

Guy Dirras

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.

115
papers

2,211
citations

23
h-index

43
g-index

118
ext. papers

2,592
ext. citations

3.9
avg, IF

5.13
L-index

#	Paper	IF	Citations
115	Effect of hot isostatic pressing on microstructure and mechanical properties of Ti6Al4V-zirconia nanocomposites processed by laser-powder bed fusion. <i>Materials and Design</i> , 2022 , 214, 110392	8.1	2
114	Experimental investigation of the local environment and lattice distortion in refractory medium entropy alloys. <i>Scripta Materialia</i> , 2022 , 211, 114532	5.6	
113	Decomposition behavior of yttria-stabilized zirconia and its effect on directed energy deposited Ti-based composite material. <i>Journal of Materials Science and Technology</i> , 2022 , 112, 138-150	9.1	0
112	Harmonic structure, a promising microstructure design. <i>Materials Research Letters</i> , 2022 , 10, 440-471	7.4	2
111	Influence of microstructural features on the yield strength of Ti6Al4V: a numerical study by using the crystal plasticity finite element method. <i>Meccanica</i> , 2021 , 56, 1129-1146	2.1	1
110	Effect of mechanical milling on the harmonic structure development during spark plasma sintering of Ti-5Al-2Sn-4Zr-4Mo-2Cr-1Fe metastable titanium alloy (Ecez alloy). <i>Journal of Alloys and Compounds</i> , 2021 , 860, 158483	5.7	0
109	Mechanical Properties of Spark Plasma Sintering-Processed Pure Ti and Ti-6Al-4V Alloys: A Comparative Study between Harmonic and Non-Harmonic Microstructures. <i>Compounds</i> , 2021 , 1, 41-57		3
108	Ultrafine-Grained Two-Phase High-Entropy Alloy Microstructures Obtained via Recrystallization: Mechanical Properties. <i>Frontiers in Materials</i> , 2020 , 7,	4	3
107	Numerical modeling on strengthening mechanisms of the harmonic structured design on CP-Ti and Ti6Al4V. <i>International Journal of Plasticity</i> , 2020 , 133, 102793	7.6	5
106	Data related to spectrum analyzes for phases identification, microstructure and mechanical properties of additive manufactured Ti6Al4V reinforced with nano Yttria stabilized zirconia. <i>Data in Brief</i> , 2020 , 29, 105249	1.2	4
105	Study of the stability under in vitro physiological conditions of surface silanized equimolar HfNbTaTiZr high-entropy alloy: A first step toward bio-implant applications. <i>Surface and Coatings Technology</i> , 2020 , 385, 125374	4.4	7
104	Study of harmonic microstructure development during Spark Plasma Sintering (SPS) of ECEZ titanium alloy. <i>MATEC Web of Conferences</i> , 2020 , 321, 12022	0.3	0
103	Lattice Strain Evolutions in Ni-W Alloys during a Tensile Test Combined with Synchrotron X-ray Diffraction. <i>Materials</i> , 2020 , 13,	3.5	2
102	Harmonic Structure Design: A Strategy for Outstanding Mechanical Properties in Structural Materials. <i>Metals</i> , 2020 , 10, 1615	2.3	6
101	Extra-strengthening in a harmonic structure designed pure titanium due to preferential recrystallization phenomenon through thermomechanical treatment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 797, 140227	5.3	10
100	A three-dimensional microstructure-based crystal plasticity model for coarse-grained and harmonic-structured Ti6Al4V under monotonic and cyclic shear loading. <i>Acta Mechanica</i> , 2020 , 231, 4991-5005	2.1	1
99	Powder Metallurgy Processing and Mechanical Properties of Controlled Ti-24Nb-4Zr-8Sn Heterogeneous Microstructures. <i>Metals</i> , 2020 , 10, 1626	2.3	2

