

Torsten Granzow

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103
papers

6,538
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h-index

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g-index

109
ext. papers

7,041
ext. citations

3.8
avg, IF

5.56
L-index

| # | Paper | IF | Citations |
|-----|---|-----|-----------|
| 103 | Perspective on the Development of Lead-free Piezoceramics. <i>Journal of the American Ceramic Society</i> , 2009 , 92, 1153-1177 | 3.8 | 2236 |
| 102 | Origin of the large strain response in (K _{0.5} Na _{0.5})NbO ₃ -modified (Bi _{0.5} Na _{0.5})TiO ₃ BaTiO ₃ lead-free piezoceramics. <i>Journal of Applied Physics</i> , 2009 , 105, 094102 | 2.5 | 493 |
| 101 | High-Strain Lead-free Antiferroelectric Electrostrictors. <i>Advanced Materials</i> , 2009 , 21, 4716-4720 | 2.4 | 321 |
| 100 | Lead-free piezoceramics with giant strain in the system Bi _{0.5} Na _{0.5} TiO ₃ BaTiO ₃ K _{0.5} Na _{0.5} NbO ₃ . I. Structure and room temperature properties. <i>Journal of Applied Physics</i> , 2008 , 103, 034107 | 2.5 | 253 |
| 99 | Morphotropic phase boundary in (1-x)Bi _{0.5} Na _{0.5} TiO ₃ xK _{0.5} Na _{0.5} NbO ₃ lead-free piezoceramics. <i>Applied Physics Letters</i> , 2008 , 92, 222902 | 3.4 | 204 |
| 98 | Lead-free piezoceramics with giant strain in the system Bi _{0.5} Na _{0.5} TiO ₃ BaTiO ₃ K _{0.5} Na _{0.5} NbO ₃ . II. Temperature dependent properties. <i>Journal of Applied Physics</i> , 2008 , 103, 034108 | 2.5 | 180 |
| 97 | Temperature-dependent ferroelastic switching of soft lead zirconate titanate. <i>Acta Materialia</i> , 2009 , 57, 4614-4623 | 8.4 | 135 |
| 96 | Influence of electric fields on the depolarization temperature of Mn-doped (1-x)Bi _{1/2} Na _{1/2} TiO ₃ -xBaTiO ₃ . <i>Journal of Applied Physics</i> , 2012 , 111, 014105 | 2.5 | 121 |
| 95 | Effect of tetragonal distortion on ferroelectric domain switching: A case study on La-doped BiFeO ₃ BbTiO ₃ ceramics. <i>Journal of Applied Physics</i> , 2010 , 108, 014103 | 2.5 | 97 |
| 94 | Fatigue of Lead Zirconate Titanate Ceramics. I: Unipolar and DC Loading. <i>Journal of the American Ceramic Society</i> , 2007 , 90, 1081-1087 | 3.8 | 80 |
| 93 | Electric-field-temperature phase diagram of the ferroelectric relaxor system (1-x)Bi _{1/2} Na _{1/2} TiO ₃ -xBaTiO ₃ doped with manganese. <i>Journal of Applied Physics</i> , 2014 , 115, 194104 | 2.5 | 76 |
| 92 | Bipolar and Unipolar Fatigue of Ferroelectric BNT-Based Lead-Free Piezoceramics. <i>Journal of the American Ceramic Society</i> , 2011 , 94, 529-535 | 3.8 | 76 |
| 91 | Effect of uniaxial stress on ferroelectric behavior of (Bi _{1/2} Na _{1/2})TiO ₃ -based lead-free piezoelectric ceramics. <i>Journal of Applied Physics</i> , 2009 , 106, 044107 | 2.5 | 76 |
| 90 | High-temperature poling of ferroelectrics. <i>Journal of Applied Physics</i> , 2008 , 104, 024116 | 2.5 | 75 |
| 89 | Effect of Ferroelectric Long-Range Order on the Unipolar and Bipolar Electric Fatigue in Bi _{1/2} Na _{1/2} TiO ₃ -Based Lead-Free Piezoceramics. <i>Journal of the American Ceramic Society</i> , 2011 , 94, 3927-3933 | 2.8 | 74 |
| 88 | Influence of pinning effects on the ferroelectric hysteresis in cerium-doped Sr _{0.61} Ba _{0.39} Nb ₂ O ₆ . <i>Physical Review B</i> , 2001 , 63, | 3.3 | 69 |
| 87 | Effect of Nb-donor and Fe-acceptor dopants in (Bi _{1/2} Na _{1/2})TiO ₃ BaTiO ₃ (K _{0.5} Na _{0.5})NbO ₃ lead-free piezoceramics. <i>Journal of Applied Physics</i> , 2010 , 108, 014110 | 2.5 | 66 |

