

Alan M Russell

List of Publications by Year in descending order

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72
papers

2,796
citations

201385

27
h-index

189595

50
g-index

102
all docs

102
docs citations

102
times ranked

2071
citing authors

#	ARTICLE	IF	CITATIONS
1	A family of ductile intermetallic compounds. <i>Nature Materials</i> , 2003, 2, 587-591.	13.3	310
2	Tensile properties of magnetostrictive iron-gallium alloys. <i>Acta Materialia</i> , 2004, 52, 5043-5050.	3.8	202
3	Investigations of Fe_2 , Fe_3 and Fe precipitates in heat-treated Inconel 718 alloy fabricated by selective laser melting. <i>Materials Characterization</i> , 2018, 136, 398-406.	1.9	157
4	A new class of ultra-hard materials based on AlMgB14. <i>Scripta Materialia</i> , 2000, 42, 597-602.	2.6	154
5	Effect of heat treatment on microstructure evolution of Inconel 718 alloy fabricated by selective laser melting. <i>Journal of Alloys and Compounds</i> , 2018, 764, 639-649.	2.8	150
6	Modeling the electrical resistivity of deformation processed metal-metal composites. <i>Acta Materialia</i> , 2014, 77, 151-161.	3.8	113
7	Ab initio calculation of bulk and defect properties of ductile rare-earth intermetallic compounds. <i>Acta Materialia</i> , 2004, 52, 4849-4857.	3.8	100
8	Ductility in Intermetallic Compounds. <i>Advanced Engineering Materials</i> , 2003, 5, 629-639.	1.6	99
9	Influence of the electronic structure on the ductile behavior of B2 CsCl-type AB intermetallics. <i>Acta Materialia</i> , 2009, 57, 5876-5881.	3.8	90
10	Mechanical properties of single crystal YAg. <i>Acta Materialia</i> , 2004, 52, 4033-4040.	3.8	81
11	Effects of mechanical alloying on an Al6061-CNT composite fabricated by semi-solid powder processing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 538, 164-172.	2.6	80
12	Fracture toughness of polycrystalline YCu, DyCu, and YAg. <i>Intermetallics</i> , 2005, 13, 559-564.	1.8	71
13	Analysis of wear mechanisms in low-friction AlMgB14-TiB2 coatings. <i>Surface and Coatings Technology</i> , 2010, 205, 2296-2301.	2.2	52
14	Pulsed laser deposition of AlMgB14 on carbide inserts for metal cutting. <i>Surface and Coatings Technology</i> , 2002, 155, 112-120.	2.2	50
15	Mechanical properties of single crystal YCu and (Tb _{0.88} Dy _{0.12})Zn B2 intermetallic compounds. <i>Intermetallics</i> , 2005, 13, 565-571.	1.8	49
16	Effect of quenching and tempering process on sulfide stress cracking susceptibility in API-5CT-C110 casing steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 688, 378-387.	2.6	47
17	Effect of microstructure and crystallography on sulfide stress cracking in API-5CT-C110 casing steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 671, 244-253.	2.6	39
18	Coefficient of thermal expansion of AlMgB14. <i>Scripta Materialia</i> , 2002, 46, 629-633.	2.6	38

