John J Lewandowski

List of Publications by Citations

248 papers	11,862 citations	53 h-index	102 g-index
256 ext. papers	12,898 ext. citations	4.2 avg, IF	6.68 L-index

#	Paper	IF	Citations
248	Intrinsic plasticity or brittleness of metallic glasses. *Philosophical Magazine Letters*, **2005**, 85, 77-87	1	927
247	Metal Additive Manufacturing: A Review of Mechanical Properties. *Annual Review of Materials Research*, **2016**, 46, 151-186	12.8	827
246	Temperature rise at shear bands in metallic glasses. *Nature Materials*, **2006**, 5, 15-18	27	736
245	Fracture of brittle metallic glasses: brittleness or plasticity. *Physical Review Letters*, **2005**, 94, 125510	7.4	435
244	Effects of matrix microstructure and particle distribution on fracture of an aluminum metal matrix composite. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1989**, 107, 241-255	5.3	334
243	Overview of Materials Qualification Needs for Metal Additive Manufacturing. *Jom*, **2016**, 68, 747-764	2.1	301
242	Mechanical Properties of Bulk Metallic Glasses. *MRS Bulletin*, **2007**, 32, 635-638	3.2	298
241	Strength and ductile-phase toughening in the two-phase Nb/Nb5Si3 alloys. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1991**, 22, 1573-1583		265
240	High-entropy Al0.3CoCrFeNi alloy fibers with high tensile strength and ductility at ambient and cryogenic temperatures. *Acta Materialia*, **2017**, 123, 285-294	8.4	262
239	Ultrahigh-Temperature Nb-Silicide-Based Composites. *MRS Bulletin*, **2003**, 28, 646-653	3.2	241
238	Mechanical behaviour of laminated metal composites. *International Materials Reviews*, **1996**, 41, 169-197	16.1	238
237	Crack initiation and growth toughness of an aluminum metal-matrix composite. *Acta Metallurgica Et Materialia*, **1990**, 38, 489-496		222
236	Fracture toughness and notched toughness of bulk amorphous alloy: Zr-Ti-Ni-Cu-Be. *Scripta Materialia*, **1998**, 38, 1811-1817	5.6	210
235	Progress Towards Metal Additive Manufacturing Standardization to Support Qualification and Certification. *Jom*, **2017**, 69, 439-455	2.1	194
234	Understanding the Glass-forming Ability of Cu50Zr50 Alloys in Terms of a Metastable Eutectic. *Journal of Materials Research*, **2005**, 20, 2307-2313	2.5	163
233	Effects of hydrostatic pressure on the flow and fracture of a bulk amorphous metal. *Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties*, **2002**, 82, 3427-3441		147
232	Defect distribution and microstructure heterogeneity effects on fracture resistance and fatigue behavior of EBM Ti□Al□V. *International Journal of Fatigue*, **2017**, 94, 263-287	5	139

