W Mark Rainforth

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/9047277/publications.pdf

Version: 2024-02-01

267 papers 7,612 citations

50276 46 h-index 91884 69 g-index

269 all docs

269 docs citations

269 times ranked 5426 citing authors

#	Article	IF	CITATIONS
1	Direct observation of individual hydrogen atoms at trapping sites in a ferritic steel. Science, 2017, 355, 1196-1199.	12.6	224
2	Twin recrystallization mechanisms and exceptional contribution to texture evolution during annealing in a magnesium alloy. Acta Materialia, 2017, 126, 132-144.	7.9	210
3	Deformation mechanisms in a metastable beta titanium twinning induced plasticity alloy with high yield strength and high strain hardening rate. Acta Materialia, 2018, 152, 301-314.	7.9	188
4	Individual effect of recrystallisation nucleation sites on texture weakening in a magnesium alloy: Part 1- double twins. Acta Materialia, 2017, 135, 14-24.	7.9	145
5	Precipitation of NbC in a model austenitic steel. Acta Materialia, 2002, 50, 735-747.	7.9	132
6	Predicting microstructure and strength of maraging steels: Elemental optimisation. Acta Materialia, 2016, 117, 270-285.	7.9	125
7	Development of Microstructure and Crystallographic Texture during Stationary Shoulder Friction Stir Welding of Ti-6Al-4V. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 2278-2289.	2.2	122
8	Basal slip mediated tension twin variant selection in magnesium WE43 alloy. Acta Materialia, 2019, 170, 1-14.	7.9	113
9	Deformation structures induced by sliding contact. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1992, 66, 621-641.	0.6	108
10	The wear behaviour of oxide ceramics-A Review. Journal of Materials Science, 2004, 39, 6705-6721.	3.7	108
11	Dissolution and precipitation behaviour in steels microalloyed with niobium during thermomechanical processing. Acta Materialia, 2015, 97, 392-403.	7.9	106
12	Individual effect of recrystallisation nucleation sites on texture weakening in a magnesium alloy: Part 2- shear bands. Acta Materialia, 2018, 145, 399-412.	7.9	104
13	Wear and friction of TiAlN/VN coatings against Al2O3 in air at room and elevated temperatures. Acta Materialia, 2010, 58, 2912-2925.	7.9	100
14	Facile route to bulk ultrafine-grain steels for high strength and ductility. Nature, 2021, 590, 262-267.	27.8	98
15	Dry wear behaviour and its relation to microstructure of novel 6092 aluminium alloy–Ni3Al powder metallurgy composite. Wear, 2001, 251, 1421-1432.	3.1	96
16	A quantitative analysis of the influence of carbides size distributions on wear behaviour of high-speed steel in dry rolling/sliding contact. Acta Materialia, 2007, 55, 2443-2454.	7.9	96
17	The wear behaviour of high-chromium white cast irons as a function of silicon and Mischmetal content. Wear, 2001, 250, 449-461.	3.1	86
18	Wear mechanisms experienced by a work roll grade high speed steel under different environmental conditions. Wear, 2009, 267, 441-448.	3.1	83

2

#	Article	IF	Citations
19	The role of trace additions of alumina to yttria–tetragonal zirconia polycrystals (Y–TZP). Scripta Materialia, 2001, 45, 653-660.	5.2	80
20	The effect of titanium on the wear behaviour of a 16%Cr white cast iron under pure sliding. Wear, 2007, 263, 808-820.	3.1	78
21	Microstructural evolution at the worn surface: a comparison of metals and ceramics. Wear, 2000, 245, 162-177.	3.1	7 5
22	Through-thickness crystallographic texture of stationary shoulder friction stir welded aluminium. Scripta Materialia, 2011, 64, 45-48.	5.2	73
23	TEM observations of wear mechanisms of TiAlCrN and TiAlN/CrN coatings grown by combined steered-arc/unbalanced magnetron deposition. Wear, 1999, 225-229, 74-82.	3.1	72
24	Microabrasion–corrosion of cast CoCrMo alloy in simulated body fluids. Tribology International, 2009, 42, 99-110.	5.9	72
25	Microstructure analysis of nanocrystalline Fe-Nd-B ribbons with enhanced hard magnetic properties. Journal of Magnetism and Magnetic Materials, 1993, 128, 307-312.	2.3	71
26	TiAlN based nanoscale multilayer coatings designed to adapt their tribological properties at elevated temperatures. Thin Solid Films, 2005, 485, 160-168.	1.8	70
27	\ddot{l} % phase strengthened 1.2GPa metastable \hat{l}^2 titanium alloy with high ductility. Scripta Materialia, 2019, 162, 77-81.	5.2	70
28	High resolution observations of friction-induced oxide and its interaction with the worn surface. Tribology International, 2002, 35, 731-748.	5.9	69
29	The effect of molybdenum on interphase precipitation and microstructures in microalloyed steels containing titanium and vanadium. Acta Materialia, 2018, 161, 374-387.	7.9	69
30	Quantifying crystallographic texture in the probe-dominated region of thick-section friction-stir-welded aluminium. Scripta Materialia, 2008, 59, 507-510.	5.2	68
31	Influence of a Single Grain Boundary on Domain Wall Motion in Ferroelectrics. Advanced Functional Materials, 2014, 24, 1409-1417.	14.9	66
32	Exploring the mechanism of "Rare Earth―texture evolution in a lean Mg–Zn–Ca alloy. Scientific Reports, 2019, 9, 7152.	3.3	65
33	Thermomechanical processing route to achieve ultrafine grains in low carbon microalloyed steels. Acta Materialia, 2016, 119, 43-54.	7.9	62
34	On the role of plastic deformation during the mild wear of alumina. Acta Materialia, 1998, 46, 6475-6483.	7.9	59
35	Lubricated sliding wear behaviour of aluminium alloy composites. Wear, 2005, 259, 577-589.	3.1	58
36	The effect of (Ti+Al):V ratio on the structure and oxidation behaviour of TiAlN/VN nano-scale multilayer coatings. Surface and Coatings Technology, 2004, 177-178, 252-259.	4.8	57