98	Effect of nano-yttria stabilized zirconia addition on the microstructure and mechanical properties of Ti6Al4V parts manufactured by selective laser melting. <i>Materials and Design</i> , 2019 , 180, 107909	8.1	24
97	Analysis of the fatigue crack growth mechanisms in equimolar body centered cubic HfNbTaTiZr high-entropy alloy: Discussions on its singularities and consequences on the crack propagation rate properties. <i>Intermetallics</i> , 2019 , 110, 106459	3.5	8
96	Spark Plasma Sintering as a Route for Producing In-Demand Microstructures: Application to the Tensile-Ductility Enhancement of Polycrystalline Nickel 2019 , 575-604		1
95	Body-centered cubic high-entropy alloys: From processing to underlying deformation mechanisms. <i>Materials Characterization</i> , 2019 , 147, 533-544	3.9	47
94	Nickel-Tungsten Composite-Like Microstructures Processed by Spark Plasma Sintering for Structural Applications 2019 , 605-634		2
93	Fracture behavior of Ni-W alloy probed by in situ synchrotron X-ray diffraction. <i>Materials Letters</i> , 2019 , 239, 116-119	3.3	5
92	A 3D crystal plasticity model of monotonic and cyclic simple shear deformation for commercial-purity polycrystalline Ti with a harmonic structure. <i>Mechanics of Materials</i> , 2019 , 128, 117-128	3.3	19
91	Data on processing of Ti-25Nb-25Zr Titanium alloys via powder metallurgy route: Methodology, microstructure and mechanical properties. <i>Data in Brief</i> , 2018 , 17, 703-708	1.2	5
90	A three-dimensional multi-scale polycrystalline plasticity model coupled with damage for pure Ti with harmonic structure design. <i>International Journal of Plasticity</i> , 2018 , 100, 192-207	7.6	26
89	Study of a bcc multi-principal element alloy: Tensile and simple shear properties and underlying deformation mechanisms. <i>Acta Materialia</i> , 2018 , 142, 131-141	8.4	91
88	Conventional vs harmonic-structured Ti-25Nb-25Zr alloys: A comparative study of deformation mechanisms. <i>Acta Materialia</i> , 2018 , 161, 420-430	8.4	25
87	Comprehensive data compilation on the mechanical properties of refractory high-entropy alloys. <i>Data in Brief</i> , 2018 , 21, 1622-1641	1.2	54
86	Four-point bending fatigue behavior of an equimolar BCC HfNbTaTiZr high-entropy alloy: Macroscopic and microscopic viewpoints. <i>Materialia</i> , 2018 , 4, 348-360	3.2	19
85	Data on the influence of cold isostatic pre-compaction on mechanical properties of polycrystalline nickel sintered using Spark Plasma Sintering. <i>Data in Brief</i> , 2017 , 11, 61-67	1.2	4
84	Synthesis of nanometric MoNbW alloy using self-propagating high-temperature synthesis. <i>Advanced Powder Technology</i> , 2017 , 28, 1739-1744	4.6	10
83	Size effects in micro-tensile testing of high purity polycrystalline nickel. <i>International Journal of Engineering Science</i> , 2017 , 119, 192-204	5.7	11
82	Cyclic shear behavior of conventional and harmonic structure-designed Ti-25Nb-25Zr Titanium alloy: Back-stress hardening and twinning inhibition. <i>Scripta Materialia</i> , 2017 , 138, 44-47	5.6	22
81	Functionalization of New Biocompatible Titanium Alloys with Harmonic Structure Design by Using UV Irradiation. <i>Irbm</i> , 2017 , 38, 190-197	4.8	5

