Geoff L Brennecka

List of Publications by Year
in descending order

84	1,611	304743	330143
papers	citations	22 h-index	37 g-index

88	88	88	1915
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Combined electromechanical dynamic fracture behavior of lead zirconate titanate (PZT). Journal of the American Ceramic Society, 2022, 105, 3116-3122.	3.8	1
2	Lithium diffusion in lithium tantalate as measured by confocal Raman spectroscopy. Journal of Materials Science, 2022, 57, 7035-7041.	3.7	0
3	High-Temperature Ferroelectric Behavior of Al0.7Sc0.3N. Micromachines, 2022, 13, 887.	2.9	24
4	First-principles indicators of ferroic parameters in epitaxial BiFeO3 and BiCrO3. Journal of Applied Physics, 2022, 132, .	2.5	0
5	Exploring the phase space of Zn₂SbN₃, a novel semiconducting nitride. Journal of Materials Chemistry C, 2021, 9, 13904-13913.	5.5	7
6	Quasi-static and dynamic fracture behavior of lead zirconate titanate: A study of poling and loading rate. Engineering Fracture Mechanics, 2021, 247, 107669.	4.3	2
7	Reduced coercive field in epitaxial thin film of ferroelectric wurtzite Al0.7Sc0.3N. Applied Physics Letters, 2021, 118, .	3.3	35
8	Understanding Reproducibility of Sputterâ€Deposited Metastable Ferroelectric Wurtzite Al_{0.6}Sc_{0.4}N Films Using In Situ Optical Emission Spectrometry. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100043.	2.4	20
9	Microstructures in Newly-Realized LnMN3 Phases. Microscopy and Microanalysis, 2021, 27, 3300-3301.	0.4	0
10	Density-functional theory calculation of magnetic properties of BiFeO3 and BiCrO3 under epitaxial strain. Journal of Applied Physics, 2021, 130, .	2.5	2
11	Synthesis of LaWN ₃ nitride perovskite with polar symmetry. Science, 2021, 374, 1488-1491.	12.6	43
12	In Situ Transmission Electron Microscopy Study of Conductive Filament Formation in Copper Oxides. IEEE Transactions on Device and Materials Reliability, 2020, 20, 609-612.	2.0	0
13	Stability of epitaxial BiXO3 phases by density-functional theory. APL Materials, 2020, 8, .	5.1	4
14	Structural Instability in Electrically Stressed, Oxygen Deficient BaTiO₃ Nanocrystals. Advanced Functional Materials, 2020, 30, 2004607.	14.9	9
15	Investigation of Off-stoichiometry in Ternary Nitrides by EDS and HRTEM. Microscopy and Microanalysis, 2020, 26, 1406-1407.	0.4	0
16	Direct Observations of Field-Intensity-Dependent Dielectric Breakdown Mechanisms in TiO2 Single Nanocrystals. ACS Nano, 2020, 14, 8328-8334.	14.6	3
17	Synthesis and Surface Chemistry of 2D TiVC Solid-Solution MXenes. ACS Applied Materials & Interfaces, 2020, 12, 20129-20137.	8.0	93
18	Strengthened relaxor behavior in (1â^'x)Pb(Fe_{0.5}Nb_{0.5})O₃â€“xBiFeO₃. Journal of Materials Chemistry C, 2020, 8, 3452-3462.	5.5	9

