Dong Wang

List of Publications by Year
in descending order

92 papers	3,503 citations	147801 31 h-index	149698 56 g-index
93 all docs	93 docs citations	93 times ranked	2064 citing authors

#	Article	IF	Citations
1	Microstructure basis for strong piezoelectricity in Pb-free Ba(Zr0.2Ti0.8)O3-(Ba0.7Ca0.3)TiO3 ceramics. Applied Physics Letters, 2011, 99, .	3.3	241
2	Large piezoelectricity and dielectric permittivity in BaTiO ₃ -xBaSnO ₃ system: The role of phase coexisting. Europhysics Letters, 2012, 98, 27008.	2.0	206
3	Role of Ï‰ phase in the formation of extremely refined intragranular Î± precipitates in metastable Î²-titanium alloys. Acta Materialia, 2016, 103, 850-858.	7.9	201
4	In situ design of advanced titanium alloy with concentration modulations by additive manufacturing. Science, 2021, 374, 478-482.	12.6	168
5	Large room-temperature electrocaloric effect in lead-free BaHf Ti O3 ceramics under low electric field. Acta Materialia, 2016, 115, 58-67.	7.9	162
6	Strain glass in Fe-doped Tiâ€“Ni. Acta Materialia, 2010, 58, 6206-6215.	7.9	152
7	Modeling Abnormal Strain States in Ferroelastic Systems: The Role of Point Defects. Physical Review Letters, 2010, 105, 205702.	7.8	128
8	Strain glass in doped Ti50(Ni50â^’xDx) (D=Co, Cr, Mn) alloys: Implication for the generality of strain glass in defect-containing ferroelastic systems. Acta Materialia, 2010, 58, 5433-5442.	7.9	120
9	Strain glass in ferroelastic systems: Premartensitic tweed versus strain glass. Philosophical Magazine, 2010, 90, 141-157.	1.6	114
10	Phase diagram of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Ti</mml:mtext></mml:mrow><mml:mrow><mml:mn>50</mml:m Crossover from martensite to strain glass. Physical Review B, 2010, 81, .	3.2	50
11	Superelasticity of slim hysteresis over a wide temperature range by nanodomains of martensite. Acta Materialia, 2014, 66, 349-359.	7.9	81
12	Pseudospinodal mechanism for fine Î±/Î² microstructures in Î²-Ti alloys. Acta Materialia, 2014, 64, 188-197.	7.9	81
13	Improved Energy Storage Properties Achieved in (K, Na)NbO₃â€‘Based Relaxor Ferroelectric Ceramics via a Combinatorial Optimization Strategy. Advanced Functional Materials, 2022, 32, .	14.9	79
14	Strain glass transition in a multifunctional Î²-type Ti alloy. Scientific Reports, 2014, 4, 3995.	3.3	76
15	Superelasticity and Tunable Thermal Expansion across a Wide Temperature Range. Journal of Materials Science and Technology, 2016, 32, 705-709.	10.7	72
16	New intrinsic mechanism on gum-like superelasticity of multifunctional alloys. Scientific Reports, 2013, 3, 2156.	3.3	57
17	Phase diagram of polar states in doped ferroelectric systems. Physical Review B, 2012, 86, .	3.2	52
18	Taming martensitic transformation via concentration modulation at nanoscale. Acta Materialia, 2017, 130, 196-207.	7.9	52

