

# J Bonneville

## List of Publications by Year in descending order

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79  
papers

1,478  
citations

471509

17  
h-index

361022

35  
g-index

79  
all docs

79  
docs citations

79  
times ranked

916  
citing authors

#	ARTICLE	IF	CITATIONS
1	Cross-slipping process and the stress-orientation dependence in pure copper. <i>Acta Metallurgica</i> , 1979, 27, 1477-1486.	2.1	179
2	A study of cross-slip activation parameters in pure copper. <i>Acta Metallurgica</i> , 1988, 36, 1989-2002.	2.1	137
3	Thermal activation parameters of plastic flow reveal deformation mechanisms in the CrMnFeCoNi high-entropy alloy. <i>Acta Materialia</i> , 2018, 143, 257-264.	7.9	132
4	A new method for activation volume measurements: application to Ni <sub>3</sub> (Al,Hf). <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1993, 167, 73-79.	5.6	115
5	Powder metallurgy processing and compressive properties of Ti <sub>3</sub> AlC <sub>2</sub> /Al composites. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 530, 168-173.	5.6	68
6	Microstructures and mechanical properties of Al-base composite materials reinforced by Al-Cu-Fe particles. <i>Journal of Alloys and Compounds</i> , 2010, 493, 453-460.	5.5	47
7	Microindentation of Al-Cu-Fe icosahedral quasicrystal. <i>Scripta Materialia</i> , 1999, 41, 989-994.	5.2	45
8	Characterization of thermally activated dislocation mechanisms using transient tests. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2002, 322, 118-125.	5.6	45
9	The mechanical properties of single phase $\hat{\text{T}}^3$ Ti <sub>47</sub> Al <sub>51</sub> Mn <sub>2</sub> polycrystals. <i>Acta Materialia</i> , 1996, 44, 4403-4415.	7.9	40
10	Hot isostatic pressing synthesis and mechanical properties of Al/Al-Cu-Fe composite materials. <i>Journal of Materials Research</i> , 2008, 23, 904-910.	2.6	39
11	Hardening stages of [112] copper single crystals at intermediate and high temperaturesâ€”I. Mechanical behaviour. <i>Acta Metallurgica Et Materialia</i> , 1993, 41, 2897-2906.	1.8	36
12	Hardening stages of [112] copper single crystals at intermediate and high temperaturesâ€”II. Slip systems and microstructures. <i>Acta Metallurgica Et Materialia</i> , 1993, 41, 2907-2922.	1.8	28
13	On the strengthening of Ni <sub>3</sub> Al by hafnium additions. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 2000, 80, 1545-1566.	0.6	25
14	Activation parameters of plastic flow in icosahedral Al-Cu-Fe. <i>Philosophical Magazine Letters</i> , 1999, 79, 1-7.	1.2	24
15	Mechanical properties of Al-Cu-Fe quasicrystalline and crystalline phases: An analogy. <i>Intermetallics</i> , 2014, 50, 54-58.	3.9	23
16	Analogy between creep cycles and stress relaxation series for activation volume measurement. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1995, 191, 85-89.	5.6	21
17	Microstructure of icosahedral Al-Pd-Mn quasicrystals deformed at room temperature in an anisotropic confining medium. <i>Philosophical Magazine Letters</i> , 2002, 82, 659-669.	1.2	18
18	Repeated load transients for measuring the effective activation volume in A $\hat{\text{T}}^3$ TiAl alloy. <i>Scripta Materialia</i> , 1997, 36, 275-281.	5.2	17

