L-Q Chen

List of Publications by Year
in descending order

877 papers	66,320 citations	700 121 h-index	1459 220 g-index
908 all docs	908 docs citations	908 times ranked	34497 citing authors

#	Article	IF	Citations
1	Phase-Field Models for Microstructure Evolution. Annual Review of Materials Research, 2002, 32, 113-140.	4.3	2,259
2	Room-temperature ferroelectricity in strained SrTiO3. Nature, 2004, 430, 758-761.	13.7	1,857
3	Enhancement of Ferroelectricity in Strained BaTiO3 Thin Films. Science, 2004, 306, 1005-1009.	6.0	1,676
4	Flexible high-temperature dielectric materials from polymer nanocomposites. Nature, 2015, 523, 576-579.	13.7	1,476
5	A Strain-Driven Morphotropic Phase Boundary in BiFeO ₃. Science, 2009, 326, 977-980.	6.0	1,065
6	Strain Tuning of Ferroelectric Thin Films. Annual Review of Materials Research, 2007, 37, 589-626.	4.3	987
7	Efficient stochastic generation of special quasirandom structures. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2013, 42, 13-18.	0.7	977
8	Applications of semi-implicit Fourier-spectral method to phase field equations. Computer Physics Communications, 1998, 108, 147-158.	3.0	907
9	Ultrahigh piezoelectricity in ferroelectric ceramics by design. Nature Materials, 2018, 17, 349-354.	13.3	874
10	Ultrathin, flexible, solid polymer composite electrolyte enabled with aligned nanoporous host for lithium batteries. Nature Nanotechnology, 2019, 14, 705-711.	15.6	773
11	Observation of polar vortices in oxide superlattices. Nature, 2016, 530, 198-201.	13.7	682
12	Ultrahighâ€"energy density lead-free dielectric films via polymorphic nanodomain design. Science, 2019, 365, 578-582.	6.0	662
13	The origin of ultrahigh piezoelectricity in relaxor-ferroelectric solid solution crystals. Nature Communications, 2016, 7, 13807.	5.8	510
14	Giant piezoelectricity of Sm-doped Pb(Mg _{1/3} Nb _{2/3})O ₃ -PbTiO ₃ single crystals. Science, 2019, 364, 264-268.	6.0	479
15	Effect of substrate constraint on the stability and evolution of ferroelectric domain structures in thin films. Acta Materialia, 2002, 50, 395-411.	3.8	456
16	A Thin Film Approach to Engineering Functionality into Oxides. Journal of the American Ceramic Society, 2008, 91, 2429-2454.	1.9	452
17	Thermodynamic properties of Al, Ni, NiAl, and Ni3Al from first-principles calculations. Acta Materialia, 2004, 52, 2665-2671.	3.8	433
18	Phaseâ€Field Method of Phase Transitions/Domain Structures in Ferroelectric Thin Films: A Review. Journal of the American Ceramic Society, 2008, 91, 1835-1844.	1.9	420

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19	Spontaneous Vortex Nanodomain Arrays at Ferroelectric Heterointerfaces. Nano Letters, 2011, 11, 828-834.	4.5	419
20	Observation of room-temperature polar skyrmions. Nature, 2019, 568, 368-372.	13.7	417
21	Computer simulation of grain growth using a continuum field model. Acta Materialia, 1997, 45, 611-622.	3.8	416
22	Ferroelastic switching for nanoscale non-volatile magnetoelectric devices. Nature Materials, 2010, 9, 309-314.	13.3	407
23	High-density magnetoresistive random access memory operating at ultralow voltage at room temperature. Nature Communications, 2011, 2, 553.	5.8	403
24	Coarsening kinetics from a variable-mobility Cahn-Hilliard equation: Application of a semi-implicit Fourier spectral method. Physical Review E, 1999, 60, 3564-3572.	0.8	386
25	Elastic strain engineering of ferroic oxides. MRS Bulletin, 2014, 39, 118-130.	1.7	379
26	Local polarization dynamics in ferroelectric materials. Reports on Progress in Physics, 2010, 73, 056502.	8.1	368
27	A phase-field model for evolving microstructures with strong elastic inhomogeneity. Acta Materialia, 2001, 49, 1879-1890.	3.8	367