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| 86 | Dynamics of polarization reversal in virgin and fatigued ferroelectric ceramics by inhomogeneous field mechanism. <i>Physical Review B</i> , 2010 , 82, | 3.3 | 66 |
| 85 | Electric-field-induced antiferroelectric to ferroelectric phase transition in mechanically confined $\text{Pb}_{0.99}\text{Nb}_{0.02}[(\text{Zr}_{0.57}\text{Sn}_{0.43})_{0.94}\text{Ti}_{0.06}]_{0.98}\text{O}_3$. <i>Physical Review B</i> , 2010 , 81, | 3.3 | 59 |
| 84 | Evidence for light-induced hole polarons in LiNbO_3 . <i>Physical Review Letters</i> , 2005 , 95, 067404 | 7.4 | 56 |
| 83 | Composition dependence of the phase transition temperature in $\text{Sr}_x\text{Ba}_{1-x}\text{Nb}_2\text{O}_6$. <i>Physica Status Solidi A</i> , 2004 , 201, R49-R52 | | 55 |
| 82 | Temperature and driving field dependence of fatigue processes in PZT bulk ceramics. <i>Acta Materialia</i> , 2011 , 59, 6083-6092 | 8.4 | 54 |
| 81 | Aging of poled ferroelectric ceramics due to relaxation of random depolarization fields by space-charge accumulation near grain boundaries. <i>Physical Review B</i> , 2009 , 80, | 3.3 | 53 |
| 80 | Stabilization of the Fatigue-Resistant Phase by CuO Addition in $(\text{Bi}_{1/2}\text{Na}_{1/2})\text{TiO}_3\text{BaTiO}_3$. <i>Journal of the American Ceramic Society</i> , 2011 , 94, 2473-2478 | 3.8 | 49 |
| 79 | Polarization-based adjustable memory behavior in relaxor ferroelectrics. <i>Physical Review Letters</i> , 2002 , 89, 127601 | 7.4 | 47 |
| 78 | Aging in the relaxor and ferroelectric state of Fe-doped $(1-x)(\text{Bi}_{1/2}\text{Na}_{1/2})\text{TiO}_3\text{-xBaTiO}_3$ piezoelectric ceramics. <i>Journal of Applied Physics</i> , 2014 , 116, 104102 | 2.5 | 46 |
| 77 | Comparison of the Temperature-Dependent Ferroelastic Behavior of Hard and Soft Lead Zirconate Titanate Ceramics. <i>Journal of the American Ceramic Society</i> , 2010 , 93, 2850-2856 | 3.8 | 46 |
| 76 | Cycling stability of lead-free BNT/BBT and BNT/BBT/BKNN multilayer actuators and bulk ceramics. <i>Journal of the European Ceramic Society</i> , 2014 , 34, 653-661 | 6 | 44 |
| 75 | De-aging of Fe-doped lead-zirconate-titanate ceramics by electric field cycling: 180° vs. non- 180° domain wall processes. <i>Journal of Applied Physics</i> , 2012 , 112, 034103 | 2.5 | 43 |
| 74 | Electromechanical poling of piezoelectrics. <i>Applied Physics Letters</i> , 2006 , 88, 252907 | 3.4 | 43 |
| 73 | Correlation of small- and large-signal properties of lead zirconate titanate multilayer actuators. <i>Acta Materialia</i> , 2009 , 57, 77-86 | 8.4 | 41 |
| 72 | Temperature dependent switching mechanism of $(\text{Pb}_{0.92}\text{La}_{0.08})(\text{Zr}_{0.65}\text{Ti}_{0.35})\text{O}_3$ investigated by small and large signal measurements. <i>Applied Physics Letters</i> , 2010 , 97, 132902 | 3.4 | 39 |
| 71 | Polarons generated by laser pulses in doped LiNbO_3 . <i>Physical Review B</i> , 2005 , 71, | 3.3 | 38 |
| 70 | Influence of radial stress on the poling behaviour of lead zirconate titanate ceramics. <i>Acta Materialia</i> , 2007 , 55, 675-680 | 8.4 | 37 |
| 69 | Barrier heights, polarization switching, and electrical fatigue in $\text{Pb}(\text{Zr,Ti})\text{O}_3$ ceramics with different electrodes. <i>Journal of Applied Physics</i> , 2010 , 108, 104106 | 2.5 | 36 |