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19	On the relationship between unusual mechanical properties and deformation substructures in ordered Ni <sub>3</sub> Al. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1993, 164, 379-383.	5.6	14
20	Deformation microstructures in Ni <sub>3</sub> (Al,Hf). <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 239-240, 174-179.	5.6	14
21	Slip line analysis in Ni <sub>3</sub> Al by atomic force microscopy. <i>Scripta Materialia</i> , 1999, 41, 945-950.	5.2	14
22	An experimental UHV AFM-STM device for characterizing surface nanostructures under stress/strain at variable temperature. <i>Review of Scientific Instruments</i> , 2013, 84, 105117.	1.3	14
23	Mechanical loss spectrum of Ni <sub>3</sub> (Al,Ta) single crystals. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 239-240, 281-286.	5.6	13
24	Microstructural analysis of i-AlPdMn quasi-crystals deformed between room temperature and 300 Å°C under confining pressure. <i>Scripta Materialia</i> , 2003, 49, 47-52.	5.2	13
25	Al-Pd-Mn icosahedral quasicrystal: deformation mechanisms in the brittle domain. <i>Philosophical Magazine</i> , 2007, 87, 1497-1511.	1.6	13
26	Synthesis and brittle-to-ductile transition of the 100-Al <sub>0.7</sub> Cu <sub>0.2</sub> Fe <sub>0.1</sub> tetragonal phase. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 4515-4518.	5.6	13
27	Interpretation of the measurement of activation parameters in L12 alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 234-236, 263-266.	5.6	12
28	Al-matrix composite materials reinforced by Al-Cu-Fe particles. <i>Journal of Physics: Conference Series</i> , 2010, 240, 012013.	0.4	12
29	Influence of terrace widths on Au(111) reconstruction. <i>Physical Review B</i> , 2017, 96, .	3.2	12
30	Temperature dependence of dislocation microstructure in Ni <sub>3</sub> (Al,Hf). <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 234-236, 755-757.	5.6	11
31	Mechanical behaviour versus structure of Al 63.6 Cu 24.0 Fe 12.4. <i>Philosophical Magazine Letters</i> , 2002, 82, 183-189.	1.2	11
32	The Strain Rate Sensitivity of Ni <sub>3</sub> (Al,Ta) Single Crystals.. <i>Materials Research Society Symposia Proceedings</i> , 1990, 213, 629.	0.1	10
33	A New Interpretation of Stress Relaxations in Ni <sub>3</sub> (Al,Hf) Single Crystals.. <i>Materials Research Society Symposia Proceedings</i> , 1994, 364, 369.	0.1	10
34	Mechanical properties of Al-Li-Cu icosahedral quasicrystals. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 234-236, 291-294.	5.6	10
35	The role of thermal activation in the strength anomaly of Ni <sub>3</sub> Al. <i>Intermetallics</i> , 2000, 8, 1013-1018.	3.9	10
36	Electronic speckle pattern interferometry for mechanical testing of thin films. <i>Optics and Lasers in Engineering</i> , 2004, 42, 1-8.	3.8	10

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37	Shear experiments under confining pressure conditions of Al <sub>3</sub> PdMn single quasicrystals. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005, 400-401, 311-314.	5.6	10
38	Atypical "boomerang" slip traces in [001] niobium single crystals deformed at room temperature. <i>Scripta Materialia</i> , 2012, 66, 475-478.	5.2	10
39	Low temperature atomic-scale observations of slip traces in niobium. <i>Scripta Materialia</i> , 2020, 183, 81-85.	5.2	10
40	Strain-amplitude-dependent mechanical loss at intermediate temperatures in a Ni <sub>3</sub> (Al, Ta) single crystal. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1999, 79, 2227-2242.	0.6	9
41	On the yield point of icosahedral AlCuFe quasicrystals. <i>Scripta Materialia</i> , 2003, 49, 41-46.	5.2	9
42	What can be learnt on the yield stress anomaly of Ni <sub>3</sub> Al using AFM observations. <i>Intermetallics</i> , 2014, 50, 86-93.	3.9	9
43	Nanometric metrology by FIB-SEM-DIC measurements of strain field and fracture separation on composite metallic material. <i>Materials and Design</i> , 2020, 192, 108665.	7.0	9
44	Rate controlling processes in creep of close packed metals at intermediate and high temperatures. <i>Revue De Physique Appliquée</i> , 1988, 23, 461-473.	0.4	9
45	Characteristics of plastic flow in Ni <sub>3</sub> (Al,Hf) single crystals. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 234-236, 770-773.	5.6	8
46	Mechanical strength of the binary compound Ni <sub>3</sub> Al. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 239-240, 169-173.	5.6	8
47	Creep behaviour of icosahedral Al <sub>3</sub> Cu <sub>2</sub> Fe. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2000, 294-296, 777-780.	5.6	8
48	Experimental study of Ni <sub>3</sub> Al slip traces by atomic force microscopy: an evidence of mobile dislocation exhaustion. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004, 387-389, 926-930.	5.6	8
49	Dislocations and Plasticity of Icosahedral Quasicrystals. <i>Dislocations in Solids</i> , 2008, , 251-331.	1.6	8
50	Spark plasma sintering synthesis and mechanical spectroscopy of the 100%Al <sub>0.7</sub> Cu <sub>0.2</sub> Fe <sub>0.1</sub> phase. <i>Journal of Materials Science</i> , 2012, 47, 169-175.	3.7	8
51	Plastic Deformation Of Al-Cu-Fe Icosahedral Quasicrystals. <i>Materials Research Society Symposia Proceedings</i> , 1998, 553, 295.	0.1	7
52	Characterising thermally activated dislocation mechanisms. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001, 309-310, 251-255.	5.6	7
53	Activation Volumes in the Yield Strength Anomaly Domain of Ni <sub>3</sub> (Al,Ta).. <i>Materials Research Society Symposia Proceedings</i> , 1994, 364, 713.	0.1	6
54	Nanoindentation-induced deformation in Al <sub>3</sub> PdMn single quasicrystals. <i>Applied Physics Letters</i> , 2006, 88, 073103.	3.3	6