28	Computer simulation of the domain dynamics of a quenched system with a large number of nonconserved order parameters: The grain-growth kinetics. Physical Review B, 1994, 50, 15752-15756.	1.1	363
29	Transparent ferroelectric crystals with ultrahigh piezoelectricity. Nature, 2020, 577, 350-354.	13.7	360
30	Manganese Doping of Monolayer MoS₂: The Substrate Is Critical. Nano Letters, 2015, 15, 6586-6591.	4.5	357
31	Multiferroic Heterostructures Integrating Ferroelectric and Magnetic Materials. Advanced Materials, 2016, 28, 15-39.	11.1	356
32	A phenomenological thermodynamic potential for BaTiO3 single crystals. Journal of Applied Physics, 2005, 98, 064101.	1.1	355
33	A Ferroelectric Oxide Made Directly on Silicon. Science, 2009, 324, 367-370.	6.0	347
34	Ab initio lattice stability in comparison with CALPHAD lattice stability. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2004, 28, 79-90.	0.7	340
35	Stable metal battery anodes enabled by polyethylenimine sponge hosts by way of electrokinetic effects. Nature Energy, 2018, 3, 1076-1083.	19.8	338
36	Deterministic control of ferroelastic switching in multiferroic materials. Nature Nanotechnology, 2009, 4, 868-875.	15.6	331

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37	Enhanced electric conductivity at ferroelectric vortex cores in BiFeO3. Nature Physics, 2012, 8, 81-88.	6.5	324
38	Domain Dynamics During Ferroelectric Switching. Science, 2011, 334, 968-971.	6.0	320
39	Sandwich-structured polymer nanocomposites with high energy density and great chargeâ€“discharge efficiency at elevated temperatures. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 9995-10000.	3.3	317
40	New frontiers for the materials genome initiative. Npj Computational Materials, 2019, 5, .	3.5	312
41	Phase-field model of domain structures in ferroelectric thin films. Applied Physics Letters, 2001, 78, 3878-3880.	1.5	302
42	Phase-field simulations of ferroelectric/ferroelastic polarization switching. Acta Materialia, 2004, 52, 749-764.	3.8	298
43	Probing Nanoscale Ferroelectricity by Ultraviolet Raman Spectroscopy. Science, 2006, 313, 1614-1616.	6.0	295
44	Computer simulation of 3-D grain growth using a phase-field model. Acta Materialia, 2002, 50, 3059-3075.	3.8	281
45	Ultrahigh energy storage in superparaelectric relaxor ferroelectrics. Science, 2021, 374, 100-104.	6.0	276
46	Super-elastic ferroelectric single-crystal membrane with continuous electric dipole rotation. Science, 2019, 366, 475-479.	6.0	272
47	Alveolus-Inspired Active Membrane Sensors for Self-Powered Wearable Chemical Sensing and Breath Analysis. ACS Nano, 2020, 14, 6067-6075.	7.3	271
48	Highâ€Performance Polymers Sandwiched with Chemical Vapor Deposited Hexagonal Boron Nitrides as Scalable Highâ€Temperature Dielectric Materials. Advanced Materials, 2017, 29, 1701864.	11.1	270
49	First-principles study of binary bcc alloys using special quasirandom structures. Physical Review B, 2004, 69, .	1.1	266
50	Nanoscale Domain Control in Multiferroic BiFeO3 Thin Films. Advanced Materials, 2006, 18, 2307-2311.	11.1	262
51	Local Structural Heterogeneity and Electromechanical Responses of Ferroelectrics: Learning from Relaxor Ferroelectrics. Advanced Functional Materials, 2018, 28, 1801504.	7.8	260
52	Emergence of room-temperature ferroelectricity at reduced dimensions. Science, 2015, 349, 1314-1317.	6.0	259
53	Kinetics of strain-induced morphological transformation in cubic alloys with a miscibility gap. Acta Metallurgica Et Materialia, 1993, 41, 279-296.	1.9	258
54	Controlling Self-Assembled Perovskiteâ^'Spinel Nanostructures. Nano Letters, 2006, 6, 1401-1407.	4.5	256

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55	Highâ€Throughput Phaseâ€Field Design of Highâ€Energyâ€Density Polymer Nanocomposites. Advanced Materials, 2018, 30, 1704380.	11.1	254
