

# L-Q Chen

## List of Publications by Citations

**Source:** <https://exaly.com/author-pdf/8788854/l-q-chen-publications-by-citations.pdf>

**Version:** 2024-04-27

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

858  
papers

49,840  
citations

105  
h-index

191  
g-index

908  
ext. papers

57,983  
ext. citations

8.4  
avg, IF

7.89  
L-index

#	Paper	IF	Citations
858	Phase-Field Models for Microstructure Evolution. <i>Annual Review of Materials Research</i> , <b>2002</b> , 32, 113-140	12.8	1890
857	Room-temperature ferroelectricity in strained SrTiO <sub>3</sub> . <i>Nature</i> , <b>2004</b> , 430, 758-61	50.4	1631
856	Enhancement of ferroelectricity in strained BaTiO <sub>3</sub> thin films. <i>Science</i> , <b>2004</b> , 306, 1005-9	33.3	1459
855	Flexible high-temperature dielectric materials from polymer nanocomposites. <i>Nature</i> , <b>2015</b> , 523, 576-9	50.4	1017
854	A strain-driven morphotropic phase boundary in BiFeO <sub>3</sub> . <i>Science</i> , <b>2009</b> , 326, 977-80	33.3	956
853	Strain Tuning of Ferroelectric Thin Films. <i>Annual Review of Materials Research</i> , <b>2007</b> , 37, 589-626	12.8	869
852	Applications of semi-implicit Fourier-spectral method to phase field equations. <i>Computer Physics Communications</i> , <b>1998</b> , 108, 147-158	4.2	750
851	Efficient stochastic generation of special quasirandom structures. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , <b>2013</b> , 42, 13-18	1.9	572
850	Ultrahigh piezoelectricity in ferroelectric ceramics by design. <i>Nature Materials</i> , <b>2018</b> , 17, 349-354	27	513
849	Observation of polar vortices in oxide superlattices. <i>Nature</i> , <b>2016</b> , 530, 198-201	50.4	488
848	Ultrathin, flexible, solid polymer composite electrolyte enabled with aligned nanoporous host for lithium batteries. <i>Nature Nanotechnology</i> , <b>2019</b> , 14, 705-711	28.7	442
847	A Thin Film Approach to Engineering Functionality into Oxides. <i>Journal of the American Ceramic Society</i> , <b>2008</b> , 91, 2429-2454	3.8	396
846	Effect of substrate constraint on the stability and evolution of ferroelectric domain structures in thin films. <i>Acta Materialia</i> , <b>2002</b> , 50, 395-411	8.4	392
845	Spontaneous vortex nanodomain arrays at ferroelectric heterointerfaces. <i>Nano Letters</i> , <b>2011</b> , 11, 828-34	11.5	365
844	Thermodynamic properties of Al, Ni, NiAl, and Ni <sub>3</sub> Al from first-principles calculations. <i>Acta Materialia</i> , <b>2004</b> , 52, 2665-2671	8.4	360
843	Ultrahigh-energy density lead-free dielectric films via polymorphic nanodomain design. <i>Science</i> , <b>2019</b> , 365, 578-582	33.3	353
842	Ferroelastic switching for nanoscale non-volatile magnetoelectric devices. <i>Nature Materials</i> , <b>2010</b> , 9, 309-14	27	344

841	High-density magnetoresistive random access memory operating at ultralow voltage at room temperature. <i>Nature Communications</i> , <b>2011</b> , 2, 553	17.4	343
840	Computer simulation of grain growth using a continuum field model. <i>Acta Materialia</i> , <b>1997</b> , 45, 611-622	8.4	342
839	Local polarization dynamics in ferroelectric materials. <i>Reports on Progress in Physics</i> , <b>2010</b> , 73, 056502	14.4	341
838	The origin of ultrahigh piezoelectricity in relaxor-ferroelectric solid solution crystals. <i>Nature Communications</i> , <b>2016</b> , 7, 13807	17.4	332
837	Phase-Field Method of Phase Transitions/Domain Structures in Ferroelectric Thin Films: A Review. <i>Journal of the American Ceramic Society</i> , <b>2008</b> , 91, 1835-1844	3.8	329
836	Coarsening kinetics from a variable-mobility Cahn-Hilliard equation: application of a semi-implicit Fourier spectral method. <i>Physical Review E</i> , <b>1999</b> , 60, 3564-72	2.4	325
835	A ferroelectric oxide made directly on silicon. <i>Science</i> , <b>2009</b> , 324, 367-70	33.3	320
834	A phase-field model for evolving microstructures with strong elastic inhomogeneity. <i>Acta Materialia</i> , <b>2001</b> , 49, 1879-1890	8.4	320
833	Computer simulation of the domain dynamics of a quenched system with a large number of nonconserved order parameters: The grain-growth kinetics. <i>Physical Review B</i> , <b>1994</b> , 50, 15752-15756	3.3	312
832	A phenomenological thermodynamic potential for BaTiO <sub>3</sub> single crystals. <i>Journal of Applied Physics</i> , <b>2005</b> , 98, 064101	2.5	310
831	Elastic strain engineering of ferroic oxides. <i>MRS Bulletin</i> , <b>2014</b> , 39, 118-130	3.2	309
830	Ab initio lattice stability in comparison with CALPHAD lattice stability. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , <b>2004</b> , 28, 79-90	1.9	303
829	Deterministic control of ferroelastic switching in multiferroic materials. <i>Nature Nanotechnology</i> , <b>2009</b> , 4, 868-75	28.7	299
828	Manganese Doping of Monolayer MoS <sub>2</sub> : The Substrate Is Critical. <i>Nano Letters</i> , <b>2015</b> , 15, 6586-91	11.5	285
827	Multiferroic Heterostructures Integrating Ferroelectric and Magnetic Materials. <i>Advanced Materials</i> , <b>2016</b> , 28, 15-39	24	284
826	Domain dynamics during ferroelectric switching. <i>Science</i> , <b>2011</b> , 334, 968-71	33.3	277
825	Phase-field model of domain structures in ferroelectric thin films. <i>Applied Physics Letters</i> , <b>2001</b> , 78, 3878-3880	3.4	276
824	Probing nanoscale ferroelectricity by ultraviolet Raman spectroscopy. <i>Science</i> , <b>2006</b> , 313, 1614-6	33.3	272

823	Enhanced electric conductivity at ferroelectric vortex cores in BiFeO <sub>3</sub> . <i>Nature Physics</i> , <b>2012</b> , 8, 81-88	16.2	271
822	Phase-field simulations of ferroelectric/ferroelastic polarization switching. <i>Acta Materialia</i> , <b>2004</b> , 52, 749-764	8.4	248
821	Nanoscale Domain Control in Multiferroic BiFeO <sub>3</sub> Thin Films. <i>Advanced Materials</i> , <b>2006</b> , 18, 2307-2311	24	244
820	Giant piezoelectricity of Sm-doped Pb(MgNb)O-PbTiO single crystals. <i>Science</i> , <b>2019</b> , 364, 264-268	33.3	242
819	Controlling self-assembled perovskite-spinel nanostructures. <i>Nano Letters</i> , <b>2006</b> , 6, 1401-7	11.5	240
818	Direct imaging of the spatial and energy distribution of nucleation centres in ferroelectric materials. <i>Nature Materials</i> , <b>2008</b> , 7, 209-15	27	235
817	Kinetics of strain-induced morphological transformation in cubic alloys with a miscibility gap. <i>Acta Metallurgica Et Materialia</i> , <b>1993</b> , 41, 279-296		231
816	First-principles study of binary bcc alloys using special quasirandom structures. <i>Physical Review B</i> , <b>2004</b> , 69,	3.3	228
815	Sandwich-structured polymer nanocomposites with high energy density and great charge-discharge efficiency at elevated temperatures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 9995-10000	11.5	227
814	Observation of room-temperature polar skyrmions. <i>Nature</i> , <b>2019</b> , 568, 368-372	50.4	221
813	Computer simulation of 3-D grain growth using a phase-field model. <i>Acta Materialia</i> , <b>2002</b> , 50, 3059-3075	8.4	218
812	Domain Control in Multiferroic BiFeO <sub>3</sub> through Substrate Vicinality. <i>Advanced Materials</i> , <b>2007</b> , 19, 2662-2666	26.6	216
811	Stable metal battery anodes enabled by polyethylenimine sponge hosts by way of electrokinetic effects. <i>Nature Energy</i> , <b>2018</b> , 3, 1076-1083	62.3	212
810	Multiscale modeling of $\theta$ precipitation in AlCu binary alloys. <i>Acta Materialia</i> , <b>2004</b> , 52, 2973-2987	8.4	209
809	Ferroelectricity in strain-free SrTiO <sub>3</sub> thin films. <i>Physical Review Letters</i> , <b>2010</b> , 104, 197601	7.4	205
808	Strain-induced polarization rotation in epitaxial (001) BiFeO <sub>3</sub> thin films. <i>Physical Review Letters</i> , <b>2008</b> , 101, 107602	7.4	205
807	Dynamic conductivity of ferroelectric domain walls in BiFeO <sub>3</sub> . <i>Nano Letters</i> , <b>2011</b> , 11, 1906-12	11.5	204
806	Emergence of room-temperature ferroelectricity at reduced dimensions. <i>Science</i> , <b>2015</b> , 349, 1314-7	33.3	198

805	First-principles calculation of self-diffusion coefficients. <i>Physical Review Letters</i> , <b>2008</b> , 100, 215901	7.4	197
804	Effect of electrical boundary conditions on ferroelectric domain structures in thin films. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 427-429	3.4	195
803	Orientation-dependent interfacial mobility governs the anisotropic swelling in lithiated silicon nanowires. <i>Nano Letters</i> , <b>2012</b> , 12, 1953-8	11.5	191
802	Extended mapping and exploration of the vanadium dioxide stress-temperature phase diagram. <i>Nano Letters</i> , <b>2010</b> , 10, 2667-73	11.5	186
801	First principles impurity diffusion coefficients. <i>Acta Materialia</i> , <b>2009</b> , 57, 4102-4108	8.4	184
800	Transparent ferroelectric crystals with ultrahigh piezoelectricity. <i>Nature</i> , <b>2020</b> , 577, 350-354	50.4	181
799	Three-dimensional phase-field simulations of coarsening kinetics of $\beta$ particles in binary NiAl alloys. <i>Acta Materialia</i> , <b>2004</b> , 52, 2837-2845	8.4	172
798	New frontiers for the materials genome initiative. <i>Npj Computational Materials</i> , <b>2019</b> , 5,	10.9	171
797	High-Throughput Phase-Field Design of High-Energy-Density Polymer Nanocomposites. <i>Advanced Materials</i> , <b>2018</b> , 30, 1704380	24	171
796	Temperature-strain phase diagram for BaTiO <sub>3</sub> thin films. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 072905	3.4	168
795	Alveolus-Inspired Active Membrane Sensors for Self-Powered Wearable Chemical Sensing and Breath Analysis. <i>ACS Nano</i> , <b>2020</b> , 14, 6067-6075	16.7	167
794	Three-Dimensional Computer Simulation of Ferroelectric Domain Formation. <i>Journal of the American Ceramic Society</i> , <b>2005</b> , 81, 492-500	3.8	166
793	Computer simulation of structural transformations during precipitation of an ordered intermetallic phase. <i>Acta Metallurgica Et Materialia</i> , <b>1991</b> , 39, 2533-2551		166
792	Solute segregation and coherent nucleation and growth near a dislocation phase-field model integrating defect and phase microstructures. <i>Acta Materialia</i> , <b>2001</b> , 49, 463-472	8.4	160
791	Polymer Nanocomposites with Ultrahigh Energy Density and High Discharge Efficiency by Modulating their Nanostructures in Three Dimensions. <i>Advanced Materials</i> , <b>2018</b> , 30, e1707269	24	157
790	High-Performance Polymers Sandwiched with Chemical Vapor Deposited Hexagonal Boron Nitrides as Scalable High-Temperature Dielectric Materials. <i>Advanced Materials</i> , <b>2017</b> , 29, 1701864	24	153
789	Phase-field microelasticity theory and micromagnetic simulations of domain structures in giant magnetostrictive materials. <i>Acta Materialia</i> , <b>2005</b> , 53, 2845-2855	8.4	151
788	Local Structural Heterogeneity and Electromechanical Responses of Ferroelectrics: Learning from Relaxor Ferroelectrics. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1801504	15.6	149

787	Multiscale modeling of precipitate microstructure evolution. <i>Physical Review Letters</i> , <b>2002</b> , 88, 125503	7.4	145
786	Spatially resolved steady-state negative capacitance. <i>Nature</i> , <b>2019</b> , 565, 468-471	50.4	144
785	A first-principles approach to finite temperature elastic constants. <i>Journal of Physics Condensed Matter</i> , <b>2010</b> , 22, 225404	1.8	136
784	Phase transitions and domain structures in strained pseudocubic (100) SrTiO <sub>3</sub> thin films. <i>Physical Review B</i> , <b>2006</b> , 73,	3.3	133
783	A roadmap for electronic grade 2D materials. <i>2D Materials</i> , <b>2019</b> , 6, 022001	5.9	133
782	Connecting the irreversible capacity loss in Li-ion batteries with the electronic insulating properties of solid electrolyte interphase (SEI) components. <i>Journal of Power Sources</i> , <b>2016</b> , 309, 221-230	8.9	132
781	Colossal Room-Temperature Electrocaloric Effect in Ferroelectric Polymer Nanocomposites Using Nanostructured Barium Strontium Titanates. <i>ACS Nano</i> , <b>2015</b> , 9, 7164-74	16.7	131
780	Effect of second-phase particle morphology on grain growth kinetics. <i>Acta Materialia</i> , <b>2009</b> , 57, 5229-5236	3.4	131
779	Enthalpies of formation of magnesium compounds from first-principles calculations. <i>Intermetallics</i> , <b>2009</b> , 17, 878-885	3.5	131
778	A mixed-space approach to first-principles calculations of phonon frequencies for polar materials. <i>Journal of Physics Condensed Matter</i> , <b>2010</b> , 22, 202201	1.8	129
777	Linking phase-field model to CALPHAD: application to precipitate shape evolution in Ni-base alloys. <i>Scripta Materialia</i> , <b>2002</b> , 46, 401-406	5.6	129
776	Atomic-scale mechanisms of ferroelastic domain-wall-mediated ferroelectric switching. <i>Nature Communications</i> , <b>2013</b> , 4,	17.4	128
775	Super-elastic ferroelectric single-crystal membrane with continuous electric dipole rotation. <i>Science</i> , <b>2019</b> , 366, 475-479	33.3	127
774	Interfacial Study on Solid Electrolyte Interphase at Li Metal Anode: Implication for Li Dendrite Growth. <i>Journal of the Electrochemical Society</i> , <b>2016</b> , 163, A592-A598	3.9	125
773	Modulation of dendritic patterns during electrodeposition: A nonlinear phase-field model. <i>Journal of Power Sources</i> , <b>2015</b> , 300, 376-385	8.9	125
772	Flexoelectricity in solids: Progress, challenges, and perspectives. <i>Progress in Materials Science</i> , <b>2019</b> , 106, 100570	42.2	123
771	First-principles calculations of twin-boundary and stacking-fault energies in magnesium. <i>Scripta Materialia</i> , <b>2010</b> , 62, 646-649	5.6	123
770	Enhancement of the dielectric response in polymer nanocomposites with low dielectric constant fillers. <i>Nanoscale</i> , <b>2017</b> , 9, 10992-10997	7.7	122

769	Phase-field simulation of polarization switching and domain evolution in ferroelectric polycrystals. <i>Acta Materialia</i> , <b>2005</b> , 53, 5313-5321	8.4	122
768	Mixed Bloch-Néel-Ising character of 180° ferroelectric domain walls. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	121
767	Scalable Polymer Nanocomposites with Record High-Temperature Capacitive Performance Enabled by Rationally Designed Nanostructured Inorganic Fillers. <i>Advanced Materials</i> , <b>2019</b> , 31, e1900875	24	120
766	Phase transitions and domain structures of ferroelectric nanoparticles: Phase field model incorporating strong elastic and dielectric inhomogeneity. <i>Acta Materialia</i> , <b>2013</b> , 61, 7591-7603	8.4	120
765	Modulation of topological structure induces ultrahigh energy density of graphene/Ba 0.6 Sr 0.4 TiO <sub>3</sub> nanofiber/polymer nanocomposites. <i>Nano Energy</i> , <b>2015</b> , 18, 176-186	17.1	119
764	Lattice, elastic, polarization, and electrostrictive properties of BaTiO <sub>3</sub> from first-principles. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 034107	2.5	116
763	Achieving High Energy Density in PVDF-Based Polymer Blends: Suppression of Early Polarization Saturation and Enhancement of Breakdown Strength. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 27236-27242	9.5	113
762	Challenges and opportunities for multi-functional oxide thin films for voltage tunable radio frequency/microwave components. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 191301	2.5	111
761	Atomistic calculations of interfacial energies, nucleus shape and size of $\beta$ precipitates in AlCu alloys. <i>Acta Materialia</i> , <b>2006</b> , 54, 4699-4707	8.4	111
760	Coarsening of ordered intermetallic precipitates with coherency stress. <i>Acta Materialia</i> , <b>2002</b> , 50, 4061-4073	8.73	111
759	Ferroelastic domain switching dynamics under electrical and mechanical excitations. <i>Nature Communications</i> , <b>2014</b> , 5, 3801	17.4	110
758	Ferroelectricity in ultrathin BaTiO <sub>3</sub> films: probing the size effect by ultraviolet Raman spectroscopy. <i>Physical Review Letters</i> , <b>2009</b> , 103, 177601	7.4	110
757	Effect of grain orientation and grain size on ferroelectric domain switching and evolution: Phase field simulations. <i>Acta Materialia</i> , <b>2007</b> , 55, 1415-1426	8.4	110
756	Phase coexistence and electric-field control of toroidal order in oxide superlattices. <i>Nature Materials</i> , <b>2017</b> , 16, 1003-1009	27	108
755	Electron-beam lithography of gold nanostructures for surface-enhanced Raman scattering. <i>Journal of Micromechanics and Microengineering</i> , <b>2012</b> , 22, 125007	2	108
754	Phase field modeling of the tetragonal-to-monoclinic phase transformation in zirconia. <i>Acta Materialia</i> , <b>2013</b> , 61, 5223-5235	8.4	106
753	Thermotropic phase boundaries in classic ferroelectrics. <i>Nature Communications</i> , <b>2014</b> , 5, 3172	17.4	105
752	Effect of substrate-induced strains on the spontaneous polarization of epitaxial BiFeO <sub>3</sub> thin films. <i>Journal of Applied Physics</i> , <b>2007</b> , 101, 114105	2.5	105