3

#	Article	IF	CITATIONS
37	Deceleration of hydrothermal degradation of 3Y-TZP by alumina and lanthana co-doping. Acta Biomaterialia, 2013, 9, 6226-6235.	8.3	56
38	Oxidation behaviour of nanoscale TiAlN/VN multilayer coatings. Surface and Coatings Technology, 2004, 177-178, 198-203.	4.8	55
39	The ubiquitous Beilby layer on aluminium surfaces. Surface and Interface Analysis, 2010, 42, 175-179.	1.8	53
40	3D analysis of thermal and stress evolution during laser cladding of bioactive glass coatings. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 59, 404-417.	3.1	53
41	Corrosion behaviour of mechanically polished AA7075â€₹6 aluminium alloy. Surface and Interface Analysis, 2010, 42, 185-188.	1.8	51
42	Sliding wear behaviour of SiC–Al2O3 nanocomposites. Wear, 2005, 259, 553-561.	3.1	50
43	The wear behaviour of Al2O3-SiC ceramic nanocomposites. Scripta Materialia, 2000, 42, 555-560.	5.2	49
44	Molten salt synthesis of MAX phases in the Ti-Al-C system. Journal of the European Ceramic Society, 2018, 38, 4585-4589.	5.7	49
45	Hydrogen embrittlement mechanisms in advanced high strength steel. Acta Materialia, 2022, 223, 117488.	7.9	49
46	The rolling/sliding wear response of conventionally processed and spray formed high chromium content cast iron at ambient and elevated temperature. Wear, 1999, 225-229, 587-599.	3.1	48
47	The rolling sliding wear response of conventionally processed and spray formed high speed steel at ambient and elevated temperature. Wear, 2003, 255, 956-966.	3.1	48
48	Dry sliding wear behaviour of powder metallurgy Al–Mg–Si alloy-MoSi2 composites and the relationship with the microstructure. Wear, 2011, 270, 658-665.	3.1	48
49	TEM observations of fatigue damage accumulation at the surface of the near-α titanium alloy IMI 834. Acta Materialia, 1996, 44, 3453-3463.	7.9	47
50	Effect of Tool Geometry and Heat Input on the Hardness, Grain Structure, and Crystallographic Texture of Thick-Section Friction Stir-Welded Aluminium. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 271-284.	2.2	47
51	EBSD and TEM investigation of the hot deformation substructure characteristics of a type 316L austenitic stainless steel. Journal of Microscopy, 2004, 213, 285-295.	1.8	46
52	Elemental distributions and substrate rotation in industrial TiAlN/VN superlattice hard PVD coatings. Surface and Coatings Technology, 2004, 183, 275-282.	4.8	46
53	The wear of wrought aluminium alloys under dry sliding conditions. Tribology International, 2007, 40, 160-169.	5.9	45
54	Evolution of microstructure and hardening, and the role of Al3Ti coarsening, during extended thermal treatment in mechanically alloyed Al-Ti-O based materials. Acta Materialia, 2001, 49, 1209-1224.	7.9	44

#	Article	IF	CITATIONS
55	Wear behaviour of nanostructured alumina–titania coatings deposited by atmospheric plasma spray. Wear, 2009, 267, 1191-1197.	3.1	44
56	Work hardening behaviour at the worn surface of Alî—,Cu and Alî—,Si alloys. Wear, 1997, 203-204, 171-179.	3.1	43
57	Tribological investigation of TiAlCrN and TiAlN/CrN coatings grown by combined steered-arc/unbalanced magnetron deposition. Vacuum, 1999, 53, 123-126.	3.5	43
58	Title is missing!. Journal of Materials Science, 2001, 36, 2667-2672.	3.7	43
59	Domain Wall Motion Across Various Grain Boundaries in Ferroelectric Thin Films. Journal of the American Ceramic Society, 2015, 98, 1848-1857.	3.8	42
60	The role of silicon in the formation of the (Al5Cu6Mg2) \ddot{l}_f phase in Al-Cu-Mg alloys. Journal of Materials Science, 2000, 35, 1413-1418.	3.7	41
61	TEM studies of the wear of TiAlN/CrN superlattice coatings. Scripta Materialia, 2001, 45, 399-404.	5.2	41
62	Wear behaviour of rapidly solidified Fe68Cr18Mo2B12 alloys. Wear, 1994, 172, 135-145.	3.1	39
63	Microstructure, crystallographic texture and mechanical properties of friction stir welded AA2017A. Materials Characterization, 2012, 64, 107-117.	4.4	39
64	The effect of thermal treatment, composition and substrate on the texture and magnetic properties of FeCo thin films. Journal Physics D: Applied Physics, 2000, 33, 1450-1459.	2.8	38
65	A comparison of crystallographic texture and grain structure development in aluminum generated by friction stir welding and high strain torsion. Materials and Design, 2016, 103, 259-267.	7.0	38
66	The effects of notch width on the SENB toughness for oxide ceramics. Journal of the European Ceramic Society, 1992, 10, 21-31.	5.7	37
67	The sliding wear of ceramics. Ceramics International, 1996, 22, 365-372.	4.8	37
68	The effect of phase constitution on the magnetic structure of nanophase NdFeB alloys observed by magnetic force microscopy. Journal of Magnetism and Magnetic Materials, 1998, 188, 109-118.	2.3	37
69	Dry sliding wear behaviour of some wrought, rapidly solidified powder metallurgy aluminium alloys. Wear, 2005, 259, 490-500.	3.1	37
70	Tribological response and characterization of Mo–W doped DLC coating. Wear, 2017, 376-377, 1622-1629.	3.1	37
71	The role of the tribofilm and roll-like debris in the wear of nanoscale nitride PVD coatings. Wear, 2007, 263, 1328-1334.	3.1	36
72	Effect of ageing on the microstructural evolution in a new design of maraging steels with carbon. Acta Materialia, 2020, 196, 101-121.	7.9	36