231	Effects of superimposed hydrostatic pressure on flow and fracture of a Zr-Ti-Ni-Cu-Be bulk amorphous alloy. *Scripta Materialia*, **1999**, 41, 19-24	5.6	138
230	Effects of heat treatment and reinforcement size. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1993**, 24, 2531-2543		136
229	Carbon Additions to Molybdenum Disilicide: Improved High-Temperature Mechanical Properties. *Journal of the American Ceramic Society*, **1991**, 74, 2704-2706	3.8	134
228	Intrinsic and extrinsic toughening of metallic glasses. *Scripta Materialia*, **2006**, 54, 337-341	5.6	124
227	Tough Fe-based bulk metallic glasses. *Applied Physics Letters*, **2008**, 92, 091918	3.4	106
226	Microstructural effects on the cleavage fracture stress of fully pearlitic eutectoid steel. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1986**, 17, 1769-1786		105
225	Compressive plasticity and toughness of a Ti-based bulk metallic glass. *Acta Materialia*, **2010**, 58, 1708-1720	8.4	99
224	Effects of hydrostatic pressure on mechanical behaviour and deformation processing of materials. *International Materials Reviews*, **1998**, 43, 145-187	16.1	99
223	Effects of Annealing and Changes in Stress State on Fracture Toughness of Bulk Metallic Glass. *Materials Transactions*, **2001**, 42, 633-637	1.3	98
222	Toughness, extrinsic effects and Poisson□ ratio of bulk metallic glasses. *Acta Materialia*, **2012**, 60, 4800-4809	8.4	94
221	Fracture Toughness and Fatigue Crack Growth Behavior of As-Cast High-Entropy Alloys. *Jom*, **2015**, 67, 2288-2295	2.1	93
220	Effects of SiCp size and volume fraction on the high cycle fatigue behavior of AZ91D magnesium alloy composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1996**, 220, 85-92	5.3	87
219	Deformation and fracture toughness of a bulk amorphous Zr□Ti□Ni□Cu□Be alloy. *Intermetallics*, **2000**, 8, 487-492	3.5	85
218	Dynamic deformation behavior of Al?Zn?Mg?Cu alloy matrix composites reinforced with 20 Vol.% SiC. *Acta Metallurgica Et Materialia*, **1993**, 41, 2337-2351		84
217	Local temperature rises during mechanical testing of metallic glasses. *Journal of Materials Research*, **2007**, 22, 419-427	2.5	81
216	Evaluation of Orientation Dependence of Fracture Toughness and Fatigue Crack Propagation Behavior of As-Deposited ARCAM EBM Ti-6Al-4V. *Jom*, **2015**, 67, 597-607	2.1	79
215	Deformation and fracture behavior of Nb in Nb5Si3/Nb laminates and its effect on laminate toughness. *Acta Metallurgica Et Materialia*, **1995**, 43, 1955-1967		79
214	The mechanism of mechanical alloying of MoSi2. *Journal of Materials Research*, **1993**, 8, 1311-1316	2.5	74

213	Effect of reinforcement size and matrix microstructure on the fracture properties of an aluminum metal matrix composite. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1992**, 150, 179-186	5.3	74
212	Segregation to SiC/Al interfaces in Al based metal matrix composites. *Scripta Metallurgica Et Materialia*, **1990**, 24, 1483-1487		74
211	Effects of HIP on microstructural heterogeneity, defect distribution and mechanical properties of additively manufactured EBM Ti-48Al-2Cr-2Nb. *Journal of Alloys and Compounds*, **2017**, 729, 1118-1135	5.7	73
210	Observations on the effects of particulate size and superposed pressure on deformation of metal matrix composites. *Scripta Metallurgica Et Materialia*, **1991**, 25, 21-26		71
209	Effects of the prior austenite grain size on the ductility of fully pearlitic eutectoid steel. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1986**, 17, 461-472		70
208	Preliminary assessment of flow, notch toughness, and high temperature behavior of Cu60Zr20Hf10Ti10 bulk metallic glass. *Scripta Materialia*, **2004**, 51, 151-154	5.6	67
207	On the slip systems in MoSi2. *Acta Metallurgica Et Materialia*, **1992**, 40, 3159-3165		64
206	Processing and properties of Nb5Si3 and tough Nb5Si3/Nb laminates. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1992**, 155, 59-65	5.3	63
205	Microstructure-property relationships in pearlitic eutectoid and hypereutectoid carbon steels. *Jom*, **2002**, 54, 25-30	2.1	62
204	Loading rate and test temperature effects on fracture ofIn Situ niobium silicide-niobium composites. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1996**, 27, 3292-3306	2.3	61
203	Micro- and macrostructural factors in DRA fracture resistance. *Jom*, **1993**, 45, 30-35	2.1	61
202	Micromechanisms of cleavage fracture in fully pearlitic microstructures. *Acta Metallurgica*, **1987**, 35, 1453-1462		61
201	The effects of superimposed hydrostatic pressure on deformation and fracture: Part II. Particulate-reinforced 6061 composites. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1993**, 24, 609-615		59
200	Effects of annealing and specimen geometry on dynamic compression of a Zr-based bulk metallic glass. *Journal of Materials Research*, **2007**, 22, 389-401	2.5	57
199	Effects of carbon additions on the high temperature mechanical properties of molybdenum disilicide. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1992**, 155, 159-163	5.3	57
198	Effects of aging condition on the fracture toughness of 2XXX and 7XXX series aluminum alloy composites. *Scripta Metallurgica*, **1989**, 23, 301-304		55
197	Spall strength and Hugoniot elastic limit of a zirconium-based bulk metallic glass under planar shock compression. *Journal of Materials Research*, **2007**, 22, 402-411	2.5	53
196	Fatigue behavior of high-entropy alloys: A review. *Science China Technological Sciences*, **2018**, 61, 168-178	3.5	53

