John E Daniels

List of Publications by Year
in descending order

117 papers	6,148 citations	81839 39 h-index	71651 76 g-index
120 all docs	120 docs citations	120 times ranked	4575 citing authors

#	Article	IF	Citations
1	A high-specific-strength and corrosion-resistant magnesium alloy. Nature Materials, 2015, 14, 1229-1235.	13.3	561
2	Evolving morphotropic phase boundary in lead-free (Bi1/2Na1/2)TiO3â€“BaTiO3 piezoceramics. Journal of Applied Physics, 2011, 109, .	1.1	405
3	<scp><scp>BiFeO</scp></scp>₃ Ceramics: Processing, Electrical, and Electromechanical Properties. Journal of the American Ceramic Society, 2014, 97, 1993-2011.	1.9	388
4	Electric-field-induced phase transformation at a lead-free morphotropic phase boundary: Case study in a 93%(Bi0.5Na0.5)TiO3â€“7%â€‚BaTiO3 piezoelectric ceramic. Applied Physics Letters, 2009, 95, 032904.	1.5	348
5	Origins of Electroâ€Mechanical Coupling in Polycrystalline Ferroelectrics During Subcoercive Electrical Loading. Journal of the American Ceramic Society, 2011, 94, 293-309.	1.9	310
6	Electric-field-induced phase-change behavior in (Bi0.5Na0.5)TiO3â€“BaTiO3â€“(K0.5Na0.5)NbO3: A combinatorial investigation. Acta Materialia, 2010, 58, 2103-2111.	3.8	210
7	Two-stage processes of electrically induced-ferroelectric to relaxor transition in 0.94(Bi1/2Na1/2)TiO3-0.06BaTiO3. Applied Physics Letters, 2013, 102, .	1.5	182
8	Ultrahigh specific strength in a magnesium alloy strengthened by spinodal decomposition. Science Advances, 2021, 7, .	4.7	176
9	Direct measurement of the domain switching contribution to the dynamic piezoelectric response in ferroelectric ceramics. Applied Physics Letters, 2006, 89, 092901.	1.5	162
10	Electric-field-induced strain mechanisms in lead-free 94%(Bi1/2Na1/2)TiO3â€“6%BaTiO3. Applied Physics Letters, 2011, 98, .	1.5	143
11	A Highâ€Temperatureâ€Capacitor Dielectric Based on <scp><scp>K</scp></scp>_{0.5}<scp><scp>Na</scp></scp>_{0.5}<scp><scp>NbO</scp></scp>₃â€“<scp><scp>Bi</scp></scp>_{1/2}<scp><scp>Na</scp></scp>_{1/2}<scp><scp>TiO</scp></scp>₃â€“ Journal of the American Ceramic Society, 2012, 95, 3519-3524.	3.6	121
12	Relaxor Characteristics of Morphotropic Phase Boundary <scp>(Bi_{1/2}Na_{1/2})TiO₃â€“(Bi_{1/2}K_{1/2})TiO₃</scp> Modified with <scp>Bi(Zn_{1/2}Ti_{1/2})O₃</scp>. Journal of the American Ceramic Society, 2011, 94, 4283-4290.	1.9	120
13	Relaxor-ferroelectric transitions: Sodium bismuth titanate derivatives. MRS Bulletin, 2018, 43, 600-606.	1.7	111
14	The structure of schwertmannite, a nanocrystalline iron oxyhydroxysulfate. American Mineralogist, 2010, 95, 1312-1322.	0.9	96
15	Origin of large electric-field-induced strain in pseudo-cubic BiFeO3â€“BaTiO3 ceramics. Acta Materialia, 2020, 197, 1-9.	3.8	93
16	Speciation of Rareâ€Earth Metal Complexes in Ionic Liquids: A Multipleâ€Technique Approach. Chemistry - A European Journal, 2009, 15, 1449-1461.	1.7	91
17	Nanoscale ferroelectric/relaxor composites: Origin of large strain in leadâ€“free Biâ€“based incipient piezoelectric ceramics. Journal of the European Ceramic Society, 2016, 36, 3401-3407.	2.8	89
18	Thermal-stability of electric field-induced strain and energy storage density in Nb-doped BNKT-ST piezoceramics. Journal of the European Ceramic Society, 2018, 38, 2511-2519.	2.8	87

