Terence G Langdon

List of Publications by Citations

1,019 papers	59,115 citations	116 h-index	205 g-index
1,039 ext. papers	63,534 ext. citations	4.2 avg, IF	8.17 L-index

#	Paper	IF	Citations
1019	Principles of equal-channel angular pressing as a processing tool for grain refinement. *Progress in Materials Science*, **2006**, 51, 881-981	42.2	3270
1018	Using high-pressure torsion for metal processing: Fundamentals and applications. *Progress in Materials Science*, **2008**, 53, 893-979	42.2	2224
1017	Principle of equal-channel angular pressing for the processing of ultra-fine grained materials. *Scripta Materialia*, **1996**, 35, 143-146	5.6	1522
1016	Producing bulk ultrafine-grained materials by severe plastic deformation. *Jom*, **2006**, 58, 33-39	2.1	1192
1015	The process of grain refinement in equal-channel angular pressing. *Acta Materialia*, **1998**, 46, 3317-3331	8.4	1057
1014	The shearing characteristics associated with equal-channel angular pressing. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1998**, 257, 328-332	5.3	827
1013	An investigation of microstructural evolution during equal-channel angular pressing. *Acta Materialia*, **1997**, 45, 4733-4741	8.4	720
1012	Experimental parameters influencing grain refinement and microstructural evolution during high-pressure torsion. *Acta Materialia*, **2003**, 51, 753-765	8.4	643
1011	Twenty-five years of ultrafine-grained materials: Achieving exceptional properties through grain refinement. *Acta Materialia*, **2013**, 61, 7035-7059	8.4	549
1010	Improving the mechanical properties of magnesium and a magnesium alloy through severe plastic deformation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2001**, 300, 142-147	5.3	530
1009	The transition from dislocation climb to viscous glide in creep of solid solution alloys. *Acta Metallurgica*, **1974**, 22, 779-788		444
1008	A unified approach to grain boundary sliding in creep and superplasticity. *Acta Metallurgica Et Materialia*, **1994**, 42, 2437-2443		428
1007	Microhardness measurements and the Hall-Petch relationship in an Al?Mg alloy with submicrometer grain size. *Acta Materialia*, **1996**, 44, 4619-4629	8.4	370
1006	The mechanical properties of superplastic materials. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1982**, 13, 689-701		370
1005	Influence of channel angle on the development of ultrafine grains in equal-channel angular pressing. *Acta Materialia*, **1998**, 46, 1589-1599	8.4	365
1004	Equal-channel angular pressing of commercial aluminum alloys: Grain refinement, thermal stability and tensile properties. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2000**, 31, 691-701	2.3	359
1003	Review: Processing of metals by equal-channel angular pressing. *Journal of Materials Science*, **2001**, 36, 2835-2843	4.3	340

1002	Developing superplasticity in a magnesium alloy through a combination of extrusion and ECAP. *Acta Materialia*, **2003**, 51, 3073-3084	8.4	321
1001	The evolution of homogeneity in processing by high-pressure torsion. *Acta Materialia*, **2007**, 55, 203-212	8.4	306
1000	Creep of ceramics. *Journal of Materials Science*, **1983**, 18, 1-50	4.3	304
999	Grain refinement and superplasticity in an aluminum alloy processed by high-pressure torsion. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2005**, 393, 344-351	5.3	302
998	An investigation of grain boundaries in submicrometer-grained Al-Mg solid solution alloys using high-resolution electron microscopy. *Journal of Materials Research*, **1996**, 11, 1880-1890	2.5	291
997	Seventy-five years of superplasticity: historic developments and new opportunities. *Journal of Materials Science*, **2009**, 44, 5998-6010	4.3	288
996	Influence of scandium and zirconium on grain stability and superplastic ductilities in ultrafine-grained Al□Mg alloys. *Acta Materialia*, **2002**, 50, 553-564	8.4	285
995	Grain boundary sliding revisited: Developments in sliding over four decades. *Journal of Materials Science*, **2006**, 41, 597-609	4.3	275
994	An investigation of microstructural stability in an AlMg alloy with submicrometer grain size. *Acta Materialia*, **1996**, 44, 2973-2982	8.4	273
993	Producing Bulk Ultrafine-Grained Materials by Severe Plastic Deformation: Ten Years Later. *Jom*, **2016**, 68, 1216-1226	2.1	268
992	OBSERVATIONS OF HIGH STRAIN RATE SUPERPLASTICITY IN COMMERCIAL ALUMINUM ALLOYS WITH ULTRAFINE GRAIN SIZES. *Scripta Materialia*, **1997**, 37, 1945-1950	5.6	268
991	Superplastic forming at high strain rates after severe plastic deformation. *Acta Materialia*, **2000**, 48, 3633-3640	8.4	268
990	The principles of grain refinement in equal-channel angular pressing. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 462, 3-11	5.3	264
989	Grain boundary sliding as a deformation mechanism during creep. *Philosophical Magazine and Journal*, **1970**, 22, 689-700		261
988	Tailoring stacking fault energy for high ductility and high strength in ultrafine grained Cu and its alloy. *Applied Physics Letters*, **2006**, 89, 121906	3.4	258
987	Performance and applications of nanostructured materials produced by severe plastic deformation. *Scripta Materialia*, **2004**, 51, 825-830	5.6	257
986	Microhardness and microstructural evolution in pure nickel during high-pressure torsion. *Scripta Materialia*, **2001**, 44, 2753-2758	5.6	257
985	Using finite element modeling to examine the temperature distribution in quasi-constrained high-pressure torsion. *Acta Materialia*, **2012**, 60, 3190-3198	8.4	251

