William T Reynolds

List of Publications by Year
in descending order

64 papers	1,997 citations	236925 25 h-index	243625 44 g-index
64 all docs	64 docs citations	64 times ranked	1416 citing authors

#	Article	IF	Citations
1	Entropy-driven microstructure evolution predicted with the steepest-entropy-ascent quantum thermodynamic framework. Acta Materialia, 2022, 237, 118163.	7.9	4
2	Assessing the influence of processing parameters and external loading on the nanoporous structure and morphology of nanoporous gold toward catalytic applications. Journal of Physics and Chemistry of Solids, 2020, 136, 109139.	4.0	4
3	Kinetic pathways of ordering and phase separation using classical solid state models within the steepest-entropy-ascent quantum thermodynamic framework. Acta Materialia, 2020, 182, 87-99.	7.9	8
4	Methodology of an application of the steepest-entropy-ascent quantum thermodynamic framework to physical phenomena in materials science. Computational Materials Science, 2019, 166, 251-264.	3.0	11
5	Predicting continuous and discontinuous phase decompositions using steepest-entropy-ascent quantum thermodynamics. Physical Review E, 2019, 99, 052121.	2.1	12
6	Low-temperature atomistic spin relaxation and non-equilibrium intensive properties using steepest-entropy-ascent quantum-inspired thermodynamics modeling. Journal of Physics Condensed Matter, 2019, 31, 505901.	1.8	8
7	Surface Symmetry Effect on Self-Assembly of Three-Dimensional Single Crystal Piezoelectric Nanostructures. Chemistry of Materials, 2018, 30, 2183-2187.	6.7	0
8	A method for predicting non-equilibrium thermal expansion using steepest-entropy-ascent quantum thermodynamics. Journal of Physics Condensed Matter, 2018, 30, 325901.	1.8	13
9	Broadband dual phase energy harvester: Vibration and magnetic field. Applied Energy, 2018, 225, 1132-1142.	10.1	71
10	The Influence of Processing Conditions on the 3-D Interconnected Structure of Nanosilver Paste. IEEE Transactions on Electron Devices, 2017, 64, 494-499.	3.0	7
11	Ultra-Low Resonant Piezoelectric MEMS Energy Harvester With High Power Density. Journal of Microelectromechanical Systems, 2017, 26, 1226-1234.	2.5	119
12	Interface Controlled Growth of Single-Crystalline PbTiO3 Nanostructured Arrays. Journal of Physical Chemistry C, 2017, 121, 27191-27198.	3.1	5
13	Effect of Laves Phase on High-Temperature Deformation and Microstructure Evolution in an 18Cr-2Mo-0.5Nb Ferritic Stainless Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 3460-3469.	2.2	18
14	Ellipsometric characterization of multi-component thin films: Determination of elemental content from optical dispersion. Thin Solid Films, 2014, 550, 239-249.	1.8	2
15	Effect of Crystallinity on Thermal Transport in Textured Lead Zirconate Titanate Thin Films. ACS Applied Materials & Interfaces, 2014, 6, 6748-6756.	8.0	8
16	How TEM Projection Artifacts Distort Microstructure Measurements: A Case Study in a 9Âpct Cr-Mo-V Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3708-3713.	2.2	9
17	The role of twin boundary and surface energies in periodically twinned â€ˆ111â€‰ nanowires. Acta Materialia, 2014, 75, 180-187.	7.9	6
18	Origin of high piezoelectric response in A-site disordered morphotropic phase boundary composition of <i>lead-free</i> piezoelectric 0.93(Na0.5Bi0.5)TiO3â€“0.07BaTiO3. Journal of Applied Physics, 2013, 113, .	2.5	74

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19	Role of coexisting tetragonal regions in the rhombohedral phase of Na0.5Bi0.5TiO3-xat.%BaTiO3 crystals on enhanced piezoelectric properties on approaching the morphotropic phase boundary. Applied Physics Letters, 2012, 100, .	3.3	58
20	The influence of Mn substitution on the local structure of Na0.5Bi0.5TiO3 crystals: Increased ferroelectric ordering and coexisting octahedral tilts. Journal of Applied Physics, 2012, 111, .	2.5	22
21	A software tool for automatic analysis of selected area diffraction patterns within Digital Micrographâ„¢. Ultramicroscopy, 2012, 112, 10-14.	1.9	18
22	Shape memory alloy/glass composite seal for solid oxide electrolyzer and fuel cells. International Journal of Hydrogen Energy, 2008, 33, 3970-3975.	7.1	26
23	3DP process for fine mesh structure printing. Powder Technology, 2008, 187, 11-18.	4.2	110
24	Thermophysical properties and devitrification of SrOâ€“La2O3â€“Al2O3â€“B2O3â€“SiO2-based glass sealant for solid oxide fuel/electrolyzer cells. Journal of Power Sources, 2008, 179, 106-112.	7.8	51
25	Magnetoelastic interactions in a cracked ferromagnetic body. Acta Materialia, 2008, 56, 4673-4681.	7.9	1
26	The Effects of Composition and Aging on the Martensite and Magnetic Transformations in Ni-Fe-Ga Ferromagnetic Shape Memory Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 752-758.	2.2	11
27	On the mechanism of formation of diffusional plate-shaped transformation products. Acta Materialia, 2006, 54, 1227-1232.	7.9	44
28	General discussion session of the 2004 hume-rothery symposium on â€œthe structure and diffusional growth mechanisms of irrational interphase boundariesâ€• Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 961-974.	2.2	3
29	The incomplete transformation phenomenon in steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 1731-1745.	2.2	79
30	Coupled-solute drag effects on ferrite formation in Fe-C-X systems. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 1187-1210.	2.2	81
31	Molybdenum accumulation at ferrite: Austenite interfaces during isothermal transformation of an Fe-0.24 pct C-0.93 pct Mo alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 1223-1235.	2.2	31
32	Atomic structure of a {111} incoherent interface in Zrâ€“N alloy. Acta Materialia, 2004, 52, 239-248.	7.9	25
33	Studies of the Structure and Composition of Type-3 Incoherent Zr/ZrN Interfaces by HRTEM, Image Simulation, EFTEM, and NCS Analysis. Microscopy and Microanalysis, 2004, 10, 276-277.	0.4	0
34	Atomic structure and dynamics of massive transformation interfaces in TiAl alloy. International Journal of Materials Research, 2004, 95, 275-278.	0.8	4
35	Atomic structure of high-index Î±2:Î³m boundaries in a Tiâ€“46.54 at.%Al alloy. Scripta Materialia, 2003, 49, 405-409.	5.2	46
36	A progress report on the definitions of bainite. Scripta Materialia, 2002, 47, 139-144.	5.2	45

