Ronald W Armstrong

List of Publications by Year
in descending order

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37	2,834	567281 15	434195 31
papers	citations	h-index	g-index

37	37	37	2073
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High-Rate Crystal/Polycrystal Dislocation Dynamics. Crystals, 2022, 12, 705.	2.2	2
2	Constitutive relations for slip and twinning in high rate deformations: A review and update. Journal of Applied Physics, 2021, 130, .	2.5	11
3	Dislocation Reaction Mechanism for Enhanced Strain Hardening in Crystal Nano-Indentations. Crystals, 2020, 10, 9.	2.2	6
4	Crystal Strengths at Micro- and Nano-Scale Dimensions. Crystals, 2020, 10, 88.	2.2	3
5	Size effects on material yield strength/deformation/fracturing properties. Journal of Materials Research, 2019, 34, 2161-2176.	2.6	19
6	Exceptional crystal strain hardening determined over macro- to micro- to nano-size scales in continuous spherical indentation tests. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 757, 95-100.	5.6	8
7	Dislocation Mechanics Pile-Up and Thermal Activation Roles in Metal Plasticity and Fracturing. Metals, 2019, 9, 154.	2.3	6
8	Hallâ€“Petch Relationship in Aluminum and Aluminum Alloys. , 2019, , .		1
9	Crystal Indentation Hardness. Crystals, 2017, 7, 21.	2.2	7
10	Crystal Engineering for Mechanical Strength at Nano-Scale Dimensions. Crystals, 2017, 7, 315.	2.2	13
11	Crystal Dislocations. Crystals, 2016, 6, 9.	2.2	1
12	Dislocation Pile-Ups, Material Strength Levels, and Thermal Activation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 5801-5810.	2.2	24
13	Dislocation Mechanics of High-Rate Deformations. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4438-4453.	2.2	45
14	Material grain size and crack size influences on cleavage fracturing. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140124.	3.4	19
15	Bertram Hopkinson's pioneering work and the dislocation mechanics of high rate deformations and mechanically induced detonations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130181.	3.4	7
16	Symmetry Aspects of Dislocation-Effected Crystal Properties: Material Strength Levels and X-ray Topographic Imaging. Symmetry, 2014, 6, 148-163.	2.2	4
17	Engineering science aspects of the Hallâ€“Petch relation. Acta Mechanica, 2014, 225, 1013-1028.	2.1	72
18	Plastic strain localization in metals: origins and consequences. Progress in Materials Science, 2014, 59, 1-160.	32.8	340

#	Article	IF	Citations
19	60 Years of Hall-Petch: Past to Present Nano-Scale Connections. Materials Transactions, 2014, 55, 2-12.	1.2	180
20	Influence of the strain rate on deformation mechanisms of an AZ31 magnesium alloy. International Journal of Materials Research, 2013, 104, 762-768.	0.3	7
21	Hall-Petch analysis of dislocation pileups in thin material layers and in nanopolycrystals. Journal of Materials Research, 2013, 28, 1792-1798.	2.6	28
22	The Hardness and Strength Properties of WC-Co Composites. Materials, 2011, 4, 1287-1308.	2.9	64
23	Dislocation mechanics of copper and iron in high rate deformation tests. Journal of Applied Physics, 2009, 105, .	2.5	90
24	DISLOCATION MECHANICS UNDER EXTREME PRESSURES. , 2008, , .		0
25	Elastic/plastic/cracking indentation behavior of hard materials. International Journal of Refractory Metals and Hard Materials, 2006, 24, 11-16.	3.8	15
26	Indentation fracture mechanics toughness dependence on grain size and crack size: Application to alumina and WCâ€“Co. International Journal of Refractory Metals and Hard Materials, 2006, 24, 129-134.	3.8	23
27	Dislocation pile-ups: From {110} cracking in MgO to model strength evaluations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 409, 24-31.	5.6	22
28	Elastic/plastic deformation behavior in a continuous ball indentation test. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 371, 251-255.	5.6	14
29	Application of Eyringâ€™s thermal activation theory to constitutive equations for polymers. AIP Conference Proceedings, 2000, , .	0.4	0
30	Dislocation characteristics in energetic crystals. AIP Conference Proceedings, 2000, , .	0.4	0
31	Split-Hopkinson pressure bar tests on pure tantalum. , 1998, , .		0
32	Norman J. Petch and his Contributions to Materials Science. Materials Research Society Symposia Proceedings, 1994, 362, 3.	0.1	0
33	Hall-Petch Basis for Assessing Alloy Strengthening. Materials Research Society Symposia Proceedings, 1994, 362, 41.	0.1	11
34	Hall-Petch Analysis of Yield, Flow and Fracturing. Materials Research Society Symposia Proceedings, 1994, 362, 9.	0.1	9
35	Description of tantalum deformation behavior by dislocation mechanics based constitutive relations. Journal of Applied Physics, 1990, 68, 1580-1591.	2.5	157
36	LM-ACT for Imaging RAM Devices in X-ray Diffraction Topographs. Advances in X-ray Analysis, 1988, 32, 659-666.	0.0	2

#	Article	IF	Citations
37	Dislocationâ€mechanicsâ€based constitutive relations for material dynamics calculations. Journal of Applied Physics, 1987, 61, 1816-1825.	2.5	1,624