751	Controllable conductive readout in self-assembled, topologically confined ferroelectric domain walls. <i>Nature Nanotechnology</i> , <b>2018</b> , 13, 947-952	28.7	104
750	Domain wall geometry controls conduction in ferroelectrics. <i>Nano Letters</i> , <b>2012</b> , 12, 5524-31	11.5	103
749	Surface Domain Structures and Mesoscopic Phase Transition in Relaxor Ferroelectrics. <i>Advanced Functional Materials</i> , <b>2011</b> , 21, 1977-1987	15.6	102
748	Exploring topological defects in epitaxial BiFeO <sub>3</sub> thin films. <i>ACS Nano</i> , <b>2011</b> , 5, 879-87	16.7	102
747	Thermodynamics of electromechanically coupled mixed ionic-electronic conductors: Deformation potential, Vegard strains, and flexoelectric effect. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	102
746	Non-volatile 180° magnetization reversal by an electric field in multiferroic heterostructures. <i>Advanced Materials</i> , <b>2014</b> , 26, 7091-5	24	99
745	Computer simulation of topological evolution in 2-D grain growth using a continuum diffuse-interface field model. <i>Acta Materialia</i> , <b>1997</b> , 45, 1115-1126	8.4	98
744	The continuum field approach to modeling microstructural evolution. <i>Jom</i> , <b>1996</b> , 48, 13-18	2.1	98
743	The Contributions of Polar Nanoregions to the Dielectric and Piezoelectric Responses in Domain-Engineered Relaxor-PbTiO <sub>3</sub> Crystals. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1700310	15.6	97
742	Phase-field modeling and machine learning of electric-thermal-mechanical breakdown of polymer-based dielectrics. <i>Nature Communications</i> , <b>2019</b> , 10, 1843	17.4	97
741	Recent advances in understanding dendrite growth on alkali metal anodes. <i>EnergyChem</i> , <b>2019</b> , 1, 100003	36.9	97
740	Elastic properties of cubic and rhombohedral BiFeO <sub>3</sub> from first-principles calculations. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	97
739	Computer simulation of 90° ferroelectric domain formation in two-dimensions. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>1997</b> , 238, 182-191	5.3	97
738	c-axis oriented epitaxial BaTiO <sub>3</sub> films on (001) Si. <i>Journal of Applied Physics</i> , <b>2006</b> , 100, 024108	2.5	97
737	Strain control of domain-wall stability in epitaxial BiFeO <sub>3</sub> (110) films. <i>Physical Review Letters</i> , <b>2007</b> , 99, 217601	7.4	96
736	Operando and three-dimensional visualization of anion depletion and lithium growth by stimulated Raman scattering microscopy. <i>Nature Communications</i> , <b>2018</b> , 9, 2942	17.4	94
735	Interfacial polarization and pyroelectricity in antiferrodistortive structures induced by a flexoelectric effect and rotostriction. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	94
734	Isostructural metal-insulator transition in VO. <i>Science</i> , <b>2018</b> , 362, 1037-1040	33.3	94



733	Hydrogen in zirconium alloys: A review. <i>Journal of Nuclear Materials</i> , <b>2019</b> , 518, 440-460	3.3	93
732	Computer simulation of stress-oriented nucleation and growth of $\eta$ precipitates in AlCu alloys. <i>Acta Materialia</i> , <b>1998</b> , 46, 2573-2585	8.4	93
731	Phase-field simulation of 2-D Ostwald ripening in the high volume fraction regime. <i>Acta Materialia</i> , <b>2002</b> , 50, 1895-1907	8.4	92
730	Diffusion-controlled grain growth in two-phase solids. <i>Acta Materialia</i> , <b>1997</b> , 45, 3297-3310	8.4	90
729	Purely electric-field-driven perpendicular magnetization reversal. <i>Nano Letters</i> , <b>2015</b> , 15, 616-22	11.5	89
728	Design of a voltage-controlled magnetic random access memory based on anisotropic magnetoresistance in a single magnetic layer. <i>Advanced Materials</i> , <b>2012</b> , 24, 2869-73	24	89
727	Computer simulation of spinodal decomposition in constrained films. <i>Acta Materialia</i> , <b>2003</b> , 51, 5173-5185	8.4	89
726	Flexible Multiferroic Bulk Heterojunction with Giant Magnetoelectric Coupling via van der Waals Epitaxy. <i>ACS Nano</i> , <b>2017</b> , 11, 6122-6130	16.7	88
725	First-principles calculations of lattice dynamics and thermal properties of polar solids. <i>Npj Computational Materials</i> , <b>2016</b> , 2,	10.9	88
724	Kinetics of tweed and twin formation during an ordering transition in a substitutional solid solution. <i>Philosophical Magazine Letters</i> , <b>1992</b> , 65, 15-23	1	88
723	Orthorhombic BiFeO <sub>3</sub> . <i>Physical Review Letters</i> , <b>2012</b> , 109, 247606	7.4	87
722	Coarsening kinetics of $\eta$ precipitates in the NiAlMo system. <i>Acta Materialia</i> , <b>2008</b> , 56, 5544-5551	8.4	86
721	Effect of solutes on dislocation motion $\eta$ phase-field simulation. <i>International Journal of Plasticity</i> , <b>2004</b> , 20, 403-425	7.6	86
720	Stability of Polar Vortex Lattice in Ferroelectric Superlattices. <i>Nano Letters</i> , <b>2017</b> , 17, 2246-2252	11.5	85
719	Synergy of micro-/mesoscopic interfaces in multilayered polymer nanocomposites induces ultrahigh energy density for capacitive energy storage. <i>Nano Energy</i> , <b>2019</b> , 62, 220-229	17.1	84
718	Polymer Nanocomposites with Interpenetrating Gradient Structure Exhibiting Ultrahigh Discharge Efficiency and Energy Density. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1803411	21.8	84
717	A novel computer simulation technique for modeling grain growth. <i>Scripta Metallurgica Et Materialia</i> , <b>1995</b> , 32, 115-120		82
716	Temperature-pressure phase diagram and ferroelectric properties of BaTiO <sub>3</sub> single crystal based on a modified Landau potential. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 114105	2.5	81

715	First-principles calculations of the elastic, phonon and thermodynamic properties of Al <sub>12</sub> Mg <sub>17</sub> . <i>Acta Materialia</i> , <b>2010</b> , 58, 4012-4018	8.4	81
714	Toward Wearable Cooling Devices: Highly Flexible Electrocaloric Ba <sub>0.67</sub> Sr <sub>0.33</sub> TiO <sub>3</sub> Nanowire Arrays. <i>Advanced Materials</i> , <b>2016</b> , 28, 4811-6	24	80
713	Interfacial Electronic Properties Dictate Li Dendrite Growth in Solid Electrolytes. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 7351-7359	9.6	80
712	Computer simulation of atomic ordering and compositional clustering in the pseudobinary Ni <sub>3</sub> AlNi <sub>3</sub> V system. <i>Acta Materialia</i> , <b>1998</b> , 46, 1719-1729	8.4	80
711	Stability and charge transfer of C3B ordered structures. <i>Physical Review B</i> , <b>1996</b> , 54, R2271-R2275	3.3	80
710	An integrated fast Fourier transform-based phase-field and crystal plasticity approach to model recrystallization of three dimensional polycrystals. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2015</b> , 285, 829-848	5.7	79
709	A Phase-Field Model Coupled with Large Elasto-Plastic Deformation: Application to Lithiated Silicon Electrodes. <i>Journal of the Electrochemical Society</i> , <b>2014</b> , 161, F3164-F3172	3.9	79
708	Microstructural Development of Coherent Tetragonal Precipitates in Magnesium-Partially-Stabilized Zirconia: A Computer Simulation. <i>Journal of the American Ceramic Society</i> , <b>1995</b> , 78, 657-661	3.8	79
707	Dynamics of simultaneous ordering and phase separation and effect of long-range Coulomb interactions. <i>Physical Review Letters</i> , <b>1993</b> , 70, 1477-1480	7.4	79
706	Understanding and designing magnetoelectric heterostructures guided by computation: progresses, remaining questions, and perspectives. <i>Npj Computational Materials</i> , <b>2017</b> , 3,	10.9	78
705	Ferroelectric control of the conduction at the LaAlO <sub>3</sub> /SrTiO <sub>3</sub> heterointerface. <i>Advanced Materials</i> , <b>2013</b> , 25, 3357-64	24	78
704	Large kinetic asymmetry in the metal-insulator transition nucleated at localized and extended defects. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	78
703	Size-dependent electric voltage controlled magnetic anisotropy in multiferroic heterostructures: Interface-charge and strain mediated magnetoelectric coupling. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	78
702	Structural evidence for enhanced polarization in a commensurate short-period BaTiO <sub>3</sub> /SrTiO <sub>3</sub> superlattice. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 092905	3.4	78
701	Absence of low-temperature phase transitions in epitaxial BaTiO <sub>3</sub> thin films. <i>Physical Review B</i> , <b>2004</b> , 69,	3.3	78
700	Re segregation at interfacial dislocation network in a nickel-based superalloy. <i>Acta Materialia</i> , <b>2018</b> , 154, 137-146	8.4	78
699	Magnetoelectric quasi-(0-3) nanocomposite heterostructures. <i>Nature Communications</i> , <b>2015</b> , 6, 6680	17.4	77
698	Selective control of multiple ferroelectric switching pathways using a trailing flexoelectric field. <i>Nature Nanotechnology</i> , <b>2018</b> , 13, 366-370	28.7	77

697	Flexoelectricity and ferroelectric domain wall structures: Phase-field modeling and DFT calculations. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	77
696	Ferroelectric domain morphologies of (001) PbZr <sub>1-x</sub> Ti <sub>x</sub> O <sub>3</sub> epitaxial thin films. <i>Journal of Applied Physics</i> , <b>2005</b> , 97, 034112	2.5	77
695	Ultrahigh discharge efficiency in multilayered polymer nanocomposites of high energy density. <i>Energy Storage Materials</i> , <b>2019</b> , 18, 213-221	19.4	77
694	Morphological evolution during phase separation and coarsening with strong inhomogeneous elasticity. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2001</b> , 9, 499-511	2	76
693	Multiferroic magnetoelectric nanostructures for novel device applications. <i>MRS Bulletin</i> , <b>2015</b> , 40, 728-735	3.5	75
692	Predicting $\gamma$ precipitate morphology and evolution in Mg-RE alloys using a combination of first-principles calculations and phase-field modeling. <i>Acta Materialia</i> , <b>2014</b> , 76, 259-271	8.4	74
691	Multiferroic domain dynamics in strained strontium titanate. <i>Physical Review Letters</i> , <b>2006</b> , 97, 257602	7.4	74
690	Phase-field model for epitaxial ferroelectric and magnetic nanocomposite thin films. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 052909	3.4	74
689	Full 180° magnetization reversal with electric fields. <i>Scientific Reports</i> , <b>2014</b> , 4, 7507	4.9	73
688	Nanovoid formation and annihilation in gallium nanodroplets under lithiation-delithiation cycling. <i>Nano Letters</i> , <b>2013</b> , 13, 5212-7	11.5	73
687	Role of scaffold network in controlling strain and functionalities of nanocomposite films. <i>Science Advances</i> , <b>2016</b> , 2, e1600245	14.3	70
686	Controlled manipulation of oxygen vacancies using nanoscale flexoelectricity. <i>Nature Communications</i> , <b>2017</b> , 8, 615	17.4	70
685	Nonlinear phase-field model for electrode-electrolyte interface evolution. <i>Physical Review E</i> , <b>2012</b> , 86, 051609	2.4	70
684	Shape evolution and splitting of coherent particles under applied stresses. <i>Acta Materialia</i> , <b>1998</b> , 47, 247-257	8.4	70
683	Stripe domain structure in epitaxial (001) BiFeO <sub>3</sub> thin films on orthorhombic TbScO <sub>3</sub> substrate. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 251911	3.4	69
682	Thermodynamics of the Ce $f$ -transition: Density-functional study. <i>Physical Review B</i> , <b>2008</b> , 78,	3.3	69
681	Effect of external mechanical constraints on the phase diagram of epitaxial PbZr <sub>1-x</sub> Ti <sub>x</sub> O <sub>3</sub> thin films: Thermodynamic calculations and phase-field simulations. <i>Applied Physics Letters</i> , <b>2003</b> , 83, 1608-1610	3.4	68
680	Shape evolution of a precipitate during strain-induced coarsening. <i>Scripta Metallurgica Et Materialia</i> , <b>1991</b> , 25, 1387-1392		68

679	Ferroelastic switching in a layered-perovskite thin film. <i>Nature Communications</i> , <b>2016</b> , 7, 10636	17.4	67
678	Intrinsic single-domain switching in ferroelectric materials on a nearly ideal surface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2007</b> , 104, 20204-9	11.5	67
677	Flexible energy harvesting polymer composites based on biofibril-templated 3-dimensional interconnected piezoceramics. <i>Nano Energy</i> , <b>2018</b> , 50, 35-42	17.1	66
676	Computer simulation of morphological evolution and rafting of $\gamma$ particles in Ni-based superalloys under applied stresses. <i>Scripta Materialia</i> , <b>1997</b> , 37, 1271-1277	5.6	66
675	Morphological evolution of coherent multi-variant Ti11Ni14 precipitates in Ti-Ni alloys under an applied stress—computer simulation study. <i>Acta Materialia</i> , <b>1998</b> , 46, 639-649	8.4	66
674	First-principles calculations of $\gamma$ -Mg5Si6/ $\beta$ Al interfaces. <i>Acta Materialia</i> , <b>2007</b> , 55, 5934-5947	8.4	66
673	Prediction of ferroelectricity in BaTiO3/BiTiO3 superlattices with domains. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 112914	3.4	66
672	Spectral implementation of an adaptive moving mesh method for phase-field equations. <i>Journal of Computational Physics</i> , <b>2006</b> , 220, 498-510	4.1	65
671	Effect of interfacial dislocations on ferroelectric phase stability and domain morphology in a thin film—phase-field model. <i>Journal of Applied Physics</i> , <b>2003</b> , 94, 2542-2547	2.5	65
670	Bioinspired elastic piezoelectric composites for high-performance mechanical energy harvesting. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 14546-14552	13	65
669	Defect chemistry and resistance degradation in Fe-doped SrTiO3 single crystal. <i>Acta Materialia</i> , <b>2016</b> , 108, 229-240	8.4	64
668	Computer simulation of ferroelectric domain structures in epitaxial BiFeO3 thin films. <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 094111	2.5	64
667	Numerical Simulation of Zener Pinning with Growing Second-Phase Particles. <i>Journal of the American Ceramic Society</i> , <b>2005</b> , 81, 526-532	3.8	64
666	Conductivity of twin-domain-wall/surface junctions in ferroelastics: Interplay of deformation potential, octahedral rotations, improper ferroelectricity, and flexoelectric coupling. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	63
665	Comparison of phase-field and Potts models for coarsening processes. <i>Acta Materialia</i> , <b>1998</b> , 47, 363-378	8.4	63
664	Equilibrium strain-energy analysis of coherently strained core-shell nanowires. <i>Journal of Crystal Growth</i> , <b>2008</b> , 310, 3084-3092	1.6	62
663	Optical creation of a supercrystal with three-dimensional nanoscale periodicity. <i>Nature Materials</i> , <b>2019</b> , 18, 377-383	27	61
662	Simulations of stress-induced twinning and de-twinning: A phase field model. <i>Acta Materialia</i> , <b>2010</b> , 58, 6554-6564	8.4	61

661	Selective variant growth of coherent Ti11Ni14 precipitate in a TiNi alloy under applied stresses. <i>Acta Materialia</i> , <b>1997</b> , 45, 471-479	8.4	61
660	Giant Resistive Switching via Control of Ferroelectric Charged Domain Walls. <i>Advanced Materials</i> , <b>2016</b> , 28, 6574-80	24	61
659	Understanding, Predicting, and Designing Ferroelectric Domain Structures and Switching Guided by the Phase-Field Method. <i>Annual Review of Materials Research</i> , <b>2019</b> , 49, 127-152	12.8	60
658	Configurable topological textures in strain graded ferroelectric nanoplates. <i>Nature Communications</i> , <b>2018</b> , 9, 403	17.4	60
657	Sharpened VO Phase Transition via Controlled Release of Epitaxial Strain. <i>Nano Letters</i> , <b>2017</b> , 17, 5614-5619	5.1	60
656	Computer simulation of spinodal decomposition in ternary systems. <i>Acta Metallurgica Et Materialia</i> , <b>1994</b> , 42, 3503-3513		60
655	Thermodynamics and ferroelectric properties of KNbO3. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 104118	2.5	59
654	Phase-field model for ferromagnetic shape-memory alloys. <i>Philosophical Magazine Letters</i> , <b>2005</b> , 85, 533-541	1	59
653	Transformation-induced elastic strain effect on the precipitation kinetics of ordered intermetallics. <i>Philosophical Magazine Letters</i> , <b>1991</b> , 64, 241-251	1	59
652	Correlated polarization switching in the proximity of a 180° domain wall. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	58
651	Unraveling Deterministic Mesoscopic Polarization Switching Mechanisms: Spatially Resolved Studies of a Tilt Grain Boundary in Bismuth Ferrite. <i>Advanced Functional Materials</i> , <b>2009</b> , 19, 2053-2063	15.6	58
650	Computer simulation of morphological evolution and coarsening kinetics of $\delta$ (Al3Li) precipitates in AlLi alloys. <i>Acta Materialia</i> , <b>1998</b> , 46, 3915-3928	8.4	58
649	Phylogeny of the Ampelocissus-Vitis clade in Vitaceae supports the New World origin of the grape genus. <i>Molecular Phylogenetics and Evolution</i> , <b>2016</b> , 95, 217-28	4.1	57
648	Thermodynamics of strained vanadium dioxide single crystals. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 083517	5.1	57
647	An iterative-perturbation scheme for treating inhomogeneous elasticity in phase-field models. <i>Journal of Computational Physics</i> , <b>2005</b> , 208, 34-50	4.1	57
646	Phase-Field Model of Electrothermal Breakdown in Flexible High-Temperature Nanocomposites under Extreme Conditions. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1800509	21.8	56
645	Thermodynamics of nanodomain formation and breakdown in scanning probe microscopy: Landau-Ginzburg-Devonshire approach. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	56
644	First-principles calculations and thermodynamic modeling of the NiMo system. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2005</b> , 397, 288-296	5.3	56