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37	Static and in-situ high-resolution transmission electron microscopy investigations of the atomic structure and dynamics of massive transformation interfaces in a Ti-Al alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 2391-2411.	2.2	64
38	Tests of the zener theory of the incomplete transformation phenomenon in Fe-C-Mo and related alloys. Scripta Materialia, 2001, 44, 2425-2430.	5.2	16
39	A STEM method for investigating alloying element accumulation at austeniteâ€“ferrite boundaries in an Feâ€“Câ€“Mo alloy. Scripta Materialia, 2001, 45, 561-567.	5.2	32
40	Determining interphase boundary orientations from near-coincidence sites. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 2059-2072.	2.2	107
41	Interfacial structure and growth mechanisms of lath-shaped precipitates in Ni-45 wtÂ° Cr. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 78, 405-422.	0.6	36
42	APFIM and TEM studies of drawn pearlitic wire. Scripta Materialia, 1997, 37, 1221-1230.	5.2	113
43	The role of atomic matching and lattice correspondences in the selection of habit planes. Acta Materialia, 1997, 45, 4423-4430.	7.9	30
44	Atomistic simulation of an f.c.c./b.c.c. interface in Niî—¸Cr alloys. Acta Materialia, 1997, 45, 4415-4421.	7.9	92
45	Eutectoid decomposition in Ag-Ga. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1996, 27, 1683-1689.	2.2	3
46	Deposition of epitaxial Î²â€“SiC films on porous Si(100) from MTS in a hot wall LPCVD reactor. Journal of Materials Research, 1995, 10, 1099-1107.	2.6	13
47	The selection of precipitate habit planes in Cr-32 Wt Pct Ni. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1994, 25, 2639-2646.	2.2	1
48	The elastic strain energy of growth ledges on coherent and partially coherent precipitates. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1994, 25, 2073-2082.	2.2	8
49	Effects of alloying elements upon austenite decomposition in Low-C steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1994, 25, 1367-1379.	2.2	9
50	Discussion to â€˜atom probe field ion microscopy of bainitic transformation in 2.25Cr-1Mo weld metalâ€™, B. Josefsson and H.-O. Andren, mater. sci. tech. 7, 849 (1991). Scripta Metallurgica Et Materialia, 1994, 30, 265-267.	1.0	1
51	Effects of Alloying Elements upon the Kinetics of the Proeutectoid Ferrite Reaction in Fe-C-X Alloys. Key Engineering Materials, 1993, 84-85, 85-128.	0.4	0
52	A Summary of the Present Diffusionist Views on Bainite. Materials Transactions, JIM, 1991, 32, 737-746.	0.9	33
53	The role of ledges in the proeutectoid ferrite and proeutectoid cementite reactions in steel. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1991, 22, 1367-1380.	1.4	14
54	Crystallographic and mechanistic aspects of growth by shear and by diffusional processes. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1990, 21, 2369-2409.	1.4	106

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55	Bainite viewed three different ways. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1990, 21, 1343-1380.	1.4	158
56	Discussion of â€œlow temperature ageing of Fe-N austeniteâ€•by J. Foct, P. Rochegude and A. Hendry: I. Mechanism of the bainite reaction. Scripta Metallurgica Et Materialia, 1990, 24, 219-220.	1.0	13
57	Further rebuttal to J. W. Christian and D. V. Edmonds. Scripta Metallurgica, 1989, 23, 279-284.	1.2	12
58	A comparison of etchants for quantitative metallography of bainite and martensite microstructures in Fe-C-Mo alloys. Metallography, 1988, 21, 91-102.	0.4	12
59	Reply to a discussion by J.W. Christian and D.V. Edmonds of papers by Aaronson and co-workers on the proeutectoid ferrite and bainite reactions. Scripta Metallurgica, 1988, 22, 567-572.	1.2	26
60	Rejoinder to comments by J. W. Christian and D. V. Edmonds. Scripta Metallurgica, 1988, 22, 575-576.	1.2	12
61	An FIM/AP study of the Mo concentration within ferrite/austenite interfaces in an Fe - 0.88 at% C - 1.06 at% Mo alloy. Scripta Metallurgica, 1988, 22, 1343-1348.	1.2	34
62	Discussion to â€œdiffusional formation of ferrite in iron and its alloysâ€• Scripta Metallurgica, 1987, 21, 1599-1604.	1.2	3
63	Further discussion to â€œdiffusional formation of ferrite in iron and its alloysâ€•by H.K.D.H. Bhadeshia. Scripta Metallurgica, 1987, 21, 1611-1614.	1.2	4
64	On the growth kinetics of ferrite plates and allotriomorphs in high-nickel Feî—¸Cî—¸Ni alloys. Scripta Metallurgica, 1985, 19, 1171-1176.	1.2	11