#	Article	IF	CITATIONS
73	Direct observation of precipitation along twin boundaries and dissolution in a magnesium alloy annealing at high temperature. Scripta Materialia, 2017, 138, 39-43.	5.2	35
74	Investigation of fundamental wear mechanisms at the piston ring and cylinder wall interface in internal combustion engines. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2007, 221, 333-343.	1.8	34
75	High temperature tribological performance of CrAlYN/CrN nanoscale multilayer coatings deposited on \hat{I}^3 -TiAl. Wear, 2009, 267, 965-975.	3.1	34
76	Indentation properties of plasma sprayed Al2O3–13% TiO2 nanocoatings. Acta Materialia, 2009, 57, 3148-3156.	7.9	34
77	Evolution of nearâ€surface deformed layers during hot rolling of AA3104 aluminium alloy. Surface and Interface Analysis, 2010, 42, 180-184.	1.8	33
78	On the damage of a work roll grade high speed steel by thermal cycling. Engineering Failure Analysis, 2011, 18, 1576-1583.	4.0	33
79	Flow softening behavior during dynamic recrystallization in Mg–3Al–1Zn magnesium alloy. Scripta Materialia, 2012, 67, 277-280.	5.2	33
80	On the use of cryomilling and spark plasma sintering to achieve high strength in a magnesium alloy. Journal of Alloys and Compounds, 2016, 688, 1141-1150.	5. 5	33
81	Formation and structure of a subsurface layer in hot rolled aluminium alloy AA3104 transfer bar. Tribology International, 2005, 38, 1050-1058.	5.9	32
82	EBSD study of the orientation dependence of substructure characteristics in a model Fe-30wt%Ni alloy subjected to hot deformation. Journal of Microscopy, 2005, 217, 138-151.	1.8	32
83	High Temperature Oxidation of a Work Roll Grade High Speed Steel. Oxidation of Metals, 2011, 76, 451-468.	2.1	32
84	Hydrogen embrittlement through the formation of low-energy dislocation nanostructures in nanoprecipitation-strengthened steels. Science Advances, 2020, 6, .	10.3	32
85	Solidification microstructure selection in the Al-rich Al–La, Al–Ce and Al–Nd systems. Journal of Crystal Growth, 1999, 197, 286-296.	1.5	31
86	Subsurface characterisation of wear on mechanically polished and electro-polished biomedical grade CoCrMo. Wear, 2015, 332-333, 650-661.	3.1	31
87	Domain pinning near a single-grain boundary in tetragonal and rhombohedral lead zirconate titanate films. Physical Review B, 2015, 91, .	3.2	31
88	A low-cost metastable beta Ti alloy with high elastic admissible strain and enhanced ductility for orthopaedic application. Journal of Alloys and Compounds, 2020, 835, 155391.	5 . 5	31
89	Coarsening of precipitates and dispersoids in aluminium alloy matrices: a consolidation of the available experimental data. Journal of Materials Science, 1994, 29, 1895-1900.	3.7	30
90	Magnetic force microscopy of nanocrystalline NdFeB ribbons: A study of tip-sample interaction using a well-characterised sample. Journal of Magnetism and Magnetic Materials, 1998, 182, 111-123.	2.3	30

#	Article	IF	CITATIONS
91	The effect of processing route, composition and hardness on the wear response of chromium bearing steels in a rolling-sliding configuration. Wear, 1997, 203-204, 220-229.	3.1	29
92	EBSD investigation of the microstructure and texture characteristics of hot deformed duplex stainless steel. Journal of Microscopy, 2006, 222, 85-96.	1.8	29
93	TEM-EELS study of low-friction superlattice TiAlN/VN coating: the wear mechanisms. Tribology Letters, 2006, 24, 171-178.	2.6	29
94	New compositional design for creating tough metallic glass composites with excellent work hardening. Acta Materialia, 2015, 86, 208-215.	7.9	29
95	Oxide scale behaviour on aluminium and steel under hot working conditions. Journal of Materials Processing Technology, 2006, 177, 36-40.	6.3	28
96	Effect of deformation twinning on crystallographic texture evolution in a Mg–6.6Zn–0.2Ca (ZX70) alloy during recrystallisation. Journal of Alloys and Compounds, 2019, 774, 556-564.	5 . 5	28
97	Austenite phase formation in rapidly solidified Fe–Cr–Mn–C steels. Acta Materialia, 1999, 47, 4555-4569.	7.9	27
98	Wear mechanisms of monolithic and multicomponent nitride coatings grown by combined arc etching and unbalanced magnetron sputtering. Surface and Coatings Technology, 2001, 146-147, 430-435.	4.8	27
99	Effect of strain reversal on the dynamic spheroidization of Ti-6Al-4V during hot deformation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 2993-3001.	2.2	27
100	Properties of mechanically milled and spark plasma sintered Al–15at.% MgB2 composite materials. Composites Science and Technology, 2008, 68, 888-895.	7.8	27
101	Influence of nearâ€surface deformed layers on filiform corrosion of AA3104 aluminium alloy. Surface and Interface Analysis, 2013, 45, 1553-1557.	1.8	27
102	Microstructural evolution during bainite transformation in a vanadium microalloyed TRIP-assisted steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 651, 822-830.	5.6	27
103	Microstructural changes induced by dry sliding wear of a A357/SiC metal matrix composite. Materials Science and Technology, 1997, 13, 41-48.	1.6	26
104	Oxidation Behavior and Mechanisms of TiAlN/VN Coatings. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 2464-2478.	2.2	26
105	Effect of Tribofilm Formation on the Dry Sliding Friction and Wear Properties of Magnetron Sputtered TiAlCrYN Coatings. Tribology Letters, 2009, 34, 113-124.	2.6	26
106	The effect of tip type and scan height on magnetic domain images obtained by MFM. IEEE Transactions on Magnetics, 1996, 32, 4138-4140.	2.1	25
107	An alternative method to separate and analyse the microtextures and microstructures of primary alpha grains and transformed beta grains in near- $\hat{l}\pm$ titanium alloy Timetal 834. Materials Characterization, 2005, 55, 388-394.	4.4	25
108	Structure, properties and response to heat treatment of melt-spun Al-Y and Al-La alloys. Journal of Materials Science, 1994, 29, 3913-3918.	3.7	24

