Nack J Kim

List of Publications by Citations

230 papers	7,693 citations	48 h-index	78 g-index
246 ext. papers	8,803 ext. citations	3.8 avg, IF	6.17 L-index

#	Paper	IF	Citations
230	Brittle intermetallic compound makes ultrastrong low-density steel with large ductility. *Nature*, **2015**, 518, 77-9	50.4	359
229	Fe-Al-Mn-C lightweight structural alloys: a review on the microstructures and mechanical properties. *Science and Technology of Advanced Materials*, **2013**, 14, 014205	7.1	250
228	Current issues in magnesium sheet alloys: Where do we go from here?. *Scripta Materialia*, **2014**, 84-85, 1-6	5.6	220
227	Designing a magnesium alloy with high strength and high formability. *Nature Communications*, **2018**, 9, 2522	17.4	192
226	Development of creep resistant die cast Mg□Sn□Al□Si alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2005**, 413-414, 555-560	5.3	174
225	Modification of Mg2Si morphology in squeeze cast Mg-Al-Zn-Si alloys by Ca or P addition. *Scripta Materialia*, **1999**, 41, 333-340	5.6	153
224	Effect of aging on the microstructure and deformation behavior of austenite base lightweight Fe□8Mn□Al□0.8C steel. *Scripta Materialia*, **2010**, 63, 1028-1031	5.6	150
223	Effects of Al addition on deformation and fracture mechanisms in two high manganese TWIP steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2011**, 528, 2922-2928	5.3	141
222	Deformation behavior of ferrite□austenite duplex lightweight Fe□Mn□Al□C steel. *Scripta Materialia*, **2012**, 66, 519-522	5.6	138
221	Relationship between stretch formability and work-hardening capacity of twin-roll cast Mg alloys at room temperature. *Scripta Materialia*, **2009**, 61, 768-771	5.6	133
220	Microstructure and tensile properties of twin-roll cast Mg□Zn□Mn□Al alloys. *Scripta Materialia*, **2007**, 57, 793-796	5.6	132
219	Correlation of microstructure and charpy impact properties in API X70 and X80 line-pipe steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 458, 281-289	5.3	128
218	Effects of Mn and Al contents on cryogenic-temperature tensile and Charpy impact properties in four austenitic high-Mn steels. *Acta Materialia*, **2015**, 100, 39-52	8.4	117
217	Thermodynamic modeling of the Mg□Si□Sn system. *Calphad: Computer Coupling of Phase Diagrams and Thermochemistry*, **2007**, 31, 192-200	1.9	116
216	Novel ferrite□austenite duplex lightweight steel with 77% ductility by transformation induced plasticity and twinning induced plasticity mechanisms. *Acta Materialia*, **2014**, 78, 181-189	8.4	111
215	Effective grain size and charpy impact properties of high-toughness X70 pipeline steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2005**, 36, 2107-2114	2.3	110
214	Texture Evolution in Mg-Zn-Ca Alloy Sheets. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2013**, 44, 2950-2961	2.3	109