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19	Long-range symmetry breaking in embedded ferroelectrics. Nature Materials, 2018, 17, 814-819. Stress-modulated relaxor-to-ferroelectric transition in lead-free<mml:math	13.3	87
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37	Neutron diffraction study of the polarization reversal mechanism in [111]c-oriented Pb(Zn1â•3Nb2â•3)O3â˜xPbTiO3. Journal of Applied Physics, 2007, 101, 104108.	1.1	43
38	Electric-field-induced strain contributions in morphotropic phase boundary composition of (Bi1/2Na1/2)TiO3-BaTiO3 during poling. Applied Physics Letters, 2015, 107, .	1.5	43
39	Frequency effects on fatigue crack growth and crack tip domain-switching behavior in a lead zirconate titanate ceramic. Acta Materialia, 2009, 57, 3932-3940.	3.8	42
40	Ferroelectric domain continuity over grain boundaries. Acta Materialia, 2017, 128, 400-405.	3.8	38
41	Domain fragmentation during cyclic fatigue in 94%(Bi1/2Na1/2)TiO3-6%BaTiO3. Journal of Applied Physics, 2012, 112, .	1.1	37
42	Enhanced electric-field-induced strains in (K,Na)NbO3 piezoelectrics from heterogeneous structures. Materials Today, 2021, 46, 44-53.	8.3	36
43	Defectâ€Driven Structural Distortions at the Surface of Relaxor Ferroelectrics. Advanced Functional Materials, 2019, 29, 1900344.	7.8	35
44	Effect of porosity on the ferroelectric and piezoelectric properties of (Ba0.85Ca0.15)(Zr0.1Ti0.9)O3 piezoelectric ceramics. Scripta Materialia, 2018, 145, 122-125.	2.6	34
45	Electricâ€Fieldâ€Induced Domain Switching and Domain Texture Relaxations in Bulk Bismuth Ferrite. Journal of the American Ceramic Society, 2015, 98, 3884-3890.	1.9	31
46	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
47	Load partition and microstructural evolution during in situ hot deformation of Tiâ€“6Alâ€“6Vâ€“2Sn alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 657, 244-258.	2.6	29
48	Oblique cross-section nanoindentation for determining the hardness change in ion-irradiated steel. International Journal of Plasticity, 2019, 112, 242-256.	4.1	29
49	Observation of a time-dependent structural phase transition in potassium sodium bismuth titanate. Applied Physics Letters, 2011, 98, .	1.5	28
50	Heterogeneous grain-scale response in ferroic polycrystals under electric field. Scientific Reports, 2016, 6, 22820.	1.6	28
51	Frequency-dependent decoupling of domain-wall motion and lattice strain in bismuth ferrite. Nature Communications, 2018, 9, 4928.	5.8	28
52	Stochastic multistep polarization switching in ferroelectrics. Physical Review B, 2018, 97, .	1.1	27
53	Determination of directionally dependent structural and microstructural information using high-energy X-ray diffraction. Journal of Applied Crystallography, 2008, 41, 1109-1114.	1.9	26
54	Cooperation of length scales and orientations in the deformation of bovine bone. Acta Biomaterialia, 2011, 7, 2943-2951.	4.1	26

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55	High-throughput evaluation of domain switching in piezoelectric ceramics and application to PbZr0.6Ti0.4O3 doped with La and Fe. Applied Physics Letters, 2008, 93, 152904.	1.5	25
56	Direct observation of Nb₃Sn lattice deformation by high-energy x-ray diffraction in internal-tin wires subject to mechanical loads at 4.2 K. Superconductor Science and Technology, 2012, 25, 054006.	1.8	24
57	Measurement and analysis of field-induced crystallographic texture using curved position-sensitive diffraction detectors. Journal of Electroceramics, 2014, 32, 283-291.	0.8	24
58	Giant Domain Wall Conductivity in Selfâ€Assembled BiFeO₃ Nanocrystals. Advanced Functional Materials, 2021, 31, .	7.8	24
59	Tailoring of unipolar strain in lead-free piezoelectrics using the ceramic/ceramic composite approach. Journal of Applied Physics, 2014, 115, 124108.	1.1	23
60	Electric-field-induced paraelectric to ferroelectric phase transformation in prototypical polycrystalline BaTiO3. Applied Physics Letters, 2014, 105, .	1.5	23
61	High-Energy Synchrotron X-Ray Diffraction for InÂSitu Diffuse Scattering Studies of Bulk Single Crystals. Jom, 2012, 64, 174-180.	0.9	22
62	Enhanced extrinsic domain switching strain in coreâ€“shell structured BaTiO 3 â€“KNbO 3 ceramics. Acta Materialia, 2015, 98, 182-189.	3.8	22
63	From Single Grains to Texture. Advanced Engineering Materials, 2009, 11, 771-773.	1.6	21
64	High energy transmission micro-beam Laue synchrotron X-ray diffraction. Materials Letters, 2010, 64, 1302-1305.	1.3	21
65	Electric-field-induced phase transitions in co-doped Pb(Zr_{1â^'x}Ti_x)O₃at the morphotropic phase boundary. Science and Technology of Advanced Materials, 2014, 15, 015010.	2.8	21
66	Observations of temperature stability of Î³-zirconium hydride by high-resolution neutron powder diffraction. Journal of Alloys and Compounds, 2016, 661, 55-61.	2.8	21
67	Microstructural and Residual Stress Development due to Inertia Friction Welding in Ti-6246. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 3149-3161.	1.1	20
68	Mechanical double loop behavior in BaTiO3: Stress induced paraelastic to ferroelastic phase transformation. Applied Physics Letters, 2013, 103, .	1.5	19
69	A first principles molecular dynamics study of the relationship between atomic structure and elastic properties of Mgâ€“Znâ€“Ca amorphous alloys. Computational Materials Science, 2015, 96, 246-255.	1.4	19
70	Polarization reversal via a transient relaxor state in nonergodic relaxors near freezing temperature. Journal of Materiomics, 2019, 5, 634-640.	2.8	19
71	Simultaneous small- and wide-angle scattering at high X-ray energies. Journal of Synchrotron Radiation, 2010, 17, 473-478.	1.0	18
72	Temperature dependent polarization reversal mechanism in 0.94(Bi1/2Na1/2)TiO3-0.06Ba(Zr0.02Ti0.98)O3 relaxor ceramics. Applied Physics Letters, 2015, 107, .	1.5	17

