

William T Reynolds

List of Publications by Year in descending order

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64
papers

1,997
citations

236925

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44
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64
all docs

64
docs citations

64
times ranked

1416
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Bainite viewed three different ways. Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science, 1990, 21, 1343-1380. | 1.4 | 158 |
| 2 | Ultra-Low Resonant Piezoelectric MEMS Energy Harvester With High Power Density. Journal of Microelectromechanical Systems, 2017, 26, 1226-1234. | 2.5 | 119 |
| 3 | APFIM and TEM studies of drawn pearlitic wire. Scripta Materialia, 1997, 37, 1221-1230. | 5.2 | 113 |
| 4 | 3DP process for fine mesh structure printing. Powder Technology, 2008, 187, 11-18. | 4.2 | 110 |
| 5 | 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 |
| 6 | 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 |
| 7 | Atomistic simulation of an f.c.c./b.c.c. interface in Ni-Cr alloys. Acta Materialia, 1997, 45, 4415-4421. | 7.9 | 92 |
| 8 | 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 |
| 9 | The incomplete transformation phenomenon in steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 1731-1745. | 2.2 | 79 |
| 10 | Origin of high piezoelectric response in A-site disordered morphotropic phase boundary composition of lead-free piezoelectric $0.93(\text{Na}_{0.5}\text{Bi}_{0.5})\text{TiO}_3\text{-}0.07\text{BaTiO}_3$. Journal of Applied Physics, 2013, 113, . | 2.5 | 74 |
| 11 | Broadband dual phase energy harvester: Vibration and magnetic field. Applied Energy, 2018, 225, 1132-1142. | 10.1 | 71 |
| 12 | 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 |
| 13 | Role of coexisting tetragonal regions in the rhombohedral phase of $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3\text{-}x\text{at.}\% \text{BaTiO}_3$ crystals on enhanced piezoelectric properties on approaching the morphotropic phase boundary. Applied Physics Letters, 2012, 100, . | 3.3 | 58 |
| 14 | Thermophysical properties and devitrification of $\text{SrO-La}_2\text{O}_3\text{-Al}_2\text{O}_3\text{-B}_2\text{O}_3\text{-SiO}_2$ -based glass sealant for solid oxide fuel/electrolyzer cells. Journal of Power Sources, 2008, 179, 106-112. | 7.8 | 51 |
| 15 | Atomic structure of high-index $\pm 2\frac{1}{3}\text{m}$ boundaries in a Ti-46.54 at.%Al alloy. Scripta Materialia, 2003, 49, 405-409. | 5.2 | 46 |
| 16 | A progress report on the definitions of bainite. Scripta Materialia, 2002, 47, 139-144. | 5.2 | 45 |
| 17 | On the mechanism of formation of diffusional plate-shaped transformation products. Acta Materialia, 2006, 54, 1227-1232. | 7.9 | 44 |
| 18 | Interfacial structure and growth mechanisms of lath-shaped precipitates in Ni-45 wt.% Cr. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 78, 405-422. | 0.6 | 36 |

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|----|---|-----|-----------|
| 19 | 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 |
| 20 | A Summary of the Present Diffusionist Views on Bainite. Materials Transactions, JIM, 1991, 32, 737-746. | 0.9 | 33 |
| 21 | A STEM method for investigating alloying element accumulation at austenite-ferrite boundaries in an Fe-C-Mo alloy. Scripta Materialia, 2001, 45, 561-567. | 5.2 | 32 |
| 22 | 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 |
| 23 | The role of atomic matching and lattice correspondences in the selection of habit planes. Acta Materialia, 1997, 45, 4423-4430. | 7.9 | 30 |
| 24 | 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 |
| 25 | 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 |
| 26 | Atomic structure of a {111} incoherent interface in Zr-N alloy. Acta Materialia, 2004, 52, 239-248. | 7.9 | 25 |
| 27 | The influence of Mn substitution on the local structure of Na _{0.5} Bi _{0.5} TiO ₃ crystals: Increased ferroelectric ordering and coexisting octahedral tilts. Journal of Applied Physics, 2012, 111, . | 2.5 | 22 |
| 28 | A software tool for automatic analysis of selected area diffraction patterns within Digital Micrograph [®] . Ultramicroscopy, 2012, 112, 10-14. | 1.9 | 18 |
| 29 | 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 |
| 30 | 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 |
| 31 | 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 |
| 32 | Discussion of low temperature ageing of Fe-N austenite by J. Foct, P. Rohegude and A. Hendry: I. Mechanism of the bainite reaction. Scripta Metallurgica Et Materialia, 1990, 24, 219-220. | 1.0 | 13 |
| 33 | Deposition of epitaxial 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 |
| 34 | 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 |
| 35 | 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 |
| 36 | Rejoinder to comments by J. W. Christian and D. V. Edmonds. Scripta Metallurgica, 1988, 22, 575-576. | 1.2 | 12 |