#	Article	IF	CITATIONS
109	Constitutive equations of flow stress of magnesium AZ31 under dynamically recrystallizing conditions. Journal of Materials Processing Technology, 2014, 214, 1408-1417.	6.3	24
110	Dry sliding friction and wear behaviour of TiC-based ceramics and consequent effect of the evolution of grain buckling on wear mechanism. Wear, 2019, 422-423, 54-67.	3.1	24
111	Twin nucleation and variant selection in Mg alloys: An integrated crystal plasticity modelling and experimental approach. International Journal of Plasticity, 2020, 135, 102778.	8.8	24
112	Intermediate rhombohedral (r-ZrO2) phase formation at the surface of sintered Y-TZP's. Journal of Materials Science Letters, 1997, 16, 883-885.	0.5	23
113	EELS characterisation of bulk CaCu3Ti4O12 ceramics. Micron, 2006, 37, 412-419.	2.2	23
114	Microstructural Evolution of Nb–V–Mo and V Containing TRIP-assisted Steels during Thermomechanical Processing. Journal of Materials Science and Technology, 2017, 33, 311-320.	10.7	23
115	Segregation mediated heterogeneous structure in a metastable \hat{l}^2 titanium alloy with a superior combination of strength and ductility. Scientific Reports, 2018, 8, 7512.	3.3	23
116	The effect of spray forming on the microstructure and properties of a high chromium white cast iron. Journal of Materials Science, 1999, 34, 2291-2301.	3.7	22
117	Microstructural evolution of Mn-based maraging steels and their influences on mechanical properties. Materials Science & Description A: Structural Materials: Properties, Microstructure and Processing, 2016, 674, 286-298.	5.6	22
118	Characterisation of strain-induced precipitation behaviour in microalloyed steels during thermomechanical controlled processing. Materials Characterization, 2017, 124, 83-89.	4.4	22
119	The influence of protein concentration, temperature and cathodic polarization on the surface status of CoCrMo biomedical grade alloys. Applied Surface Science, 2020, 499, 143908.	6.1	22
120	The application of laser scanning confocal microscopy to tribological research. Wear, 2001, 251, 1159-1168.	3.1	21
121	The effect of lubrication on the friction and wear of Biolox \hat{A}^{\otimes} delta. Acta Biomaterialia, 2012, 8, 2348-2359.	8.3	21
122	Spinel–rock salt transformation in LiCoMnO _{4â^' <i>Î < /i> </i>} . Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20140991.	2.1	21
123	A comparison of domain images obtained for nanophase alloys by magnetic force microscopy and high resolution Lorentz electron microscopy. IEEE Transactions on Magnetics, 1995, 31, 3349-3351.	2.1	20
124	A comparative study of mechanically mixed layers (MMLs) characteristics of commercial aluminium alloys sliding against alumina and steel sliders. Journal of Materials Processing Technology, 2008, 201, 662-668.	6.3	20
125	Thermal stability of Al/Al ₁₁ Ce ₃ and Al/Al ₁₁ La ₃ /Al _{Ni eutectics obtained by Bridgman growth. Materials Science and Technology, 1999, 15, 616-620.}	1.6	19
126	Transmission Electron Microscopy Study of a 3Yâ€TZP Worn under Dry and Water‣ubricated Sliding Conditions. Journal of the American Ceramic Society, 1999, 82, 1483-1491.	3.8	19