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73	The effect of inter-granular constraints on the response of polycrystalline piezoelectric ceramics at the surface and in the bulk. Applied Physics Letters, 2016, 109, .	1.5	16
74	Hydration and radiation effects on the residual stress state of cortical bone. Acta Biomaterialia, 2013, 9, 9503-9507.	4.1	15
75	Quantitative grain-scale ferroic domain volume fractions and domain switching strains from three-dimensional X-ray diffraction data. Journal of Applied Crystallography, 2015, 48, 882-889.	1.9	15
76	Electromechanical Response of Polycrystalline Barium Titanate Resolved at the Grain Scale. Journal of the American Ceramic Society, 2017, 100, 393-402.	1.9	15
77	High-throughput screening of combinatorial materials libraries by high-energy x-ray diffraction. Applied Physics Letters, 2007, 91, 071916.	1.5	14
78	In situ crack growth studies of hydrided Zircaloy-4 on a single-edge notched tensile specimen. Scripta Materialia, 2009, 61, 431-433.	2.6	14
79	Absence of toughening behavior in 0.94(Na 1/2 Bi 1/2)TiO 3 -0.06BaTiO 3 relaxor ceramic. Scripta Materialia, 2017, 136, 115-119.	2.6	14
80	In situ observation of Î³-ZrH formation by X-ray diffraction. Journal of Alloys and Compounds, 2017, 695, 3124-3130.	2.8	14
81	Porous and sutureless bioelectronic patch with retained electronic properties under cyclic stretching. Applied Materials Today, 2019, 15, 315-322.	2.3	14
82	Domain walls in ferroelectrics. Journal of the American Ceramic Society, 2021, 104, 1619-1632.	1.9	13
83	Nonlinear mechanical behaviour of Ba0.5Sr0.5Co0.8Fe0.2O3â˜Î´ and in situ stress dependent synchrotron X-ray diffraction study. Solid State Ionics, 2017, 300, 106-113.	1.3	12
84	Self-Poling of BiFeO₃ Thick Films. ACS Applied Materials & Interfaces, 2016, 8, 19626-19634.	4.0	11
85	Composition dependence of electric-field-induced structure of Bi1/2(Na1â˜xKx)1/2TiO3 lead-free piezoelectric ceramics. Journal of Applied Physics, 2016, 119, 234101.	1.1	11
86	In situ study of electricâ€fieldâ€induced ferroelectric and antiferromagnetic domain switching in polycrystalline BiFeO₃. Journal of the American Ceramic Society, 2019, 102, 1768-1775.	1.9	11
87	Effect of mechanical depoling on piezoelectric properties of Na0.5Bi0.5TiO3â€“xBaTiO3 in the morphotropic phase boundary region. Journal of Materials Science, 2018, 53, 1672-1679.	1.7	10
88	Compositional dependence of disordered structures in Na Â½ Bi Â½ TiO 3 -BaTiO 3 solid solutions. Materials Research Bulletin, 2018, 106, 301-306.	2.7	9
89	Ferroelectric Domain Continuity Over Grain Boundaries for Tetragonal, Orthorhombic, and Rhombohedral Crystal Symmetries. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2018, 65, 1517-1524.	1.7	9
90	Direct observation of domain wall motion and lattice strain dynamics in ferroelectrics under high-power resonance. Physical Review B, 2021, 103, .	1.1	9