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55	Atomic reconstruction of niobium (111) surfaces. <i>Surface Science</i> , 2015, 632, 60-63.	1.9	6
56	Plasticity of the $\gamma$ -Al <sub>7</sub> Cu <sub>2</sub> Fe phase. <i>Journal of Alloys and Compounds</i> , 2016, 665, 144-151.	5.5	6
57	Formation processes of the $\gamma$ -Al <sub>70</sub> Cu <sub>20</sub> Fe <sub>10</sub> phase synthesized by SPS technique. <i>Journal of Alloys and Compounds</i> , 2017, 699, 1157-1165.	5.5	6
58	The Critical Stress for Plastic Deformation in Ni <sub>3</sub> (Al,Hf) Single Crystals.. <i>Materials Research Society Symposia Proceedings</i> , 1992, 288, 429.	0.1	5
59	Effect of Off-Stoichiometry on the Deformation Behavior of Ni <sub>3</sub> Al Binary Polycrystals. <i>Materials Research Society Symposia Proceedings</i> , 1998, 552, 1.	0.1	5
60	Chapter 62 Work hardening in some ordered intermetallic compounds. <i>Dislocations in Solids</i> , 2002, , 459-545.	1.6	5
61	A Study of Cross Slip in the F.C.C. Structure. , 1985, , 9-14.		5
62	On the plasticity of Al-Cu-Fe quasicrystals. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005, 400-401, 315-319.	5.6	4
63	Bow-tie slip traces in Fe <sub>80</sub> Al <sub>20</sub> single crystals deformed at room temperature. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 565, 258-261.	5.6	4
64	Slip-trace-induced vicinal step destabilization. <i>Physical Review B</i> , 2016, 93, .	3.2	4
65	The Temperature Dependence of the Mechanical Properties of Gamma TiAl. <i>Materials Research Society Symposia Proceedings</i> , 1994, 364, 629.	0.1	3
66	An Assessment of the Method Used to Determine Activation Parameters in L1 <sub>2</sub> Alloys. <i>Materials Research Society Symposia Proceedings</i> , 1998, 552, 1.	0.1	3
67	Quantitative numerical method for analysing slip traces observed by AFM. <i>Surface Topography: Metrology and Properties</i> , 2013, 1, 015002.	1.6	3
68	Mechanical Properties of Binary Ni <sub>3</sub> Al Single Crystals. <i>Materials Research Society Symposia Proceedings</i> , 1996, 460, 419.	0.1	2
69	On the equilibrium configurations of climb-dissociated Lomer-Cottrell dislocations. <i>Philosophical Magazine Letters</i> , 1998, 78, 87-95.	1.2	2
70	Direct Measurement of Dislocation Exhaustion Rates During Plastic Deformation of Ni <sub>3</sub> Al Compounds. <i>Materials Research Society Symposia Proceedings</i> , 1998, 552, 1.	0.1	2
71	A microtensile set up for characterising the mechanical properties of films. <i>Materials Research Society Symposia Proceedings</i> , 2005, 875, 1.	0.1	2
72	How slip traces modify the Au(111) reconstruction. <i>Physical Review B</i> , 2019, 99, .	3.2	2

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73	A study of cross slip activation parameters in copper. <i>Revue De Physique Appliquée</i> , 1988, 23, 677-677.	0.4	2
74	Experimental Study of Mobile Dislocation Densities and Velocities through Transient Mechanical Tests. <i>Materials Research Society Symposia Proceedings</i> , 1999, 578, 21.	0.1	1
75	An atomic-scale insight into Ni <sub>3</sub> Al slip traces. <i>Materialia</i> , 2020, 9, 100563.	2.7	1
76	A New Technique to Study Cross-slip in F.C.C. Crystals. , 1979, , 3-8.		1
77	Transient Creep Behavior of $\hat{\Gamma}^3$ -TiAl Polycrystals. <i>Materials Research Society Symposia Proceedings</i> , 1996, 460, 263.	0.1	0
78	Mechanical Loss Associated with Stress Anomaly in Ni <sub>3</sub> Al and Ni <sub>3</sub> (Al, Ta) Single Crystals. <i>Materials Research Society Symposia Proceedings</i> , 1999, 578, 181.	0.1	0
79	Multiplication, Mobility and Exhaustion of Dislocations. , 2000, , 57-66.		0