#	Article	IF	CITATIONS
127	TEM characterisation of near surface deformation resulting from lubricated sliding wear of aluminium alloy and composites. Wear, 2007, 263, 707-718.	3.1	19
128	The effect of microstructure and composition on the rolling contact fatigue behaviour of cast bainitic steels. Wear, 2007, 263, 756-765.	3.1	19
129	3-D micromagnetic simulation of a Bloch line between C-sections of a $180 \hat{A}^{\circ}$ domain wall in a $\{100\}$ iron film. Journal of Magnetism and Magnetic Materials, 2000, 218, 103-113.	2.3	18
130	A study of Biolox® delta subject to water lubricated reciprocating wear. Tribology International, 2010, 43, 1872-1881.	5.9	18
131	Powder bed generation in integrated modelling of additive layer manufacturing of orthopaedic implants. International Journal of Advanced Manufacturing Technology, 2016, 87, 519-530.	3.0	18
132	Application of cellular automata and Lattice Boltzmann methods for modelling of additive layer manufacturing. International Journal of Numerical Methods for Heat and Fluid Flow, 2018, 28, 31-46.	2.8	18
133	Fatigue of a nickel base superalloy with bimodal grain size. Materials Science and Technology, 1996, 12, 1007-1014.	1.6	17
134	Strength of AISI 316L in torsion at high temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 475, 257-267.	5.6	17
135	Electron energy loss spectroscopy of nano-scale CrAlYN/CrN–CrAlY(O)N/Cr(O)N multilayer coatings deposited by unbalanced magnetron sputtering. Thin Solid Films, 2010, 518, 5121-5127.	1.8	16
136	Subsurface modifications in powder metallurgy aluminium alloy composites reinforced with intermetallic MoSi2 particles under dry sliding wear. Wear, 2014, 309, 126-133.	3.1	16
137	On the interstitial induced lattice inhomogeneities in nitrogen-expanded austenite. Scripta Materialia, 2020, 185, 146-151.	5.2	16
138	The coarsening of \hat{l}_i precipitates in an Al-4WT% Cu alloy as a result of frictional heating. Scripta Materialia, 1996, 34, 877-881.	5.2	15
139	Effect of alloy composition and reinforcement with silicon carbide on the microstructure and mechanical properties of three silicide dispersion strengthened aluminium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 304-306, 524-528.	5.6	15
140	An analysis of microband orientation in a commercial purity aluminium alloy subjected to forward and reverse torsion using Electron Backscatter Diffraction (EBSD). Journal of Microscopy, 2006, 222, 97-104.	1.8	15
141	Dynamic surface microstructural changes during tribological contact that determine the wear behaviour of hip prostheses: metals and ceramics. Faraday Discussions, 2012, 156, 41.	3.2	15
142	The Impact of Strain Reversal on Microstructure Evolution and Orientation Relationships in Ti-6Al-4V with an Initial Alpha Colony Microstructure. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 5997-6007.	2.2	15
143	The influence of hydrogen on plasticity in pure iron—theory and experiment. Scientific Reports, 2020, 10, 10209.	3.3	15
144	The structure and properties of spray formed cold rolling mill work roll steels. Journal of Materials Science, 1998, 33, 3233-3244.	3.7	14

#	Article	IF	CITATIONS
145	3-D simulation of Bloch lines in $180 \hat{A}^\circ$ domain walls in thin iron films. Journal of Magnetism and Magnetic Materials, 1998, 177-181, 229-230.	2.3	14
146	MFM of nanocrystalline NdFeB: a study of the effect of processing route on the micromagnetic structure. Journal of Magnetism and Magnetic Materials, 1998, 190, 48-59.	2.3	14
147	The effect of heat treatment at 500–655°C on the microstructure and properties of mechanically alloyed Al–Ti–O based material. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 351, 344-357.	5.6	14
148	Electron energy-loss spectroscopy (EELS) studies of an yttria stabilized TZP ceramic. Journal of the European Ceramic Society, 2004, 24, 2023-2029.	5.7	14
149	Microstructure evolution of AISI 316L in torsion at high temperature. Acta Materialia, 2005, 53, 1263-1275.	7.9	14
150	A study of internal oxidation in carburized steels by glow discharge optical emission spectroscopy and scanning electron microscopy. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2003, 58, 689-698.	2.9	13
151	Characterisation of L21-ordered Ni2TiAl precipitates in Fe Mn maraging steels. Materials Characterization, 2016, 118, 199-205.	4.4	13
152	Wear Resistance of Stainless Steel Coatings on ZE41 Magnesium Alloy. Journal of Thermal Spray Technology, 2018, 27, 1615-1631.	3.1	13
153	Influence of sintering environment on the spark plasma sintering of Maxthal 312 (nominally-Ti3SiC2) and the role of powder particle size on densification. Journal of Alloys and Compounds, 2019, 801, 208-219.	5.5	13
154	Transmission electron microscopy of worn zirconia surfaces. Journal of Materials Research, 1998, 13, 396-405.	2.6	12
155	The Use of Fe-30% Ni and Fe-30% Ni–Nb Alloys as Model Systems for Studying the Microstructural Evolution during the Hot Deformation of Austenite. Materials and Manufacturing Processes, 2011, 26, 127-131.	4.7	12
156	Wear of hydrogen free C/Cr PVD coating against Al2O3 at room temperature. Wear, 2011, 271, 2150-2156.	3.1	12
157	Transmission electron microscopy analysis of worn alumina hip replacement prostheses. Acta Materialia, 2012, 60, 2061-2072.	7.9	12
158	Oxide Structures Formed During the High Temperature Oxidation of Hot Mill Work Rolls. Oxidation of Metals, 2013, 80, 191-203.	2.1	12
159	Optimization of magnetocaloric properties of arc-melted and spark plasma-sintered LaFe11.6Si1.4. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	12
160	Enhancing ductility and strength of nanostructured Mg alloy by in-situ powder casting during spark plasma sintering. Journal of Alloys and Compounds, 2018, 769, 71-77.	5.5	12
161	Development of Ni-free Mn-stabilised maraging steels using Fe2SiTi precipitates. Acta Materialia, 2019, 174, 260-270.	7.9	12
162	Influence of tantalum composition on mechanical behavior and deformation mechanisms of TiZrHfTax high entropy alloys. Journal of Alloys and Compounds, 2022, 903, 163796.	5.5	12