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| 68 | Anisotropy of ferroelectric behavior of $(1-x)\text{Bi}_{1/2}\text{Na}_{1/2}\text{TiO}_3-x\text{BaTiO}_3$ single crystals across the morphotropic phase boundary. <i>Journal of Applied Physics</i> , 2014 , 116, 044111 | 2.5 | 35 |
| 67 | Mechanical Confinement: An Effective Way of Tuning Properties of Piezoelectric Crystals. <i>Advanced Functional Materials</i> , 2012 , 22, 797-802 | 15.6 | 35 |
| 66 | Auxetic behavior under electrical loads in an induced ferroelectric phase. <i>Applied Physics Letters</i> , 2009 , 94, 042909 | 3.4 | 34 |
| 65 | Refractive Indices of Congruently Melting $\text{Sr}_{0.61}\text{Ba}_{0.39}\text{Nb}_2\text{O}_6$. <i>Physica Status Solidi A</i> , 2001 , 186, R13-R15 | | 33 |
| 64 | Frequency-dependence of large-signal properties in lead-free piezoceramics. <i>Journal of Applied Physics</i> , 2012 , 112, 014101 | 2.5 | 32 |
| 63 | PMNBT Ceramics Prepared By Spark Plasma Sintering. <i>Journal of the American Ceramic Society</i> , 2007 , 90, 1101-1106 | 3.8 | 32 |
| 62 | Change from 3D-Ising to random field-Ising-model criticality in a uniaxial relaxor ferroelectric. <i>Physical Review Letters</i> , 2004 , 92, 065701 | 7.4 | 32 |
| 61 | Effect of bipolar electric fatigue on polarization switching in lead-zirconate-titanate ceramics. <i>Journal of Applied Physics</i> , 2010 , 108, 014105 | 2.5 | 30 |
| 60 | Domain switching energies: Mechanical versus electrical loading in La-doped bismuth ferrite/lead titanate. <i>Journal of Applied Physics</i> , 2011 , 109, 054109 | 2.5 | 30 |
| 59 | Deaging of heat-treated iron-doped lead zirconate titanate ceramics. <i>Applied Physics Letters</i> , 2006 , 89, 262908 | 3.4 | 29 |
| 58 | Photorefractive properties of Cr-doped $\text{Sr}_{0.61}\text{Ba}_{0.39}\text{Nb}_2\text{O}_6$ related to crystal purity and doping concentration. <i>Applied Physics B: Lasers and Optics</i> , 2001 , 72, 661-666 | 1.9 | 29 |
| 57 | Electron paramagnetic resonance study of ZnO varistor material. <i>Journal of Physics Condensed Matter</i> , 2014 , 26, 115801 | 1.8 | 28 |
| 56 | Acoustic emission study of domain wall motion and phase transition in $(1-x)\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3-x\text{BaTiO}_3-y\text{K}_{0.5}\text{Na}_{0.5}\text{NbO}_3$ lead-free piezoceramics. <i>Scripta Materialia</i> , 2009 , 60, 251-253 | 5.6 | 28 |
| 55 | Fatigue of Lead Zirconate Titanate Ceramics II: Sesquipolar Loading. <i>Journal of the American Ceramic Society</i> , 2007 , 90, 1088-1093 | 3.8 | 28 |
| 54 | Temperature dependent determination of the linear electrooptic coefficient r_{33} in $\text{Sr}_{0.61}\text{Ba}_{0.39}\text{Nb}_2\text{O}_6$ single crystals by means of light-induced scattering. <i>Optics Communications</i> , 2003 , 218, 173-182 | 2 | 28 |
| 53 | Increasing bulk photovoltaic current by strain tuning. <i>Science Advances</i> , 2019 , 5, eaau9199 | 14.3 | 27 |
| 52 | Bulk ZnO as piezotronic pressure sensor. <i>Applied Physics Letters</i> , 2014 , 105, 111604 | 3.4 | 27 |
| 51 | Evidence of random electric fields in the relaxor-ferroelectric $\text{Sr}_{0.61}\text{Ba}_{0.39}\text{Nb}_2\text{O}_6$. <i>Europhysics Letters</i> , 2002 , 57, 597-603 | 1.6 | 27 |