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19	Remembering Joanna McKittrick. Journal of the American Ceramic Society, 2020, 103, 2277-2277.	3.8	0
20	Utilizing Site Disorder in the Development of New Energy-Relevant Semiconductors. ACS Energy Letters, 2020, 5, 2027-2041.	17.4	46
21	In situ TEM study of the transitions between crystalline Si and nonstoichiometric amorphous oxide under bipolar voltage bias. Journal of Applied Physics, 2019, 125, .	2.5	5
22	Review of high-throughput approaches to search for piezoelectric nitrides. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, .	2.1	14
23	In Situ TEM Study of the Amorphous-to-Crystalline Transition during Dielectric Breakdown in TiO₂ Film. ACS Applied Materials & Interfaces, 2019, 11, 40726-40733.	8.0	13
24	COMBIgor: Data-Analysis Package for Combinatorial Materials Science. ACS Combinatorial Science, 2019, 21, 537-547.	3.8	52
25	Synthesis of Lanthanum Tungsten Oxynitride Perovskite Thin Films. Advanced Electronic Materials, 2019, 5, 1900214.	5.1	15
26	Improving the multicaloric properties of Pb(Fe0.5Nb0.5)O3 by controlling the sintering conditions and doping with manganese. Journal of the European Ceramic Society, 2019, 39, 4122-4130.	5.7	10
27	Transparent polycrystalline Gd 2 Hf 2 O 7 ceramics. Journal of the American Ceramic Society, 2018, 101, 3797-3807.	3.8	12
28	Enhanced Piezoelectric Response of AlN via CrN Alloying. Physical Review Applied, 2018, 9, .	3.8	57
29	Processing and characteristics of transparent Gd 3 TaO 7 polycrystalline ceramics. Journal of the American Ceramic Society, 2018, 101, 1847-1856.	3.8	10
30	Characterization of Elastic Modulus Across the (Al_{1â€“<italic>x</italic>}Sc_{<italic>x</italic>})N System Using DFT and Substrate-Effect-Corrected Nanoindentation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 2167-2175.	3.0	22
31	Wideband 3D-Printed Dielectric Resonator Antennas. , 2018, , .		9
32	Large piezoelectric response of van der Waals layered solids. Journal of Materials Chemistry C, 2018, 6, 11035-11044.	5.5	19
33	Implications of heterostructural alloying for enhanced piezoelectric performance of (Al,Sc)N. Physical Review Materials, 2018, 2, .	2.4	47
34	Phonon scattering mechanisms dictating the thermal conductivity of lead zirconate titanate (PbZr1âˆ’xTixO3) thin films across the compositional phase diagram. Journal of Applied Physics, 2017, 121, .	2.5	13
35	Nanoscale Compositional Analysis of a Thermally Processed Entropy-Stabilized Oxide via Correlative TEM and APT. Microscopy and Microanalysis, 2017, 23, 1640-1641.	0.4	6
36	Tuning the piezoelectric and mechanical properties of the AlN system via alloying with YN and BN. Journal of Applied Physics, 2017, 122, .	2.5	49