#	Article	IF	CITATIONS
163	A transmission electron microscopy study of wear of magnesia partially stabilised zirconia. Wear, 1993, 162-164, 322-331.	3.1	11
164	Nano-beam analysis of Ω precipitates in a Al-Cu-Mg-Ag alloy. Scripta Materialia, 1996, 35, 261-265.	5.2	11
165	Failure Modes of the Oxide Scale Formed on a Work Roll Grade High Speed Steel. Oxidation of Metals, 2011, 76, 149-160.	2.1	11
166	Wear and degradation on retrieved zirconia femoral heads. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 31, 145-151.	3.1	11
167	Correlation between the formation of tribofilm and repassivation in biomedical titanium alloys during tribocorrosion. Tribology International, 2021, 163, 107147.	5.9	11
168	Microstructure and load bearing capacity of TiN/NbN superlattice coatings deposited on medical grade CoCrMo alloy by HIPIMS. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 132, 105267.	3.1	11
169	Effect of Nb-Mo additions on precipitation behaviour in V microalloyed TRIP-assisted steels. Materials Science and Technology, 2016, 32, 1721-1729.	1.6	10
170	Correlation of the wear transition in CoCrMo alloys with the formation of a nanocrystalline surface layer and a proteinaceous surface film. Wear, 2017, 376-377, 223-231.	3.1	10
171	Simulation of 3-D micromagnetic structures in thin iron platelet. IEEE Transactions on Magnetics, 1997, 33, 4170-4172.	2.1	9
172	A novel microstructure in the Al-La-Ni ternary eutectic alloy. Scripta Materialia, 1998, 39, 1371-1376.	5.2	9
173	Micromagnetic and MFM studies of a domain wall in thick $\{110\}$ FeSi. Journal of Magnetism and Magnetic Materials, 1998, 190, 17-27.	2.3	9
174	Characterisation of Grain Boundaries in CaCu3Ti4O12using HREM, EDS and EELS. Journal of Physics: Conference Series, 2006, 26, 65-68.	0.4	9
175	Microstructure and mechanical properties of sputtered intermetallic Al–Au coatings. Journal of Applied Physics, 2007, 102, 023523.	2.5	9
176	Thermal stability of sputtered intermetallic Al–Au coatings. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2007, 25, 1402-1406.	2.1	9
177	A â€~3-body' abrasion wear study of bioceramics for total hip joint replacements. Wear, 2009, 267, 2122-2131.	3.1	9
178	Stabilisation of Fe2O3-rich Perovskite Nanophase in Epitaxial Rare-earth Doped BiFeO3 Films. Scientific Reports, 2015, 5, 13066.	3.3	9
179	Characterisation of the oxide film on the taper interface from retrieved large diameter metal on polymer modular total hip replacements. Tribology International, 2015, 89, 86-96.	5.9	9
180	Strain-mediated converse magnetoelectric coupling strength manipulation by a thin titanium layer. Applied Physics Letters, 2016, 108, .	3.3	9

#	Article	IF	CITATIONS
181	The formation mechanism of reverted austenite in Mn-based maraging steels. Journal of Materials Science, 2019, 54, 6624-6631.	3.7	9
182	Effect of cryomilling time on microstructure evolution and hardness of cryomilled AZ31 powders. Materials Characterization, 2021, 178, 111311.	4.4	9
183	Ramification of thermal expansion mismatch and phase transformation in TiC-particulate/SiC-matrix ceramic composite. Ceramics International, 2020, 46, 20488-20495.	4.8	9
184	Hot workability of spray-formed AISI M3:2 high-speed steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 386, 420-427.	5.6	9
185	Microstructure Evolution and Tensile Behaviour of a Cold Rolled 8 Wt Pct Mn Medium Manganese Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 597-609.	2.2	9
186	Insights into tribofilm formation on Ti-6V-4Al in a bioactive environment: Correlation between surface modification and micro-mechanical properties. Acta Biomaterialia, 2022, 141, 466-480.	8.3	9
187	Phase constitution in melt-spun A1–10 wt% Y. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1994, 70, 1129-1137.	0.6	8
188	Microstructure study of high coercivity Ga containing Nd-Fe-B permanent magnets. Journal of Magnetism and Magnetic Materials, 1995, 145, L19-L22.	2.3	8
189	Characterisation of FeBSiC coated MFM tips using Lorentz electron tomography and MFM. IEEE Transactions on Magnetics, 1999, 35, 3986-3988.	2.1	8
190	Coarsening kinetics at 600°c of Al4C3 dispersoids in mechanically alloyed Al-Ti-O-C. Scripta Materialia, 2001, 44, 79-86.	5.2	8
191	Investigating worn surfaces of nanoscale TiAlN/VN multilayer coating using FIB and TEM. Journal of Physics: Conference Series, 2006, 26, 95-98.	0.4	8
192	Magnetic force microscopy and micromagnetic study of cross-tie wall structures in Co91Nb6Zr3 amorphous thin films. Journal of Applied Physics, 2000, 87, 1096-1102.	2.5	7
193	Microstructure and magnetoelastic properties of FeCo/Ag multilayers. Journal of Applied Physics, 2001, 89, 7511-7513.	2.5	7
194	EBSD investigation of the effect of strain path changes on the microstructure and texture of duplex stainless steel during hot deformation. Journal of Physics: Conference Series, 2006, 26, 331-334.	0.4	7
195	Characterisation of microstructure and thermal stability of rapidly solidified Al–8·5Fe–1·3V–1·7Si alloy during prolonged exposure at 625°C. Materials Science and Technology, 2006, 22, 1369-1379.	1.6	7
196	On the structure and composition of nanoscale TiAlN/VN multilayers. Philosophical Magazine, 2007, 87, 967-978.	1.6	7
197	Characterisation of the wear mechanisms in retrieved alumina-on-alumina total hip replacements. Wear, 2017, 376-377, 212-222.	3.1	7
198	The Effect of Heating Rate on Discontinuous Grain Boundary Alpha Formation in a Metastable Beta Titanium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 3766-3771.	2.2	7