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| 50 | Evaluation of domain wall motion in bipolar fatigued lead-zirconate-titanate: A study on reversible and irreversible contributions. <i>Journal of Applied Physics</i> , 2010 , 107, 104119 | 2.5 | 26 |
| 49 | Probing polar nanoregions in Sr _{0.61} Ba _{0.39} Nb ₂ O ₆ via second-harmonic dielectric response. <i>Physical Review B</i> , 2003 , 68, | 3.3 | 26 |
| 48 | Detection of phase transitions in sodium bismuth titanate/Barium titanate single crystals by acoustic emission. <i>Applied Physics Letters</i> , 2008 , 92, 012904 | 3.4 | 23 |
| 47 | Degradation of lead-zirconate-titanate ceramics under different dc loads. <i>Journal of Applied Physics</i> , 2009 , 105, 104105 | 2.5 | 21 |
| 46 | Beam fanning reversal in the ferroelectric relaxor Sr _{0.61} Ba _{0.39} Nb ₂ O ₆ at high external electric fields. <i>Journal of Applied Physics</i> , 2003 , 94, 4763 | 2.5 | 21 |
| 45 | Bipolar Fatigue Caused by Field Screening in Pb(Zr,Ti)O ₃ Ceramics. <i>Journal of the American Ceramic Society</i> , 2007 , 90, 070922001254005-??? | 3.8 | 20 |
| 44 | Study of beam-fanning hysteresis in photo- refractive SBN:Ce: light-induced and primary scattering as functions of polar structure. <i>Applied Physics B: Lasers and Optics</i> , 2003 , 76, 407-416 | 1.9 | 19 |
| 43 | Influence of Ce and Cr doping on the pyroelectric behaviour of Sr _{0.61} Ba _{0.39} Nb ₂ O ₆ . <i>Physica Status Solidi A</i> , 2003 , 197, R2-R4 | | 19 |
| 42 | Evolution of a stable polarization state in lead zirconate titanate ceramics by repeated partial switching. <i>Applied Physics Letters</i> , 2005 , 87, 212901 | 3.4 | 19 |
| 41 | Local electric-field-driven repoling reflected in the ferroelectric polarization of Ce-doped Sr _{0.61} Ba _{0.39} Nb ₂ O ₆ . <i>Applied Physics Letters</i> , 2002 , 80, 470-472 | 3.4 | 19 |
| 40 | Unexpectedly high piezoelectricity of Sm-doped lead zirconate titanate in the Curie point region. <i>Scientific Reports</i> , 2018 , 8, 4120 | 4.9 | 18 |
| 39 | Orientation-Dependence of Thermal Depolarization and Phase Development in Bi _{1/2} Na _{1/2} TiO ₃ -BaTiO ₃ Single Crystals. <i>Journal of the American Ceramic Society</i> , 2015 , 98, 3966-3974 | 3.8 | 18 |
| 38 | PROCESSING AND PROPERTIES OF Na _{0.5} Bi _{0.5} TiO ₃ PIEZOELECTRIC CERAMICS MODIFIED WITH La, Mn AND Fe. <i>Functional Materials Letters</i> , 2010 , 03, 45-48 | 1.2 | 17 |
| 37 | Phase field simulation and experimental investigation of the electro-mechanical behavior of ferroelectrics. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 2010 , 90, 623-632 | 1 | 17 |
| 36 | Influence of defects and domain walls on dielectric and mechanical resonances in LiNbO ₃ . <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 015901 | 1.8 | 14 |
| 35 | Current-voltage characteristics for lead zirconate titanate bulk ceramics. <i>Journal of Applied Physics</i> , 2008 , 104, 054120 | 2.5 | 12 |
| 34 | Quantitative comparison between the degree of domain orientation and nonlinear properties of a PZT ceramic during electrical and mechanical loading. <i>Journal of Materials Research</i> , 2011 , 26, 1126-1132 | 2.5 | 11 |
| 33 | Study of Domain Structure Kinetics in SBN Crystals Using Optical Methods. <i>Ferroelectrics</i> , 2008 , 374, 33-40 | 0.6 | 11 |