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19	Reduced-temperature processing and consolidation of ultra-refractory Ta ₄ HfC ₅ . <i>International Journal of Refractory Metals and Hard Materials</i> , 2013, 41, 293-299.	1.7	37
20	Determination of slip systems and their relation to the high ductility and fracture toughness of the B2 DyCu intermetallic compound. <i>Acta Materialia</i> , 2007, 55, 3765-3770.	3.8	34
21	Dislocation core structures in YAg, a ductile B2 CsCl-type intermetallic compound. <i>Scripta Materialia</i> , 2008, 58, 1066-1069.	2.6	34
22	Mechanical alloying of carbon nanotube and Al6061 powder for metal matrix composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 532, 558-566.	2.6	34
23	Microstructural evolution of TiAl-based alloys deformed by high-pressure torsion. <i>Acta Materialia</i> , 2015, 98, 103-112.	3.8	32
24	A deformation-processed Al-matrix/Ca-nanofilamentary composite with low density, high strength, and high conductivity. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 690, 348-354.	2.6	32
25	Formation of a bimodal structure in ultrafine Ti-Fe-Nb alloys with high-strength and enhanced ductility. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 609, 60-64.	2.6	31
26	Microstructure and nanomechanical properties of Al-Mg-B-Ti films synthesized by pulsed laser deposition. <i>Thin Solid Films</i> , 2002, 418, 129-135.	0.8	30
27	The microstructure-strength relationship in a deformation processed Al-Ca composite. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 570, 106-113.	2.6	28
28	A dislocation-based, strain-gradient-plasticity strengthening model for deformation processed metal-metal composites. <i>Journal of Materials Science</i> , 2014, 49, 2787-2794.	1.7	27
29	A high-strength, high-conductivity Al-Ti deformation processed metal metal matrix composite. <i>Composites Part A: Applied Science and Manufacturing</i> , 1999, 30, 239-247.	3.8	26
30	Belt abrasion resistance and cutting tool studies on new ultra-hard boride materials. <i>Tribology International</i> , 2009, 42, 706-713.	3.0	26
31	Al ₂ MgO ₄ , Fe ₃ O ₄ , and FeB impurities in AlMgB ₁₄ . <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003, 351, 117-122.	2.6	25
32	Enhanced wear resistance in AlMgB ₁₄ -TiB ₂ composites. <i>Wear</i> , 2011, 271, 640-646.	1.5	25
33	Production of fine calcium powders by centrifugal atomization with rotating quench bath. <i>Powder Technology</i> , 2017, 308, 84-93.	2.1	23
34	Understanding the role of Ca segregation on thermal stability, electrical resistivity and mechanical strength of nanostructured aluminum. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 798, 140108.	2.6	20
35	A new fracture-resistant binder phase for use with AlMgB ₁₄ and other ultra-hard ceramics. <i>Journal of Alloys and Compounds</i> , 2004, 366, 145-151.	2.8	19
36	Direct reaction synthesis of Mg ₂ B ₁₄ from elemental precursors. <i>Scripta Materialia</i> , 2006, 54, 813-816.	2.6	18

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37	Erosion resistance of TiB ₂ -ZrB ₂ composites. <i>Wear</i> , 2009, 267, 136-143.	1.5	18
38	Mechanical properties and determination of slip systems of the B ₂ YZn intermetallic compound. <i>Acta Materialia</i> , 2010, 58, 4298-4304.	3.8	17
39	Prospects for novel deformation processed Al/Ca composite conductors for overhead high voltage direct current (HVDC) power transmission. <i>Electric Power Systems Research</i> , 2013, 105, 105-114.	2.1	17
40	Phase field study of interfacial diffusion-driven spheroidization in a composite comprised of two mutually insoluble phases. <i>Journal of Chemical Physics</i> , 2014, 140, 124706.	1.2	16
41	Effects of microstructure and crystallography on mechanical properties of cold-rolled SAE1078 pearlitic steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 709, 115-124.	2.6	16
42	Microstructure and wear resistance of low temperature hot pressed TiB ₂ . <i>Wear</i> , 2009, 266, 1171-1177.	1.5	15
43	A deformation processed Al-20%Sn in-situ composite. <i>Scripta Materialia</i> , 2001, 44, 935-940.	2.6	13
44	Mechanical properties of magnetostrictive iron-gallium alloys. , 2003, 5053, 534.		12
45	Formation, densification, and selected mechanical properties of hot pressed Al ₄ SiC ₄ , Al ₄ SiC ₄ with 30vol.% WC, and Al ₄ SiC ₄ with 30vol.% TiC. <i>Ceramics International</i> , 2011, 37, 3117-3121.	2.3	12
46	Microstructure and oxidation behavior of Al + Cr co-deposited coatings on nickel-based superalloys. <i>Surface and Coatings Technology</i> , 2017, 310, 273-277.	2.2	12
47	Microstructure and mechanical properties of the Dy ₅₀ (Cu ₅₀ -xNi _x) intermetallic B ₂ CsCl-type compounds. <i>Scripta Materialia</i> , 2008, 59, 810-813.	2.6	11
48	The deformation behavior of DyCu ductile intermetallic compound under compression. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 7173-7177.	2.6	11
49	Self-assembled nano- to micron-size fibers from molten R ₁₁ Ni ₄ In ₉ intermetallics. <i>Acta Materialia</i> , 2014, 73, 27-36.	3.8	11
50	X-ray diffraction study of the phase purity, order and texture of ductile B ₂ intermetallics. <i>Acta Materialia</i> , 2010, 58, 2788-2796.	3.8	10
51	A new method for strengthening gold. <i>Gold Bulletin</i> , 1998, 31, 88-92.	3.2	9
52	Texture-strength relationships in a deformation processed Al-Sn metal-metal composite. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004, 373, 99-106.	2.6	9
53	Estimation of surface energy and bonding between AlMgB ₁₄ and TiB ₂ . <i>Journal of Physics and Chemistry of Solids</i> , 2010, 71, 824-826.	1.9	9
54	Magnetization study of the ultra-hard material MgAlB ₁₄ . <i>Journal of Magnetism and Magnetic Materials</i> , 2003, 265, 23-32.	1.0	7