643	Fast 180° magnetization switching in a strain-mediated multiferroic heterostructure driven by a voltage. <i>Scientific Reports</i> , <b>2016</b> , 6, 27561	4.9	56
642	Investigation on evolution mechanisms of site-specific grain structures during metal additive manufacturing. <i>Journal of Materials Processing Technology</i> , <b>2018</b> , 257, 191-202	5.3	55
641	From core-shell Ba <sub>0.4</sub> Sr <sub>0.6</sub> TiO <sub>3</sub> @SiO <sub>2</sub> particles to dense ceramics with high energy storage performance by spark plasma sintering. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 4477-4484	13	55
640	Toward an integrated computational system for describing the additive manufacturing process for metallic materials. <i>Additive Manufacturing</i> , <b>2014</b> , 1-4, 52-63	6.1	54
639	Hydride Formation in Zirconium Alloys. <i>Jom</i> , <b>2012</b> , 64, 1403-1408	2.1	54
638	Morphology of critical nuclei in solid-state phase transformations. <i>Physical Review Letters</i> , <b>2007</b> , 98, 265703	7.03	54
637	Phase-field simulation of domain structure evolution during a coherent hexagonal-to-orthorhombic transformation. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , <b>2000</b> , 80, 1967-1982		54
636	Shape Evolution of a Coherent Tetragonal Precipitate in Partially Stabilized Cubic ZrO <sub>2</sub> : A Computer Simulation. <i>Journal of the American Ceramic Society</i> , <b>1993</b> , 76, 3029-3033	3.8	54
635	3d transition metal impurities in aluminum: A first-principles study. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	53
634	Tuning the remanent polarization of epitaxial ferroelectric thin films with strain. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 122904	3.4	53
633	Defect-mediated polarization switching in ferroelectrics and related materials: from mesoscopic mechanisms to atomistic control. <i>Advanced Materials</i> , <b>2010</b> , 22, 314-22	24	52
632	Formation of virtual ordered states along a phase-decomposition path. <i>Physical Review B</i> , <b>1991</b> , 44, 4681-4684	3.3	52
631	Electrokinetic Phenomena Enhanced Lithium-Ion Transport in Leaky Film for Stable Lithium Metal Anodes. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1900704	21.8	51
630	Stability of the M2 phase of vanadium dioxide induced by coherent epitaxial strain. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	51
629	Watching domains grow: In-situ studies of polarization switching by combined scanning probe and scanning transmission electron microscopy. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 052014	2.5	51
628	Thermodynamic description and growth kinetics of stoichiometric precipitates in the phase-field approach. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , <b>2007</b> , 31, 303-312	1.9	51
627	First-principles growth kinetics and morphological evolution of Cu nanoscale particles in Al. <i>Acta Materialia</i> , <b>2005</b> , 53, 2759-2764	8.4	51
626	Optimizing direct magnetoelectric coupling in Pb(Zr,Ti)O <sub>3</sub> /Ni multiferroic film heterostructures. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 072901	3.4	50

625	Surface effect on domain wall width in ferroelectrics. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 084102	2.5	50
624	Effect of elastic interaction on the formation of a complex multi-domain microstructural pattern during a coherent hexagonal to orthorhombic transformation. <i>Acta Materialia</i> , <b>1999</b> , 47, 4375-4386	8.4	50
623	Multiscale computational understanding and growth of 2D materials: a review. <i>Npj Computational Materials</i> , <b>2020</b> , 6,	10.9	49
622	Phase-field modeling of displacive phase transformations in elastically anisotropic and inhomogeneous polycrystals. <i>Acta Materialia</i> , <b>2014</b> , 76, 68-81	8.4	49
621	Probing local ionic dynamics in functional oxides at the nanoscale. <i>Nano Letters</i> , <b>2013</b> , 13, 3455-62	11.5	49
620	BiFeO <sub>3</sub> domain wall energies and structures: a combined experimental and density functional theory+U study. <i>Physical Review Letters</i> , <b>2013</b> , 110, 267601	7.4	49
619	Size-dependent polarization distribution in ferroelectric nanostructures: Phase field simulations. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 162905	3.4	49
618	Ferroelectric domain structures in SrBi <sub>2</sub> Nb <sub>2</sub> O <sub>9</sub> epitaxial thin films: Electron microscopy and phase-field simulations. <i>Journal of Applied Physics</i> , <b>2004</b> , 95, 6332-6340	2.5	49
617	Ultrahigh specific strength in a magnesium alloy strengthened by spinodal decomposition. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	49
616	Ultrahigh energy storage in superparaelectric relaxor ferroelectrics. <i>Science</i> , <b>2021</b> , 374, 100-104	33.3	49
615	Controlled synthesis of 2D transition metal dichalcogenides: from vertical to planar MoS <sub>2</sub> . <i>2D Materials</i> , <b>2017</b> , 4, 025029	5.9	48
614	Strong strain dependence of ferroelectric coercivity in a BiFeO <sub>3</sub> film. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 142902	3.4	48
613	The effect of mechanical strains on the ferroelectric and dielectric properties of a model single crystal [Phase field simulation. <i>Acta Materialia</i> , <b>2005</b> , 53, 2495-2507	8.4	48
612	Computer Simulation Model for Coupled Grain Growth and Ostwald Ripening Application to Al <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> Two-Phase Systems. <i>Journal of the American Ceramic Society</i> , <b>1996</b> , 79, 1163-1168	3.8	48
611	Ferroelectric Domain Wall Memristor. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2000109	15.6	47
610	Role of Reversible Phase Transformation for Strong Piezoelectric Performance at the Morphotropic Phase Boundary. <i>Physical Review Letters</i> , <b>2018</b> , 120, 055501	7.4	47
609	Thermodynamic potential and phase diagram for multiferroic bismuth ferrite (BiFeO <sub>3</sub> ). <i>Npj Computational Materials</i> , <b>2017</b> , 3,	10.9	46
608	Atomic-resolution imaging of electrically induced oxygen vacancy migration and phase transformation in SrCoO. <i>Nature Communications</i> , <b>2017</b> , 8, 104	17.4	46

607	Internal Biasing in Relaxor Ferroelectric Polymer to Enhance the Electrocaloric Effect. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 5134-5139	15.6	46
606	Intrinsic nucleation mechanism and disorder effects in polarization switching on ferroelectric surfaces. <i>Physical Review Letters</i> , <b>2009</b> , 102, 017601	7.4	46
605	First-principles lattice dynamics and heat capacity of BiFeO <sub>3</sub> . <i>Acta Materialia</i> , <b>2011</b> , 59, 4229-4234	8.4	46
604	Shape of a rhombohedral coherent Ti <sub>11</sub> Ni <sub>14</sub> precipitate in a cubic matrix and its growth and dissolution during constrained aging. <i>Acta Materialia</i> , <b>1997</b> , 45, 2435-2442	8.4	46
603	Nanoscale mechanical switching of ferroelectric polarization via flexoelectricity. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 022904	3.4	45
602	Fast Magnetic Domain-Wall Motion in a Ring-Shaped Nanowire Driven by a Voltage. <i>Nano Letters</i> , <b>2016</b> , 16, 2341-8	11.5	45
601	Inversion symmetry breaking by oxygen octahedral rotations in the Ruddlesden-Popper NaRTiO <sub>4</sub> family. <i>Physical Review Letters</i> , <b>2014</b> , 112, 187602	7.4	45
600	A phase field study of strain energy effects on solute-grain boundary interactions. <i>Acta Materialia</i> , <b>2011</b> , 59, 7800-7815	8.4	45
599	Interfacial coherency and ferroelectricity of BaTiO <sub>3</sub> /SrTiO <sub>3</sub> superlattice films. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 252904	3.4	45
598	Effect of strain on voltage-controlled magnetism in BiFeO <sub>3</sub> -based heterostructures. <i>Scientific Reports</i> , <b>2014</b> , 4, 4553	4.9	44
597	Phase field simulations of ferroelectrics domain structures in PbZr <sub>x</sub> Ti <sub>1-x</sub> O <sub>3</sub> bilayers. <i>Acta Materialia</i> , <b>2013</b> , 61, 2909-2918	8.4	44
596	A phase-field model of stress effect on grain boundary migration. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2011</b> , 19, 035002	2	44
595	Misfit strain-misfit strain diagram of epitaxial BaTiO <sub>3</sub> thin films: Thermodynamic calculations and phase-field simulations. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 232904	3.4	44
594	The influence of 180° ferroelectric domain wall width on the threshold field for wall motion. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 084107	2.5	44
593	Water printing of ferroelectric polarization. <i>Nature Communications</i> , <b>2018</b> , 9, 3809	17.4	44
592	Composition- and pressure-induced ferroelectric to antiferroelectric phase transitions in Sm-doped BiFeO <sub>3</sub> system. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 012903	3.4	43
591	Nonlinear phase field model for electrodeposition in electrochemical systems. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 263903	3.4	43
590	Computer simulation of the kinetics of order-disorder and phase separation during precipitation of $\theta$ (Al <sub>3</sub> Li) in Al-Li alloys. <i>Acta Materialia</i> , <b>1997</b> , 45, 245-255	8.4	43



589	Microstructural evolution during the $\alpha$ - $\beta$ +O transformation in TiAlNb alloys: phase-field simulation and experimental validation. <i>Acta Materialia</i> , <b>2000</b> , 48, 4125-4135	8.4	43
588	Computer Simulation of Twin Formation during the Displacive c- $\beta$ Phase Transformation in the Zirconia-Yttria System. <i>Journal of the American Ceramic Society</i> , <b>1995</b> , 78, 769-773	3.8	43
587	Electrically reversible cracks in an intermetallic film controlled by an electric field. <i>Nature Communications</i> , <b>2018</b> , 9, 41	17.4	42
586	First-principles lattice dynamics, thermodynamics, and elasticity of Cr <sub>2</sub> O <sub>3</sub> . <i>Surface Science</i> , <b>2012</b> , 606, 1422-1425	1.8	42
585	Growth of nanoscale BaTiO <sub>3</sub> /SrTiO <sub>3</sub> superlattices by molecular-beam epitaxy. <i>Journal of Materials Research</i> , <b>2008</b> , 23, 1417-1432	2.5	42
584	Strain effect on coercive field of epitaxial barium titanate thin films. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 142907	3.4	42
583	The phase field model for hydrogen diffusion and hydride precipitation in zirconium under non-uniformly applied stress. <i>Mechanics of Materials</i> , <b>2006</b> , 38, 3-10	3.3	42
582	Spinodal decomposition in a film with periodically distributed interfacial dislocations. <i>Acta Materialia</i> , <b>2004</b> , 52, 3069-3074	8.4	42
581	Computer simulation of anisotropic grain growth. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>1995</b> , 195, 179-187	5.3	42
580	Quantitative interface models for simulating microstructure evolution. <i>Acta Materialia</i> , <b>2004</b> , 52, 833-848	4.4	41
579	Structural stability of NiMo compounds from first-principles calculations. <i>Scripta Materialia</i> , <b>2005</b> , 52, 17-20	5.6	41
578	Computer simulation of decomposition reactions accompanied by a congruent ordering of the second kind. <i>Scripta Metallurgica Et Materialia</i> , <b>1991</b> , 25, 61-66		41
577	VO Nanowire Composite Paper as a High-Performance Lithium-Ion Battery Cathode. <i>ACS Omega</i> , <b>2017</b> , 2, 793-799	3.9	40
576	Tuning Phase Transitions in 1T-TaS via the Substrate. <i>Nano Letters</i> , <b>2017</b> , 17, 3471-3477	11.5	40
575	Phenomenological thermodynamic potential for CaTiO <sub>3</sub> single crystals. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	40
574	First-principles study of constitutional point defects in B <sub>2</sub> NiAl using special quasirandom structures. <i>Acta Materialia</i> , <b>2005</b> , 53, 2643-2652	8.4	40
573	Phase field modeling of solidification microstructure evolution during welding. <i>Journal of Materials Processing Technology</i> , <b>2018</b> , 255, 285-293	5.3	40
572	Computation of entropies and phase equilibria in refractory V-Nb-Mo-Ta-W high-entropy alloys. <i>Acta Materialia</i> , <b>2018</b> , 143, 88-101	8.4	39

571	Phase-field simulation of strain-induced domain switching in magnetic thin films. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 112505	3.4	39
570	Effect of applied load on nucleation and growth of hydrides in zirconium. <i>Computational Materials Science</i> , <b>2002</b> , 23, 283-290	3.2	39
569	Electrically controlled non-volatile switching of magnetism in multiferroic heterostructures via engineered ferroelastic domain states. <i>NPG Asia Materials</i> , <b>2016</b> , 8, e316-e316	10.3	39
568	Electrical Tunability of Domain Wall Conductivity in LiNbO Thin Films. <i>Advanced Materials</i> , <b>2019</b> , 31, e1902890	2.4	38
567	Blowing polar skyrmion bubbles in oxide superlattices. <i>Acta Materialia</i> , <b>2018</b> , 152, 155-161	8.4	38
566	Linking phase-field and finite-element modeling for process-structure-property relations of a Ni-base superalloy. <i>Acta Materialia</i> , <b>2012</b> , 60, 5984-5999	8.4	38
565	Semi-empirical studies on electronic structures of a boron-doped graphene layer: Implications on the oxidation mechanism. <i>Carbon</i> , <b>1997</b> , 35, 1517-1525	10.4	38
564	Influence of interfacial dislocations on hysteresis loops of ferroelectric films. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 104110	2.5	38
563	Lattice Parameters and Local Lattice Distortions in fcc-Ni Solutions. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2007</b> , 38, 562-569	2.3	38
562	An integrated framework for multi-scale materials simulation and design. <i>Journal of Computer-Aided Materials Design</i> , <b>2004</b> , 11, 183-199		38
561	Computer simulation of grain growth kinetics with solute drag. <i>Journal of Materials Research</i> , <b>1999</b> , 14, 1113-1123	2.5	38
560	Toward Metamodels for Composable and Reusable Additive Manufacturing Process Models. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , <b>2014</b> , 136,	3.3	37
559	Diffuse-interface description of grain boundary motion. <i>Philosophical Magazine Letters</i> , <b>1997</b> , 75, 187-196		37
558	Linking first-principles energetics to CALPHAD: An application to thermodynamic modeling of the Al-Ca binary system. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2005</b> , 36, 5-13	2.3	37
557	Diffuse-interface modeling of composition evolution in the presence of structural defects. <i>Computational Materials Science</i> , <b>2002</b> , 23, 270-282	3.2	37
556	Anisotropic polarization-induced conductance at a ferroelectric-insulator interface. <i>Nature Nanotechnology</i> , <b>2018</b> , 13, 1132-1136	28.7	37
555	Structural Insight in the Interfacial Effect in Ferroelectric Polymer Nanocomposites. <i>Advanced Materials</i> , <b>2020</b> , 32, e2005431	24	36
554	Magnetization Reversal by Out-of-plane Voltage in BiFeO <sub>3</sub> -based Multiferroic Heterostructures. <i>Scientific Reports</i> , <b>2015</b> , 5, 10459	4.9	36

553	Determination of fracture toughness of AZ31 Mg alloy using the cohesive finite element method. <i>Engineering Fracture Mechanics</i> , <b>2012</b> , 96, 401-415	4.2	36
552	A phase-field model for deformation twinning. <i>Philosophical Magazine Letters</i> , <b>2011</b> , 91, 110-121	1	36
551	Surface polar states and pyroelectricity in ferroelastics induced by flexo-roto field. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 142902	3.4	36
550	Possibility of Spinodal Decomposition in ZrO <sub>2</sub> -Y <sub>2</sub> O <sub>3</sub> Alloys: A Theoretical Investigation. <i>Journal of the American Ceramic Society</i> , <b>1995</b> , 78, 1680-1686	3.8	36
549	Microscopic master equation approach to diffusional transformations in inhomogeneous systems: Single-site approximation and direct exchange mechanism. <i>Acta Metallurgica Et Materialia</i> , <b>1994</b> , 42, 2943-2954		36
548	Enabling High-Energy-Density High-Efficiency Ferroelectric Polymer Nanocomposites with Rationally Designed Nanofillers. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2006739	15.6	36
547	Giant elastic tunability in strained BiFeO <sub>3</sub> near an electrically induced phase transition. <i>Nature Communications</i> , <b>2015</b> , 6, 8985	17.4	35
546	Domain topology and domain switching kinetics in a hybrid improper ferroelectric. <i>Nature Communications</i> , <b>2016</b> , 7, 11602	17.4	35
545	YPHON: A package for calculating phonons of polar materials. <i>Computer Physics Communications</i> , <b>2014</b> , 185, 2950-2968	4.2	35
544	Phase-field simulations of stress-strain behavior in ferromagnetic shape memory alloy Ni <sub>2</sub> MnGa. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 073906	2.5	35
543	APPENDIX A Landau Free-Energy Coefficients <b>2007</b> , 363-372		35
542	A three-dimensional phase-field model for computer simulation of lamellar structure formation in NiAl intermetallic alloys. <i>Acta Materialia</i> , <b>2001</b> , 49, 2341-2353	8.4	35
541	Particle translational motion and reverse coarsening phenomena in multiparticle systems induced by a long-range elastic interaction. <i>Physical Review B</i> , <b>1992</b> , 46, 11194-11197	3.3	35
540	Giant Ferroelectric Polarization in Ultrathin Ferroelectrics via Boundary-Condition Engineering. <i>Advanced Materials</i> , <b>2017</b> , 29, 1701475	24	35
539	Enhanced flexoelectricity at reduced dimensions revealed by mechanically tunable quantum tunnelling. <i>Nature Communications</i> , <b>2019</b> , 10, 537	17.4	34
538	Hybrid Magnetic Micropillar Arrays for Programmable Actuation. <i>Advanced Materials</i> , <b>2020</b> , 32, e2001879	24	34
537	Defect-Induced Hedgehog Polarization States in Multiferroics. <i>Physical Review Letters</i> , <b>2018</b> , 120, 137602	7.4	34
536	Influence of anisotropic strain on the dielectric and ferroelectric properties of SrTiO <sub>3</sub> thin films on DyScO <sub>3</sub> substrates. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	34

