

Mr Barnett

List of Publications by Year in Descending Order

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

71
papers

8,371
citations

40
h-index

71
g-index

71
ext. papers

9,203
ext. citations

6
avg, IF

6.75
L-index

#	Paper	IF	Citations
71	Optimising the Al and Ti compositional window for the design of (L12)-strengthened AlCoCrFeNiTi high entropy alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 835, 142620	5.3	4
70	On the enhanced wear resistance of CoCrFeMnNi high entropy alloy at intermediate temperature. <i>Scripta Materialia</i> , 2020 , 186, 230-235	5.6	33
69	A scrap-tolerant alloying concept based on high entropy alloys. <i>Acta Materialia</i> , 2020 , 200, 735-744	8.4	7
68	A rationale for the influence of grain size on failure of magnesium alloy AZ31: An in situ X-ray microtomography study. <i>Acta Materialia</i> , 2020 , 200, 619-631	8.4	8
67	Towards the large-scale production and strength prediction of near-eutectic Al _x CoCrFeNi _{2.1} alloys by additive manufacturing. <i>Manufacturing Letters</i> , 2020 , 25, 16-20	4.5	15
66	Grain size and void formation in Mg alloy AZ31. <i>Journal of Alloys and Compounds</i> , 2020 , 816, 152618	5.7	9
65	Crystal plasticity and in-situ diffraction-based determination of the dislocation strengthening and load-sharing effects of precipitates in Mg alloy, AZ91. <i>Materialia</i> , 2019 , 6, 100308	3.2	7
64	Importance of propagation in controlling the twinning stress in Mg. <i>Scripta Materialia</i> , 2019 , 162, 447-459	5.6	11
63	Discontinuous yielding in wrought magnesium. <i>Computational Materials Science</i> , 2017 , 132, 81-91	3.2	8
62	Distinguishing between slip and twinning events during nanoindentation of magnesium alloy AZ31. <i>Scripta Materialia</i> , 2016 , 110, 10-13	5.6	29
61	Modeling of twin formation, propagation and growth in a Mg single crystal based on crystal plasticity finite element method. <i>International Journal of Plasticity</i> , 2016 , 86, 70-92	7.6	71
60	The role of back stress caused by precipitates on {101̄2} twinning in a Mg ₃ Zn alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 647, 66-73	5.3	51
59	The effect of high yttrium solute concentration on the twinning behaviour of magnesium alloys. <i>Acta Materialia</i> , 2015 , 82, 447-456	8.4	100
58	A microstructure based analytical model for tensile twinning in a rod textured Mg alloy. <i>International Journal of Plasticity</i> , 2015 , 72, 151-167	7.6	16
57	Influence of orientation on twin nucleation and growth at low strains in a magnesium alloy. <i>Acta Materialia</i> , 2014 , 80, 380-391	8.4	73
56	Thermomechanical properties of Ni-Ti shape memory wires containing nanoscale precipitates induced by stress-assisted ageing. <i>Acta Biomaterialia</i> , 2014 , 10, 5178-5192	10.8	28
55	On the strength of dislocation interactions and their effect on latent hardening in pure Magnesium. <i>International Journal of Plasticity</i> , 2014 , 62, 72-92	7.6	109

54	Effect of alloying and extrusion temperature on the microstructure and mechanical properties of MgZn and MgZnRE alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 619, 238-246	5.3	26
53	A double inclusion homogenization scheme for polycrystals with hierarchal topologies: application to twinning in Mg alloys. <i>International Journal of Plasticity</i> , 2014 , 60, 182-196	7.6	25
52	Time and spatial resolution of slip and twinning in a grain embedded within a magnesium polycrystal. <i>Acta Materialia</i> , 2014 , 78, 203-212	8.4	31
51	Precipitate characteristics and their effect on the prismatic-slip-dominated deformation behaviour of an MgZn alloy. <i>Acta Materialia</i> , 2013 , 61, 4091-4102	8.4	83
50	Solute strengthening of prismatic slip, basal slip and {101 $\bar{2}$ } twinning in Mg and MgZn binary alloys. <i>International Journal of Plasticity</i> , 2013 , 47, 165-181	7.6	157
49	Influence of temperature and plastic relaxation on tensile twinning in a magnesium alloy. <i>Scripta Materialia</i> , 2013 , 69, 521-524	5.6	21
48	Forming of magnesium and its alloys 2013 , 197-231		3
47	Attaining high compressive strains in pure Mg at room temperature by encasing with pure Al. <i>Scripta Materialia</i> , 2012 , 66, 725-728	5.6	21
46	The effect of initial grain size and temperature on the tensile properties of magnesium alloy AZ31 sheet. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012 , 549, 1-6	5.3	47
45	A minimum parameter approach to crystal plasticity modelling. <i>Acta Materialia</i> , 2012 , 60, 5391-5398	8.4	24
44	Twinning in magnesium-based lamellar microstructures. <i>Scripta Materialia</i> , 2012 , 67, 704-707	5.6	44
43	Effect of plate-shaped particle distributions on the deformation behaviour of magnesium alloy AZ91 in tension and compression. <i>Acta Materialia</i> , 2012 , 60, 218-228	8.4	161
42	Twinning and its role in wrought magnesium alloys 2012 , 105-143		10
41	On the Impact of Second Phase Particles on Twinning in Magnesium Alloys 2011 , 289-293		
40	Solute segregation and texture modification in an extruded magnesium alloy containing gadolinium. <i>Scripta Materialia</i> , 2011 , 65, 919-921	5.6	162
39	Processing and properties of MgZnGdZr. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011 , 528, 3659-3665	5.3	43
38	Effect of precipitate shape on slip and twinning in magnesium alloys. <i>Acta Materialia</i> , 2011 , 59, 1945-1954	8.4	292
37	Processing and properties of MgZnGdZr: Part 1 Recrystallisation and texture development. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011 , 528, 3653-3658	5.3	37