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|----|--|-----|-----------|
| 37 | Further rebuttal to J. W. Christian and D. V. Edmonds. <i>Scripta Metallurgica</i> , 1989, 23, 279-284. | 1.2 | 12 |
| 38 | Predicting continuous and discontinuous phase decompositions using steepest-entropy-ascent quantum thermodynamics. <i>Physical Review E</i> , 2019, 99, 052121. | 2.1 | 12 |
| 39 | On the growth kinetics of ferrite plates and allotriomorphs in high-nickel Fe-C-Ni alloys. <i>Scripta Metallurgica</i> , 1985, 19, 1171-1176. | 1.2 | 11 |
| 40 | The Effects of Composition and Aging on the Martensite and Magnetic Transformations in Ni-Fe-Ga Ferromagnetic Shape Memory Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2007, 38, 752-758. | 2.2 | 11 |
| 41 | Methodology of an application of the steepest-entropy-ascent quantum thermodynamic framework to physical phenomena in materials science. <i>Computational Materials Science</i> , 2019, 166, 251-264. | 3.0 | 11 |
| 42 | Effects of alloying elements upon austenite decomposition in Low-C steels. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1994, 25, 1367-1379. | 2.2 | 9 |
| 43 | How TEM Projection Artifacts Distort Microstructure Measurements: A Case Study in a 9% Cr-Mo-V Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 3708-3713. | 2.2 | 9 |
| 44 | The elastic strain energy of growth ledges on coherent and partially coherent precipitates. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1994, 25, 2073-2082. | 2.2 | 8 |
| 45 | Effect of Crystallinity on Thermal Transport in Textured Lead Zirconate Titanate Thin Films. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 6748-6756. | 8.0 | 8 |
| 46 | Low-temperature atomistic spin relaxation and non-equilibrium intensive properties using steepest-entropy-ascent quantum-inspired thermodynamics modeling. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 505901. | 1.8 | 8 |
| 47 | Kinetic pathways of ordering and phase separation using classical solid state models within the steepest-entropy-ascent quantum thermodynamic framework. <i>Acta Materialia</i> , 2020, 182, 87-99. | 7.9 | 8 |
| 48 | The Influence of Processing Conditions on the 3-D Interconnected Structure of Nanosilver Paste. <i>IEEE Transactions on Electron Devices</i> , 2017, 64, 494-499. | 3.0 | 7 |
| 49 | The role of twin boundary and surface energies in periodically twinned Cu nanowires. <i>Acta Materialia</i> , 2014, 75, 180-187. | 7.9 | 6 |
| 50 | Interface Controlled Growth of Single-Crystalline PbTiO_3 Nanostructured Arrays. <i>Journal of Physical Chemistry C</i> , 2017, 121, 27191-27198. | 3.1 | 5 |
| 51 | Further discussion to diffusional formation of ferrite in iron and its alloys by H.K.D.H. Bhadeshia. <i>Scripta Metallurgica</i> , 1987, 21, 1611-1614. | 1.2 | 4 |
| 52 | Assessing the influence of processing parameters and external loading on the nanoporous structure and morphology of nanoporous gold toward catalytic applications. <i>Journal of Physics and Chemistry of Solids</i> , 2020, 136, 109139. | 4.0 | 4 |
| 53 | Atomic structure and dynamics of massive transformation interfaces in TiAl alloy. <i>International Journal of Materials Research</i> , 2004, 95, 275-278. | 0.8 | 4 |
| 54 | Entropy-driven microstructure evolution predicted with the steepest-entropy-ascent quantum thermodynamic framework. <i>Acta Materialia</i> , 2022, 237, 118163. | 7.9 | 4 |

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|----|--|-----|-----------|
| 55 | Discussion to "diffusional formation of ferrite in iron and its alloys" Scripta Metallurgica, 1987, 21, 1599-1604. | 1.2 | 3 |
| 56 | Eutectoid decomposition in Ag-Ga. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1996, 27, 1683-1689. | 2.2 | 3 |
| 57 | General discussion session of the 2004 hume-rothery symposium on "the structure and diffusional growth mechanisms of irrational interphase boundaries" Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 961-974. | 2.2 | 3 |
| 58 | Ellipsometric characterization of multi-component thin films: Determination of elemental content from optical dispersion. Thin Solid Films, 2014, 550, 239-249. | 1.8 | 2 |
| 59 | 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 |
| 60 | Discussion to "atom probe field ion microscopy of bainitic transformation in 2.25Cr-1Mo weld metal", B. Josefsson and H.-O. Andren, mater. sci. tech. 7, 849 (1991). Scripta Metallurgica Et Materialia, 1994, 30, 265-267. | 1.0 | 1 |
| 61 | Magnetoelastic interactions in a cracked ferromagnetic body. Acta Materialia, 2008, 56, 4673-4681. | 7.9 | 1 |
| 62 | 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 |
| 63 | 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 |
| 64 | Surface Symmetry Effect on Self-Assembly of Three-Dimensional Single Crystal Piezoelectric Nanostructures. Chemistry of Materials, 2018, 30, 2183-2187. | 6.7 | 0 |