535	Domain stability of PbTiO <sub>3</sub> thin films under anisotropic misfit strains: Phase-field simulations. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 054105	2.5	34
534	Non-classical nucleation theory of ordered intermetallic precipitates—application to the Al <sub>2</sub> Li alloy. <i>Acta Materialia</i> , <b>1996</b> , 44, 4253-4259	8.4	34
533	Kinetics of virtual phase formation during precipitation of ordered intermetallics. <i>Physical Review B</i> , <b>1992</b> , 46, 5899-5905	3.3	34
532	Strain-induced modulated structures in two-phase cubic alloys. <i>Scripta Metallurgica Et Materialia</i> , <b>1991</b> , 25, 1969-1974		34
531	Giant piezoelectricity in oxide thin films with nanopillar structure. <i>Science</i> , <b>2020</b> , 369, 292-297	33.3	34
530	Tunable thermal conductivity via domain structure engineering in ferroelectric thin films: A phase-field simulation. <i>Acta Materialia</i> , <b>2016</b> , 111, 220-231	8.4	34
529	The relation of electrical conductivity profiles and modulus data using the example of STO:Fe single crystals: A path to improve the model of resistance degradation. <i>Acta Materialia</i> , <b>2016</b> , 117, 252-261	8.4	34
528	Mechanical Switching of Nanoscale Multiferroic Phase Boundaries. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 3405-3413	15.6	33
527	Permanent ferroelectric retention of BiFeO <sub>3</sub> mesocrystal. <i>Nature Communications</i> , <b>2016</b> , 7, 13199	17.4	33
526	Two modes of grain boundary pinning by coherent precipitates. <i>Acta Materialia</i> , <b>2017</b> , 135, 226-232	8.4	33
525	Reversible phase transition induced large piezoelectric response in Sm-doped BiFeO <sub>3</sub> with a composition near the morphotropic phase boundary. <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	33
524	Effect of strong nonuniformity in grain boundary energy on 3-D grain growth behavior: A phase-field simulation study. <i>Computational Materials Science</i> , <b>2017</b> , 127, 67-77	3.2	33
523	Effects of strain and oxygen vacancies on the ferroelectric and antiferrodistortive distortions in PbTiO <sub>3</sub> /SrTiO <sub>3</sub> superlattice. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	33
522	Mixed-space approach for calculation of vibration-induced dipole-dipole interactions. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	33
521	A Phase Diagram for Epitaxial PbZr <sub>1-x</sub> Ti <sub>x</sub> O <sub>3</sub> Thin Films at the Bulk Morphotropic Boundary Composition. <i>Journal of the American Ceramic Society</i> , <b>2005</b> , 88, 1669-1672	3.8	33
520	A computer simulation technique for spinodal decomposition and ordering in ternary systems. <i>Scripta Metallurgica Et Materialia</i> , <b>1993</b> , 29, 683-688		33
519	Dramatically Enhanced Combination of Ultimate Tensile Strength and Electric Conductivity of Alloys via Machine Learning Screening. <i>Acta Materialia</i> , <b>2020</b> , 200, 803-810	8.4	33
518	Polymer Dielectrics with Simultaneous Ultrahigh Energy Density and Low Loss. <i>Advanced Materials</i> , <b>2021</b> , 33, e2008198	24	33

517	Bottom-up synthesis of vertically oriented two-dimensional materials. <i>2D Materials</i> , <b>2016</b> , 3, 041003	5.9	33
516	Local negative permittivity and topological phase transition in polar skyrmions. <i>Nature Materials</i> , <b>2021</b> , 20, 194-201	27	33
515	Conformational Domain Wall Switch. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1807523	15.6	32
514	Electric-field-driven magnetization reversal in square-shaped nanomagnet-based multiferroic heterostructure. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 142901	3.4	32
513	A thermodynamic potential, energy storage performances, and electrocaloric effects of Ba <sub>1-x</sub> Sr <sub>x</sub> TiO <sub>3</sub> single crystals. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 102901	3.4	32
512	First-principles study of 180° domain walls in BaTiO <sub>3</sub> : Mixed Bloch-Néel-Ising character. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	32
511	Universal emergence of spatially modulated structures induced by flexoantiferrodistortive coupling in multiferroics. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	32
510	Topological evolution during coupled grain growth and Ostwald ripening in volume-conserved 2-D two-phase polycrystals. <i>Acta Materialia</i> , <b>1997</b> , 45, 4145-4154	8.4	32
509	Phase field formulations for modeling the Ostwald ripening in two-phase systems. <i>Computational Materials Science</i> , <b>1998</b> , 9, 329-336	3.2	32
508	Modeling Solid-State Phase Transformations and Microstructure Evolution. <i>MRS Bulletin</i> , <b>2001</b> , 26, 197-202		32
507	Thermodynamic assessment of the Al-Ca binary system using random solution and associate models. <i>Journal of Alloys and Compounds</i> , <b>2002</b> , 340, 199-206	5.7	32
506	Predicting Coherency Loss of ( $\gamma^{\prime}$ ) Precipitates in IN718 Superalloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2016</b> , 47, 3235-3247	2.3	32
505	Facilitation of Ferroelectric Switching via Mechanical Manipulation of Hierarchical Nanoscale Domain Structures. <i>Physical Review Letters</i> , <b>2017</b> , 118, 017601	7.4	31
504	Polarization switching of the incommensurate phases induced by flexoelectric coupling in ferroelectric thin films. <i>Acta Materialia</i> , <b>2015</b> , 90, 344-354	8.4	31
503	A modified Landau-Devonshire thermodynamic potential for strontium titanate. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 232902	3.4	31
502	Linking length scales via materials informatics. <i>Jom</i> , <b>2006</b> , 58, 42-50	2.1	31
501	Lightweight Porous Polystyrene with High Thermal Conductivity by Constructing 3D Interconnected Network of Boron Nitride Nanosheets. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 46767-46778	9.5	31
500	A thermodynamic potential and the temperature-composition phase diagram for single-crystalline K <sub>1-x</sub> NaxNbO <sub>3</sub> (0 ≤ x ≤ 0.5). <i>Applied Physics Letters</i> , <b>2017</b> , 110, 102906	3.4	30

499	Impact of symmetry on the ferroelectric properties of CaTiO <sub>3</sub> thin films. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 162904	3.4	30
498	Direct observation of asymmetric domain wall motion in a ferroelectric capacitor. <i>Acta Materialia</i> , <b>2013</b> , 61, 6765-6777	8.4	30
497	A thermodynamic free energy function for potassium niobate. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 072904	3.4	30
496	Frequency dependent dynamical electromechanical response of mixed ionic-electronic conductors. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 014107	2.5	30
495	Incorporating diffuse-interface nuclei in phase-field simulations. <i>Scripta Materialia</i> , <b>2010</b> , 63, 8-11	5.6	30
494	Atomistic Simulations of Interactions between Cu Precipitates and an Edge Dislocation in a B.C.C. Fe Single Crystal. <i>Physica Status Solidi (B): Basic Research</i> , <b>2000</b> , 220, 845-846	1.3	30
493	Coarsening Kinetics of a Two Phase Mixture with Highly Disparate Diffusion Mobility. <i>Communications in Computational Physics</i> , <b>2010</b> , 8, 249-264	2.4	30
492	Nanodomain Engineering in Ferroelectric Capacitors with Graphene Electrodes. <i>Nano Letters</i> , <b>2016</b> , 16, 6460-6466	11.5	30
491	Phylogenomics, biogeography, and adaptive radiation of grapes. <i>Molecular Phylogenetics and Evolution</i> , <b>2018</b> , 129, 258-267	4.1	30
490	Disrupting long-range polar order with an electric field. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	29
489	Manipulating topological transformations of polar structures through real-time observation of the dynamic polarization evolution. <i>Nature Communications</i> , <b>2019</b> , 10, 4864	17.4	29
488	Thermodynamic fluctuations in magnetic states: Fe <sub>3</sub> Pt as a prototype. <i>Philosophical Magazine Letters</i> , <b>2010</b> , 90, 851-859	1	29
487	Piezoelectric response of single-crystal PbZr <sub>1-x</sub> Ti <sub>x</sub> O <sub>3</sub> near morphotropic phase boundary predicted by phase-field simulation. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 252904	3.4	29
486	Solution-based thermodynamic modeling of the Ni <sub>3</sub> Al and Ni <sub>3</sub> Mo <sub>3</sub> Al systems using first-principle calculations. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , <b>2009</b> , 33, 631-641	1.9	29
485	Cubic to tetragonal martensitic transformation in a thin film elastically constrained by a substrate. <i>Metals and Materials International</i> , <b>2003</b> , 9, 221-226	2.4	29
484	Computer Simulation of Grain Growth and Ostwald Ripening in Alumina/Zirconia Two-Phase Composites. <i>Journal of the American Ceramic Society</i> , <b>2005</b> , 80, 1773-1780	3.8	29
483	Extraordinarily Large Electrocaloric Strength of Metal-Free Perovskites. <i>Advanced Materials</i> , <b>2020</b> , 32, e1906224	24	29
482	Strain-mediated voltage-controlled switching of magnetic skyrmions in nanostructures. <i>Npj Computational Materials</i> , <b>2018</b> , 4,	10.9	29

481	From classical thermodynamics to phase-field method. <i>Progress in Materials Science</i> , <b>2021</b> , 100868	42.2	29
480	Kinetic control of tunable multi-state switching in ferroelectric thin films. <i>Nature Communications</i> , <b>2019</b> , 10, 1282	17.4	28
479	Phase-Field Modeling of Nucleation in Solid-State Phase Transformations. <i>Jom</i> , <b>2014</b> , 66, 1520-1528	2.1	28
478	Broken symmetry, strong correlation, and splitting between longitudinal and transverse optical phonons of MnO and NiO from first principles. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	28
477	Phase-field model of multiferroic composites: Domain structures of ferroelectric particles embedded in a ferromagnetic matrix. <i>Philosophical Magazine</i> , <b>2010</b> , 90, 125-140	1.6	28
476	Quantification of internal electric fields and local polarization in ferroelectric superlattices. <i>ACS Nano</i> , <b>2011</b> , 5, 640-6	16.7	28
475	Effect of ferroelastic twin walls on local polarization switching: Phase-field modeling. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 162901	3.4	28
474	Diffuse-interface description of strain-dominated morphology of critical nuclei in phase transformations. <i>Acta Materialia</i> , <b>2008</b> , 56, 3568-3576	8.4	28
473	Modeling of lattice parameter in the Ni-Al system. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2004</b> , 35, 2313-2321	2.3	28
472	Phase-field simulation of hydride precipitation in bi-crystalline zirconium. <i>Scripta Materialia</i> , <b>2002</b> , 47, 237-241	5.6	28
471	Computer Simulation of the Dynamics of 180° Ferroelectric Domains. <i>Journal of the American Ceramic Society</i> , <b>1995</b> , 78, 2554-2556	3.8	28
470	Morphology, Structure, and Ontogeny of Trichomes of the Grape Genus ( <i>Vitis</i> , Vitaceae). <i>Frontiers in Plant Science</i> , <b>2016</b> , 7, 704	6.2	28
469	Direct observation of nanoscale Peltier and Joule effects at metal-insulator domain walls in vanadium dioxide nanobeams. <i>Nano Letters</i> , <b>2014</b> , 14, 2394-400	11.5	27
468	Coupling GSM/ALE with ES-FEM-T3 for fluid-deformable structure interactions. <i>Journal of Computational Physics</i> , <b>2014</b> , 276, 315-340	4.1	27
467	Phase-field simulation of domain structures in epitaxial BiFeO3 films on vicinal substrates. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 052903	3.4	27
466	Phase-field modeling of stress-induced surface instabilities in heteroepitaxial thin films. <i>Journal of Applied Physics</i> , <b>2005</b> , 98, 044910	2.5	27
465	Atom probe analyses and numerical calculation of ternary phase diagram in Ni-Al-V system. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , <b>2001</b> , 25, 125-134	1.9	27
464	Strain engineering of dischargeable energy density of ferroelectric thin-film capacitors. <i>Nano Energy</i> , <b>2020</b> , 72, 104665	17.1	26

463	Light-Activated Gigahertz Ferroelectric Domain Dynamics. <i>Physical Review Letters</i> , <b>2018</b> , 120, 096101	7.4	26
462	Size effects of electrocaloric cooling in ferroelectric nanowires. <i>Journal of the American Ceramic Society</i> , <b>2018</b> , 101, 1566-1575	3.8	26
461	Enhanced extraordinary optical transmission (EOT) through arrays of bridged nanohole pairs and their sensing applications. <i>Nanoscale</i> , <b>2014</b> , 6, 7917-23	7.7	26
460	Micromagnetic simulation of spin-transfer switching in a full-Heusler Co <sub>2</sub> FeAl <sub>0.5</sub> Si <sub>0.5</sub> alloy spin-valve nanopillar. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 033913	2.5	26
459	Phase-field modeling of corrosion kinetics under dual-oxidants. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2012</b> , 20, 035013	2	26
458	Mechanical-force-induced non-local collective ferroelastic switching in epitaxial lead-titanate thin films. <i>Nature Communications</i> , <b>2019</b> , 10, 3951	17.4	25
457	Domain pinning near a single-grain boundary in tetragonal and rhombohedral lead zirconate titanate films. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	25
456	Acoustic Detection of Phase Transitions at the Nanoscale. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 478-486	4.66	25
455	Voltage-driven perpendicular magnetic domain switching in multiferroic nanoislands. <i>Journal of Applied Physics</i> , <b>2013</b> , 113, 194301	2.5	25
454	Strain effect on phase transitions of BaTiO <sub>3</sub> nanowires. <i>Acta Materialia</i> , <b>2011</b> , 59, 7189-7198	8.4	25
453	Origin of suppressed polarization in BiFeO <sub>3</sub> films. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 212904	3.4	25
452	Coarsening dynamics of self-accommodating coherent patterns. <i>Acta Materialia</i> , <b>2002</b> , 50, 13-21	8.4	25
451	Coarsening kinetics of $\beta$ -Al <sub>3</sub> Li precipitates: phase-field simulation in 2D and 3D. <i>Scripta Materialia</i> , <b>2000</b> , 42, 967-973	5.6	25
450	Microstructure dependence of diffusional transport. <i>Computational Materials Science</i> , <b>2001</b> , 20, 37-47	3.2	25
449	Phase transition enhanced superior elasticity in freestanding single-crystalline multiferroic BiFeO <sub>3</sub> membranes. <i>Science Advances</i> , <b>2020</b> , 6,	14.3	25
448	Magnetically actuated functional gradient nanocomposites for strong and ultra-durable biomimetic interfaces/surfaces. <i>Materials Horizons</i> , <b>2017</b> , 4, 869-877	14.4	24
447	Orientations of low-energy domain walls in perovskites with oxygen octahedral tilts. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	24
446	Electric field-induced tetragonal to orthorhombic phase transitions in [110] <sub>c</sub> -oriented BaTiO <sub>3</sub> single crystals. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 232904	3.4	24



445	Quantitative evaluation of particle pinning force on a grain boundary using the phase-field method. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2012</b> , 20, 055004	2	24
444	Effect of grain boundary width on grain growth in a diffuse-interface field model. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>1997</b> , 238, 78-84	5.3	24
443	Toroidal polar topology in strained ferroelectric polymer. <i>Science</i> , <b>2021</b> , 371, 1050-1056	33.3	24
442	Atomic imaging of mechanically induced topological transition of ferroelectric vortices. <i>Nature Communications</i> , <b>2020</b> , 11, 1840	17.4	24
441	Initial Irreversible Losses and Enhanced High-Temperature Performance of Rare-Earth Permanent Magnets. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1900690	15.6	23
440	A phase-field model of phase transitions and domain structures of NiCoMnIn metamagnetic alloys. <i>Acta Materialia</i> , <b>2015</b> , 83, 333-340	8.4	23
439	Hierarchical Domain Structure and Extremely Large Wall Current in Epitaxial BiFeO <sub>3</sub> Thin Films. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1801725	15.6	23
438	Ferroelectric Domain Walls in PbTiO <sub>3</sub> Are Effective Regulators of Heat Flow at Room Temperature. <i>Nano Letters</i> , <b>2019</b> , 19, 7901-7907	11.5	23
437	Electroelastic fields in artificially created vortex cores in epitaxial BiFeO <sub>3</sub> thin films. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 052903	3.4	23
436	Thermodynamic properties of Laves phases in the Mg <sub>2</sub> AlTa system at finite temperature from first-principles. <i>Intermetallics</i> , <b>2012</b> , 22, 17-23	3.5	23
435	Solvus boundaries of (meta)stable phases in the AlMgBi system: First-principles phonon calculations and thermodynamic modeling. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , <b>2010</b> , 34, 20-25	1.9	23
434	A thermodynamic framework for a system with itinerant-electron magnetism. <i>Journal of Physics Condensed Matter</i> , <b>2009</b> , 21, 326003	1.8	23
433	Correlation between number of ferroelectric variants and coercive field of lead zirconate titanate single crystals. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 032902	3.4	23
432	Influence of an applied strain field on microstructural evolution during the $\beta$ - $\gamma$ -phase transformation in TiAlNb system. <i>Acta Materialia</i> , <b>2001</b> , 49, 13-20	8.4	23
431	The chromosome-level wintersweet ( <i>Chimonanthus praecox</i> ) genome provides insights into floral scent biosynthesis and flowering in winter. <i>Genome Biology</i> , <b>2020</b> , 21, 200	18.3	23
430	Strain phase separation: Formation of ferroelastic domain structures. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	23
429	Tunneling Hot Spots in Ferroelectric SrTiO <sub>3</sub> . <i>Nano Letters</i> , <b>2018</b> , 18, 491-497	11.5	23
428	Interfacial Coupling Boosts Giant Electrocaloric Effects in Relaxor Polymer Nanocomposites: In Situ Characterization and Phase-Field Simulation. <i>Advanced Materials</i> , <b>2019</b> , 31, e1801949	24	23

