, 121, 155701.	1.1	21
46	Gauge factors for piezotronic stress sensor in polycrystalline ZnO. Journal Physics D: Applied Physics, 2017, 50, 175106.	1.3	10
47	The effect of A site non-stoichiometry on 0.94(NayBix)TiO3-0.06BaTiO3. Journal of the European Ceramic Society, 2017, 37, 1429-1436.	2.8	63
48	Mechanism of Lithium Metal Penetration through Inorganic Solid Electrolytes. Advanced Energy Materials, 2017, 7, 1701003.	10.2	780
49	Ionic conductivity of acceptor doped sodium bismuth titanate: influence of dopants, phase transitions and defect associates. Journal of Materials Chemistry C, 2017, 5, 8958-8965.	2.7	65
50	Conduction Mechanisms in BaTiO₃â€“Bi(Zn_{1/2}Ti_{1/2})O₃ Ceramics. Journal of the American Ceramic Society, 2016, 99, 3047-3054.	1.9	33
51	Defect Structure of Doped Leadâ€Free 0.9(Bi_{0.5}Na_{0.5})TiO₃â^'0.1(Bi_{0.5}K_{0.5})TiO₃ Piezoceramics. Journal of the American Ceramic Society, 2016, 99, 543-550.	1.9	10
52	Role of (Bi1/2K1/2)TiO3 in the dielectric relaxations of BiFeO3-(Bi1/2K1/2)TiO3 ceramics. Journal of Applied Physics, 2016, 119, .	1.1	26
53	Phase transition behavior, dielectric and ferroelectric properties of (1) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 107 Td (â^'x)(Bi0.5 36, 2461-2468.	2.8	144
54	DC-bias dependent impedance spectroscopy of BaTiO₃â€“Bi(Zn_{1/2}Ti_{1/2})O₃ ceramics. Journal of Materials Chemistry C, 2016, 4, 1782-1786.	2.7	19

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55	Varistor piezotronics: Mechanically tuned conductivity in varistors. Journal of Applied Physics, 2015, 118, .	1.1	22
56	Bulk ZnO as piezotronic pressure sensor. Applied Physics Letters, 2014, 105, .	1.5	31
57	Impedance Spectroscopy of (<scp><scp>Bi</scp></scp>_{1/2}<scp><scp>Na</scp></scp>_{1/2})<scp><scp>TiO</scp></scp>₃ Based Highâ€Temperature Dielectrics. Journal of the American Ceramic Society, 2014, 97, 2825-2831.	1.9	73
58	Synthesis of Novel Lithium Salts containing Pentafluorophenylamido-based Anions and Investigation of their Thermal and Electrochemical Properties. Zeitschrift Fur Physikalische Chemie, 2012, 226, 377-390.	1.4	9
59	Near-surface transport properties of donor doped Pb(ZrxTi1âˆ'x)O3 (PZT) in an external electric field. Solid State Ionics, 2012, 225, 727-731.	1.3	2
60	Oxide Ion Transport in Donorâ€Doped <scp><scp>Pb</scp></scp>(<scp><scp>Zr</scp></scp>_x<scp><scp>Ti</scp></scp>_{1âˆ'x})<scp> Nearâ€Surface Diffusion Properties. Journal of the American Ceramic Society, 2012, 95, 1692-1700.	1.9	18
61	Oxygen tracer diffusion in donor doped barium titanate. Journal of Applied Physics, 2011, 110, .	1.1	32
62	Relationship between Cation Segregation and the Electrochemical Oxygen Reduction Kinetics of La_{0.6}Sr_{0.4}CoO_{3âˆ'Î´} Thin Film Electrodes. Journal of the Electrochemical Society, 2011, 158, B727-B734.	1.3	183
63	Oxide Ion Transport in Donor-Doped Pb(ZrxTi1âˆ'x)O3: The Role of Grain Boundaries. Journal of the American Ceramic Society, 2011, 94, 1173-1181.	1.9	22
64	The effect of bias-temperature stress on Na+ incorporation into thin insulating films. Analytical and Bioanalytical Chemistry, 2011, 400, 649-657.	1.9	6
65	Measurement of 18O tracer diffusion coefficients in thin yttria stabilized zirconia films. Solid State Ionics, 2011, 184, 23-26.	1.3	25
66	Surface Cation Segregation and its Effect on the Oxygen Reduction Reaction on Mixed Conducting Electrodes Investigated by ToF-SIMS and ICP-OES. ECS Transactions, 2011, 35, 1975-1983.	0.3	2
67	Enhanced Lithium Transference Numbers in Ionic Liquid Electrolytes. Journal of Physical Chemistry B, 2008, 112, 12985-12990.	1.2	206