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37	Processing of crack-free high density polycrystalline LiTaO3 ceramics. Journal of Materials Science: Materials in Electronics, 2017, 28, 3725-3732.	2.2	6
38	Highly Textured BaTiO₃ via Templated Grain Growth and Resulting Polarization Reversal Dynamics. Journal of the American Ceramic Society, 2016, 99, 922-929.	3.8	15
39	Current Understanding of Structureâ€“Processingâ€“Property Relationships in BaTiO₃â€“Bi(M)O₃ Dielectrics. Journal of the American Ceramic Society, 2016, 99, 2849-2870.	3.8	99
40	Thermal Conductivity of Self-Assembling Symmetric Block Copolymer Thin Films of Polystyrene-Block-Poly(methyl methacrylate). Journal of Heat Transfer, 2016, 138, .	2.1	8
41	Solution Chemistry, Substrate, and Processing Effects on Chemical Homogeneity in Lead Zirconate Titanate Thin Films. Journal of the American Ceramic Society, 2015, 98, 2028-2038.	3.8	10
42	Combined Experimental and Computational Methods Reveal the Evolution of Buried Interfaces during Synthesis of Ferroelectric Thin Films. Advanced Materials Interfaces, 2015, 2, 1500181.	3.7	16
43	Thin Films: Combined Experimental and Computational Methods Reveal the Evolution of Buried Interfaces during Synthesis of Ferroelectric Thin Films (Adv. Mater. Interfaces 10/2015). Advanced Materials Interfaces, 2015, 2, .	3.7	0
44	The European Materials Research Society (EMRS) Spring Meeting 2014 Symposium I. Journal of Sol-Gel Science and Technology, 2015, 73, 519-519.	2.4	0
45	Thermal transport in tantalum oxide films for memristive applications. Applied Physics Letters, 2015, 107, .	3.3	25
46	Quantifying Compositional Homogeneity in <scp><scp>Pb</scp></scp>(<scp><scp>Zr</scp></scp>,<scp><scp>Ti</scp></scp>)<scp><scp>O</scp></scp>₃ Using Atom Probe Tomography. Journal of the American Ceramic Society, 2014, 97, 2677-2697.	3.8	29
47	Phase and Texture Evolution in Chemically Derived <scp><scp>PZT</scp></scp> Thin Films on Pt Substrates. Journal of the American Ceramic Society, 2014, 97, 2973-2979.	3.8	8
48	Crystallographic changes in lead zirconate titanate due to neutron irradiation. AIP Advances, 2014, 4, .	1.3	16
49	Phase formation of BaTiO₃â€“Bi(Zn_{1/2}Ti_{1/2})O₃ perovskite ceramics. Journal of the Ceramic Society of Japan, 2014, 122, 260-266.	1.1	18
50	Optical anisotropy near the relaxor-ferroelectric phase transition in lanthanum lead zirconate titanate. Journal of Applied Physics, 2013, 114, 053515.	2.5	6
51	Electrical conductivity in oxygen-deficient phases of tantalum pentoxide from first-principles calculations. Journal of Applied Physics, 2013, 114, .	2.5	36
52	Dielectric properties of BaTiO3â€“Bi(Zn1/2Ti1/2)O3â€“NaNbO3 solid solutions. Journal of Materials Science, 2013, 48, 2245-2250.	3.7	30
53	On the Degradation Processes of Thin Film PZT in 0.1 N H2SO4. Journal of the Electrochemical Society, 2013, 160, C128-C135.	2.9	3
54	Effect of Switching Atmospheric Conditions during Crystallization on the Phase Evolution of Solutionâ€Derived Lead Zirconate Titanate Thin Films. Journal of the American Ceramic Society, 2013, 96, 2706-2709.	3.8	7