427	Intrinsic Conductance of Domain Walls in BiFeO. <i>Advanced Materials</i> , <b>2019</b> , 31, e1902099	24	22
426	Space charge effects on the dielectric response of polymer nanocomposites. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 092901	3.4	22
425	Field enhancement of electronic conductance at ferroelectric domain walls. <i>Nature Communications</i> , <b>2017</b> , 8, 1318	17.4	22
424	Predicting effective magnetoelectric response in magnetic-ferroelectric composites via phase-field modeling. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 052904	3.4	22
423	Piezoelectric anisotropy of a KNbO3 single crystal. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 094111	2.5	22
422	Predicting Diffusion Coefficients from First Principles via Eyring's Reaction Rate Theory. <i>Defect and Diffusion Forum</i> , <b>2009</b> , 294, 1-13	0.7	22
421	Simultaneous Prediction of Morphologies of a Critical Nucleus and an Equilibrium Precipitate in Solids. <i>Communications in Computational Physics</i> , <b>2010</b> , 7, 674-682	2.4	22
420	First-principles calculations on MgO: Phonon theory versus mean-field potential approach. <i>Journal of Applied Physics</i> , <b>2006</b> , 100, 023533	2.5	22
419	First-principles calculations and phenomenological modeling of lattice misfit in Ni-base superalloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2006</b> , 431, 196-200	5.3	22
418	Simulation of Hydride precipitation in bi-crystalline zirconium under uniformly applied load. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2002</b> , 334, 6-10	5.3	22
417	Uncertainty Quantification in Metallic Additive Manufacturing Through Physics-Informed Data-Driven Modeling. <i>Jom</i> , <b>2019</b> , 71, 2625-2634	2.1	21
416	Effect of cooling rates on the dendritic morphology transition of Mg <sub>97</sub> Gd alloy by in situ X-ray radiography. <i>Journal of Materials Science and Technology</i> , <b>2018</b> , 34, 1142-1148	9.1	21
415	Control of Domain Structures in Multiferroic Thin Films through Defect Engineering. <i>Advanced Materials</i> , <b>2018</b> , 30, e1802737	24	21
414	Revealing ferroelectric switching character using deep recurrent neural networks. <i>Nature Communications</i> , <b>2019</b> , 10, 4809	17.4	21
413	Electric-field induced ferromagnetic phase in paraelectric antiferromagnets. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	21
412	Kinetic Pathways of Phase Transformations in Two-Phase Ti Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2014</b> , 45, 3438-3445	2.3	21
411	Monoclinic phases arising across thermal inter-ferroelectric phase transitions. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	21
410	Dipole spring ferroelectrics in superlattice SrTiO <sub>3</sub> /BaTiO <sub>3</sub> thin films exhibiting constricted hysteresis loops. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 092905	3.4	21

409	Accurate calculations of phonon dispersion in CaF <sub>2</sub> and CeO <sub>2</sub> . <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	21
408	The first phylogenetic analysis of <i>Tetrastigma</i> (Miq.) Planch., the host of Rafflesiaceae. <i>Taxon</i> , <b>2011</b> , 60, 499-512	0.8	21
407	Phase diagram and domain splitting in thin ferroelectric films with incommensurate phase. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	21
406	Three-dimensional phase-field simulation of domain structures in ferroelectric islands. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 122906	3.4	21
405	Phase-field simulation of domain structures and magnetostrictive response in Tb <sub>1-x</sub> Dy <sub>x</sub> Fe <sub>2</sub> alloys near morphotropic phase boundary. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 141908	3.4	21
404	Superhierarchical Inorganic/Organic Nanocomposites Exhibiting Simultaneous Ultrahigh Dielectric Energy Density and High Efficiency. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2007994	15.6	21
403	Periodicity-Doubling Cascades: Direct Observation in Ferroelastic Materials. <i>Physical Review Letters</i> , <b>2019</b> , 123, 087603	7.4	20
402	Film size-dependent voltage-modulated magnetism in multiferroic heterostructures. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2014</b> , 372, 20120444	3	20
401	Effect of Ferroelectric Polarization on Ionic Transport and Resistance Degradation in BaTiO <sub>3</sub> by Phase-Field Approach. <i>Journal of the American Ceramic Society</i> , <b>2014</b> , 97, 3568-3575	3.8	20
400	Micro-/macro-responses of a ferroelectric single crystal with domain pinning and depinning by dislocations. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 164108	2.5	20
399	Role of polaron hopping in leakage current behavior of a SrTiO <sub>3</sub> single crystal. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 224102	2.5	20
398	Phase-field simulations of magnetic field-induced strain in Ni <sub>2</sub> MnGa ferromagnetic shape memory alloy. <i>Philosophical Magazine</i> , <b>2011</b> , 91, 2102-2116	1.6	20
397	Phase transitions and domain stabilities in biaxially strained (001) SrTiO <sub>3</sub> epitaxial thin films. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 084113	2.5	20
396	Effect of strain and deadlayer on the polarization switching of ferroelectric thin film. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 114111	2.5	20
395	Ab initio calculation of structural properties of C3B and C5B compounds. <i>Physical Review B</i> , <b>1997</b> , 55, 8-10	3.3	20
394	Spinodal decomposition and pattern formation near a crystalline surface. <i>Surface Science</i> , <b>1996</b> , 355, 229-240	1.8	20
393	Multiscale framework for simulation-guided growth of 2D materials. <i>Npj 2D Materials and Applications</i> , <b>2018</b> , 2,	8.8	20
392	A Coherently Strained Monoclinic [111]PbTiO <sub>3</sub> Film Exhibiting Zero Poisson's Ratio State. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1901687	15.6	19

391	Strain, temperature, and electric-field effects on the phase transition and piezoelectric responses of $K_{0.5}Na_{0.5}NbO_3$ thin films. <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 154106	2.5	19
390	Phase-field modeling of $\eta$ precipitation kinetics in 319 aluminum alloys. <i>Computational Materials Science</i> , <b>2018</b> , 151, 84-94	3.2	19
389	Improved surface-enhanced Raman scattering on arrays of gold quasi-3D nanoholes. <i>Journal Physics D: Applied Physics</i> , <b>2012</b> , 45, 425401	3	19
388	Giant tuning of ferroelectricity in single crystals by thickness engineering. <i>Science Advances</i> , <b>2020</b> , 6,	14.3	19
387	A Strain-Mediated Magnetoelectric-Spin-Torque Hybrid Structure. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1806371	15.6	19
386	A Bottom-Up Formation Mechanism of Solid Electrolyte Interphase Revealed by Isotope-Assisted Time-of-Flight Secondary Ion Mass Spectrometry. <i>Journal of Physical Chemistry Letters</i> , <b>2018</b> , 9, 5508-5514	6.4	19
385	Theory of strain phase separation and strain spinodal: Applications to ferroelastic and ferroelectric systems. <i>Acta Materialia</i> , <b>2017</b> , 133, 147-159	8.4	18
384	Microstructure and mechanical properties of as-deposited and heat treated Ti <sub>55</sub> Al <sub>18</sub> Mo <sub>18</sub> V <sub>8</sub> Cr <sub>1</sub> Zr (Ti-55531) alloy fabricated by laser melting deposition. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 810, 151792	5.7	18
383	Understanding Microstructure Evolution During Additive Manufacturing of Metallic Alloys Using Phase-Field Modeling <b>2018</b> , 93-116		18
382	Effects of surface energy anisotropy on void evolution during irradiation: A phase-field model. <i>Journal of Nuclear Materials</i> , <b>2016</b> , 479, 316-322	3.3	18
381	Chemical potential and Gibbs free energy. <i>MRS Bulletin</i> , <b>2019</b> , 44, 520-523	3.2	18
380	A phase-field model for hydride formation in polycrystalline metals: Application to $\epsilon$ hydride in zirconium alloys. <i>Acta Materialia</i> , <b>2019</b> , 181, 262-277	8.4	18
379	Coupling of electrical and mechanical switching in nanoscale ferroelectrics. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 202905	3.4	18
378	Phase-field modeling of switchable diode-like current-voltage characteristics in ferroelectric BaTiO <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2014</b> , 104, 182905	3.4	18
377	Phase-field modeling of three-phase electrode microstructures in solid oxide fuel cells. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 033909	3.4	18
376	Nanoscale Origins of Nonlinear Behavior in Ferroic Thin Films. <i>Advanced Functional Materials</i> , <b>2013</b> , 23, 81-90	15.6	18
375	Three-dimensional phase-field modeling of spinodal decomposition in constrained films. <i>Metals and Materials International</i> , <b>2003</b> , 9, 61-66	2.4	18
374	Computer Simulation of Martensitic Transformation in Constrained Films. <i>Materials Science Forum</i> , <b>2002</b> , 408-412, 1645-1650	0.4	18

373	Kinetics of decomposition reactions accompanied by a congruent ordering of the first-kind. <i>Scripta Metallurgica Et Materialia</i> , <b>1991</b> , 25, 67-72		18
372	Engineering interfacial adhesion for high-performance lithium metal anode. <i>Nano Energy</i> , <b>2020</b> , 67, 1042421	4.1	18
371	Universal phase dynamics in VO switches revealed by ultrafast operando diffraction. <i>Science</i> , <b>2021</b> , 373, 352-355	33.3	18
370	Anomalous negative electrocaloric effect in a relaxor/normal ferroelectric polymer blend with controlled nano- and meso-dipolar couplings. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 142902	3.4	18
369	Microstructural effects on effective piezoelectric responses of textured PMN-PT ceramics. <i>Acta Materialia</i> , <b>2018</b> , 145, 62-70	8.4	18
368	Emergence of the Vortex State in Confined Ferroelectric Heterostructures. <i>Advanced Materials</i> , <b>2019</b> , 31, e1901014	24	17
367	Pinning force from multiple second-phase particles in grain growth. <i>Computational Materials Science</i> , <b>2014</b> , 93, 81-85	3.2	17
366	The unusual temperature dependence of the switching behavior in a ferroelectric single crystal with dislocations. <i>Smart Materials and Structures</i> , <b>2014</b> , 23, 025004	3.4	17
365	Gold Split-Ring Resonators (SRRs) as Substrates for Surface-Enhanced Raman Scattering. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 21908-21915	3.8	17
364	A Spectral Iterative Method for the Computation of Effective Properties Of Elastically Inhomogeneous Polycrystals. <i>Communications in Computational Physics</i> , <b>2012</b> , 11, 726-738	2.4	17
363	Polarization rotation transitions in anisotropically strained SrTiO <sub>3</sub> thin films. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 192902	3.4	17
362	Dynamic drag of solute atmosphere on moving edge dislocationsPhase-field simulation. <i>Journal of Applied Physics</i> , <b>2004</b> , 96, 229-236	2.5	17
361	Dynamic in situ observation of voltage-driven repeatable magnetization reversal at room temperature. <i>Scientific Reports</i> , <b>2016</b> , 6, 23696	4.9	17
360	First-principles thermodynamic theory of Seebeck coefficients. <i>Physical Review B</i> , <b>2018</b> , 98,	3.3	17
359	High-entropy polymer produces a giant electrocaloric effect at low fields.. <i>Nature</i> , <b>2021</b> , 600, 664-669	50.4	17
358	Lead-free (Ag,K)NbO materials for high-performance explosive energy conversion. <i>Science Advances</i> , <b>2020</b> , 6, eaba0367	14.3	16
357	An All-Scale Hierarchical Architecture Induces Colossal Room-Temperature Electrocaloric Effect at Ultralow Electric Field in Polymer Nanocomposites. <i>Advanced Materials</i> , <b>2020</b> , 32, e1907927	24	16
356	Domain Dynamics under Ultrafast Electric-Field Pulses. <i>Physical Review Letters</i> , <b>2020</b> , 124, 107601	7.4	16

355	Effect of multi-domain structure on ionic transport, electrostatics, and current evolution in BaTiO <sub>3</sub> ferroelectric capacitor. <i>Acta Materialia</i> , <b>2016</b> , 112, 224-230	8.4	16
354	Quantitative phase field modeling of hydraulic fracture branching in heterogeneous formation under anisotropic in-situ stress. <i>Journal of Natural Gas Science and Engineering</i> , <b>2018</b> , 56, 455-471	4.6	16
353	Simulation of multilevel cell spin transfer switching in a full-Heusler alloy spin-valve nanopillar. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 042405	3.4	16
352	On the speed of piezostain-mediated voltage-driven perpendicular magnetization reversal: a computational elastodynamics-micromagnetic phase-field study. <i>NPG Asia Materials</i> , <b>2017</b> , 9, e404-e404 <sup>10.3</sup>	10.3	16
351	Evolution of the statistical distribution in a topological defect network. <i>Scientific Reports</i> , <b>2015</b> , 5, 170574.9	4.9	16
350	Modelling high-power spin-torque oscillator with perpendicular magnetization in half-metallic Heusler alloy spin valve nanopillar. <i>Journal of Alloys and Compounds</i> , <b>2014</b> , 597, 230-235	5.7	16
349	Low-symmetry monoclinic ferroelectric phase stabilized by oxygen octahedra rotations in strained EuxSr <sub>1-x</sub> TiO <sub>3</sub> thin films. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	16
348	Micromagnetic simulation of high-power spin-torque oscillator in half-metallic Heusler alloy spin valve nanopillar. <i>AIP Advances</i> , <b>2013</b> , 3, 032132	1.5	16
347	Phonon dispersions in random alloys: a method based on special quasi-random structure force constants. <i>Journal of Physics Condensed Matter</i> , <b>2011</b> , 23, 485403	1.8	16
346	Phase-field simulation of phase coarsening at ultrahigh volume fractions. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 061801	2.5	16
345	Stability of the unswitched polarization state of ultrathin epitaxial Pb(Zr,Ti)O <sub>3</sub> in large electric fields. <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	16
344	Mathematical and Numerical Aspects of a Phase-field Approach to Critical Nuclei Morphology in Solids. <i>Journal of Scientific Computing</i> , <b>2008</b> , 37, 89-102	2.3	16
343	RAPID SOLIDIFICATION OF OXIDE SUPERCONDUCTORS IN THE Y-Ba-Cu-O SYSTEM. <i>Advanced Ceramic Materials</i> , <b>1987</b> , 2, 353-363		16
342	Coupling in situ synchrotron X-ray radiography and phase-field simulation to study the effect of low cooling rates on dendrite morphology during directional solidification in Mg <sub>92</sub> Al <sub>8</sub> alloys. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 815, 152385	5.7	16
341	A Tandem 0D/2D/2D NbS Quantum Dot/Nb O Nanosheet/g-C N Flake System with Spatial Charge-Transfer Cascades for Boosting Photocatalytic Hydrogen Evolution. <i>Small</i> , <b>2020</b> , 16, e2003302	11	16
340	Bonding charge density from atomic perturbations. <i>Journal of Computational Chemistry</i> , <b>2015</b> , 36, 1008-1015	3.5	15
339	The effect of low cooling rates on dendrite morphology during directional solidification in Mg <sub>92</sub> Al <sub>8</sub> alloys: In situ X-ray radiographic observation. <i>Materials Letters</i> , <b>2016</b> , 163, 218-221	3.3	15
338	Local 90° switching in Pb(Zr <sub>0.2</sub> Ti <sub>0.8</sub> )O <sub>3</sub> thin film: Phase-field modeling. <i>Acta Materialia</i> , <b>2014</b> , 73, 75-82	8.4	15

337	Strain-domain structure and stability diagrams for single-domain magnetic thin films. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 142413	3.4	15
336	Irradiation-induced grain growth in nanocrystalline reduced activation ferrite/martensite steel. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 121905	3.4	15
335	On the elastically coupled magnetic and ferroelectric domains: A phase-field model. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 202402	3.4	15
334	Solution-based thermodynamic modeling of the NiAlMo system using first-principles calculations. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , <b>2014</b> , 46, 124-133	1.9	15
333	Phase-field simulations of thickness-dependent domain stability in PbTiO <sub>3</sub> thin films. <i>Acta Materialia</i> , <b>2012</b> , 60, 3296-3301	8.4	15
332	Diffuse-interface approach to predicting morphologies of critical nucleus and equilibrium structure for cubic to tetragonal transformations. <i>Journal of Computational Physics</i> , <b>2010</b> , 229, 6574-6584	4.1	15
331	Thermodynamic modeling of MgCaTe system by combining first-principles and CALPHAD method. <i>Journal of Alloys and Compounds</i> , <b>2008</b> , 463, 294-301	5.7	15
330	Modeling of Thermodynamic Properties and Phase Equilibria for the Cu-Mg Binary System. <i>Journal of Phase Equilibria and Diffusion</i> , <b>2007</b> , 28, 158-166	1	15
329	Phase-field model for grain boundary grooving in multi-component thin films. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2006</b> , 14, 433-443	2	15
328	Micromagnetic simulations of current-induced magnetization switching in Co/Cu/Co nanopillars. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 093907	2.5	15
327	Modeling of Dynamical Evolution of Micro/Mesosopic Morphological Patterns in Coherent Phase Transformations <b>1996</b> , 325-371		15
326	Subterahertz collective dynamics of polar vortices. <i>Nature</i> , <b>2021</b> , 592, 376-380	50.4	15
325	Local Probing of Ferroelectric and Ferroelastic Switching through Stress-Mediated Piezoelectric Spectroscopy. <i>Advanced Materials Interfaces</i> , <b>2016</b> , 3, 1500470	4.6	15
324	Anomalous Electronic Anisotropy Triggered by Ferroelastic Coupling in Multiferroic Heterostructures. <i>Advanced Materials</i> , <b>2016</b> , 28, 876-83	24	15
323	Insight into the Mechanism of Thermal Stability of $\mu$ -Diimine Nickel Complex in Catalyzing Ethylene Polymerization. <i>Organometallics</i> , <b>2017</b> , 36, 1196-1203	3.8	14
322	Ferroelectric domain structures and temperature-misfit strain phase diagrams of K <sub>1-x</sub> NaxNbO <sub>3</sub> thin films: A phase-field study. <i>Applied Physics Letters</i> , <b>2019</b> , 115, 092902	3.4	14
321	Robust polarization switching in self-assembled BiFeO <sub>3</sub> nanoislands with quad-domain structures. <i>Acta Materialia</i> , <b>2019</b> , 175, 324-330	8.4	14
320	Constructing Polymorphic Nanodomains in BaTiO <sub>3</sub> Films via Epitaxial Symmetry Engineering. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1910569	15.6	14