213	Microstructure and tensile properties of high-strength high-ductility Ti-based amorphous matrix composites containing ductile dendrites. *Acta Materialia*, **2011**, 59, 7277-7286	8.4	109
212	Effects of alloying elements on microstructure, hardness, and fracture toughness of centrifugally cast high-speed steel rolls. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2005**, 36, 87-97	2.3	101
211	Transformation behavior and microstructural characteristics of acicular ferrite in linepipe steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2008**, 478, 361-370	5.3	100
210	Novel ultra-high-strength (ferrite + austenite) duplex lightweight steels achieved by fine dislocation substructures (Taylor lattices), grain refinement, and partial recrystallization. *Acta Materialia*, **2015**, 96, 301-310	8.4	99
209	Cladding of Mg alloy with Al by twin-roll casting. *Scripta Materialia*, **2011**, 64, 836-839	5.6	96
208	Effect of Sn addition on the microstructure and deformation behavior of Mg-3Al alloy. *Acta Materialia*, **2017**, 124, 268-279	8.4	94
207	Atomistic Modeling of pure Mg and Mg□Al systems. *Calphad: Computer Coupling of Phase Diagrams and Thermochemistry*, **2009**, 33, 650-657	1.9	88
206	Critical Assessment 6: Magnesium sheet alloys: viable alternatives to steels?. *Materials Science and Technology*, **2014**, 30, 1925-1928	1.5	84
205	Microstructural investigation of nanocrystalline bulk Al□Mg alloy fabricated by cryomilling and extrusion. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2004**, 374, 211-216	5.3	76
204	Effect of nano-particles on the creep resistance of Mg□Sn based alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 449-451, 318-321	5.3	74
203	Effects of acicular ferrite on charpy impact properties in heat affected zones of oxide-containing API X80 linepipe steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2011**, 528, 3350-3357	5.3	72
202	Realization of high tensile ductility in a bulk metallic glass composite by the utilization of deformation-induced martensitic transformation. *Scripta Materialia*, **2011**, 65, 304-307	5.6	71
201	Microstructure and properties of titanium boride dispersed Cu alloys fabricated by spray forming. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2000**, 277, 274-283	5.3	71
200	Novel medium-Mn (austenite□+□martensite) duplex hot-rolled steel achieving 1.6□GPa strength with 20 % ductility by Mn-segregation-induced TRIP mechanism. *Acta Materialia*, **2018**, 147, 247-260	8.4	70
199	The influence of reinforced particle fracture on strengthening of spray formed Cu-TiB2 composite. *Scripta Materialia*, **1998**, 39, 1063-1069	5.6	67
198	Correlation of fatigue properties and microstructure in investment cast Ti-6Al-4V welds. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2003**, 340, 232-242	5.3	67
197	Microstructure and texture evolution of Mg alloys during twin-roll casting and subsequent hot rolling. *Scripta Materialia*, **2010**, 63, 716-720	5.6	66
196	Effect of T1 precipitate on the anisotropy of Al?Li alloy 2090. *Acta Metallurgica Et Materialia*, **1993**, 41, 941-948		66

195	Effects of Cooling Conditions on Tensile and Charpy Impact Properties of API X80 Linepipe Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2010**, 41, 329-340	2.3	65
194	Effect of Mg2Si particles on the elevated temperature tensile properties of squeeze-cast Mg-Al alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2004**, 35, 1629-1632	2.3	61
193	The twin-roll casting of magnesium alloys. *Jom*, **2009**, 61, 14-18	2.1	60
192	Effect of Carbon Content on Cracking Phenomenon Occurring during Cold Rolling of Three Light-Weight Steel Plates. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2011**, 42, 138-146	2.3	59
191	Novel ultra-high-strength Cu-containing medium-Mn duplex lightweight steels. *Acta Materialia*, **2017**, 135, 215-225	8.4	58
190	Effects of critical plasma spray parameter and spray distance on wear resistance of Al2O38wt.%TiO2 coatings plasma-sprayed with nanopowders. *Surface and Coatings Technology*, **2008**, 202, 3625-3632	4.4	58
189	Microstructure and wear resistance of nanostructured Al2O38wt.%TiO2 coatings plasma-sprayed with nanopowders. *Surface and Coatings Technology*, **2006**, 201, 1309-1315	4.4	56
188	Effect of Ca addition on microstructure of twin-roll cast AZ31 Mg alloy. *Metals and Materials International*, **2009**, 15, 1-5	2.4	50
187	Microstructural evolution in twin-roll strip cast Mg2Zn1Mn1Al alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 449-451, 352-355	5.3	50
186	Effects of Molybdenum and Vanadium Addition on Tensile and Charpy Impact Properties of API X70 Linepipe Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science* , **2007**, 38, 1731-1742	2.3	49
185	Analysis of abnormal fracture occurring during drop-weight tear test of high-toughness line-pipe steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2004**, 368, 18-27	5.3	48
184	Twinning-mediated formability in Mg alloys. *Scientific Reports*, **2016**, 6, 22364	4.9	48
183	Prediction of composition dependency of glass forming ability of Mg1Cu1Y alloys by thermodynamic approach. *Scripta Materialia*, **2005**, 52, 969-972	5.6	47
182	Correlation of microstructure and fracture properties of API X70 pipeline steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2005**, 36, 725-739	2.3	46
181	Effective grain size of dual-phase steel. *Materials Science and Engineering*, **1986**, 83, 145-149		46
180	Quasi-static and dynamic deformation mechanisms interpreted by microstructural evolution in TWinning Induced Plasticity (TWIP) steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 684, 54-63	5.3	43
179	Effect of boron on the hot ductility of Nb-containing steel. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2002**, 33, 701-704	2.3	43
178	Interpretation of cryogenic-temperature Charpy impact toughness by microstructural evolution of dynamically compressed specimens in austenitic 0.4C(12216)Mn steels. *Acta Materialia*, **2015**, 87, 332-343	8.4	42