#	Article	IF	CITATIONS
199	Fatigue of a nickel base superalloy with bimodal grain size. Materials Science and Technology, 1996, 12, 1007-1014.	1.6	7
200	Coarsening of SÂAl2CuMg in Al-Cu-Mg base alloys. Journal of Materials Science Letters, 1997, 16, 420-421.	0.5	6
201	Preparation and characterisation of a new amorphous tip coating for application in magnetic force microscopy. Journal of Magnetism and Magnetic Materials, 1999, 205, 131-135.	2.3	6
202	The effects of dislocations and grain boundaries on the coarsening of Al4C3 dispersoids at 600°C in two mechanically alloyed Al-Ti-O-C based materials. Scripta Materialia, 2001, 44, 1089-1093.	5. 2	6
203	The coarsening of dispersed Al3Ti in aluminum-based matrices. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 419-421.	2.2	6
204	Wear behaviour of tool steels with added (WTi)C particles. Wear, 2003, 255, 517-526.	3.1	6
205	Characterisation of alumina hip-joint wear by FIB Microscopy. Journal of Physics: Conference Series, 2006, 26, 343-346.	0.4	6
206	Factors Affecting the Development of Oxide Scales on Austenitic Stainless Steels during Hot Rolling in Steckel Mills. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 2486-2494.	2.2	6
207	Validation of neutron texture data on GEM at ISIS using electron backscattered diffraction. Measurement Science and Technology, 2008, 19, 034002.	2.6	6
208	The role of helium ion microscopy in the characterisation of complex three-dimensional nanostructures. Ultramicroscopy, 2010, 110, 1178-1184.	1.9	6
209	Characterization of worn alumina hip replacement prostheses. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2012, 100B, 121-132.	3.4	6
210	The effect of thermomechanical controlled processing on recrystallisation and subsequent deformation-induced ferrite transformation textures in microalloyed steels. Journal of Materials Science, 2018, 53, 6922-6938.	3.7	6
211	Role of Titanium, Carbon, Boron, and Zirconium in Carbide and Porosity Formation during Equiaxed Solidification of Nickel-Based Superalloys. Journal of Materials Engineering and Performance, 2019, 28, 4171-4186.	2.5	6
212	Effect of grain size and crystallographic structure on the corrosion and tribocorrosion behaviour of a CoCrMo biomedical grade alloy in simulated body fluid. Wear, 2021, 478-479, 203884.	3.1	6
213	An alternative formation mechanism of {332}BCC twinning in metastable body-centered-cubic high entropy alloy. Scripta Materialia, 2022, 217, 114770.	5.2	6
214	Dislocation densities, dispersoid identities and the origins of thermal stability and strengthening in three mechanically alloyed aluminium alloys. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1997, 76, 1093-1104.	0.6	5
215	Modelling of MFM images of 180° and 90° domain walls in iron films. IEEE Transactions on Magnetics, 1997, 33, 4056-4058.	2.1	5
216	The Formability of Spray-formed, High-chromium Content, White Cast Iron. Journal of Materials Science Letters, 1998, 17, 1637-1640.	0.5	5

#	Article	IF	CITATIONS
217	The effect of microstructure on the morphology of fatigue cracks in UDIMETR 720. Fatigue and Fracture of Engineering Materials and Structures, 2000, 23, 725-736.	3.4	5
218	Investigation of the phase constitution and structure of rapidly solidified hard magnetic Nd ₁₈ Fe ₇₆ B ₆ ribbons by transmission electron microscopy. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2001, 81, 11-24.	0.6	5
219	On the structure and oxidation mechanisms in nanoscale hard coatings. Journal of Physics: Conference Series, 2006, 26, 89-94.	0.4	5
220	3D surface reconstruction and FIB microscopy of worn alumina hip prostheses. Journal of Physics: Conference Series, 2008, 126, 012044.	0.4	5
221	On the Effect of Strain Reversal on Static Recrystallisation and Strain-Induced Precipitation Process Kinetics in Microalloyed Steels. Materials Science Forum, 2012, 715-716, 655-660.	0.3	5
222	Electric field-controlled magnetization in bilayered magnetic films for magnetoelectric memory. Journal of Applied Physics, 2015, 118, .	2.5	5
223	Numerical analysis of highly reactive interfaces in processing of nanocrystallised multilayered metallic materials by using duplex technique. Surface and Coatings Technology, 2015, 277, 170-180.	4.8	5
224	Magnetic force imaging of domain structures for a (Pr/Nd)FeB alloy. Journal of Applied Physics, 1998, 83, 2715-2718.	2.5	4
225	Coarsening kinetics at 600 \hat{A}° C of Al2O3 dispersoids in a mechanically alloyed aluminium alloy. Scripta Materialia, 2002, 47, 331-335.	5.2	4
226	Electron Microscopy Analysis on the Worn Surface of a High-Chromium White Iron During Dry Sliding Contact. Materials Research Society Symposia Proceedings, 2004, 843, 741.	0.1	4
227	Mechanism of Oxidation of Austenitic Stainless Steels under Conditions of Hot Rolling in Steckel Mills. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 2477-2485.	2.2	4
228	Tracing C changes in a C/CrC PVD coating using Raman spectroscopy and EELS. Journal of Physics: Conference Series, 2010, 241, 012108.	0.4	4
229	C/CrC nanocomposite coating deposited by magnetron sputtering at high ion irradiation conditions. Journal of Applied Physics, 2011, 110, 073301.	2.5	4
230	Quantifying Crystallographic Texture Variation in a Titanium Billet. IOP Conference Series: Materials Science and Engineering, 2018, 375, 012019.	0.6	4
231	Characterisation of a High-Power Impulse Magnetron Sputtered C/Mo/W wear resistant coating by transmission electron microscopy. Surface and Coatings Technology, 2019, 377, 124853.	4.8	4
232	Effect of Potential and Microstructure on the Tribocorrosion Behaviour of Beta and Near Beta Ti Alloys II. Journal of Bio- and Tribo-Corrosion, 2021, 7, 1.	2.6	4
233	Microstructural changes induced by dry sliding wear of a A357/SiC metal matrix composite. Materials Science and Technology, 1997, 13, 41-48.	1.6	4
234	Some observations on cyclic deformation structures in the high-strength commercial aluminum alloy AA 7150. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1998, 29, 2727-2736.	2.2	3