195	Effects of Casting Conditions and Deformation Processing on A356 Aluminum and A356-20 Vol. % SiC Composites. *Journal of Composite Materials*, **1992**, 26, 2076-2106	2.7	52
194	Effects of microstructure of the behavior of an aluminum alloy and an aluminum matrix composite tested under low levels of superimposed hydrostatic pressure. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1989**, 20, 2409-2417		52
193	Pressure effects on metallic glasses. *Acta Materialia*, **2010**, 58, 1026-1036	8.4	47
192	Ductile-to-brittle transition in a Ti-based bulk metallic glass. *Scripta Materialia*, **2009**, 60, 1027-1030	5.6	45
191	Effects of layer thickness on impact toughness of Al/AlSiCp laminates. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1994**, 183, 59-67	5.3	45
190	Stability of nanosized oxides in ferrite under extremely high dose self ion irradiations. *Journal of Nuclear Materials*, **2017**, 486, 86-95	3.3	44
189	Effects of thickness and orientation on the small scale fracture behaviour of additively manufactured Ti-6Al-4V. *Materials Characterization*, **2018**, 143, 94-109	3.9	44
188	Laminated composites with improved toughness. *Scripta Metallurgica Et Materialia*, **1990**, 24, 1515-1519		44
187	Sample size and preparation effects on the tensile ductility of Pd-based metallic glass nanowires. *Acta Materialia*, **2015**, 87, 1-7	8.4	43
186	A Critical Review on Metallic Glasses as Structural Materials for Cardiovascular Stent Applications. *Journal of Functional Biomaterials*, **2018**, 9,	4.8	41
185	Effects of test temperature, grain size, and alloy additions on the cleavage fracture stress of polycrystalline niobium. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1997**, 28, 389-399	2.3	41
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183	Periodic corrugation on dynamic fracture surface in brittle bulk metallic glass. *Applied Physics Letters*, **2006**, 89, 181911	3.4	40
182	Unconstrained and constrained tensile flow and fracture behavior of an Nb-1.24 At. Pct Si alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1995**, 26, 1767-1776	2.3	40
181	The effects of hydrostatic pressure on the mechanical behavior of NiAl. *Scripta Metallurgica Et Materialia*, **1991**, 25, 2017-2022		40
180	Fracture toughness of monolithic nickel aluminide intermetallics. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1992**, 149, 143-151	5.3	39
179	Effect of tube processing methods on microstructure, mechanical properties and irradiation response of 14YWT nanostructured ferritic alloys. *Acta Materialia*, **2017**, 134, 116-127	8.4	36
178	Effect of microstructure and notch root radius on fracture toughness of an aluminum metal matrix composite. *International Journal of Fracture*, **1989**, 40, R31-R34	2.3	36