80	Dynamic Hall-Petch versus grain-size gradient effects on the mechanical behavior under simple shear loading of Titanium Ti-25Nb-25Zr alloys. <i>Materials Letters</i> , 2017 , 206, 214-216	3.3	19
79	Design and tensile properties of a bcc Ti-rich high-entropy alloy with transformation-induced plasticity. <i>Materials Research Letters</i> , 2017 , 5, 110-116	7.4	107
78	Data on the impact of increasing the W amount on the mass density and compressive properties of Ni-W alloys processed by spark plasma sintering. <i>Data in Brief</i> , 2016 , 7, 1405-8	1.2	7
77	Elastic and plastic properties of as-cast equimolar TiHfZrTaNb high-entropy alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 654, 30-38	5.3	103
76	Microstructure and strength of nickel subjected to large plastic deformation at very high strain rate. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 662, 9-15	5.3	9
75	Mechanical behavior and microstructure of Ti ₂₀ Hf ₂₀ Zr ₂₀ Ta ₂₀ Nb ₂₀ high-entropy alloy loaded under quasi-static and dynamic compression conditions. <i>Materials Characterization</i> , 2016 , 111, 106-113	3.9	54
74	Bulk NiW alloys with a composite-like microstructure processed by spark plasma sintering: Microstructure and mechanical properties. <i>Materials and Design</i> , 2016 , 89, 1181-1190	8.1	19
73	Prediction of Ductile Fracture Through Small-Size Notched Tensile Specimens. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016 , 67-72	0.3	1
72	Three-Dimensionally Gradient and Periodic Harmonic Structure for High Performance Advanced Structural Materials. <i>Materials Transactions</i> , 2016 , 57, 1424-1432	1.3	15
71	Harmonic Structure: An Effective Tailored Heterogeneous Microstructural Design to Strengthen Ti-6Al-4V Alloy 2016 , 629-635		
70	Synthesis of nanometric refractory alloys powders in the MoNbW system. <i>Journal of Alloys and Compounds</i> , 2016 , 679, 80-87	5.7	6
69	On the room temperature deformation mechanisms of a TiZrHfNbTa refractory high-entropy alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 645, 255-263	5.3	129
68	Modelling of microstructural effects on the mechanical behavior of ultrafine-grained Nickel using crystal plasticity finite element model. <i>International Journal of Engineering Science</i> , 2015 , 94, 212-225	5.7	12
67	Microstructural investigation of plastically deformed Ti ₂₀ Zr ₂₀ Hf ₂₀ Nb ₂₀ Ta ₂₀ high entropy alloy by X-ray diffraction and transmission electron microscopy. <i>Materials Characterization</i> , 2015 , 108, 1-7	3.9	67
66	Investigation of deformation micro-mechanisms in nickel consolidated from a bimodal powder by spark plasma sintering. <i>Materials Characterization</i> , 2015 , 99, 118-127	3.9	16
65	Microstructure evolution during direct impact loading of commercial purity Titanium with harmonic structure design. <i>Materiaux Et Techniques</i> , 2015 , 103, 311	0.6	6
64	Microstructure of a near-equimolar refractory high-entropy alloy. <i>Materials Letters</i> , 2014 , 126, 285-287	3.3	96
63	Characterization of bulk bimodal polycrystalline nickel deformed by direct impact loadings. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 601, 48-57	5.3	15

62	Powder metallurgy processing and deformation characteristics of bulk multimodal nickel. <i>Materials Characterization</i> , 2014 , 94, 126-137	3.9	15
61	Microstructure and mechanical properties of bulk highly faulted fcc/hcp nanostructured cobalt microstructures. <i>Materials Characterization</i> , 2014 , 91, 26-33	3.9	19
60	High performance Ti-6Al-4V alloy by creation of harmonic structure design. <i>IOP Conference Series: Materials Science and Engineering</i> , 2014 , 63, 012030	0.4	13
59	Indentation creep study on ultrafine-grained Zn processed by powder metallurgy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 596, 170-175	5.3	8
58	Influence of Triaxial Stress State on Ductile Fracture Strength of Polycrystalline Nickel. <i>International Journal of Fracture</i> , 2013 , 182, 267-274	2.3	11
57	Room-temperature deformation micro-mechanisms of polycrystalline nickel processed by spark plasma sintering. <i>Materials Characterization</i> , 2013 , 79, 76-83	3.9	17
56	Convective and Microwave Dryings of Raffia Fruit: Modeling and Effects on Color and Hardness. <i>Research Journal of Applied Sciences, Engineering and Technology</i> , 2013 , 6, 2715-2723	0.2	4
55	Mechanical behaviour and underlying deformation mechanisms in coarse- and ultrafine-grained Zn over a wide range of strain rates. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 564, 273-283	5.3	16
54	Deformation Mechanisms in Ultrafine-Grained Zn at Different Strain Rates and Temperatures. <i>Key Engineering Materials</i> , 2013 , 592-593, 313-316	0.4	
53	Effects of Alkali Treatment on the Microstructure, Composition, and Properties of the Raffia textilis Fiber. <i>BioResources</i> , 2013 , 8,	1.3	28
52	Nanostructured cobalt powders synthesised by polyol process and consolidated by Spark Plasma Sintering: Microstructure and mechanical properties. <i>Materials Characterization</i> , 2012 , 69, 1-8	3.9	24
51	Ultrafine-Grained Aluminum Processed by a Combination of Hot Isostatic Pressing and Dynamic Plastic Deformation: Microstructure and Mechanical Properties. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012 , 43, 1312-1322	2.3	5
50	Ultrafine-grained nickel refined by dislocation activities at intermediate strain rate impact: deformation microstructure and mechanical properties. <i>Journal of Materials Science</i> , 2012 , 47, 7932-7938	4.3	5
49	High Purity Ultrafine-Grained Nickel Processed by Dynamic Plastic Deformation: Microstructure and Mechanical Properties. <i>Advanced Engineering Materials</i> , 2012 , 14, 1027-1033	3.5	10
48	Nickel with multimodal grain size distribution achieved by SPS: microstructure and mechanical properties. <i>Journal of Materials Science</i> , 2012 , 47, 7926-7931	4.3	21
47	Effect of Processing Conditions on Microstructure and Mechanical Behaviour of Metals Sintered from Nanopowders. <i>Materials Science Forum</i> , 2012 , 729, 49-54	0.4	1
46	Microstructure and nanohardness distribution in a polycrystalline Zn deformed by high strain rate impact. <i>Materials Characterization</i> , 2011 , 62, 480-487	3.9	19
45	Microstructure of Al ₂ O ₃ nanocomposite formed by in situ phase transformation during Al nanopowder consolidation. <i>Materials Chemistry and Physics</i> , 2011 , 129, 846-852	4.4	16