56	Multiscale modeling of Î¸â€² precipitation in Alâ€“Cu binary alloys. Acta Materialia, 2004, 52, 2973-2987.	3.8	253
57	Direct imaging of the spatial and energy distribution of nucleation centres in ferroelectric materials. Nature Materials, 2008, 7, 209-215.	13.3	250
58	Domain Control in Multiferroic BiFeO₃ through Substrate Vicinality. Advanced Materials, 2007, 19, 2662-2666.	11.1	245
59	Spatially resolved steady-state negative capacitance. Nature, 2019, 565, 468-471.	13.7	245
60	Scalable Polymer Nanocomposites with Record Highâ€Temperature Capacitive Performance Enabled by Rationally Designed Nanostructured Inorganic Fillers. Advanced Materials, 2019, 31, e1900875.	11.1	236
61	Modulation of dendritic patterns during electrodeposition: A nonlinear phase-field model. Journal of Power Sources, 2015, 300, 376-385.	4.0	235
62	Ferroelectricity in Strain-Free<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>SrTiO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>Thin Films. Physical Review Letters, 2010, 104, 197601.	2.9	233
63	First-Principles Calculation of Self-Diffusion Coefficients. Physical Review Letters, 2008, 100, 215901.	2.9	231
64	Effect of electrical boundary conditions on ferroelectric domain structures in thin films. Applied Physics Letters, 2002, 81, 427-429.	1.5	226
65	Polymer Nanocomposites with Ultrahigh Energy Density and High Discharge Efficiency by Modulating their Nanostructures in Three Dimensions. Advanced Materials, 2018, 30, e1707269.	11.1	226
66	Dynamic Conductivity of Ferroelectric Domain Walls in BiFeO₃. Nano Letters, 2011, 11, 1906-1912.	4.5	223
67	Flexoelectricity in solids: Progress, challenges, and perspectives. Progress in Materials Science, 2019, 106, 100570.	16.0	223
68	Strain-Induced Polarization Rotation in Epitaxial (001)<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>BiFeO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>Thin Films. Physical Review Letters, 2008, 101, 107602.	2.9	221
69	Enhancement of the dielectric response in polymer nanocomposites with low dielectric constant fillers. Nanoscale, 2017, 9, 10992-10997.	2.8	216
70	Extended Mapping and Exploration of the Vanadium Dioxide Stress-Temperature Phase Diagram. Nano Letters, 2010, 10, 2667-2673.	4.5	215
71	First principles impurity diffusion coefficients. Acta Materialia, 2009, 57, 4102-4108.	3.8	213
72	Orientation-Dependent Interfacial Mobility Governs the Anisotropic Swelling in Lithiated Silicon Nanowires. Nano Letters, 2012, 12, 1953-1958.	4.5	212

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73	A roadmap for electronic grade 2D materials. 2D Materials, 2019, 6, 022001.	2.0	205
74	Hydrogen in zirconium alloys: A review. Journal of Nuclear Materials, 2019, 518, 440-460.	1.3	203
75	Threeâ€Dimensional Computer Simulation of Ferroelectric Domain Formation. Journal of the American Ceramic Society, 1998, 81, 492-500.	1.9	197
76	Three-dimensional phase-field simulations of coarsening kinetics of Î³â€² particles in binary Niâ€"Al alloys. Acta Materialia, 2004, 52, 2837-2845.	3.8	196
77	Temperature-strain phase diagram for BaTiO3 thin films. Applied Physics Letters, 2006, 88, 072905.	1.5	193
78	Computer simulation of structural transformations during precipitation of an ordered intermetallic phase. Acta Metallurgica Et Materialia, 1991, 39, 2533-2551.	1.9	188
79	Phase-field microelasticity theory and micromagnetic simulations of domain structures in giant magnetostrictive materials. Acta Materialia, 2005, 53, 2845-2855.	3.8	186
80	Effect of second-phase particle morphology on grain growth kinetics. Acta Materialia, 2009, 57, 5229-5236.	3.8	184
81	Connecting the irreversible capacity loss in Li-ion batteries with the electronic insulating properties of solid electrolyte interphase (SEI) components. Journal of Power Sources, 2016, 309, 221-230.	4.0	182