177	Effects of impurity segregation on sustained load cracking of Cr-1Mo steels Crack initiation. *Acta Metallurgica*, **1987**, 35, 593-608		36
176	Effects of test orientation on fracture and fatigue crack growth behavior of third generation as-cast Ti 48Al 2Nb 2Cr. *Intermetallics*, **2015**, 57, 73-82	3.5	35
175	In-situ deformation studies of an aluminum metal-matrix composite in a scanning electron microscope. *Scripta Metallurgica*, **1989**, 23, 1801-1804		35
174	Effects of surface laser treatments on microstructure, tension, and fatigue behavior of AISI 316LVM biomedical wires. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 688, 101-113	5.3	34
173	Effects of load ratio, R, and test temperature on fatigue crack growth of fully pearlitic eutectoid steel (fatigue crack growth of pearlitic steel). *International Journal of Fatigue*, **2004**, 26, 305-309	5	34
172	Design of Inserts for Split-Hopkinson Pressure Bar Testing of Low Strain-to-Failure Materials. *Experimental Mechanics*, **2009**, 49, 479-490	2.6	32
171	Delamination study using four-point bending of bilayers. *Journal of Materials Science*, **1997**, 32, 3851-3856	3	32
170	Effects of Test Temperature and Loading Conditions on the Tensile Properties of a Zr-Based Bulk Metallic Glass. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2008**, 39, 1922-1934	2.3	32
169	Quantitative evaluation of Al nano-particles in amorphous Al87Ni7Gd6 omparison of XRD, DSC, and TEM. *Scripta Materialia*, **2003**, 48, 1537-1541	5.6	32
168	Effect of high strain rates on peak stress in a Zr-based bulk metallic glass. *Journal of Applied Physics*, **2008**, 104, 093522	2.5	31
167	Environmental effects on ductile-phase toughening in Nb5Si3-Nb composites. *Jom*, **1992**, 44, 36-41	2.1	31
166	The effects of superimposed hydrostatic pressure on deformation and fracture: Part I. Monolithic 6061 aluminum. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1993**, 24, 601-608		31
165	Improved understanding of environment-induced cracking (EIC) of sensitized 5XXX series aluminium alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 682, 613-621	5.3	29
164	Increased Toughness of Zirconium-Based Bulk Metallic Glasses Tested under Mixed Mode Conditions. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2010**, 41, 149-158	2.3	29
163	Mechanical behaviour of laminated metal composites		29
162	Pressure-induced dislocations and subsequent flow in NiAl. *Acta Metallurgica Et Materialia*, **1993**, 41, 485-496		28
161	Laminated nanostructure composites with improved bend ductility and toughness. *Scripta Materialia*, **2009**, 61, 1072-1074	5.6	26
160	Effects of Changes in Test Temperature and Loading Conditions on Fracture Toughness of a Zr-Based Bulk Metallic Glass. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2008**, 39, 2077-2085	2.3	26

159	Effects of annealing at high pressure on structure and mechanical properties of Al87Ni7Gd6 metallic glass. *Intermetallics*, **2002**, 10, 1099-1103	3.5	26
158	The decrease in yield strength in NiAl due to hydrostatic pressure. *Scripta Metallurgica Et Materialia*, **1992**, 26, 1733-1736		26
157	Effects of superimposed hydrostatic pressure on the fracture properties of particulate reinforced metal matrix composites. *Scripta Metallurgica*, **1989**, 23, 253-256		26
156	Yielding and work hardening effects in notched bend bars. *Journal of the Mechanics and Physics of Solids*, **1986**, 34, 433-454	5	26
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154	Effects of test temperature, grain size, and alloy additions on the low-temperature fracture toughness of polycrystalline niobium. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1997**, 28, 2297-2307	2.3	25
153	Effects of hydrostatic pressure on mechanical behaviour and deformation processing of materials		25
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151	Delamination of a sensitized commercial Al–Mg alloy during fatigue crack growth. *Scripta Materialia*, **2010**, 63, 799-802	5.6	24
150	Microstructural effects on tension behavior of Cu–15Ni–8Sn sheet. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 527, 769-781	5.3	24
149	Influence of thickness in the fracture resistance of conventional and laminated DRA materials. *Scripta Metallurgica Et Materialia*, **1994**, 31, 191-195		24
148	Crack bridging in a laminated metal matrix composite. *Scripta Metallurgica Et Materialia*, **1994**, 31, 607-612		24
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145	Notch effects on tensile behavior of Ni3Al and Ni3Al + B. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1989**, 20, 1247-1255		23
144	Effects of particulate volume fraction on cyclic stress response and fatigue life of AZ91D magnesium alloy metal matrix composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2014**, 600, 188-194	5.3	22
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140	Model experiments to mimic fracture surface features in metallic glasses. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 527, 2207-2213	5.3	21
139	Fracture characteristics of an Al□Si□Mg model composite system. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1993**, 172, 63-69	5.3	21
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137	Effects of lamination and changes in layer thickness on fatigue-crack propagation of lightweight laminated metal composites. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2004**, 35, 45-52	2.3	20
136	Combined Mode I-Mode III Fracture Toughness of a Particulate Reinforced Metal-Matrix Composite. *Journal of Composite Materials*, **1991**, 25, 831-841	2.7	20
135	Lead-induced solid metal embrittlement of an excess silicon Al□Mg□Si alloy at temperatures of □°C to 80□°C. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1992**, 23, 1679-1689		20
134	Effects of impurity segregation and test environment on sustained load cracking of steel□. Crack propagation. *Acta Metallurgica*, **1987**, 35, 2081-2090		20
133	Fatigue and fracture of wires and cables for biomedical applications. *International Materials Reviews*, **2016**, 61, 231-314	16.1	20
132	Spall strength of a zirconium-based bulk metallic glass under shock-induced compression-and-shear loading. *Mechanics of Materials*, **2009**, 41, 886-897	3.3	19
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130	Inertial stabilization of buckling at high rates of loading and low test temperatures: Implications for dynamic crush resistance of aluminum-alloy-based sandwich plates with lattice core. *Acta Materialia* , **2007**, 55, 2829-2840	8.4	19
129	Intergranular fracture of Al?Li alloys: Effects of aging and impurities. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1990**, 123, 219-227	5.3	19
128	Matrix effects on the ductility of aluminium-based composites deformed under hydrostatic pressure. *Journal of Materials Science Letters*, **1989**, 8, 1447-1448		18
127	In-situ scanning electron microscope studies of crack growth in an aluminum metal-matrix composite. *Scripta Metallurgica Et Materialia*, **1990**, 24, 2357-2362		18
126	Effects of Annealing and Pressure on Devitrification and Mechanical Properties of Amorphous Al87Ni7Gd6. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2008**, 39, 1935-1941	2.3	17
125	Interface Effects on the Quasi-Static and Impact Toughness of Discontinuously Reinforced Aluminum Laminates. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2008**, 39, 1993-2006	2.3	17
124	The effects of reinforcement additions and heat treatment on the evolution of the poisson ratio during straining of discontinuously reinforced aluminum alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1995**, 26, 2911-2921	2.3	17