44	Magnetic properties of ultrafine-grained cobalt samples obtained from consolidated nanopowders. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011 , 208, 1942-1949	1.6	2
43	Microstructure and mechanical properties of ultrafine-grained fcc/hcp cobalt processed by a bottom-up approach. <i>Journal of Alloys and Compounds</i> , 2010 , 489, 424-428	5.7	18
42	Microstructure engineering from metallic powder blends for enhanced mechanical properties. <i>Journal of Physics: Conference Series</i> , 2010 , 240, 012016	0.3	5
41	Filament formation during elevated temperature deformation of high purity ultrafine-grained aluminum. <i>Materials Letters</i> , 2010 , 64, 1163-1165	3.3	11
40	A bimodal bulk ultra-fine-grained nickel: Experimental and micromechanical investigations. <i>Mechanics of Materials</i> , 2010 , 42, 522-536	3.3	46
39	Microstructure and mechanical characteristics of bulk polycrystalline Ni consolidated from blends of powders with different particle size. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 1206-1214	5.3	62
38	On the strengthening behavior of ultrafine-grained nickel processed from nanopowders. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 3227-3235	5.3	44
37	Fine-grained nickel deformed by direct impact at different velocities: Microstructure and mechanical properties. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 4128-4135	5.3	16
36	Microstructure characterization of high-purity aluminum processed by dynamic severe plastic deformation. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010 , 207, 2233-2237	1.6	6
35	Microstructure and mechanical behavior of ultrafine-grained Ni processed by different powder metallurgy methods. <i>Journal of Materials Research</i> , 2009 , 24, 217-226	2.5	36
34	The elastic-plastic transition in nanograined polycrystals. <i>International Journal of Materials Research</i> , 2009 , 100, 767-769	0.5	3
33	Mechanical characteristics under monotonic and cyclic simple shear of spark plasma sintered ultrafine-grained nickel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009 , 526, 201-210	5.3	14
32	A revisited generalized self-consistent polycrystal model following an incremental small strain formulation and including grain-size distribution effect. <i>International Journal of Engineering Science</i> , 2009 , 47, 537-553	5.7	22
31	A new concept for producing ultrafine-grained metallic structures via an intermediate strain rate: Experiments and modeling. <i>International Journal of Mechanical Sciences</i> , 2009 , 51, 797-806	5.5	23
30	On the microstructure and physical properties of untreated raffia textilis fiber. <i>Composites Part A: Applied Science and Manufacturing</i> , 2009 , 40, 418-422	8.4	79
29	Chapter 90 Mechanical Properties of Nanograined Metallic Polycrystals. <i>Dislocations in Solids</i> , 2009 , 15, 199-248		11
28	Plasticity of nanocrystalline materials: a critical viewpoint. <i>International Journal of Materials Research</i> , 2009 , 100, 1456-1460	0.5	2
27	Bulk Ultrafine-Grained Nickel Consolidated from Nanopowders. <i>Materials Science Forum</i> , 2008 , 589, 93-98.4		8