82	Interfacial Study on Solid Electrolyte Interphase at Li Metal Anode: Implication for Li Dendrite Growth. Journal of the Electrochemical Society, 2016, 163, A592-A598.	1.3	180
83	Solute segregation and coherent nucleation and growth near a dislocationâ€"a phase-field model integrating defect and phase microstructures. Acta Materialia, 2001, 49, 463-472.	3.8	177
84	Ultrahigh specific strength in a magnesium alloy strengthened by spinodal decomposition. Science Advances, 2021, 7, .	4.7	176
85	Phase-field modeling and machine learning of electric-thermal-mechanical breakdown of polymer-based dielectrics. Nature Communications, 2019, 10, 1843.	5.8	174
86	From classical thermodynamics to phase-field method. Progress in Materials Science, 2022, 124, 100868.	16.0	172
87	A mixed-space approach to first-principles calculations of phonon frequencies for polar materials. Journal of Physics Condensed Matter, 2010, 22, 202201.	0.7	167
88	Interfacial Electronic Properties Dictate Li Dendrite Growth in Solid Electrolytes. Chemistry of Materials, 2019, 31, 7351-7359.	3.2	165
89	A first-principles approach to finite temperature elastic constants. Journal of Physics Condensed Matter, 2010, 22, 225404.	0.7	164
90	Colossal Room-Temperature Electrocaloric Effect in Ferroelectric Polymer Nanocomposites Using Nanostructured Barium Strontium Titanates. ACS Nano, 2015, 9, 7164-7174.	7.3	164

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91	Controllable conductive readout in self-assembled, topologically confined ferroelectric domain walls. Nature Nanotechnology, 2018, 13, 947-952.	15.6	163
92	High-entropy enhanced capacitive energy storage. Nature Materials, 2022, 21, 1074-1080.	13.3	161
93	Multiscale Modeling of Precipitate Microstructure Evolution. Physical Review Letters, 2002, 88, 125503.	2.9	160
94	Phase transitions and domain structures in strained pseudocubic (100)SrTiO3thin films. Physical Review B, 2006, 73, .	1.1	160
95	Enthalpies of formation of magnesium compounds from first-principles calculations. Intermetallics, 2009, 17, 878-885.	1.8	159
96	Phase coexistence and electric-field control of toroidal order in oxide superlattices. Nature Materials, 2017, 16, 1003-1009.	13.3	159
97	Achieving High Energy Density in PVDF-Based Polymer Blends: Suppression of Early Polarization Saturation and Enhancement of Breakdown Strength. ACS Applied Materials & Interfaces, 2016, 8, 27236-27242.	4.0	158
98	Isostructural metal-insulator transition in VO ₂. Science, 2018, 362, 1037-1040.	6.0	158
99	Atomic-scale mechanisms of ferroelastic domain-wall-mediated ferroelectric switching. Nature Communications, 2013, 4, .	5.8	152
100	Phase-field simulation of polarization switching and domain evolution in ferroelectric polycrystals. Acta Materialia, 2005, 53, 5313-5321.	3.8	148
101	Mixed Bloch-NÃ©el-Ising character of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>180</mml:mn><mml:mo>Â°</mml:mo></mml:mrow></mml:math>ferroelectric domain walls. Physical Review B, 2009, 80, .	1.1	146
102	Recent advances in understanding dendrite growth on alkali metal anodes. EnergyChem, 2019, 1, 100003.	10.1	146
103	Synergy of micro-/mesoscopic interfaces in multilayered polymer nanocomposites induces ultrahigh energy density for capacitive energy storage. Nano Energy, 2019, 62, 220-229.	8.2	144
104	Linking phase-field model to CALPHAD: application to precipitate shape evolution in Ni-base alloys. Scripta Materialia, 2002, 46, 401-406.	2.6	143
105	Phase transitions and domain structures of ferroelectric nanoparticles: Phase field model incorporating strong elastic and dielectric inhomogeneity. Acta Materialia, 2013, 61, 7591-7603.	3.8	143