#	ARTICLE	IF	CITATIONS
19	Shuffle-nanodomain regulated strain glass transition in Ti-24Nb-4Zr-8Sn alloy. Acta Materialia, 2020, 186, 415-424.	7.9	52
20	Spontaneous strain glass to martensite transition in a Ti<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>50</mml:mn></mml:msub></mml:math>Ni<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>44.5</mml:mn></mml:mrow></mml:msub></mml:math>Fe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><	3.2	51
21	Origin of an Isothermal<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>R</mml:mi></mml:mrow></mml:math>-Martensite Formation in Ni-rich Ti-Ni Solid Solution: Crystallization of Strain Glass. Physical Review Letters, 2015, 114, 055701.	7.8	48
22	Formation of monoclinic nanodomains at the morphotropic phase boundary of ferroelectric systems. Physical Review B, 2013, 88, .	3.2	46
23	Nano-scale structural non-uniformities in gum like Ti-24Nb-4Zr-8Sn metastable Î²-Ti alloy. Scripta Materialia, 2019, 158, 95-99.	5.2	45
24	The role of nano-scaled structural non-uniformities on deformation twinning and stress-induced transformation in a cold rolled multifunctional Î²-titanium alloy. Scripta Materialia, 2020, 177, 181-185.	5.2	45
25	Pattern formation during cubic to orthorhombic martensitic transformations in shape memory alloys. Acta Materialia, 2014, 68, 93-105.	7.9	42
26	A New Strategy for Large Dynamic Piezoelectric Responses in Leadâ€Free Ferroelectrics: The Relaxor/Morphotropic Phase Boundary Crossover. Advanced Functional Materials, 2020, 30, 2004641.	14.9	38
27	Phase transition sequence in Pb-free 0.96(K0.5Na0.5)0.95Li0.05Nb0.93 Sb0.07O3â^'0.04BaZrO3 ceramic with large piezoelectric response. Applied Physics Letters, 2015, 107, .	3.3	37
28	Phase transition behaviours near the triple point for Pb-free (1 â^' x)Ba(Zr _{0.2} Ti) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 387 piezoceramics. Europhysics Letters, 2016, 115, 37001.	2.0	37
29	Re-entrant relaxorâ€“ferroelectric composite showing exceptional electromechanical properties. NPG Asia Materials, 2018, 10, 1029-1036.	7.9	36
30	Novel transformation pathway and heterogeneous precipitate microstructure in Ti-alloys. Acta Materialia, 2020, 196, 409-417.	7.9	35
31	Non-conventional transformation pathways and ultrafine lamellar structures in Î³-TiAl alloys. Acta Materialia, 2020, 189, 25-34.	7.9	34
32	A new mechanism for low and temperature-independent elastic modulus. Scientific Reports, 2015, 5, 11477.	3.3	33
33	Linear-superelastic metals by controlled strain release via nanoscale concentration-gradient engineering. Materials Today, 2020, 33, 17-23.	14.2	33
34	Phase field simulation of martensitic transformation in pre-strained nanocomposite shape memory alloys. Acta Materialia, 2019, 164, 99-109.	7.9	32
35	Defect strength and strain glass state in ferroelastic systems. Journal of Alloys and Compounds, 2016, 661, 100-109.	5.5	31
36	High temperature-stability of (Pb 0.9 La 0.1)(Zr 0.65 Ti 0.35)O 3 ceramic for energy-storage applications at finite electric field strength. Scripta Materialia, 2017, 137, 114-118.	5.2	31