319	Switching the curl of polarization vectors by an irrotational electric field. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3	14
318	Theoretical Assessment on the Phase Transformation Kinetic Pathways of Multi-component Ti Alloys: Application to Ti-6Al-4V. <i>Journal of Phase Equilibria and Diffusion</i> , <b>2016</b> , 37, 53-64	1	14
317	Engineering domain structures in nanoscale magnetic thin films via strain. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 164303	2.5	14
316	Phase field model of deformation twinning in tantalum: Parameterization via molecular dynamics. <i>Scripta Materialia</i> , <b>2013</b> , 68, 451-454	5.6	14
315	A phase-field model for elastically anisotropic polycrystalline binary solid solutions. <i>Philosophical Magazine</i> , <b>2013</b> , 93, 1468-1489	1.6	14
314	Finite temperature structure and properties of $\sqrt{5}$ (310) tilt grain boundaries in nacl a molecular dynamics study. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , <b>1992</b> , 66, 11-26		14
313	Phase-field method and Materials Genome Initiative (MGI). <i>Science Bulletin</i> , <b>2014</b> , 59, 1641-1645		13
312	First-order morphological transition of ferroelastic domains in ferroelectric thin films. <i>Acta Materialia</i> , <b>2014</b> , 75, 188-197	8.4	13
311	Density Functional Theory-Based Database Development and CALPHAD Automation. <i>Jom</i> , <b>2013</b> , 65, 1533-1539	2.1	13
310	Understanding cementite dissolution in pearlitic steels subjected to rolling-sliding contact loading: A combined experimental and theoretical study. <i>Acta Materialia</i> , <b>2017</b> , 141, 193-205	8.4	13
309	Correlative High-Resolution Mapping of Strain and Charge Density in a Strained Piezoelectric Multilayer. <i>Advanced Materials Interfaces</i> , <b>2015</b> , 2, 1400281	4.6	13
308	Effective elastic properties of polycrystals based on phase-field description. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2012</b> , 554, 67-71	5.3	13
307	Bending-induced electromechanical coupling and large piezoelectric response in a micromachined diaphragm. <i>Scientific Reports</i> , <b>2013</b> , 3, 3127	4.9	13
306	Phonon dispersion in Sr <sub>2</sub> RuO <sub>4</sub> studied by a first-principles cumulative force-constant approach. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	13
305	Effect of boron on graphite oxidation a theoretical study. <i>Carbon</i> , <b>1997</b> , 35, 307-309	10.4	13
304	Kinetics of ordering and spinodal decomposition in the pair approximation. <i>Physical Review B</i> , <b>1998</b> , 58, 5266-5274	3.3	13
303	Thermodynamics and kinetics of order-disorder processes derived from the cluster-activation method and microscopic diffusion theory. <i>Physical Review B</i> , <b>1994</b> , 49, 3791-3799	3.3	13
302	Understanding and predicting geometrical constraint ferroelectric charged domain walls in a BiFeO <sub>3</sub> island via phase-field simulations. <i>Applied Physics Letters</i> , <b>2018</b> , 113, 222902	3.4	13



301	Hydrogel Ionic Diodes toward Harvesting Ultralow-Frequency Mechanical Energy. <i>Advanced Materials</i> , <b>2021</b> , 33, e2103056	24	13
300	Improper molecular ferroelectrics with simultaneous ultrahigh pyroelectricity and figures of merit. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	13
299	Effect of Meso-Scale Geometry on Piezoelectric Performances of Additively Manufactured Flexible Polymer-Pb(ZrxTi1-x)O3 Composites. <i>Advanced Engineering Materials</i> , <b>2017</b> , 19, 1600803	3.5	12
298	Observation of Strong Polarization Enhancement in Ferroelectric Tunnel Junctions. <i>Nano Letters</i> , <b>2019</b> , 19, 6812-6818	11.5	12
297	Current-Driven Insulator-To-Metal Transition in Strongly Correlated VO2. <i>Physical Review Applied</i> , <b>2019</b> , 11,	4.3	12
296	Interaction Dynamics Between Ferroelectric and Antiferroelectric Domains in a PbZrO3-Based Ceramic. <i>Physical Review Applied</i> , <b>2019</b> , 11,	4.3	12
295	Mechanically induced ferroelectric switching in BaTiO3 thin films. <i>Acta Materialia</i> , <b>2020</b> , 193, 151-162	8.4	12
294	Mechanically controllable nonlinear dielectrics. <i>Science Advances</i> , <b>2020</b> , 6, eaaz3180	14.3	12
293	Analysis of multi-domain ferroelectric switching in BiFeO3 thin film using phase-field method. <i>Computational Materials Science</i> , <b>2016</b> , 115, 208-213	3.2	12
292	Anisotropic Li intercalation in a Li(x)FePO4 nano-particle: a spectral smoothed boundary phase-field model. <i>Physical Chemistry Chemical Physics</i> , <b>2016</b> , 18, 9537-43	3.6	12
291	Phase-Field Based Multiscale Modeling of Heterogeneous Solid Electrolytes: Applications to Nanoporous LiPS. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 33341-33350	9.5	12
290	Nanoscale Bandgap Tuning across an Inhomogeneous Ferroelectric Interface. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 24704-24710	9.5	12
289	Phase-field simulation of electric-field-induced in-plane magnetic domain switching in magnetic/ferroelectric layered heterostructures. <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 123917	2.5	12
288	Quasi-one-dimensional metallic conduction channels in exotic ferroelectric topological defects. <i>Nature Communications</i> , <b>2021</b> , 12, 1306	17.4	12
287	Perspective: voltage control of magnetization in multiferroic heterostructures. <i>National Science Review</i> , <b>2019</b> , 6, 621-624	10.8	11
286	Unexpected Giant Microwave Conductivity in a Nominally Silent BiFeO Domain Wall. <i>Advanced Materials</i> , <b>2020</b> , 32, e1905132	24	11
285	Reversible Polarization Rotation in Epitaxial Ferroelectric Bilayers. <i>Advanced Materials Interfaces</i> , <b>2016</b> , 3, 1600444	4.6	11
284	Discovering minimum energy pathways via distortion symmetry groups. <i>Physical Review B</i> , <b>2018</b> , 98,	3.3	11

283	Tungsten-potassium: a promising plasma-facing material. <i>Tungsten</i> , <b>2019</b> , 1, 141-158	4.6	11
282	Tuning phase stability of complex oxide nanocrystals via conjugation. <i>Nano Letters</i> , <b>2014</b> , 14, 3314-20	11.5	11
281	Micromagnetic simulation of critical current density of spin transfer torque switching in a full-Heusler Co <sub>2</sub> FeAl <sub>0.5</sub> Si <sub>0.5</sub> alloy spin valve nanopillar. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2013</b> , 330, 16-20	2.8	11
280	Kinetics of Domain Switching by Mechanical and Electrical Stimulation in Relaxor-Based Ferroelectrics. <i>Physical Review Applied</i> , <b>2017</b> , 8,	4.3	11
279	Unexpected significant increase in bulk conductivity of a dielectric arising from charge injection. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 262902	3.4	11
278	Influence of interfacial coherency on ferroelectric switching of superlattice BaTiO <sub>3</sub> /SrTiO <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2015</b> , 107, 122906	3.4	11
277	Strain-assisted current-induced magnetization reversal in magnetic tunnel junctions: A micromagnetic study with phase-field microelasticity. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 122407	3.4	11
276	Large electric field induced strains in ferroelectric islands. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 132901	3.4	11
275	Selective variant growth of coherent precipitate under external constraints. <i>Journal of Phase Equilibria and Diffusion</i> , <b>1998</b> , 19, 523-528		11
274	Theoretical investigation of the thermodynamic stability of nano-scale systems—Periodic layer-structures. <i>Scripta Materialia</i> , <b>1995</b> , 5, 257-268		11
273	NONEQUILIBRIUM PATTERN FORMATION INVOLVING BOTH CONSERVED AND NONCONSERVED ORDER PARAMETERS AND EFFECT OF LONG-RANGE INTERACTIONS. <i>Modern Physics Letters B</i> , <b>1993</b> , 07, 1857-1881	1.6	11
272	Enhanced electric-field-induced strains in (K,Na)NbO <sub>3</sub> piezoelectrics from heterogeneous structures. <i>Materials Today</i> , <b>2021</b> , 46, 44-53	21.8	11
271	Epitaxial strain and its relaxation at the LaAlO <sub>3</sub> /SrTiO <sub>3</sub> interface. <i>Journal of Applied Physics</i> , <b>2016</b> , 120, 085302	2.5	11
270	Defects, Entropy, and the Stabilization of Alternative Phase Boundary Orientations in Battery Electrode Particles. <i>Advanced Energy Materials</i> , <b>2016</b> , 6, 1501759	21.8	11
269	Magnetoelectric Coupling by Piezoelectric Tensor Design. <i>Scientific Reports</i> , <b>2019</b> , 9, 19158	4.9	11
268	Electric-Field-Driven Nanosecond Ferroelastic-Domain Switching Dynamics in Epitaxial Pb(Zr,Ti)O <sub>3</sub> Film. <i>Physical Review Letters</i> , <b>2019</b> , 123, 217601	7.4	11
267	Study of $\delta$ -precipitation behavior in Al-Cu-Cd alloys by phase-field modeling. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2019</b> , 746, 105-114	5.3	11
266	Switchable polar spirals in tricolor oxide superlattices. <i>Acta Materialia</i> , <b>2019</b> , 164, 493-498	8.4	11

265	Heat-treatment induced microstructural evolution and enhanced mechanical property of selective laser melted near $\sigma$ -Ti-5Al-5Mo-5 V-3Cr-1Zr alloy. <i>Journal of Alloys and Compounds</i> , <b>2021</b> , 858, 158351	5.7	11
264	Control of Epitaxial BaFeAs Atomic Configurations with Substrate Surface Terminations. <i>Nano Letters</i> , <b>2018</b> , 18, 6347-6352	11.5	11
263	A phase-field model integrating reaction-diffusion kinetics and elasto-plastic deformation with application to lithiated selenium-doped germanium electrodes. <i>International Journal of Mechanical Sciences</i> , <b>2018</b> , 144, 158-171	5.5	11
262	Spontaneous ferroelectric order in lead-free relaxor Na <sub>1/2</sub> Bi <sub>1/2</sub> TiO <sub>3</sub> -based composites. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	10
261	Colossal flexoresistance in dielectrics. <i>Nature Communications</i> , <b>2020</b> , 11, 2586	17.4	10
260	Deterministic reversal of single magnetic vortex circulation by an electric field. <i>Science Bulletin</i> , <b>2020</b> , 65, 1260-1267	10.6	10
259	Optimization of Nitrogen, Phosphorus, and Potassium Fertilization Rates for Overseeded Perennial Ryegrass Turf on Dormant Bermudagrass in a Transitional Climate. <i>Frontiers in Plant Science</i> , <b>2018</b> , 9, 487	6.2	10
258	Structure and energetics of Ni from ab initio molecular dynamics calculations. <i>Computational Materials Science</i> , <b>2014</b> , 89, 242-246	3.2	10
257	Quantifying charge ordering by density functional theory: Fe <sub>3</sub> O <sub>4</sub> and CaFeO <sub>3</sub> . <i>Chemical Physics Letters</i> , <b>2014</b> , 607, 81-84	2.5	10
256	3D polarization texture of a symmetric 4-fold flux closure domain in strained ferroelectric PbTiO <sub>3</sub> films. <i>Journal of Materials Research</i> , <b>2017</b> , 32, 957-967	2.5	10
255	Determination of electrical properties of degraded mixed ionic conductors: Impedance studies with applied dc voltage. <i>Journal of Applied Physics</i> , <b>2017</b> , 122, 244101	2.5	10
254	Pinning of grain boundary migration by a coherent particle. <i>Philosophical Magazine Letters</i> , <b>2014</b> , 94, 794-802	1	10
253	Genetic diversity of Calycanthaceae accessions estimated using AFLP markers. <i>Scientia Horticulturae</i> , <b>2007</b> , 112, 331-338	4.1	10
252	Plant regeneration from excised hypocotyl explants of <i>Platanus acerifolia</i> willd. <i>In Vitro Cellular and Developmental Biology - Plant</i> , <b>2002</b> , 38, 558-563	2.3	10
251	Ferroelastically protected polarization switching pathways to control electrical conductivity in strain-graded ferroelectric nanoplates. <i>Physical Review Materials</i> , <b>2018</b> , 2,	3.2	10
250	Uncertainty quantification and reduction in metal additive manufacturing. <i>Npj Computational Materials</i> , <b>2020</b> , 6,	10.9	10
249	Conductivity of iron-doped strontium titanate in the quenched and degraded states. <i>Journal of the American Ceramic Society</i> , <b>2019</b> , 102, 3567-3577	3.8	10
248	A Comparison of Fourier Spectral Iterative Perturbation Method and Finite Element Method in Solving Phase-Field Equilibrium Equations. <i>Communications in Computational Physics</i> , <b>2017</b> , 21, 1325-1349	2.4	9

247	Phase-field modeling of diffusional phase behaviors of solid surfaces: A case study of phase-separating LiFePO <sub>4</sub> electrode particles. <i>Computational Materials Science</i> , <b>2015</b> , 108, 323-332	3.2	9
246	Static magnetic solution in magnetic composites with arbitrary susceptibility inhomogeneity and anisotropy. <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 043907	2.5	9
245	A novel mechanism to reduce coercive field of ferroelectric materials via {1 1 1} twin engineering. <i>Acta Materialia</i> , <b>2015</b> , 97, 404-412	8.4	9
244	High-throughput data-driven interface design of high-energy-density polymer nanocomposites. <i>Journal of Materiomics</i> , <b>2020</b> , 6, 573-581	6.7	9
243	Observation of Unconventional Dynamics of Domain Walls in Uniaxial Ferroelectric Lead Germanate. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2000284	15.6	9
242	Molecular Cloning and Functional Characterization of and Transcription Factors from Wintersweet (L.). <i>Plants</i> , <b>2020</b> , 9,	4.5	9
241	Exploring Polarization Rotation Instabilities in Super-Tetragonal BiFeO <sub>3</sub> Epitaxial Thin Films and Their Technological Implications. <i>Advanced Electronic Materials</i> , <b>2016</b> , 2, 1600307	6.4	9
240	Nanoscale Origins of Ferroelastic Domain Wall Mobility in Ferroelectric Multilayers. <i>ACS Nano</i> , <b>2016</b> , 10, 10126-10134	16.7	9
239	Comprehensive analysis of wintersweet flower reveals key structural genes involved in flavonoid biosynthetic pathway. <i>Gene</i> , <b>2018</b> , 676, 279-289	3.8	9
238	Strain anisotropy and magnetic domain structures in multiferroic heterostructures: High-throughput finite-element and phase-field studies. <i>Acta Materialia</i> , <b>2019</b> , 176, 73-83	8.4	9
237	Deterministic Ferroelastic Domain Switching Using Ferroelectric Bilayers. <i>Nano Letters</i> , <b>2019</b> , 19, 5319-5326	12.6	9
236	Expression of Two Type Expansins from in Enhance Tolerance to Cold and Drought Stresses. <i>International Journal of Molecular Sciences</i> , <b>2019</b> , 20,	6.3	9
235	First-principles studies of lattice dynamics and thermal properties of Mg <sub>2</sub> Si <sub>1-x</sub> Sn <sub>x</sub> . <i>Journal of Materials Research</i> , <b>2015</b> , 30, 2578-2584	2.5	9
234	Evaluating microstructural parameters of three-dimensional grains generated by phase-field simulation or other voxel-based techniques. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2012</b> , 20, 075009	2	9
233	Grain growth and microstructural evolution in a two-dimensional two-phase solid containing only quadrjunctions. <i>Scripta Materialia</i> , <b>1997</b> , 37, 233-238	5.6	9
232	Current-induced magnetization dynamics in Co <sub>2</sub> Fe <sub>2</sub> O <sub>7</sub> nanopillars. <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 07B111	2.5	9
231	First-principles study of constitutional and thermal point defects in B2 PdIn. <i>Intermetallics</i> , <b>2006</b> , 14, 248-254	3.5	9
230	Three-Dimensional Dynamic Calculation of the Equilibrium Shape of a Coherent Tetragonal Precipitate in Mg-Partially Stabilized Cubic ZrO <sub>2</sub> . <i>Journal of the American Ceramic Society</i> , <b>1996</b> , 79, 987-991	3.8	9

229	Double-gradients design of polymer nanocomposites with high energy density. <i>Energy Storage Materials</i> , <b>2022</b> , 44, 73-81	19.4	9
228	Tunable Non-Volatile Memory by Conductive Ferroelectric Domain Walls in Lithium Niobate Thin Films. <i>Crystals</i> , <b>2020</b> , 10, 804	2.3	9
227	Vortex Domain Walls in Ferroelectrics. <i>Nano Letters</i> , <b>2021</b> , 21, 3533-3539	11.5	9
226	Precipitation Hardening in Ferroelectric Ceramics. <i>Advanced Materials</i> , <b>2021</b> , 33, e2102421	24	9
225	Phase field simulation of charged interface formation during ferroelectric switching. <i>Acta Materialia</i> , <b>2016</b> , 112, 285-294	8.4	9
224	Testing reticulate evolution of four Vitis species from East Asia using restriction-site associated DNA sequencing. <i>Journal of Systematics and Evolution</i> , <b>2018</b> , 56, 331-339	2.9	9
223	Switching the chirality of a magnetic vortex deterministically with an electric field. <i>Materials Research Letters</i> , <b>2018</b> , 6, 669-675	7.4	9
222	Designing polymer nanocomposites with high energy density using machine learning. <i>Npj Computational Materials</i> , <b>2021</b> , 7,	10.9	9
221	Role of interfaces in organic/inorganic flexible thermoelectrics. <i>Nano Energy</i> , <b>2021</b> , 89, 106380	17.1	9
220	Optimal design of high temperature metalized thin-film polymer capacitors: A combined numerical and experimental method. <i>Journal of Power Sources</i> , <b>2017</b> , 357, 149-157	8.9	8
219	Role of flexoelectric coupling in polarization rotations at the a-c domain walls in ferroelectric perovskites. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 202903	3.4	8
218	Strain-induced incommensurate phases in hexagonal manganites. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	8
217	Direct observation of weakened interface clamping effect enabled ferroelastic domain switching. <i>Acta Materialia</i> , <b>2019</b> , 171, 184-189	8.4	8
216	Oxygen vacancy diffusion across cathode/electrolyte interface in solid oxide fuel cells: An electrochemical phase-field model. <i>Journal of Power Sources</i> , <b>2015</b> , 287, 396-400	8.9	8
215	Nanopore-induced dielectric and piezoelectric enhancement in PbTiO <sub>3</sub> nanowires. <i>Acta Materialia</i> , <b>2020</b> , 187, 146-152	8.4	8
214	Expression of the subgroup IIIb bHLH transcription factor CpbHLH1 from <i>Chimonanthus praecox</i> (L.) in transgenic model plants inhibits anthocyanin accumulation. <i>Plant Cell Reports</i> , <b>2020</b> , 39, 891-907	5.1	8
213	First-principles calculations of lattice dynamics and thermodynamic properties for Yb <sub>14</sub> MnSb <sub>11</sub> . <i>Journal of Applied Physics</i> , <b>2018</b> , 123, 045102	2.5	8
212	Topological dynamics of vortex-line networks in hexagonal manganites. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	8