106	First-principles calculations of twin-boundary and stacking-fault energies in magnesium. Scripta Materialia, 2010, 62, 646-649.	2.6	141
107	Effect of grain orientation and grain size on ferroelectric domain switching and evolution: Phase field simulations. Acta Materialia, 2007, 55, 1415-1426.	3.8	140
108	Operando and three-dimensional visualization of anion depletion and lithium growth by stimulated Raman scattering microscopy. Nature Communications, 2018, 9, 2942.	5.8	138

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109	Atomistic calculations of interfacial energies, nucleus shape and size of Î¸â€² precipitates in Alâ€“Cu alloys. Acta Materialia, 2006, 54, 4699-4707.	3.8	137
110	Lattice, elastic, polarization, and electrostrictive properties of BaTiO3 from first-principles. Journal of Applied Physics, 2010, 108, .	1.1	137
111	Challenges and opportunities for multi-functional oxide thin films for voltage tunable radio frequency/microwave components. Journal of Applied Physics, 2013, 114, .	1.1	137
112	Phase field modeling of the tetragonal-to-monoclinic phase transformation in zirconia. Acta Materialia, 2013, 61, 5223-5235.	3.8	136
113	Modulation of topological structure induces ultrahigh energy density of graphene/Ba 0.6 Sr 0.4 TiO 3 nanofiber/polymer nanocomposites. Nano Energy, 2015, 18, 176-186.	8.2	136
114	Ferroelastic domain switching dynamics under electrical and mechanical excitations. Nature Communications, 2014, 5, 3801.	5.8	135
115	Coarsening of ordered intermetallic precipitates with coherency stress. Acta Materialia, 2002, 50, 4061-4073.	3.8	133
116	Polymer Nanocomposites with Interpenetrating Gradient Structure Exhibiting Ultrahigh Discharge Efficiency and Energy Density. Advanced Energy Materials, 2019, 9, 1803411.	10.2	132
117	Stability of Polar Vortex Lattice in Ferroelectric Superlattices. Nano Letters, 2017, 17, 2246-2252.	4.5	131
118	The Contributions of Polar Nanoregions to the Dielectric and Piezoelectric Responses in Domainâ€Engineered Relaxorâ€PbTiO₃ Crystals. Advanced Functional Materials, 2017, 27, 1700310.	7.8	129
119	Electron-beam lithography of gold nanostructures for surface-enhanced Raman scattering. Journal of Micromechanics and Microengineering, 2012, 22, 125007.	1.5	126
120	Domain Wall Geometry Controls Conduction in Ferroelectrics. Nano Letters, 2012, 12, 5524-5531.	4.5	125
121	Ultrahigh discharge efficiency in multilayered polymer nanocomposites of high energy density. Energy Storage Materials, 2019, 18, 213-221.	9.5	125
122	Selective control of multiple ferroelectric switching pathways using a trailing flexoelectric field. Nature Nanotechnology, 2018, 13, 366-370.	15.6	124
123	Thermotropic phase boundaries in classic ferroelectrics. Nature Communications, 2014, 5, 3172.	5.8	123
124	Ferroelectricity in Ultrathin<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>BaTiO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>Films: Probing the Size Effect by Ultraviolet Raman Spectroscopy. Physical Review Letters, 2009, 103, 177601.	2.9	121
125	High-entropy polymer produces a giant electrocaloric effect at low fields. Nature, 2021, 600, 664-669.	13.7	121
126	First-principles calculations of lattice dynamics and thermal properties of polar solids. Npj Computational Materials, 2016, 2, .	3.5	119

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127	Re segregation at interfacial dislocation network in a nickel-based superalloy. Acta Materialia, 2018, 154, 137-146.	3.8	119
128	Exploring Topological Defects in Epitaxial BiFeO₃ Thin Films. ACS Nano, 2011, 5, 879-887.	7.3	118
129	Flexible Multiferroic Bulk Heterojunction with Giant Magnetoelectric Coupling <i>via</i> van der Waals Epitaxy. ACS Nano, 2017, 11, 6122-6130.	7.3	118