123	Effects of reinforcement size and distribution on fracture toughness of composite nickel aluminide intermetallics. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1992**, 158, 31-45	5.3	17
122	Tension and fatigue behavior of Al-2124A/SiC-particulate metal matrix composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2020**, 770, 138518	5.3	17
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120	Stress-State Effects on the Fracture of a Zr-Ti-Ni-Cu-Be Bulk Amorphous Alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2010**, 41, 1758-1766	2.3	16
119	Tension and fatigue behavior of 316LVM 1x7 multi-strand cables used as implantable electrodes. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2008**, 486, 447-454	5.3	16
118	Effects of lead on the sustained-load cracking of Al?Mg?Si at ambient temperatures. *Materials Science and Engineering*, **1987**, 96, 185-195		16
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112	Poisson ratio measurements for an al-based metal matrix composite during elastic and plastic deformation. *Scripta Metallurgica Et Materialia*, **1993**, 29, 199-204		15
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108	Effects of Changes in Notch Radius and Test Temperature on the Toughness of a Nano-crystalline Aluminum Alloy Composite Produced via Extrusion of Amorphous Aluminum Alloy Powders. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2008**, 497, 212-215	5.3	14
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104	Yield point behavior in NiAl. *Scripta Metallurgica Et Materialia*, **1993**, 29, 1309-1312		13
103	Interfacial fracture toughness measurement using indentation. *Journal of Materials Science*, **1994**, 29, 4022-4026	4.3	13
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101	Pre-exposure embrittlement of a commercial Al-Mg-Mn alloy, AA5083-H131. *Corrosion Reviews*, **2017**, 35, 275-290	3.2	12
100	Effects of microstructure on high strain rate deformation and flow behaviour of AlMgSi alloy (AA 6061) under uniaxial compression and combined compression and shear loading. *Materials Science and Technology*, **2011**, 27, 13-20	1.5	12
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98	Effects of microstructural characteristics on mechanical properties of open-cell nickel foams. *Materials Science and Technology*, **2005**, 21, 1355-1358	1.5	12
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96	Evolution of fatigue crack growth and fracture behavior in gamma titanium aluminide Ti-43.5Al-4Nb-1Mo-0.1B (TNM) forgings. *International Journal of Fatigue*, **2018**, 111, 54-69	5	11
95	Deformation texture of hydrostatically extruded polycrystalline NiAl. *Scripta Metallurgica Et Materialia*, **1993**, 29, 1651-1654		11
94	Effects of hydrostatic pressure on the flow and fracture of a bulk amorphous metal		11
93	Dynamic Fracture of a Zr-based Bulk Metallic Glass. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2013**, 44, 4644-4653	2.3	10
92	Delamination of Sensitized Al-Mg Alloy During Fatigue Crack Growth in Room Temperature Air. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 3952-3956	2.3	10
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