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55	Phase and texture evolution in solution deposited lead zirconate titanate thin films: Formation and role of the Pt3Pb intermetallic phase. Journal of Applied Physics, 2013, 113, .	2.5	20
56	Neutron irradiation effects on domain wall mobility and reversibility in lead zirconate titanate thin films. Journal of Applied Physics, 2013, 113, 124104.	2.5	29
57	Atomic Scale Composition Profiling of Ferroelectrics via Laser-Pulsed Atom Probe Tomography and Cross-Correlative Transmission Electron Microscopy. Microscopy and Microanalysis, 2013, 19, 980-981.	0.4	2
58	Electrochemical Response of Ferroelectric PbZr0.52Ti0.48O3Thin Films. Journal of the Electrochemical Society, 2012, 159, C357-C363.	2.9	2
59	Defect mechanisms in high resistivity BaTiO3â€“Bi(Zn1/2Ti1/2)O3 ceramics. Applied Physics Letters, 2012, 101, .	3.3	23
60	In situ x-ray diffraction of solution-derived ferroelectric thin films for quantitative phase and texture evolution measurement. Journal of Applied Physics, 2012, 112, .	2.5	14
61	An Automated Electrochemical Probe for Evaluation of Thin Films. Journal of the Electrochemical Society, 2012, 159, F87-F90.	2.9	7
62	Chemically Homogeneous Complex Oxide Thin Films Via Improved Substrate Metallization. Advanced Functional Materials, 2012, 22, 2295-2302.	14.9	53
63	Functional Coatings: Chemically Homogeneous Complex Oxide Thin Films Via Improved Substrate Metallization (Adv. Funct. Mater. 11/2012). Advanced Functional Materials, 2012, 22, 2214-2214.	14.9	0
64	Powder Synthesis and Hotâ€Pressing of a <scp><scp>LiTaO</scp></scp>₃ Ceramic. Journal of the American Ceramic Society, 2012, 95, 2820-2826.	3.8	13
65	Neutron flux characterization techniques for radiation effects studies. Journal of Radioanalytical and Nuclear Chemistry, 2012, 291, 503-507.	1.5	10
66	Phase evolution in solution deposited Pb-deficient PLZT thin films. Journal of Materials Science, 2011, 46, 2148-2154.	3.7	7
67	Processing Technologies for Highâ€Permittivity Thin Films in Capacitor Applications. Journal of the American Ceramic Society, 2010, 93, 3935-3954.	3.8	105
68	Effect of domain structure on dielectric nonlinearity in epitaxial BiFeO3 films. Applied Physics Letters, 2010, 97, 262904.	3.3	18
69	Reversibility of the Perovskiteâ€toâ€Fluorite Phase Transformation in Leadâ€Based Thin and Ultrathin Films. Advanced Materials, 2008, 20, 1407-1411.	21.0	51
70	Fabrication of Perovskite-Based High-Value Integrated Capacitors by Chemical Solution Deposition. Journal of the American Ceramic Society, 2008, 91, 1851-1857.	3.8	49
71	Quantitative Xâ€Ray Spectrum Imaging of Lead Lanthanum Zirconate Titanate PLZT Thinâ€Films. Journal of the American Ceramic Society, 2008, 91, 3690-3697.	3.8	28
72	Fabrication of (Ba,Sr)TiO3 high-value integrated capacitors by chemical solution deposition. , 2008, , .		0

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73	TF026. , 2008, , .		1
74	Multilayer thin and ultrathin film capacitors fabricated by chemical solution deposition. Journal of Materials Research, 2008, 23, 176-181.	2.6	22
75	Quantitative chemical analysis of fluorite-to-perovskite transformations in (Pb,La)(Zr,Ti)O3 PLZT thin films. Journal of Materials Research, 2008, 23, 2944-2953.	2.6	9
76	Micro- and Nano-patterning of Solution-Derived Functional Electronic Ceramics. Microscopy and Microanalysis, 2008, 14, 1432-1433.	0.4	0
77	Quantitative STEM-EDS Spectrum Imaging of Phase Transformations in (Pb, La)(Zr, Ti)O3. Microscopy and Microanalysis, 2008, 14, 1434-1435.	0.4	1
78	Densification and Grain Growth for Powder-Derived Ta2O5-TiO2 Ceramics. Journal of the Ceramic Society of Japan, 2007, 115, 678-682.	1.1	1
79	Fabrication of ultrathin film capacitors by chemical solution deposition. Journal of Materials Research, 2007, 22, 2868-2874.	2.6	39
80	Phase Transformations in the Highâ€Temperature Form of Pure and TiO₂â€Stabilized Ta₂O₅. Journal of the American Ceramic Society, 2007, 90, 2947-2953.	3.8	20
81	Preparation of Dense Ta2O5-Based Ceramics by a Coated Powder Method for Enhanced Dielectric Properties. Journal of the American Ceramic Society, 2006, 89, 060601012420004-???.	3.8	6
82	Use of Stress To Produce Highly Oriented Tetragonal Lead Zirconate Titanate (PZT 40/60) Thin Films and Resulting Electrical Properties. Journal of the American Ceramic Society, 2004, 87, 1459-1465.	3.8	62
83	Micropen Printing of Electronic Components. , 2002, , 229-259.		1
84	Lanthanide series doping effects in lead zirconate titanate (PLnZT) thin films. Journal of Materials Research, 2002, 17, 871-878.	2.6	33