#	Article	IF	CITATIONS
235	Evolution and coarsening of Al2O3 dispersoids at 500 °C to 600 °C in a mechanically alloyed Al-Ti-O based material. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 2937-2945.	2.2	3
236	Microstructural changes induced by wear. Tribology Series, 2002, 40, 273-282.	0.1	3
237	Coarsening of particulate silicon in aluminium based matrices. Materials Science and Technology, 2004, 20, 1223-1225.	1.6	3
238	Degradation of a C/CrC PVD coating after annealing in Ar+H ₂ at 700°C studied by Raman spectroscopy and transmission electron microscopy. Materials at High Temperatures, 2009, 26, 169-176.	1.0	3
239	Oxide scale modelling in hot rolling: assumptions, numerical techniques and examples of prediction. Ironmaking and Steelmaking, 2010, 37, 276-282.	2.1	3
240	Stability in Air of Silver and Silver Oxide Nanoparticle Shells Deposited Over Silica Spheres Without Using Coupling Agents. Journal of Nanoscience and Nanotechnology, 2012, 12, 8158-8164.	0.9	3
241	Piezoelectrics: Influence of a Single Grain Boundary on Domain Wall Motion in Ferroelectrics (Adv.) Tj ETQq1 1 ().784314 14.9	rgBŢ /Overlac
242	Crystallographic Texture Investigation of Thick Section Friction Stir Welded AA6082 and AA5083 Using EBSD. Key Engineering Materials, 2018, 786, 44-51.	0.4	3
243	Formation of interface phases in the titanium alloy IMI 834. Journal of Materials Science, 1996, 31, 1205-1211.	3.7	2
244	Three-dimensional simulation of the disturbance of magnetic domain walls by magnetic force microscope tips. Journal of Applied Physics, 1997, 81, 4686-4688.	2.5	2
245	The structure of FeCo/Ag multilayers. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2001, 81, 1533-1546.	0.6	2
246	Recent Developments in the Microscopy of Ceramics. Advances in Imaging and Electron Physics, 2004, 132, 167-246.	0.2	2
247	Oxidation performance of nano-scale multilayer coatings on \hat{I}^3 -TiAl. Journal of Physics: Conference Series, 2008, 126, 012022.	0.4	2
248	Sub-surface characterisation of tribological contact zone of metal hip prostheses. Journal of Physics: Conference Series, 2015, 644, 012029.	0.4	2
249	Giant electric field tunable magnetic properties in a Co ₅₀ Fe ₅₀ /lead magnesium niobate–lead titanate multiferroic heterostructure. Journal Physics D: Applied Physics, 2015, 48, 305005.	2.8	2
250	Coherent Growth of α-Fe ₂ O ₃ in Ti and Nd Co-doped BiFeO ₃ Thin Films. Materials Research Letters, 2016, 4, 168-173.	8.7	2
251	Detailed In Situ Hot Stage Transmission Electron Microscope Observations of the Localized Pinning of a Mobile Ferrite-Austenite Interface in a Fe-C-Mn Alloy by a Single Oxidic Particle. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 3811-3818.	2.2	2
252	Investigation of the phase constitution and structure of rapidly solidified hard magnetic Nd 18 Fe 76 B 6 ribbons by transmission electron microscopy. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2001, 81, 11-24.	0.6	2

#	Article	IF	CITATIONS
253	The effect of alumina fibre reinforcement on the wear of an Al-4.3% Cu alloy. Wear, 1995, 181-183, 312-324.	3.1	1
254	Effect of long-term room-temperature storage on the structure and properties of glassy melt-spun Mg-Al-Ca alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2000, 31, 2155-2162.	2,2	1
255	Influence of interfaces on magnetostrictive granular films. Physical Review B, 2002, 65, .	3.2	1
256	Site specific SEM/FIB/TEM for analysis of lubricated sliding wear of aluminium alloy composites. Journal of Physics: Conference Series, 2006, 26, 327-330.	0.4	1
257	The influence of beam energy and oxidation on quantitative carbide analysis in the scanning electron microscope. Journal of Applied Physics, 2006, 100, 114902.	2.5	1
258	EELS characterisation and valence determination of Mn minerals from the Kalahari manganese field in South Africa. Journal of Physics: Conference Series, 2008, 126, 012045.	0.4	1
259	The Effect of High Temperature Grain Refinement on the Isothermal Ferrite Grain Growth Kinetics in Steel S460. Materials Science Forum, 0, 715-716, 907-912.	0.3	1
260	Controlling Grain Size in Oxide Ceramics for Optimization of Strength and Wear Resistance. Materials Science Forum, 0, 715-716, 703-710.	0.3	1
261	Opportunities and pitfalls in characterisation of nanoscale features. Materials Science and Technology, 2000, 16, 1349-1355.	1.6	0
262	Materials for engineers. Materials Today, 2009, 12, 54.	14.2	0
263	EELS and ELNES studies of nano-scale nitride multilayers deposited by unbalanced magnetron sputtering. Journal of Physics: Conference Series, 2010, 241, 012046.	0.4	0
264	New Recrystallisation Behaviour Seen in Magnesium Alloy Elektron 675. Materials Science Forum, 2012, 715-716, 171-172.	0.3	0
265	An Investigation of the Dynamic Recrystallisation Behaviour of Magnesium AZ31 Alloy at 450°C Using Plane Strain Compression Testing as a Tool. Materials Science Forum, 0, 715-716, 164-169.	0.3	0
266	Cross sectional TEM analysis of duplex HIPIMS and DC magnetron sputtered Mo and W doped carbon coatings. Journal of Physics: Conference Series, 2015, 644, 012011.	0.4	0
267	Why Does Nitriding of Grainâ€Oriented Silicon Steel Become Slower at Higher Temperature?. Steel Research International, 2021, 92, 2000545.	1.8	0