130	Elastic properties of cubic and rhombohedral<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>BiFeO</mml:mtext></mml:mrow><mml:mn>3</mml:mn></mml:m first-principles calculations. Physical Review B, 2009, 80, .	1.1	116
131	The continuum field approach to modeling microstructural evolution. Jom, 1996, 48, 13-18.	0.9	115
132	Nonâ€Volatile 180Â° Magnetization Reversal by an Electric Field in Multiferroic Heterostructures. Advanced Materials, 2014, 26, 7091-7095.	11.1	115
133	Diffusion-controlled grain growth in two-phase solids. Acta Materialia, 1997, 45, 3297-3310.	3.8	113
134	Effect of substrate-induced strains on the spontaneous polarization of epitaxial BiFeO3 thin films. Journal of Applied Physics, 2007, 101, 114105.	1.1	113
135	Surface Domain Structures and Mesoscopic Phase Transition in Relaxor Ferroelectrics. Advanced Functional Materials, 2011, 21, 1977-1987.	7.8	113
136	Computer simulation of topological evolution in 2-D grain growth using a continuum diffuse-interface field model. Acta Materialia, 1997, 45, 1115-1126.	3.8	110
137	Thermodynamics of electromechanically coupled mixed ionic-electronic conductors: Deformation potential, Vegard strains, and flexoelectric effect. Physical Review B, 2011, 83, .	1.1	110
138	Understanding and designing magnetoelectric heterostructures guided by computation: progresses, remaining questions, and perspectives. Npj Computational Materials, 2017, 3, .	3.5	110
139	Strain Control of Domain-Wall Stability in Epitaxial<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>BiFeO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>(110) Films. Physical Review Letters, 2007, 99, 217601.	2.9	109
140	Dramatically Enhanced Combination of Ultimate Tensile Strength and Electric Conductivity of Alloys via Machine Learning Screening. Acta Materialia, 2020, 200, 803-810.	3.8	109
141	Computer simulation of stress-oriented nucleation and growth of Î¸â€² precipitates inAlâ€“Cu alloys. Acta Materialia, 1998, 46, 2573-2585.	3.8	108
142	Computer simulation of 90 Â° ferroelectric domain formation in two-dimensions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 238, 182-191.	2.6	107
143	Flexible energy harvesting polymer composites based on biofibril-templated 3-dimensional interconnected piezoceramics. Nano Energy, 2018, 50, 35-42.	8.2	107
144	c-axis oriented epitaxial BaTiO3 films on (001) Si. Journal of Applied Physics, 2006, 100, 024108.	1.1	106

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145	Computer simulation of spinodal decomposition in constrained films. Acta Materialia, 2003, 51, 5173-5185.	3.8	105
146	Optical creation of a supercrystal with three-dimensional nanoscale periodicity. Nature Materials, 2019, 18, 377-383.	13.3	105
147	Phase-field simulation of 2-D Ostwald ripening in the high volume fraction regime. Acta Materialia, 2002, 50, 1895-1907.	3.8	104
148	Coarsening kinetics of Î³â€² precipitates in the Niâ€“Alâ€“Mo system. Acta Materialia, 2008, 56, 5544-5551.	3.8	104
149	Bioinspired elastic piezoelectric composites for high-performance mechanical energy harvesting. Journal of Materials Chemistry A, 2018, 6, 14546-14552.	5.2	104
150	First-principles calculations of the elastic, phonon and thermodynamic properties of Al12Mg17. Acta Materialia, 2010, 58, 4012-4018.	3.8	103
151	Flexoelectricity and ferroelectric domain wall structures: Phase-field modeling and DFT calculations. Physical Review B, 2014, 89, .	1.1	101
152	Toward Wearable Cooling Devices: Highly Flexible Electrocaloric Ba_{0.67}Sr_{0.33}TiO₃ Nanowire Arrays. Advanced Materials, 2016, 28, 4811-4816.	11.1	101
153	Understanding, Predicting, and Designing Ferroelectric Domain Structures and Switching Guided by the Phase-Field Method. Annual Review of Materials Research, 2019, 49, 127-152.	4.3	101