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| 32 | Ferroelectric properties of lead zirconate titanate under radial load. <i>Applied Physics Letters</i> , 2007 , 91, 142904 | 3.4 | 11 |
| 31 | Discontinuous domain wall motion in the relaxor ferroelectric Sr 0.61 Ba 0.39 Nb 2 O 6. <i>Europhysics Letters</i> , 2004 , 68, 733-739 | 1.6 | 10 |
| 30 | Temperature study of photoinduced wide-angle scattering in cerium-doped strontium barium niobate. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2003 , 20, 307 | 1.7 | 10 |
| 29 | Field induced modification of defect complexes in magnesium-doped lithium niobate. <i>Journal of Applied Physics</i> , 2014 , 116, 244102 | 2.5 | 9 |
| 28 | Domain Switching During Electromechanical Poling in Lead Zirconate Titanate Ceramics. <i>Journal of the American Ceramic Society</i> , 2008 , 91, 1586-1590 | 3.8 | 9 |
| 27 | Angular and wavelength selectivity of parasitic holograms in cerium doped strontium barium niobate. <i>Journal of Applied Physics</i> , 2004 , 96, 6987-6993 | 2.5 | 9 |
| 26 | Aging of the ferroelectric hysteresis in Ce-doped Strontium-Barium-Niobate observed by holographic phase gratings. <i>Applied Physics B: Lasers and Optics</i> , 2004 , 78, 211-215 | 1.9 | 9 |
| 25 | Study of the domain structure evolution in single crystals of relaxor ferroelectric Sr0.61Ba0.39Nb2O6:Ce1. <i>Physics of the Solid State</i> , 2010 , 52, 346-351 | 0.8 | 8 |
| 24 | Superspace approach applied to a neutron-diffraction study of the holographic data storage material Sr0.61Ba0.39Nb2O6. <i>Applied Physics A: Materials Science and Processing</i> , 2002 , 74, s963-s965 | 2.6 | 8 |
| 23 | New parametric scattering in photorefractive Sr0.61Ba0.39Nb2O6:Cr. <i>Physical Review Letters</i> , 2003 , 91, 243903 | 7.4 | 8 |
| 22 | Solution-processed BiFeO3 thin films with low leakage current. <i>Journal of the European Ceramic Society</i> , 2021 , 41, 6449-6455 | 6 | 8 |
| 21 | Broadband characterization of congruent lithium niobate from mHz to optical frequencies. <i>Journal Physics D: Applied Physics</i> , 2017 , 50, 36LT01 | 3 | 7 |
| 20 | Polaron-mediated low-frequency dielectric anomaly in reduced LiNbO3:Ti. <i>Applied Physics Letters</i> , 2017 , 111, 022903 | 3.4 | 7 |
| 19 | Effect of electrical and mechanical poling history on domain orientation and piezoelectric properties of soft and hard PZT ceramics. <i>Science and Technology of Advanced Materials</i> , 2011 , 12, 015002 ⁻¹ | 7 | 7 |
| 18 | Effect of optical damage resistant dopants on the dielectric properties of LiNbO3: Insight from broadband impedance spectroscopy and Raman scattering. <i>Journal of Applied Physics</i> , 2018 , 123, 154105 ²⁻⁵ | 6 | 6 |
| 17 | Dielectric investigations of 0.945(Bi0.5Na0.5) TiO3-0.055BaTiO3. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2009 , 56, 1831-4 | 3.2 | 6 |
| 16 | Photorefractive parametric scattering in the ferroelectric relaxor SBN: Phenomenological and application aspects. <i>Physical Review B</i> , 2005 , 71, | 3.3 | 6 |
| 15 | Light-induced absorption in lead lanthanum zirconate titanate ceramics. <i>Journal of Applied Physics</i> , 2009 , 105, 024103 | 2.5 | 5 |