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37	Crystallographic analysis and phase field simulation of transformation plasticity in a multifunctional Î²-Ti alloy. International Journal of Plasticity, 2017, 89, 110-129.	8.8	31
38	A new Î±Â+Âβ Ti-alloy with refined microstructures and enhanced mechanical properties in the as-cast state. Scripta Materialia, 2022, 207, 114260.	5.2	31
39	Enhanced mechanical properties of Ti-5Al-5Mo-5V-3Cr-1Zr by bimodal lamellar precipitate microstructures via two-step aging. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 829, 142117.	5.6	28
40	Integrated Computational Materials Engineering (ICME) Approach to Design of Novel Microstructures for Ti-Alloys. Jom, 2014, 66, 1287-1298.	1.9	27
41	Ferroic glasses. Npj Computational Materials, 2017, 3, .	8.7	27
42	Making metals linear super-elastic with ultralow modulus and nearly zero hysteresis. Materials Horizons, 2019, 6, 515-523.	12.2	27
43	Laminated Modulation of Tricritical Ferroelectrics Exhibiting Highly Enhanced Dielectric Permittivity and Temperature Stability. Advanced Functional Materials, 2019, 29, 1807162.	14.9	25
44	Strain states and unique properties in cold-rolled TiNi shape memory alloys. Acta Materialia, 2022, 231, 117890.	7.9	24
45	Spontaneous strain glass to martensite transition in ferromagnetic Ni-Co-Mn-Ga strain glass. Applied Physics Letters, 2013, 102, .	3.3	22
46	Ferroelectric Domain Walls Approaching Morphotropic Phase Boundary. Journal of Physical Chemistry C, 2017, 121, 2243-2250.	3.1	22
47	Novel deformation twinning system in a cold rolled high-strength metastable-Î² Ti-5Al-5V-5Mo-3Cr-0.5Fe alloy. Materialia, 2020, 9, 100614.	2.7	21
48	Trirelaxor Ferroelectric Material with Giant Dielectric Permittivity over a Wide Temperature Range. ACS Applied Materials & Interfaces, 2021, 13, 33272-33281.	8.0	21
49	Large electrostrain with nearly-vanished hysteresis in eco-friendly perovskites by building coexistent glasses near quadruple point. Nano Energy, 2021, 90, 106519.	16.0	20
50	Novel B19â€² strain glass with large recoverable strain. Physical Review Materials, 2017, 1, .	2.4	20
51	Role of point defects in the formation of relaxor ferroelectrics. Acta Materialia, 2022, 225, 117558.	7.9	20
52	A lightweight strain glass alloy showing nearly temperature-independent low modulus and high strength. Nature Materials, 2022, 21, 1003-1007.	27.5	18
53	Glass-Glass Transitions by Means of an Acceptor-Donor Percolating Electric-Dipole Network. Physical Review Applied, 2017, 8, .	3.8	17
54	Highâ€Performance Strain of Leadâ€Free Relaxorâ€Ferroelectric Piezoceramics by the Morphotropic Phase Boundary Modification. Advanced Functional Materials, 2022, 32, .	14.9	16

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55	Time-dependent ferroelectric transition in Pb(1â^’<i>x</i>)(Zr0.4Ti0.6)(1â^’<i>x</i>/4)O3â€‰â^’â€‰<i>x</i>La system. Applied Physics Letters, 2013, 102, .	3.3	14
56	Polarization Spinodal at Ferroelectric Morphotropic Phase Boundary. Physical Review Letters, 2020, 125, 127602.	7.8	14
57	Revealing the atomistic mechanisms of strain glass transition in ferroelastics. Acta Materialia, 2020, 194, 134-143.	7.9	14
58	Reentrant strain glass transition in Ti-Ni-Cu shape memory alloy. Acta Materialia, 2022, 226, 117618.	7.9	14
59	Evidence for crossover martensite in Ti₅₀Ni₄₅Fe₅: An intermediate state between normal martensite and strain glass. Europhysics Letters, 2012, 100, 58001.	2.0	13
60	Glass-ferroic composite caused by the crystallization of ferroic glass. Physical Review B, 2015, 92, .	3.2	12
61	Origin of ultrahigh piezoelectric activity of [001]-oriented ferroelectric single crystals at the morphotropic phase boundary. Applied Physics Letters, 2016, 108, 012904.	3.3	12
62	Tilt strain glass in Sr and Nb co-doped LaAlO3 ceramics. Acta Materialia, 2019, 168, 250-260.	7.9	12
63	Sandwichlike strain glass phase diagram of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ti</mml:mi><mml:mn> Physical Review B, 2016, 94, .	4.2	11
64	Effect of strain on the Curie temperature and band structure of low-dimensional SbSI. Applied Physics Letters, 2018, 112, .	3.3	10
65	Kinetic arrest behavior in Ni-Co-Mn-Sn alloys within the phase boundary between martensite and strain glass. Scripta Materialia, 2021, 194, 113671.	5.2	10
66	Strain Glass State, Strain Glass Transition, and Controlled Strain Release. Annual Review of Materials Research, 2022, 52, 159-187.	9.3	10
67	Heterogeneous precipitate microstructure in titanium alloys for simultaneous improvement of strength and ductility. Journal of Materials Science and Technology, 2022, 124, 150-163.	10.7	10
68	Reversible Domain-Wall-Motion-Induced Low-Hysteretic Piezoelectric Response in Ferroelectrics. Journal of Physical Chemistry C, 2019, 123, 15434-15440.	3.1	9
69	Quantifying the abnormal strain state in ferroelastic materials: A moment invariant approach. Acta Materialia, 2015, 94, 172-180.	7.9	8
70	Secondary hardening behavior in Ti alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 759, 640-647.	5.6	8
71	Existence of a quadruple point in a binary ferroelectric phase diagram. Physical Review B, 2021, 103, .	3.2	8
72	The effect of point defects on ferroelastic phase transition of lanthanum-doped calcium titanate ceramics. Journal of Alloys and Compounds, 2013, 577, S468-S471.	5.5	7