26	Microstructure and Mechanical Properties of Commercial Purity HIPed and Crushed Aluminum. <i>Materials Science Forum</i> , 2008 , 584-586, 579-584	0.4	2
25	Microstructure and yield strength of ultrafine grained aluminum processed by hot isostatic pressing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 458, 385-390	5.3	23
24	Room temperature deformation mechanisms in ultrafine-grained materials processed by hot isostatic pressing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 462, 100-105	5.3	22
23	Elasto-plastic behaviour of thin metal films. <i>Philosophical Magazine</i> , 2007 , 87, 4875-4892	1.6	19
22	Macroscopic and microscopic aspects of the deformation and fracture mechanisms of ultrafine-grained aluminum processed by hot isostatic pressing. <i>Acta Materialia</i> , 2006 , 54, 411-421	8.4	108
21	Processing and Characterization of Nanocrystalline Aluminum Obtained by Hot Isostatic Pressing (HIP) 2005 , 564-570		
20	Elastic properties of SiC films by Brillouin light scattering. <i>Journal of Applied Physics</i> , 2004 , 95, 2324-2330	5	30
19	Investigating the elastic properties of SiC films. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 387-389, 302-306	5.3	6
18	Measured mechanical properties of LIGA Ni structures. <i>Sensors and Actuators A: Physical</i> , 2003 , 103, 59-63	9	114
17	An Approach of Precipitate/Dislocation Interaction in Age-Hardened Al-Mg-Si Alloys: Measurement of the Strain Field around Precipitates and Related Simulation of the Dislocation Propagation. <i>Materials Science Forum</i> , 2002 , 396-402, 1019-1024	0.4	19
16	Influence of the elastic stress relaxation on the microstructures and mechanical properties of metal matrix composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2002 , 33, 1397-1401	8.4	4
15	Mesostructure of the localization in prestrained mild steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001 , 319-321, 304-307	5.3	2
14	Microstructural evolution during monotonic and reverse shearing of AA5182 aluminium alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001 , 319-321, 457-460	5.3	4
13	Relating the mechanical properties of a pseudo-binary Al ₂ Cu alloy to the deformation induced microstructure. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001 , 319-321, 372-374	5.3	
12	Stress field around precipitates: direct measurement and relation with the behavior of dislocations. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001 , 319-321, 270-273	5.3	11
11	On the existence of superlattice intrinsic stacking fault-superlattice extrinsic stacking fault coupled pairs in an Al ₂ Cu alloy. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 2001 , 81, 467-478		4
10	Mechanical Properties of Thin Film Silicon Carbide. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 687, 1		8
9	On the Role of the Underlying Microstructure on the Mechanical Properties of Microelectromechanical Systems (MEMS) Materials. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 657, 5221		1

8	Macroscopic behaviour versus dislocation substructures development under cyclic shear tests on the aluminium 3004 alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1999 , 263, 85-95	5.3	17
7	Cyclic shear tests on Aluminium 3004 and 5182 alloys: macroscopic behaviour and substructural development. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997 , 234-236, 966-969	5.3	3
6	On the microstructural evolution of cold-rolled Al+5at.% Mg. <i>Scripta Metallurgica Et Materialia</i> , 1995 , 33, 755-760		17
5	Role of experimental conditions and of thin foil ageing on the high temperature deformation microstructure of ϵ CuZn. <i>Scripta Metallurgica Et Materialia</i> , 1994 , 31, 21-24		
4	Cluster variation method calculation of antiphase boundaries on {112} plane in a B2 ordered compound application to ϵ CuZn. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1993 , 67, 813-826		7
3	Calculation of antiphase boundaries on {110} planes in a b2 ordered compound by the cluster variation method. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1992 , 65, 477-496		21
2	Weak-beam study of the dislocation microstructure of ϵ CuZn deformed in the temperature domain of the plastic anomaly. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1992 , 65, 815-828		19
1	A Weak-Beam Study of the Microstructure of ϵ CUZN Deformed in the Domain of Flow Stress Anomaly. <i>Materials Research Society Symposia Proceedings</i> , 1988 , 133, 737		2