211	Active cell-matrix coupling regulates cellular force landscapes of cohesive epithelial monolayers. <i>Npj Computational Materials</i> , <b>2018</b> , 4,	10.9	8
210	Modelling current-induced magnetization switching in Heusler alloy Co <sub>2</sub> FeAl-based spin-valve nanopillar. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 133905	2.5	8
209	Impact of Free Charges on Polarization and Pyroelectricity in Antiferrodistortive Structures and Surfaces Induced by a Flexoelectric Effect. <i>Ferroelectrics</i> , <b>2012</b> , 438, 32-44	0.6	8
208	A first-principles approach to transition states of diffusion. <i>Journal of Physics Condensed Matter</i> , <b>2012</b> , 24, 305402	1.8	8
207	Magnetization switching modes in nanopillar spin valve under the external field. <i>Science China: Physics, Mechanics and Astronomy</i> , <b>2011</b> , 54, 1227-1234	3.6	8
206	A first-principles scheme to phonons of high temperature phase: No imaginary modes for cubic SrTiO <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2010</b> , 97, 162907	3.4	8
205	Patterning cell using Si-stencil for high-throughput assay. <i>RSC Advances</i> , <b>2011</b> , 1, 746	3.7	8
204	Effects of unequally biaxial misfit strains on polarization phase diagrams in embedded ferroelectric thin layers: Phase field simulations. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 132908	3.4	8
203	Modeling of Plate-like Precipitates in Aluminum Alloys: Comparison between Phase Field and Cellular Automaton Methods. <i>Journal of Phase Equilibria and Diffusion</i> , <b>2007</b> , 28, 258-264	1	8
202	Mean-field potential calculations of shock-compressed porous carbon. <i>Physical Review B</i> , <b>2005</b> , 71,	3.3	8
201	Computing the effective diffusivity using a spectral method. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2001</b> , 311, 135-141	5.3	8
200	Computer simulation of vacancy segregation during spinodal decomposition and Ostwald ripening. <i>Scripta Metallurgica Et Materialia</i> , <b>1994</b> , 31, 1507-1512		8
199	Phase-field model of insulator-to-metal transition in VO <sub>2</sub> under an electric field. <i>Physical Review Materials</i> , <b>2018</b> , 2,	3.2	8
198	Presence of a purely tetragonal phase in ultrathin BiFeO <sub>3</sub> films: Thermodynamics and phase-field simulations. <i>Acta Materialia</i> , <b>2020</b> , 183, 110-117	8.4	8
197	Stability and dynamics of skyrmions in ultrathin magnetic nanodisks under strain. <i>Acta Materialia</i> , <b>2020</b> , 183, 145-154	8.4	8
196	Quantifying the effect of hydride microstructure on zirconium alloys embrittlement using image analysis. <i>Journal of Nuclear Materials</i> , <b>2021</b> , 547, 152817	3.3	8
195	Direct Imaging of the Relaxation of Individual Ferroelectric Interfaces in a Tensile-Strained Film. <i>Advanced Electronic Materials</i> , <b>2017</b> , 3, 1600508	6.4	7
194	An alternative approach to predict Seebeck coefficients: Application to La <sub>3</sub> Te <sub>4</sub> . <i>Scripta Materialia</i> , <b>2019</b> , 169, 87-91	5.6	7

193	Micromagnetic study of high-power spin torque oscillator with perpendicular magnetization in half-metallic Heusler alloy spin valve nanopillar under external magnetic fields. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2015</b> , 373, 10-15	2.8	7
192	Interdiffusion across solid electrolyte-electrode interface. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 213907	3.4	7
191	Numerical simulation of vortex dynamics in type-II superconductors in oscillating magnetic field using time-dependent Ginzburg-Landau equations. <i>Journal of Physics Condensed Matter</i> , <b>2017</b> , 29, 505701 <sup>1.8</sup>	1.8	7
190	Ginzburg-Landau theory of metal-insulator transition in VO <sub>2</sub> : The electronic degrees of freedom. <i>Europhysics Letters</i> , <b>2017</b> , 120, 46003	1.6	7
189	Piezoelectric enhancement of (PbTiO <sub>3</sub> ) <sub>m</sub> /(BaTiO <sub>3</sub> ) <sub>n</sub> ferroelectric superlattices through domain engineering. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	7
188	Kinetics of cubic-to-tetragonal transformation in NiTi alloys. <i>Philosophical Magazine</i> , <b>2010</b> , 90, 337-355	1.6	7
187	A multiple-component order parameter phase field model for anisotropic grain growth. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>1997</b> , 238, 94-100	5.3	7
186	Structure and dynamic properties of twist boundaries in NaCl through a molecular dynamics study. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , <b>1989</b> , 60, 525-544		7
185	Computational Tools for Designing Ni-Base Superalloys <b>2004</b> ,		7
184	Defects engineering driven high power factor of ZrNiSn-based Half-Heusler thermoelectric materials. <i>Chemical Physics Letters</i> , <b>2020</b> , 755, 137770	2.5	7
183	In-situ domain structure characterization of Pb(Mg <sub>1/3</sub> Nb <sub>2/3</sub> )O <sub>3</sub> -PbTiO <sub>3</sub> crystals under alternating current electric field poling. <i>Acta Materialia</i> , <b>2021</b> , 210, 116853	8.4	7
182	High thermal shock resistance realized by Ti/TiH <sub>2</sub> doped tungsten-potassium alloys. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 780, 388-399	5.7	7
181	Detection of Highly Differentiated Genomic Regions Between Lotus ( Gaertn.) With Contrasting Plant Architecture and Their Functional Relevance to Plant Architecture. <i>Frontiers in Plant Science</i> , <b>2018</b> , 9, 1219	6.2	7
180	Optimizing Piezoelectric Nanocomposites by High-Throughput Phase-Field Simulation and Machine Learning.. <i>Advanced Science</i> , <b>2022</b> , e2105550	13.6	7
179	Flexoelectric control of physical properties by atomic force microscopy. <i>Applied Physics Reviews</i> , <b>2021</b> , 8, 041327	17.3	7
178	Ferroelectric crystals with giant electro-optic property enabling ultracompact Q-switches.. <i>Science</i> , <b>2022</b> , 376, 371-377	33.3	7
177	Multiscale crystal-plasticity phase field and extended finite element methods for fatigue crack initiation and propagation modeling. <i>International Journal of Fracture</i> , <b>2019</b> , 216, 41-57	2.3	6
176	Phase field modeling of microstructure evolution of electrocatalyst-infiltrated solid oxide fuel cell cathodes. <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 065105	2.5	6

175	The Optimized N, P, and K Fertilization for Bermudagrass Integrated Turf Performance during the Establishment and Its Importance for the Sustainable Management of Urban Green Spaces. <i>Sustainability</i> , <b>2020</b> , 12, 10294	3.6	6
174	Temperature dependence of three-dimensional domain wall arrangement in ferroelectric K <sub>0.9</sub> Na <sub>0.1</sub> NbO <sub>3</sub> epitaxial thin films. <i>Journal of Applied Physics</i> , <b>2020</b> , 128, 184101	2.5	6
173	Strain effects on domain structures in ferroelectric thin films from phase-field simulations. <i>Journal of the American Ceramic Society</i> , <b>2018</b> , 101, 4783-4790	3.8	6
172	Magnetic anisotropy energy of ferromagnetic shape memory alloys Ni <sub>2</sub> X(X=Fe, Co)Ga by first-principles calculations. <i>AIP Advances</i> , <b>2017</b> , 7, 075001	1.5	6
171	Direct determination of the effect of strain on domain morphology in ferroelectric superlattices with scanning probe microscopy. <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 052011	2.5	6
170	Magnetic reversal of double-layer patterned nanosquares. <i>Journal of Applied Physics</i> , <b>2005</b> , 97, 084313	2.5	6
169	Patterned nanostructure in AgCo/Pt/MgO(001) thin films. <i>Physical Review B</i> , <b>2003</b> , 68,	3.3	6
168	Phase-Field Simulations of Tunable Polar Topologies in Lead-Free Ferroelectric/Paraelectric Multilayers with Ultrahigh Energy Storage Performance.. <i>Advanced Materials</i> , <b>2022</b> , e2108772	24	6
167	Low-voltage magnetoelectric coupling in membrane heterostructures. <i>Science Advances</i> , <b>2021</b> , 7, eabh2214	24.5	6
166	Inverse Domain-Size Dependence of Piezoelectricity in Ferroelectric Crystals. <i>Advanced Materials</i> , <b>2021</b> , e2105071	24	6
165	Dendrite-free Lithium Based on Lessons Learned from Lithium and Magnesium Electrodeposition Morphology Simulations. <i>Cell Reports Physical Science</i> , <b>2021</b> , 2, 100294	6.1	6
164	The role of lattice dynamics in ferroelectric switching.. <i>Nature Communications</i> , <b>2022</b> , 13, 1110	17.4	6
163	First-principles lattice dynamics and thermodynamic properties of pre-perovskite PbTiO <sub>3</sub> . <i>Acta Materialia</i> , <b>2019</b> , 171, 146-153	8.4	5
162	A thermodynamic study of phase transitions and electrocaloric properties of K <sub>0.5</sub> Na <sub>0.5</sub> NbO <sub>3</sub> single crystals. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 092902	3.4	5
161	Phase-field simulation of austenite growth behavior: Insights into the austenite memory phenomenon. <i>Computational Materials Science</i> , <b>2016</b> , 117, 139-150	3.2	5
160	Electric Field Writing of Ferroelectric Nano-Domains Near 71° Domain Walls with Switchable Interfacial Conductivity. <i>Annalen Der Physik</i> , <b>2018</b> , 530, 1800130	2.6	5
159	A thermodynamically consistent phase-field model for viscous sintering. <i>Journal of the American Ceramic Society</i> , <b>2019</b> , 102, 674-685	3.8	5
158	Phase field simulation of grain size effects on the phase coexistence and magnetostrictive behavior near the ferromagnetic morphotropic phase boundary. <i>Applied Physics Letters</i> , <b>2019</b> , 115, 162402	3.4	5



157	Understanding and Predicting the Lithium Dendrite Formation in Li-Ion Batteries: Phase Field Model. <i>ECS Transactions</i> , <b>2014</b> , 61, 1-9	1	5
156	Pressure and electric field effects on piezoelectric responses of KNbO <sub>3</sub> . <i>Journal of Applied Physics</i> , <b>2012</b> , 112, 064106	2.5	5
155	Elastic solutions with arbitrary elastic inhomogeneity and anisotropy. <i>Philosophical Magazine Letters</i> , <b>2012</b> , 1-9	1	5
154	Magnetic excitation and thermodynamics of BaFe <sub>2</sub> As <sub>2</sub> . <i>International Journal of Quantum Chemistry</i> , <b>2011</b> , 111, 3565-3570	2.1	5
153	Fabrication of metallic nanostructures of sub-20 nm with an optimized process of E-beam lithography and lift-off. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2012</b> , 12, 696-9	1.3	5
152	3D Simulation of Coarsening of $\gamma$ Precipitates in a Ni-Al Alloy. <i>Materials Research Society Symposia Proceedings</i> , <b>1999</b> , 580, 327		5
151	Synergy between phase transformation and domain switching in two morphotropic phase boundary ferroelectrics. <i>Physical Review Materials</i> , <b>2018</b> , 2,	3.2	5
150	In-plane quasi-single-domain BaTiO via interfacial symmetry engineering. <i>Nature Communications</i> , <b>2021</b> , 12, 6784	17.4	5
149	Atomic-scale observation of non-classical nucleation-mediated phase transformation in a titanium alloy. <i>Nature Materials</i> , <b>2021</b> ,	27	5
148	Ultrahigh energy density of poly(vinylidene fluoride) from synergistically improved dielectric constant and withstand voltage by tuning the crystallization behavior. <i>Journal of Materials Chemistry A</i> , <b>2021</b> , 9, 27660-27671	13	5
147	Controlled Nucleation and Stabilization of Ferroelectric Domain Wall Patterns in Epitaxial (110) Bismuth Ferrite Heterostructures. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2003571	15.6	5
146	Effect of Heat Treatment on the Microstructure and Mechanical Properties of Selective Laser-Melted Ti64 and Ti-5Al-5Mo-5V-1Cr-1Fe. <i>Metals</i> , <b>2021</b> , 11, 534	2.3	5
145	Domain patterns and super-elasticity of freestanding BiFeO <sub>3</sub> membranes via phase-field simulations. <i>Acta Materialia</i> , <b>2021</b> , 208, 116689	8.4	5
144	Visualization of dielectric constant-electric field-temperature phase maps for imprinted relaxor ferroelectric thin films. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 132902	3.4	5
143	Impedance spectroscopy utilized to study the spatial distribution of conductivity within capacitors during operation <b>2016</b> ,		5
142	Effect of the misorientation angle and anisotropy strength on the initial planar instability dynamics during solidification in a molten pool. <i>International Journal of Heat and Mass Transfer</i> , <b>2019</b> , 130, 204-214	4.9	5
141	Three-dimensional Phase-field simulation of $\gamma$ precipitation kinetics in Inconel 625 during heat treatment. <i>Computational Materials Science</i> , <b>2021</b> , 187, 110123	3.2	5
140	Corrosion behavior of additive manufactured Ti-6Al-4V in sulfamic acid cleaning solution. <i>New Journal of Chemistry</i> , <b>2021</b> , 45, 2967-2973	3.6	5

139	Strain-induced indium clustering in non-polar a-plane InGaN quantum wells. <i>Acta Materialia</i> , <b>2018</b> , 145, 109-122	8.4	5
138	Quasiharmonic calculations of thermodynamic properties for La <sub>3</sub> NiTe <sub>4</sub> system. <i>Computational Materials Science</i> , <b>2018</b> , 142, 417-426	3.2	5
137	Spectral phase-field model of deformation twinning and plastic deformation. <i>International Journal of Plasticity</i> , <b>2021</b> , 143, 103019	7.6	5
136	Realize High Thermoelectric Properties in n-Type BiTeSe/YO Nanocomposites by Constructing Heterointerfaces. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 38526-38533	9.5	5
135	Role of interfacial energy anisotropy in dendrite orientation in Al-Zn alloys: A phase field study. <i>Materials and Design</i> , <b>2022</b> , 216, 110555	8.1	5
134	Current assisted memory effect in superconductor/ferromagnet bilayers: a potential candidate for memristors. <i>Superconductor Science and Technology</i> , <b>2019</b> , 32, 095002	3.1	4
133	Electrical polarization induced by atomically engineered compositional gradient in complex oxide solid solution. <i>NPG Asia Materials</i> , <b>2019</b> , 11,	10.3	4
132	Strain Engineering in Functional Materials. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 082201	2.5	4
131	Origin of interfacial polar order in incipient ferroelectrics. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	4
130	Microstructure and magnetostriction of PrFe <sub>1.93</sub> Zr <sub>0.02</sub> nanocrystalline synthesized under high pressure. <i>Journal of Alloys and Compounds</i> , <b>2015</b> , 619, 195-199	5.7	4
129	Spinodal electronic phase separation during insulator-metal transitions. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	4
128	Thermodynamic and phase-field studies of phase transitions, domain structures, and switching for Ba(Zr <sub>1-x</sub> Ti <sub>x</sub> )O <sub>3</sub> solid solutions. <i>Acta Materialia</i> , <b>2020</b> , 186, 609-615	8.4	4
127	Numerical Simulation of Phase Transitions in Type-II Annular Superconductor Using Time-dependent Ginzburg-Landau Equations. <i>Journal of Superconductivity and Novel Magnetism</i> , <b>2018</b> , 31, 3445-3451	1.5	4
126	Spinodal twinning of a deformed crystal. <i>Philosophical Magazine</i> , <b>2014</b> , 94, 888-897	1.6	4
125	A thermodynamic potential for Ni <sub>45</sub> Co <sub>5</sub> Mn <sub>36.7</sub> In <sub>13.3</sub> single crystal. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 013504	2.5	4
124	Micromagnetic Simulation of Spin Transfer Torque Magnetization Precession Phase Diagram in a Spin-Valve Nanopillar under External Magnetic Fields <b>2012</b> , 2012, 1-12		4
123	Shape Evolution and Splitting of a Single Coherent Particle. <i>Materials Research Society Symposia Proceedings</i> , <b>1997</b> , 481, 243		4
122	Concentration overshooting caused by compositional relaxation in a one-dimensional bcc binary model alloy: a computer simulation on microscopic master equations. <i>Scripta Materialia</i> , <b>1998</b> , 39, 1113-1118	5.6	4

121	Effect of substrate constraint on spinodal decomposition in an elastically inhomogeneous thin film. <i>Metals and Materials International</i> , <b>2004</b> , 10, 429-434	2.4	4
120	Three-dimensional pseudopotential lattice Boltzmann model for multiphase flows at high density ratio. <i>Physical Review E</i> , <b>2020</b> , 102, 053308	2.4	4
119	DFTTK: Density Functional Theory ToolKit for high-throughput lattice dynamics calculations. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , <b>2021</b> , 75, 102355	1.9	4
118	High-throughput phase-field simulations and machine learning of resistive switching in resistive random-access memory. <i>Npj Computational Materials</i> , <b>2020</b> , 6,	10.9	4
117	Phase-field model of deformation twin-grain boundary interactions in hexagonal systems. <i>Acta Materialia</i> , <b>2020</b> , 200, 821-834	8.4	4
116	Nano-imaging of strain-tuned stripe textures in a Mott crystal. <i>Npj Quantum Materials</i> , <b>2021</b> , 6,	5	4
115	Superelastic oxide micropillars enabled by surface tension-modulated 90° domain switching with excellent fatigue resistance. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	4
114	Electric-field-controlled magnetization switching in multiferroic heterostructures containing interactive magnetic nanoislands. <i>Journal Physics D: Applied Physics</i> , <b>2020</b> , 53, 024002	3	4
113	Ultrasensitive magnetostrictive responses at the pre-transitional rhombohedral side of ferromagnetic morphotropic phase boundary. <i>Journal of Materials Science</i> , <b>2021</b> , 56, 1713-1729	4.3	4
112	Microstructural impacts on ionic conductivity of oxide solid electrolytes from a combined atomistic-mesoscale approach. <i>Npj Computational Materials</i> , <b>2021</b> , 7,	10.9	4
111	Computational modeling of grain boundary electrostatic effect in polycrystalline SrTiO <sub>3</sub> thin film. <i>Journal of the American Ceramic Society</i> , <b>2019</b> , 102, 4136-4151	3.8	3
110	Anomalous crack arrays in anisotropic-strained manganite on scandate substrates. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 201905	3.4	3
109	Low-energy complementary ferroelectric-nanocrack logic. <i>Nano Energy</i> , <b>2020</b> , 75, 104871	17.1	3
108	Irradiation hardening behaviors of tungsten-potassium alloy studied by accelerated 3-MeVW <sup>2+</sup> ions. <i>Chinese Physics B</i> , <b>2020</b> , 29, 046102	1.2	3
107	Theoretical study of the structural phase transition and elastic properties of HfN under high pressures. <i>Journal of Physics and Chemistry of Solids</i> , <b>2014</b> , 75, 1295-1300	3.9	3
106	Micromagnetic simulation of electric field-modulation on precession dynamics of spin torque nano-oscillator. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 082406	3.4	3
105	Properties of Natural Fibers from the Abaxial Side of Fireweed ( <i>Gerbera delavayi</i> ) Leaf Blade for Manual Spinning. <i>Journal of Natural Fibers</i> , <b>2017</b> , 14, 78-85	1.8	3
104	Intrinsic space charge layers and field enhancement in ferroelectric nanojunctions. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 022903	3.4	3