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73	Accelerating ferroic ageing dynamics upon cooling. NPG Asia Materials, 2016, 8, e319-e319.	7.9	7
74	Modeling magnetic nanotubes using a chain of ellipsoid-rings approach. Journal of Applied Physics, 2012, 111, 063912.	2.5	6
75	Strain Glasses. Springer Series in Materials Science, 2018, , 183-203.	0.6	6
76	New Degree of Freedom in Determining Superior Piezoelectricity at the Lead-Free Morphotropic Phase Boundary: The Invisible Ferroelectric Crossover. ACS Applied Materials & Interfaces, 2022, 14, 1434-1442.	8.0	6
77	Monte Carlo simulation of magnetic domain structure and magnetic properties near the morphotropic phase boundary. Physical Chemistry Chemical Physics, 2017, 19, 7236-7244.	2.8	5
78	Unique properties associated with normal martensitic transition and strain glass transition â€“ A simulation study. Journal of Alloys and Compounds, 2013, 577, S102-S106.	5.5	4
79	Adaptive Volume Control in Titanium Alloy for High Temperature Performance. Materials, 2019, 12, 3950.	2.9	4
80	Origin of the modulus anomaly over a wide temperature range of Mn0.70Fe0.25Cu0.05 alloy. Computational Materials Science, 2017, 140, 89-94.	3.0	3
81	Tailoring thermal expansion coefficient from positive through zero to negative in the compositional crossover alloy Ti50(Pd40Cr10) by uniaxial tensile stress. Materials and Design, 2021, 199, 109431.	7.0	3
82	Modeling and Simulation of Microstructure Evolution during Heat Treatment of Titanium Alloys. , 2016, , 573-603.		3
83	Quasiâ€Linear Superelasticity with Ultralow Modulus in Tensile Cyclic Deformed TiNi Strain Glass. Advanced Engineering Materials, 2022, 24, .	3.5	3
84	Simulation study on exchange interaction and unique magnetization near ferromagnetic morphotropic phase boundary. Journal of Physics Condensed Matter, 2017, 29, 445802.	1.8	2
85	Heterogeneous Microstructure Enhanced Comprehensive Mechanical Properties in Titanium Alloys. Jom, 2021, 73, 3082-3091.	1.9	2
86	A novel two-stage martensitic transformation induced by nanoscale concentration modulation in a TiNb-based shape memory alloy. Computational Materials Science, 2021, 200, 110843.	3.0	2
87	Strain Glass as a Novel Multi-functional Material. Springer Series in Materials Science, 2014, , 271-288.	0.6	2
88	Nanoscaled Martensitic Domains in Ferroelastic Systems: Strain Glass. Current Nanoscience, 2016, 12, 192-201.	1.2	2
89	Exploration of Nano-scale Structural Instabilities in Metastable Î² Titanium Alloys Using Advanced Electron Microscopy. MATEC Web of Conferences, 2020, 321, 12001.	0.2	1
90	Phase Field Model and Computer Simulation of Strain Glasses. Springer Series in Materials Science, 2018, , 253-272.	0.6	0

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91	Low-energy irradiation induced giant quasilinear superelasticity over wide temperature range in NiTi shape memory alloys. Physical Review Materials, 2022, 6, .	2.4	0
92	Stabilized piezoelectricity upon ferro-ferro phase transition achieved by aging induced domain memory effect in acceptor doped lead-free ceramics. Scripta Materialia, 2022, 219, 114872.	5.2	0