36	Effective values of critical resolved shear stress for slip in polycrystalline magnesium and other hcp metals. <i>Scripta Materialia</i> , 2010 , 63, 737-740	5.6	290
35	Effect of particles in promoting twin nucleation in a Mg β wt.% Zn alloy. <i>Scripta Materialia</i> , 2010 , 63, 823-826	5.6	103
34	On the correlation between deformation twinning and Lüders-like deformation in an extruded Mg alloy: In situ neutron diffraction and EPSC.4 modelling. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 1383-1394	5.3	68
33	Investigation of deformation twinning in a fine-grained and coarse-grained ZM20 Mg alloy: Combined in situ neutron diffraction and acoustic emission. <i>Acta Materialia</i> , 2010 , 58, 1503-1517	8.4	150
32	The effect of strain rate on the deformation mechanisms and the strain rate sensitivity of an ultra-fine-grained Al alloy. <i>Scripta Materialia</i> , 2009 , 61, 181-184	5.6	60
31	The post-deformation recrystallization behaviour of magnesium alloy Mg β Al β Zn. <i>Scripta Materialia</i> , 2009 , 61, 1097-1100	5.6	26
30	Plastic Flow Properties and Microstructural Evolution in an Ultrafine-Grained Al-Mg-Si Alloy at Elevated Temperatures. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009 , 40, 3294-3303	2.3	23
29	Atom Probe Tomography of Solute Distributions in Mg-Based Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009 , 40, 2480-2487	2.3	23
28	Effect of particles on the formation of deformation twins in a magnesium-based alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009 , 516, 226-234	5.3	187
27	Enhanced tensile ductility of an ultra-fine-grained aluminum alloy. <i>Scripta Materialia</i> , 2008 , 58, 163-166	5.6	54
26	A rationale for the strong dependence of mechanical twinning on grain size. <i>Scripta Materialia</i> , 2008 , 59, 696-698	5.6	263
25	Effect of microalloying with rare-earth elements on the texture of extruded magnesium-based alloys. <i>Scripta Materialia</i> , 2008 , 59, 772-775	5.6	271
24	Characteristics of the contraction twins formed close to the fracture surface in Mg β Al β Zn alloy deformed in tension. <i>Scripta Materialia</i> , 2008 , 59, 959-962	5.6	143
23	Necking and failure at low strains in a coarse-grained wrought Mg alloy. <i>Scripta Materialia</i> , 2008 , 59, 1035-1038	5.6	43
22	The origin of rare earth texture development in extruded Mg-based alloys and its effect on tensile ductility. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 496, 399-408	5.3	576
21	Deformation Twinning and the Hall-Petch Relation in Commercial Purity Ti. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2008 , 39, 934-944	2.3	66
20	Influences of steady and cyclic die rotation on the compression of aluminium. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 483-484, 444-447	5.3	47
19	Microstructure evolution in hot worked and annealed magnesium alloy AZ31. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 485, 318-324	5.3	52

18	Non-Schmid behaviour during secondary twinning in a polycrystalline magnesium alloy. <i>Acta Materialia</i> , 2008 , 56, 5-15	8.4	307
17	Tensile deformation of an ultrafine-grained aluminium alloy: Micro shear banding and grain boundary sliding. <i>Acta Materialia</i> , 2008 , 56, 2223-2230	8.4	95
16	EBSD analysis of a Ti-IF steel subjected to hot torsion in the ferritic region. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 486, 72-79	5.3	28
15	Investigation of deformation mechanisms involved in the plasticity of AZ31 Mg alloy: In situ neutron diffraction and EPSC modelling. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 496, 14-24	5.3	129
14	A practical condition for migration dynamic recrystallization. <i>Acta Materialia</i> , 2007 , 55, 3271-3278	8.4	14
13	Influence of aging pre-treatment on the compressive deformation of WE54 alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 452-453, 306-312	5.3	33
12	Twinning and the ductility of magnesium alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 464, 1-7	5.3	914
11	Twinning and the ductility of magnesium alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 464, 8-16	5.3	846
10	Influence of microstructure on strain distribution in Mg ₃ Al ₁ Zn. <i>Scripta Materialia</i> , 2007 , 57, 1125-1128	5.6	42
9	Microstructural Development during Hot Working of Mg-3Al-1Zn. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2007 , 38, 1856-1867	2.3	183
8	Influence of initial microstructure on the hot working flow stress of Mg ₃ Al ₁ Zn. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 423, 292-299	5.3	126
7	Influence of grain size on hot working stresses and microstructures in Mg ₃ Al ₁ Zn. <i>Scripta Materialia</i> , 2004 , 51, 19-24	5.6	101
6	Grain size effect on the warm deformation behaviour of a Ti-IF steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 367, 282-294	5.3	49
5	Influence of grain size on the compressive deformation of wrought Mg ₃ Al ₁ Zn. <i>Acta Materialia</i> , 2004 , 52, 5093-5103	8.4	1042
4	Experimental and theoretical investigation of compression of a cylinder using a rotating platen. <i>International Journal of Mechanical Sciences</i> , 2003 , 45, 1717-1737	5.5	8
3	The generation of new high-angle boundaries in aluminium during hot torsion. <i>Acta Materialia</i> , 2002 , 50, 2285-2296	8.4	88
2	Influence of deformation conditions and texture on the high temperature flow stress of magnesium AZ31. <i>Journal of Light Metals</i> , 2001 , 1, 167-177		201
1	The Hot Working Flow Stress and Microstructure in Magnesium AZ31		1