103	The effects of domain wall thickness on the nanoscale piezoresponse of ferroelectric domains. <i>Journal of Applied Physics</i> , <b>2014</b> , 116, 066816	2.5	3
102	Minimum tetragonality in PbTiO <sub>3</sub> /BaTiO <sub>3</sub> ferroelectric superlattices. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 144103	2.5	3
101	Effects of spin structures on phonons in BaFe <sub>2</sub> As <sub>2</sub> . <i>Applied Physics Letters</i> , <b>2010</b> , 97, 022504	3.4	3
100	Effects of spin structures on Fermi surface topologies in BaFe <sub>2</sub> As <sub>2</sub> . <i>Solid State Communications</i> , <b>2011</b> , 151, 272-275	1.6	3
99	Integration of first-principles calculations, calphad modeling, and phase-field simulations <b>2007</b> , 171-213		3
98	Theoretical investigation of the thermodynamic stability of nano-scale systemsII: Relaxation of a junction profile. <i>Scripta Materialia</i> , <b>1995</b> , 5, 269-279		3
97	Morphology Transformations in Ordering and Phase Separating Materials. <i>NATO ASI Series Series B: Physics</i> , <b>1994</b> , 587-604		3
96	MOLECULAR DYNAMICS STUDY OF THE STRUCTURE AND PROPERTIES OF TWIST BOUNDARIES. <i>Journal De Physique Colloque</i> , <b>1988</b> , 49, C5-139-C5-150		3
95	Liberating a hidden antiferroelectric phase with interfacial electrostatic engineering.. <i>Science Advances</i> , <b>2022</b> , 8, eabg5860	14.3	3
94	Linearly aligned single-chiral vortices in hexagonal manganites by insitu electric arc heating. <i>Physical Review Materials</i> , <b>2018</b> , 2,	3.2	3
93	Nanotextured Dynamics of a Light-Induced Phase Transition in VO. <i>Nano Letters</i> , <b>2021</b> , 21, 9052-9060	11.5	3
92	Synergistic tuning of carrier mobility, effective mass, and point defects scattering triggered high thermoelectric performance in n-type Ge-doped PbTe. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 055104	2.5	3
91	A multiscale insight into the growth of h-BN: effect of the enclosure. <i>2D Materials</i> , <b>2021</b> , 8, 035033	5.9	3
90	Synthesis, magnetic properties and magnetostriction of Pr(Fe <sub>0.75</sub> Co <sub>0.15</sub> Cu <sub>0.01</sub> Nb <sub>0.04</sub> B <sub>0.05</sub> ) <sub>1.93</sub> bulk nanocrystalline synthesized under high pressure. <i>AIP Advances</i> , <b>2016</b> , 6, 056215	1.5	3
89	Anisotropic superconductivity induced by periodic multiferroic domain patterns. <i>NPG Asia Materials</i> , <b>2019</b> , 11,	10.3	3
88	Atomic-scale mechanism of internal structural relaxation screening at polar interfaces. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	3
87	Phase diagrams, superdomains, and superdomain walls in K Na <sub>1</sub> -NbO <sub>3</sub> epitaxial thin films. <i>Acta Materialia</i> , <b>2021</b> , 215, 117038	8.4	3
86	Inherent stochasticity during insulator-metal transition in VO. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	3

85	Investigation of Zirconium hydride morphology in a single crystal using quantitative phase field simulations supported by experiments. <i>Journal of Nuclear Materials</i> , <b>2021</b> , 153303	3.3	3
84	Phase-Field Simulation of Strain-Assisted Current-Induced Magnetization Dynamics in a Magnetic Tunnel Junction. <i>IEEE Magnetism Letters</i> , <b>2017</b> , 8, 1-5	1.6	2
83	Phase-field study of the effects of the multi-controlling parameters on columnar dendrite during directional solidification in hexagonal materials. <i>European Physical Journal E</i> , <b>2020</b> , 43, 41	1.5	2
82	Annealing induced shrinkage-fill effect of tungsten-potassium alloys with trace titanium doping. <i>International Journal of Refractory Metals and Hard Materials</i> , <b>2020</b> , 90, 105193	4.1	2
81	Phase Field Methods. <i>Springer Series in Materials Science</i> , <b>2016</b> , 195-217	0.9	2
80	Genetic Diversity and Population Structure of <i>Gerbera delavayi</i> (Asteraceae) in Southwest China: Implications for Conservation. <i>Annales Botanici Fennici</i> , <b>2017</b> , 54, 409-422	0.3	2
79	Toward Metamodels for Composable and Reusable Additive Manufacturing Process Models <b>2014</b> ,		2
78	Effect of Elastic Anisotropy and Inhomogeneity on Coring Structure Evolution in Pu-Ga Alloys □ Phase-field modeling. <i>Journal of Computer-Aided Materials Design</i> , <b>2007</b> , 14, 389-402		2
77	Phase-field modelling of material microstructure <b>2007</b> , 62-83		2
76	Modeling Precipitate Microstructure Evolution in Alloys with First-Principles Energetic Information. <i>Materials Science Forum</i> , <b>2004</b> , 449-452, 19-24	0.4	2
75	Mesoscale Simulation of Grain Growth <b>2005</b> , 361-373		2
74	Solute segregation and antiphase boundary motion in a B2 single phase. <i>Acta Materialia</i> , <b>1999</b> , 47, 3695-8703	7.0	2
73	Can up-hill diffusion occur in a binary diffusion-couple above the critical spinodal instability temperature? - The role of the gradient energy. <i>Scripta Metallurgica Et Materialia</i> , <b>1994</b> , 30, 453-456		2
72	Giant Thermal Transport Tuning at a Metal/Ferroelectric Interface. <i>Advanced Materials</i> , <b>2021</b> , e2105778	2.4	2
71	Stress-dependence of dislocation dissociation, nucleation and annihilation in elastically anisotropic Cu. <i>International Journal of Plasticity</i> , <b>2021</b> , 138, 102927	7.6	2
70	Engineering new limits to magnetostriction through metastability in iron-gallium alloys. <i>Nature Communications</i> , <b>2021</b> , 12, 2757	17.4	2
69	Evolution of topological defects at two sequential phase transitions of Nd <sub>2</sub> SrFe <sub>2</sub> O <sub>7</sub> . <i>Physical Review Research</i> , <b>2021</b> , 3,	3.9	2
68	Emergent chirality in a polar meron to skyrmion transition revealed by 4D-STEM. <i>Microscopy and Microanalysis</i> , <b>2021</b> , 27, 348-350	0.5	2

67	Size Effect on Spontaneous Flux-closure Domains in BiFeO <sub>3</sub> Thin Films. <i>Microscopy and Microanalysis</i> , <b>2016</b> , 22, 1596-1597	0.5	2
66	Explicit Dynamics of Diffuse Interface in Phase-Field Model. <i>Advanced Theory and Simulations</i> , <b>2021</b> , 4, 2000162	3.5	2
65	Ferroelastic Nanodomain-mediated Mechanical Switching of Ferroelectricity in Thick Epitaxial Films. <i>Nano Letters</i> , <b>2021</b> , 21, 445-452	11.5	2
64	Dislocation-induced large local polarization inhomogeneity of ferroelectric materials. <i>Scripta Materialia</i> , <b>2021</b> , 194, 113624	5.6	2
63	Phase-field simulation of magnetic microstructure and domain switching in (Tb <sub>0.27</sub> Dy <sub>0.73</sub> )Fe <sub>2</sub> single crystal. <i>AIP Advances</i> , <b>2021</b> , 11, 015207	1.5	2
62	Giant room temperature elastocaloric effect in metal-free thin-film perovskites. <i>Npj Computational Materials</i> , <b>2021</b> , 7,	10.9	2
61	Dynamics of voltage-driven oscillating insulator-metal transitions. <i>Physical Review B</i> , <b>2021</b> , 104,	3.3	2
60	Graded hierarchical microstructure and mechanical property of electron beam melted Ti <sub>3</sub> Al <sub>2</sub> Mo <sub>3</sub> V <sub>3</sub> Cr <sub>2</sub> Zr. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2021</b> , 825, 141914	5.3	2
59	Machine learning in energy storage materials		2
58	Bimodal polymorphic nanodomains in ferroelectric films for giant energy storage. <i>Energy Storage Materials</i> , <b>2022</b> , 48, 306-313	19.4	2
57	High-throughput finite-element design of dielectric composites for high-frequency copper clad laminates. <i>Composites Science and Technology</i> , <b>2022</b> , 225, 109517	8.6	2
56	Polymer Nanocomposites: Polymer Nanocomposites with Interpenetrating Gradient Structure Exhibiting Ultrahigh Discharge Efficiency and Energy Density (Adv. Energy Mater. 15/2019). <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1970047	21.8	1
55	Domain wall tuned superconductivity in superconductor/ferromagnet bilayers. <i>Journal Physics D: Applied Physics</i> , <b>2020</b> , 53, 375001	3	1
54	In situ Electric Field Manipulation of Ferroelectric Vortices. <i>Microscopy and Microanalysis</i> , <b>2019</b> , 25, 1844-1845	1.845	1
53	Computational Metallurgy <b>2014</b> , 2807-2835		1
52	Orientation effect on the electronic transport properties of C <sub>6</sub> cluster. <i>Computational and Theoretical Chemistry</i> , <b>2014</b> , 1029, 79-83	2	1
51	Phase-field Model for Diffusional Phase Transformations in Elastically Inhomogeneous Polycrystals. <i>Solid State Phenomena</i> , <b>2011</b> , 172-174, 1084-1089	0.4	1
50	Readily regenerable reduced microstructure representations. <i>Computational Materials Science</i> , <b>2008</b> , 42, 368-379	3.2	1

49	Introduction to the Phase-Field Method of Microstructure Evolution <b>2005</b> , 37-56		1
48	JOM-e: The symposium on computational methods in materials education. <i>Jom</i> , <b>2003</b> , 55, 13-13	2.1	1
47	Theoretical investigation of the thermodynamic stability of nanoscale systemsII: Thin film with an IPB. <i>Scripta Materialia</i> , <b>1995</b> , 5, 745-754		1
46	Mathematically modeling mesoscale microstructural evolution. <i>Jom</i> , <b>1996</b> , 48, 12-12	2.1	1
45	Computer Simulation of Vacancy Segregation at Antiphase Domain Boundaries During Coarsening. <i>Materials Research Society Symposia Proceedings</i> , <b>1993</b> , 319, 375		1
44	Molecular Dynamics Studies of Twist Boundaries in Ionic Materials. <i>Materials Research Society Symposia Proceedings</i> , <b>1988</b> , 122, 135		1
43	Stability and low-energy orientations of interphase boundaries in multiaxial ferroelectrics: Phase-field simulations. <i>Physical Review B</i> , <b>2022</b> , 105,	3.3	1
42	Tunable Nanoscale Evolution and Topological Phase Transitions of a Polar Vortex Supercrystal.. <i>Advanced Materials</i> , <b>2021</b> , e2106401	24	1
41	Q-POP-Thermo: A general-purpose thermodynamics solver for ferroelectric materials. <i>Computer Physics Communications</i> , <b>2022</b> , 108302	4.2	1
40	Thermodynamic Models of Multicomponent Nonstoichiometric Solution Phases Using Internal Process Order Parameters. <i>Acta Materialia</i> , <b>2021</b> , 223, 117462	8.4	1
39	Combining the K-bubble strengthening and Y-doping: Microstructure, mechanical/thermal properties, and thermal shock behavior of W-K-Y alloys. <i>International Journal of Refractory Metals and Hard Materials</i> , <b>2022</b> , 103, 105739	4.1	1
38	Computational synthesis of 2D materials grown by chemical vapor deposition. <i>Journal of Materials Research</i> ,1	2.5	1
37	Engineering nanoscale polarization at the SrTiO3/Ge interface. <i>Scripta Materialia</i> , <b>2020</b> , 178, 489-492	5.6	1
36	Multi-scale simulation of AlCuPd alloy for yield strength prediction of large components in quenching-aging process. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2021</b> , 814, 141223	5.3	1
35	Germanium-isotope-driven distortion and disorder in clathrate framework. <i>Chemical Physics</i> , <b>2019</b> , 520, 47-51	2.3	1
34	Strain-Induced Interlayer Parallel-to-Antiparallel Magnetic Transitions of Twisted Bilayers. <i>Advanced Theory and Simulations</i> , <b>2021</b> , 4, 2000215	3.5	1
33	Structure and Mechanical Properties of Low Doped-Zr TC4 Alloy Prepared by Spark Plasma Sintering. <i>Advanced Engineering Materials</i> , <b>2018</b> , 20, 1800739	3.5	1
32	Phase Coexistence of Ferroelectric Vortices and Classical a1/a2 Domains in PbTiO3/SrTiO3 Superlattices.. <i>Microscopy and Microanalysis</i> , <b>2018</b> , 24, 1638-1639	0.5	1

31	Boundary conditions manipulation of polar vortex domains in BiFeO <sub>3</sub> membranes via phase-field simulations. <i>Journal Physics D: Applied Physics</i> , <b>2021</b> , 54, 495301	3	1
30	OrderDisorder Transitions in a Polar Vortex Lattice. <i>Advanced Functional Materials</i> ,2111392	15.6	1
29	A Phase-Field Study on Internal to External Oxidation Transition in High-Temperature Structural Alloys. <i>Jom</i> , <b>2022</b> , 74, 1435-1443	2.1	1
28	Strain Control of Domain Structures in Ferroelectric Thin Films: Applications of Phase-Field Method <b>2020</b> , 1213-1230		0
27	Microscopic piezoelectric behavior of clamped and membrane (001) PMN-30PT thin films. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 202903	3.4	0
26	Predicting phase transformation kinetics during metal additive manufacturing using non-isothermal Johnson-Mehl-Avrami models: Application to Inconel 718 and Ti-6Al-4V. <i>Additive Manufacturing</i> , <b>2021</b> , 49, 102478	6.1	0
25	Impact Toughness of As-Built and Heat-Treated Near- $\sigma$ Ti <sub>5</sub> Al <sub>5</sub> Mo <sub>5</sub> V <sub>5</sub> Cr <sub>5</sub> Zr Alloys Fabricated by Selective Laser Melting and Electron Beam Melting. <i>Advanced Engineering Materials</i> ,2101178	3.5	0
24	Phase-field simulation of two-dimensional topological charges in nematic liquid crystals. <i>Journal of Applied Physics</i> , <b>2020</b> , 128, 124701	2.5	0
23	Shear-strain-induced over 90° rotation of local magnetization in FeCoSiB/PMN-PT (011) multiferroic heterostructures. <i>Acta Materialia</i> , <b>2020</b> , 199, 495-503	8.4	0
22	Microstructure and Mechanical Property of Ti <sub>5</sub> Al <sub>5</sub> Mo <sub>5</sub> V <sub>5</sub> Cr <sub>5</sub> Zr Alloy Fabricated by Selective Laser Melting with a Preheated Substrate. <i>Advanced Engineering Materials</i> , <b>2021</b> , 23, 2100265	3.5	0
21	Room-temperature ultrasensitive magnetoelastic responses near the magnetic-ordering tricritical region. <i>Journal of Applied Physics</i> , <b>2021</b> , 130, 063901	2.5	0
20	Flexoelectric Domain Walls Originated from Structural Phase Transition in Epitaxial BiVO Films.. <i>Small</i> , <b>2022</b> , e2107540	11	0
19	Local manipulation and topological phase transitions of polar skyrmions. <i>Matter</i> , <b>2022</b> , 5, 1031-1041	12.7	0
18	High Performance High-power Textured Mn/Cu-doped PIN-PMN-PT Ceramics. <i>Acta Materialia</i> , <b>2022</b> , 118015	8.4	0
17	Phase-Field Model of Stoichiometric Compounds and Solution Phases. <i>Acta Materialia</i> , <b>2022</b> , 118007	8.4	0
16	A new design of divided solenoid with high homogeneity based on linear programming. <i>Review of Scientific Instruments</i> , <b>2020</b> , 91, 014708	1.7	
15	A high-NbTiAl alloy with ultrafine-grained structure fabricated by cryomilling and spark plasma sintering. <i>Rare Metals</i> , <b>2018</b> , 1	5.5	
14	Interaction between Ferroelectric Polarization and Defects in BiFeO <sub>3</sub> Thin Films. <i>Microscopy and Microanalysis</i> , <b>2017</b> , 23, 1604-1605	0.5	



13 Simulating Microstructural Evolution using the Phase Field Method **2012**, 1

12 Phase Field Modeling of Surface Instabilities Induced by Stresses. *Materials Research Society Symposia Proceedings*, **2003**, 795, 247

11 Motion of Multiple Interfaces: Grain Growth and Coarsening **2005**, 327-342

10 Domain Structures and Phase Diagram in 2D Ferroelectrics Under Applied Biaxial Strains - Phase Field Simulations and Thermodynamic Calculations. *Materials Research Society Symposia Proceedings*, **2005**, 881, 1

9 Computer Simulation of Hydride Precipitation in Bi-crystalline Zirconium. *Materials Research Society Symposia Proceedings*, **2001**, 677, 4141

8 Phase Transformation Kinetics during Precipitation of an Ordered Intermetallic from a Disordered Matrix -a Computer Simulation. *Materials Research Society Symposia Proceedings*, **1990**, 205, 351

7 Magnetoelectrics and Multiferroics **2021**, 595-623

6 Continuum Diffuse-Interface Model for Modeling Microstructural Stability. *NATO ASI Series Series B: Physics*, **1996**, 37-52

5 Phase-Field Modeling of  $\eta$  Precipitation Kinetics in W319 Alloys. *Minerals, Metals and Materials Series*, **2017**, 293-304 0.3

4 Nanomechanics of Ferroelectric Thin Films and Heterostructures. *Springer Series in Materials Science*, **2016**, 469-488 0.9

3 Magnetoelectrics and Multiferroics **2021**, 1-29

2 Strain Control of Domain Structures in Ferroelectric Thin Films: Applications of Phase-Field Method **2018**, 1-18

1 First principles calculations on the novel high pressure phase of HfC. *International Journal of Modern Physics B*, 2150279 1.1