177	Microstructural development of adiabatic shear bands in ultra-fine-grained low-carbon steels fabricated by equal channel angular pressing. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2006**, 441, 308-320	5.3	42
176	Microstructural evolution and deformation behavior of twinning-induced plasticity (TWIP) steel during wire drawing. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2015**, 644, 41-52	5.3	41
175	Correlation of microstructure and wear resistance of Al2O3-TiO2 coatings plasma sprayed with nanopowders. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2006**, 37, 1851-1861	2.3	41
174	Microstructure and Mechanical Properties of Strip Cast Al-Mg-Si-X Alloys. *Materials Transactions*, **2003**, 44, 2617-2624	1.3	41
173	Effects of HIPping on high-cycle fatigue properties of investment cast A356 aluminum alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2003**, 340, 123-129	5.3	41
172	Effects of Annealing Temperature on Microstructure and Tensile Properties in Ferritic Lightweight Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 843-853	2.3	40
171	Correlation of Microstructure and Cracking Phenomenon Occurring during Hot Rolling of Lightweight Steel Plates. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2010**, 41, 138-148	2.3	40
170	Twinning behavior of Mg–Zn–Gd alloy sheet during longitudinal tensile deformation. *Scripta Materialia*, **2013**, 69, 465-468	5.6	39
169	Superplastic deformation behavior of twin-roll cast Mg–Zn–Mn–Al alloy. *Scripta Materialia*, **2009** , 61, 223-226	5.6	39
168	Effects of Mo, Cr, and V Additions on Tensile and Charpy Impact Properties of API X80 Pipeline Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2009**, 40, 1851-1862	2.3	39
167	Correlation of the microstructure and mechanical properties of oxide-dispersion-strengthened coppers fabricated by internal oxidation. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2004**, 35, 493-502	2.3	39
166	Correlation of rolling condition, microstructure, and low-temperature toughness of X70 pipeline steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2005**, 36, 1793-1805	2.3	39
165	Origin of intergranular fracture in martensitic 8Mn steel at cryogenic temperatures. *Scripta Materialia*, **2013**, 69, 420-423	5.6	37
164	Effects of Mn Addition on Tensile and Charpy Impact Properties in Austenitic Fe-Mn-C-Al-Based Steels for Cryogenic Applications. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2014**, 45, 5419-5430	2.3	35
163	Effects of carbon equivalent and cooling rate on tensile and Charpy impact properties of high-strength bainitic steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2011**, 530, 530-538	5.3	35
162	Improvement of strength–ductility balance of B2-strengthened lightweight steel. *Acta Materialia*, **2020**, 191, 1-12	8.4	34
161	Deformation behavior of duplex austenite and -martensite high-Mn steel. *Science and Technology of Advanced Materials*, **2013**, 14, 014204	7.1	34
160	Effects of Nb and C additions on the microstructure and tensile properties of lightweight ferritic Fe–8Al–5Mn alloy. *Scripta Materialia*, **2014**, 89, 37-40	5.6	32