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| 14 | Beam fanning used to study thermal disorder and decay of polar structures in the ferroelectric relaxor Sr _{0.61} Ba _{0.39} Nb ₂ O ₆ . <i>Europhysics Letters</i> , 2004 , 66, 48-54 | 1.6 | 5 |
| 13 | Intensity and wavelength dependence of the photoconductivity in Cr-doped Sr _{0.61} Ba _{0.39} Nb ₂ O ₆ . <i>European Physical Journal B</i> , 2004 , 38, 19-24 | 1.2 | 5 |
| 12 | Dielectric tunability of ferroelectric barium titanate at millimeter-wave frequencies. <i>Physical Review B</i> , 2019 , 100, | 3.3 | 4 |
| 11 | Influence of substrate stress on in-plane and out-of-plane ferroelectric properties of PZT films. <i>Journal of Applied Physics</i> , 2022 , 131, 014101 | 2.5 | 4 |
| 10 | Achieving large electric-field-induced strain in lead-free piezoelectrics. <i>Materials Research Letters</i> , 2019 , 7, 173-179 | 7.4 | 4 |
| 9 | Influence of tensile vs. compressive stress on fatigue of lead zirconate titanate thin films. <i>Journal of the European Ceramic Society</i> , 2021 , 41, 6991-6999 | 6 | 4 |
| 8 | Enhancement of ferroelectricity and orientation in solution-derived hafnia thin films through heterogeneous grain nucleation. <i>Applied Physics Letters</i> , 2021 , 118, 162902 | 3.4 | 3 |
| 7 | Influence of reducing atmosphere on the defect chemistry of lead lanthanum zirconate titanate (8/65/35). <i>Solid State Ionics</i> , 2012 , 228, 56-63 | 3.3 | 2 |
| 6 | Intensity dependent properties of photo-induced light scattering in ferroelectric Sr _{0.61} Ba _{0.39} Nb ₂ O ₆ :Ce. <i>Journal of Physics Condensed Matter</i> , 2006 , 18, 3037-3052 | 1.8 | 1 |
| 5 | Temperature-dependent coherent oscillation in photorefractive relaxor strontium barium niobate. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2005 , 22, 1648 | 1.7 | 1 |
| 4 | Direct evidence for bulk photovoltaic charge transport in a ferroelectric polycrystalline film. <i>Scripta Materialia</i> , 2022 , 211, 114498 | 5.6 | 1 |
| 3 | Tunable polar dielectrics for applications at millimeter wavelengths 2016 , | | 1 |
| 2 | Effect of electrical and mechanical poling history on domain orientation and piezoelectric properties of soft and hard PZT ceramics. <i>Science and Technology of Advanced Materials</i> , 2011 , 12, 015002 ^{7,1} | | |
| 1 | Influence of charged walls and defects on DC resistivity and dielectric relaxations in Cu-Cl boracite. <i>Applied Physics Letters</i> , 2021 , 119, 202904 | 3.4 | |