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55	Transmission electron microscopy study of the microstructure of a YCu ductile intermetallic compound, the influence of the start metal purity. Scripta Materialia, 2011, 64, 821-823.	2.6	7
56	Properties of AlMgB14 hot pressed with additions of ZrB2 and HfB2. Powder Technology, 2013, 235, 968-974.	2.1	7
57	Microstructural evolution and phase transformation in the liquid-solid Al/Ni diffusion couple. Philosophical Magazine, 2019, 99, 1103-1120.	0.7	7
58	The stability of Pt nanofilaments in a Au-matrix composite. Gold Bulletin, 2007, 40, 199-205.	3.2	6
59	Advances in deformation processed gold composites. Gold Bulletin, 2000, 33, 128-133.	3.2	5
60	Microstructure and properties of a silver-erbium oxide alloy. Journal of Alloys and Compounds, 2008, 454, 292-296.	2.8	5
61	Transmission electron microscopy study of the microstructure of a Ti-Fe-Zr alloy. Materials Characterization, 2013, 83, 43-48.	1.9	5
62	Microstructure and oxidation behavior of Al and Hf co-deposition coatings on nickel-based superalloys. Surface and Coatings Technology, 2013, 224, 57-61.	2.2	5
63	Microstructure and mechanical properties of an ultrafine Ti-Si-Nb alloy. Materials Chemistry and Physics, 2015, 163, 512-517.	2.0	5
64	Thermal stability of deformation processed gold-silver composite. Scripta Materialia, 2003, 49, 399-403.	2.6	4
65	Microstructure investigations of Pt-modified $\text{Ni}_3\text{Al} + \text{Ni}$ coatings on Ni-based superalloys. Journal of Materials Research, 2010, 25, 1191-1195.	1.2	4
66	TEM study of the martensitic phases in the ductile DyCu and YCu intermetallic compounds. Acta Materialia, 2017, 132, 345-353.	3.8	4
67	Observations of a dynamical-to-kinematic diffraction transition in plastically deformed polycrystalline intermetallic YCu. Acta Materialia, 2014, 70, 307-315.	3.8	3
68	A survey of flaws near welds detected by side angle ultrasound examination of anhydrous ammonia nurse tanks. Journal of Loss Prevention in the Process Industries, 2016, 43, 263-272.	1.7	3
69	A comparison of strengthening mechanisms in rolled and axisymmetrically deformed Ti-20Y composites. Journal of Materials Science, 1999, 34, 1447-1460.	1.7	2
70	Leg weld fatigue cracks in anhydrous ammonia nurse tanks. Case Studies in Engineering Failure Analysis, 2015, 3, 73-79.	1.2	1
71	Predicted Growth Of Through-thickness Stress Corrosion Cracks In Anhydrous Ammonia Nurse Tanks. Advanced Materials Letters, 2015, 6, 783-789.	0.3	1
72	Tensile Properties Of Strontium Metal. Advanced Materials Letters, 2012, 3, 362-364.	0.3	0