154	Nonlinear phase-field model for electrode-electrolyte interface evolution. Physical Review E, 2012, 86, 051609.	0.8	100
155	Orthorhombic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>BiFeO</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2012, 109, 247606.	2.9	100
156	Interfacial polarization and pyroelectricity in antiferrodistortive structures induced by a flexoelectric effect and rotostriction. Physical Review B, 2012, 85, .	1.1	100
157	Purely Electric-Field-Driven Perpendicular Magnetization Reversal. Nano Letters, 2015, 15, 616-622.	4.5	100
158	A Phase-Field Model Coupled with Large Elasto-Plastic Deformation: Application to Lithiated Silicon Electrodes. Journal of the Electrochemical Society, 2014, 161, F3164-F3172.	1.3	99
159	Design of a Voltageâ€Controlled Magnetic Random Access Memory Based on Anisotropic Magnetoresistance in a Single Magnetic Layer. Advanced Materials, 2012, 24, 2869-2873.	11.1	98
160	Ferroelastic switching in a layered-perovskite thin film. Nature Communications, 2016, 7, 10636.	5.8	97
161	Nanovoid Formation and Annihilation in Gallium Nanodroplets under Lithiationâ€“Delithiation Cycling. Nano Letters, 2013, 13, 5212-5217.	4.5	96
162	An integrated fast Fourier transform-based phase-field and crystal plasticity approach to model recrystallization of three dimensional polycrystals. Computer Methods in Applied Mechanics and Engineering, 2015, 285, 829-848.	3.4	96

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163	Effect of solutes on dislocation motion â€”a phase-field simulation. International Journal of Plasticity, 2004, 20, 403-425.	4.1	95
164	Kinetics of tweed and twin formation during an ordering transition in a substitutional solid solution. Philosophical Magazine Letters, 1992, 65, 15-23.	0.5	93
165	Predicting Î²â€² precipitate morphology and evolution in Mgâ€"RE alloys using a combination of first-principles calculations and phase-field modeling. Acta Materialia, 2014, 76, 259-271.	3.8	93
166	Multiferroic magnetoelectric nanostructures for novel device applications. MRS Bulletin, 2015, 40, 728-735.	1.7	93
167	Controlled manipulation of oxygen vacancies using nanoscale flexoelectricity. Nature Communications, 2017, 8, 615.	5.8	93
168	Sharpened VO₂ Phase Transition via Controlled Release of Epitaxial Strain. Nano Letters, 2017, 17, 5614-5619.	4.5	93
169	Morphological evolution during phase separation and coarsening with strong inhomogeneous elasticity. Modelling and Simulation in Materials Science and Engineering, 2001, 9, 499-511.	0.8	92
170	Large kinetic asymmetry in the metal-insulator transition nucleated at localized and extended defects. Physical Review B, 2011, 83, .	1.1	92
171	From coreâ€"shell Ba_{0.4}Sr_{0.6}TiO₃@SiO₂ particles to dense ceramics with high energy storage performance by spark plasma sintering. Journal of Materials Chemistry A, 2018, 6, 4477-4484.	5.2	92
172	Role of interfacial energy anisotropy in dendrite orientation in Al-Zn alloys: A phase field study. Materials and Design, 2022, 216, 110555.	3.3	92
173	Configurable topological textures in strain graded ferroelectric nanoplates. Nature Communications, 2018, 9, 403.	5.8	91
174	Multiferroic Domain Dynamics in Strained Strontium Titanate. Physical Review Letters, 2006, 97, 257602.	2.9	90
175	Temperature-pressure phase diagram and ferroelectric properties of BaTiO3 single crystal based on a modified Landau potential. Journal of Applied Physics, 2010, 108, .	1.1	90
176	Ferroelectric Control of the Conduction at the LaAlO₃/SrTiO₃ Heterointerface. Advanced Materials, 2013, 25, 3357-3364.	11.1	90
177	Phaseâ€Field Model of Electrothermal Breakdown in Flexible Highâ€Temperature Nanocomposites under Extreme Conditions. Advanced Energy Materials, 2018, 8, 1800509.	10.2	90
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