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91	In-situ stress and strain measurements around cracks using synchrotron X-ray diffraction. Journal of Strain Analysis for Engineering Design, 2011, 46, 593-606.	1.0	8
92	A multiple length scale description of the mechanism of elastomer stretching. RSC Advances, 2016, 6, 95910-95919.	1.7	8
93	Investigation of frequency effect on electrical fatigue and crack tip domain-switching behaviors in Pb(Mg1/3Nb2/3)0.65Ti0.35O3 ceramics via synchrotron X-ray diffraction. Journal of the European Ceramic Society, 2017, 37, 4609-4616.	2.8	8
94	Multistep stochastic mechanism of polarization reversal in rhombohedral ferroelectrics. Physical Review B, 2020, 102, .	1.1	8
95	Simultaneous Large Optical and Piezoelectric Effects Induced by Domain Reconfiguration Related to Ferroelectric Phase Transitions. Advanced Materials, 2022, 34, e2106827.	11.1	8
96	Uniaxial compressive stress and temperature dependent mechanical behavior of (1- x)BiFeO 3 - x BaTiO 3 lead-free piezoelectric ceramics. Ceramics International, 2017, 43, 9092-9098.	2.3	7
97	Maximising electro-mechanical response by minimising grain-scale strain heterogeneity in phase-change actuator ceramics. Applied Physics Letters, 2016, 109, .	1.5	6
98	Load partition and microstructural evolution during hot deformation of Ti-6Al-6V-2Sn matrix composites, and possible strengthening mechanisms. Journal of Alloys and Compounds, 2018, 764, 937-946.	2.8	6
99	Poling-induced inverse time-dependent microstrain mechanisms and post-poling relaxation in bismuth ferrite. Applied Physics Letters, 2020, 116, .	1.5	6
100	Phase transformation of constrained BaTiO3 particles in a Sn matrix. Scripta Materialia, 2009, 61, 391-394.	2.6	5
101	Phase boundaries in the ternary (Bi0.5Na0.5TiO3)x(BaTiO3)y(SrTiO3)1â^'xâ^'y system. Applied Physics Letters, 2017, 111, 202903.	1.5	5
102	Achieving large electric-field-induced strain in lead-free piezoelectrics. Materials Research Letters, 2019, 7, 173-179.	4.1	5
103	Investigation of mechanical property changes in He2+ ion irradiated MA957 through nanoindentation and in situ micro-tensile testing. Journal of Nuclear Materials, 2021, 547, 152819.	1.3	5
104	Functional surface layers in relaxor ferroelectrics. Journal of Materials Chemistry C, 2020, 8, 7663-7671.	2.7	5
105	Automated apparatus for dynamic mechanical analysis using the piezoelectric ultrasonic composite oscillator technique. Journal Physics D: Applied Physics, 2006, 39, 5290-5293.	1.3	3
106	Neutron diffraction study of polycrystalline Ca1â^'xSrxTiO3 mixed perovskite materials. Physica B: Condensed Matter, 2006, 385-386, 88-90.	1.3	3
107	Ferroelastic contribution to the piezoelectric response in lead zirconate titanate by in situ stroboscopic neutron diffraction. Physica B: Condensed Matter, 2006, 385-386, 100-102.	1.3	3
108	A sample cell forin situelectric-field-dependent structural characterization and macroscopic strain measurements. Journal of Synchrotron Radiation, 2016, 23, 694-699.	1.0	3

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109	Quantitative analysis of domain textures in ferroelectric ceramics from single high-energy synchrotron X-ray diffraction images. Journal of Applied Physics, 2017, 121, 164102.	1.1	3
110	In situ X-ray diffraction investigation of electric-field-induced switching in a hybrid improper ferroelectric. Journal of Applied Crystallography, 2021, 54, 533-540.	1.9	3
111	Pyroelectric material property considerations for x-ray generation. Journal of Applied Physics, 2022, 131, 114503.	1.1	3
112	Time-resolved neutron diffraction studies of triglycine sulphate near the ferroelectric transition during the application of high-voltage electric fields. Physica B: Condensed Matter, 2006, 385-386, 97-99.	1.3	2
113	Time-Resolved, Electric-Field-Induced Domain Switching and Strain in Ferroelectric Ceramics and Crystals. Springer Series in Solid-state Sciences, 2009, , 149-175.	0.3	2
114	Grain-scale strain heterogeneity as a function of crystallographic texture in phase-change electro-mechanical ceramics. Applied Physics Letters, 2020, 117, .	1.5	1
115	Selfâ€poling and electromechanical response of crystallographically textured PMNâ€32PT prepared by templated grain growth. Journal of the American Ceramic Society, 2022, 105, 3581-3589.	1.9	1
116	Time Resolved Studies Near the Ferroelectric Transition in Triglycine Sulphate During the Application of High-Voltage Fields. Ferroelectrics, 2006, 339, 175-182.	0.3	0
117	Revealing phase boundaries by weighted parametric structural refinement. Journal of Synchrotron Radiation, 2019, 26, 1638-1643.	1.0	0