984	Factors influencing the equilibrium grain size in equal-channel angular pressing: Role of Mg additions to aluminum. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1998**, 29, 2503-2510	2.3	251
983	Using finite element modeling to examine the flow processes in quasi-constrained high-pressure torsion. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2011**, 528, 8198-8204	5.3	250
982	Deformation mechanisms in h.c.p. metals at elevated temperatures Creep behavior of magnesium. *Acta Metallurgica*, **1981**, 29, 1969-1982		248
981	Achieving High Strength and High Ductility in Precipitation-Hardened Alloys. *Advanced Materials*, **2005**, 17, 1599-1602	24	246
980	Microstructural characteristics of ultrafine-grained aluminum produced using equal-channel angular pressing. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1998**, 29, 2245-2252	2.3	241
979	An examination of the breakdown in creep by viscous glide in solid solution alloys at high stress levels. *Acta Metallurgica*, **1982**, 30, 2181-2196		240
978	Relationship between texture and low temperature superplasticity in an extruded AZ31 Mg alloy processed by ECAP. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2005**, 402, 250-257	5.3	231
977	Fundamentals of Superior Properties in Bulk NanoSPD Materials. *Materials Research Letters*, **2016**, 4, 1-21	7.4	230
976	Deformation mechanism maps based on grain size. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1974**, 5, 2339-2345		230
975	Influence of stacking-fault energy on microstructural characteristics of ultrafine-grain copper and copper zinc alloys. *Acta Materialia*, **2008**, 56, 809-820	8.4	219
974	The evolution of homogeneity and grain refinement during equal-channel angular pressing: A model for grain refinement in ECAP. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2005**, 398, 66-76	5.3	218
973	Creep of ceramics. *Journal of Materials Science*, **1988**, 23, 1-20	4.3	215
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971	Development of a multi-pass facility for equal-channel angular pressing to high total strains. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2000**, 281, 82-87	5.3	214
970	Influence of equal-channel angular pressing on precipitation in an Al Zn Mg Cu alloy. *Acta Materialia*, **2009**, 57, 3123-3132	8.4	213
969	An evaluation of the strain contributed by grain boundary sliding in superplasticity. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1994**, 174, 225-230	5.3	212
968	Improvement of mechanical properties for Al alloys using equal-channel angular pressing. *Journal of Materials Processing Technology*, **2001**, 117, 288-292	5.3	211
967	Optimizing the rotation conditions for grain refinement in equal-channel angular pressing. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1998**, 29, 2011-2013	2.3	206

966	The potential for scaling ECAP: effect of sample size on grain refinement and mechanical properties. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2001**, 318, 34-41	5.3	203
965	Influence of specimen dimensions on the tensile behavior of ultrafine-grained Cu. *Scripta Materialia* , **2008**, 59, 627-630	5.6	199
964	Orientation imaging microscopy of ultrafine-grained nickel. *Scripta Materialia*, **2002**, 46, 575-580	5.6	199
963	Deformation mechanisms in h.c.p. metals at elevated temperatures—I. Creep behavior of a Mg-0.8% Al solid solution alloy. *Acta Metallurgica*, **1982**, 30, 1157-1170		199
962	Using ECAP to achieve grain refinement, precipitate fragmentation and high strain rate superplasticity in a spray-cast aluminum alloy. *Acta Materialia*, **2003**, 51, 6139-6149	8.4	198
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960	Microstructural evolution in high purity aluminum processed by ECAP. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 524, 143-150	5.3	193
959	Principles of superplasticity in ultrafine-grained materials. *Journal of Materials Science*, **2007**, 42, 1782-1796	4.5	193
958	Processing of a low-carbon steel by equal-channel angular pressing. *Acta Materialia*, **2002**, 50, 1359-1368	8.4	189
957	Creep and substructure formation in an Al-5% Mg solid solution alloy. *Acta Metallurgica*, **1981**, 29, 1495-1507		184
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939	Microstructures and microhardness of an aluminum alloy and pure copper after processing by high-pressure torsion. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2005**, 410-411, 422-425	5.3	155
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937	Developing grain refinement and superplasticity in a magnesium alloy processed by high-pressure torsion. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2008**, 488, 117-124	5.3	154
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931	Developing high-pressure torsion for use with bulk samples. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2005**, 406, 268-273	5.3	146

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927	Influence of ECAP on precipitate distributions in a spray-cast aluminum alloy. *Acta Materialia*, **2005**, 53, 749-758	8.4	140
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924	Microstructure and properties of pure titanium processed by equal-channel angular pressing at room temperature. *Scripta Materialia*, **2008**, 59, 542-545	5.6	135
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921	The use of severe plastic deformation for microstructural control. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2002**, 324, 82-89	5.3	132
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915	The physics of superplastic deformation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1991**, 137, 1-11	5.3	124
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911	Principles of grain refinement in magnesium alloys processed by equal-channel angular pressing. *Journal of Materials Science*, **2009**, 44, 4758-4762	4.3	121
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898	Identifiying creep mechanisms at low stresses. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2000**, 283, 266-273	5.3	110
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888	Hardening of an Al0.3CoCrFeNi high entropy alloy via high-pressure torsion and thermal annealing. *Materials Letters*, **2015**, 151, 126-129	3.3	106
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886	High strain rate superplasticity in an Al-Mg alloy containing scandium. *Scripta Materialia*, **1998**, 38, 1851-1856	3.6	106
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863	Three-dimensional shear-strain patterns induced by high-pressure torsion and their impact on hardness evolution. *Acta Materialia*, **2011**, 59, 3903-3914	8.4	92
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