159	Relationship between yield ratio and the material constants of the Swift equation. *Metals and Materials International*, **2006**, 12, 131-135	2.4	32
158	Effects of Aluminum Addition on Tensile and Cup Forming Properties of Three Twinning Induced Plasticity Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 1870-1883	2.3	31
157	Microstructural evolution of liquid metal embrittlement in resistance-spot-welded galvanized TWinning-Induced Plasticity (TWIP) steel sheets. *Materials Characterization*, **2019**, 147, 233-241	3.9	31
156	In-situ microfracture observation of strip-cast Zr-Ti-Cu-Ni-Be bulk metallic glass alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2004**, 35, 3753-3761	2.3	30
155	Effect of reduction of area on microstructure and mechanical properties of twinning-induced plasticity steel during wire drawing. *Metals and Materials International*, **2015**, 21, 815-822	2.4	29
154	Continuous fabrication of bulk amorphous alloy sheets by twin-roll strip casting. *Intermetallics*, **2006**, 14, 987-993	3.5	29
153	Microstructural analysis of multilayered titanium aluminide sheets fabricated by hot rolling and heat treatment. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2002**, 33, 3649-3659	2.3	29
152	Mechanical property and fracture behavior of strip cast Zr-base BMG alloy containing crystalline phase. *Intermetallics*, **2004**, 12, 1125-1131	3.5	29
151	Cu addition effects on TRIP to TWIP transition and tensile property improvement of ultra-high-strength austenitic high-Mn steels. *Acta Materialia*, **2019**, 166, 246-260	8.4	28
150	Tensile and Creep Properties of Squeeze Cast Mg Alloys with Various Second Phases. *Materials Science Forum*, **2003**, 419-422, 419-424	0.4	27
149	Thermodynamic approach for predicting the glass forming ability of amorphous alloys. *Intermetallics*, **2004**, 12, 1103-1107	3.5	26
148	Dynamic tension–compression asymmetry of martensitic transformation in austenitic Fe–(0.4, 1.0)C–18Mn steels for cryogenic applications. *Acta Materialia*, **2015**, 96, 37-46	8.4	25
147	Effects of finish rolling temperature on inverse fracture occurring during drop weight tear test of API X80 pipeline steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2012**, 541, 181-189	5.3	25
146	Hardness improvement of TiB2/Ti surface-alloyed material fabricated by high-energy electron beam irradiation. *Scripta Materialia*, **1998**, 39, 1389-1394	5.6	25
145	Evolution of microstructure in a rapidly solidified Al?Fe?V?Si alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1994**, 189, 291-299	5.3	25
144	Fracture mechanisms of a 2124 aluminum. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1992**, 23, 2589-2596		25
143	Effect of stacking faults on the ductility of Fe-18Mn-1.5Al-0.6C twinning-induced plasticity steel at low temperatures. *Scripta Materialia*, **2017**, 137, 18-21	5.6	24
142	Effect of secondary phase particles on the tensile behavior of Mg-Zn-Ca alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 735, 288-294	5.3	24

141	Effects of microstructure on inverse fracture occurring during drop-weight tear testing of high-toughness X70 pipeline steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2005**, 36, 371-387	2.3	24
140	Effects of Rolling and Cooling Conditions on Microstructure and Tensile and Charpy Impact Properties of Ultra-Low-Carbon High-Strength Bainitic Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2011**, 42, 1827-1835	2.3	23
139	Effects of Specimen Thickness and Notch Shape on Fracture Modes in the Drop Weight Tear Test of API X70 and X80 Linepipe Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2011**, 42, 2619-2632	2.3	23
138	Orientation dependence of microfracture behavior in a dual-phase high-strength low-alloy steel. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1997**, 28, 504-509	2.3	22
137	Constitutive analysis on the superplastic deformation of warm-rolled 6013 Al alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2006**, 435-436, 687-692	5.3	22
136	Structure and decomposition behaviour of rapidly solidified Mg?Nd?X (X ?Al, Si) Alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1994**, 179-180, 637-640	5.3	22
135	Effect of B2 morphology on the mechanical properties of B2-strengthened lightweight steels. *Scripta Materialia*, **2019**, 165, 68-72	5.6	22
134	Effect of C content on the microstructure and tensile properties of lightweight ferritic Fe-8Al-5Mn-0.1Nb alloy. *Metals and Materials International*, **2015**, 21, 79-84	2.4	21
133	Microstructural modification and hardness improvement in boride/Ti6Al4V surface-alloyed materials fabricated by high-energy electron beam irradiation. *Scripta Materialia*, **2001**, 45, 1-6	5.6	21
132	Microstructural Evolution in Fe-22Mn-0.4C Twinning-Induced Plasticity Steel During High Strain Rate Deformation. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2015**, 46, 545-548	2.3	20
131	Effects of Inclusions on Delayed Fracture Properties of Three TWinning Induced Plasticity (TWIP) Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2013**, 44, 776-786	2.3	20
130	Microstructure and Mechanical Properties of Two Continuous-Fiber-Reinforced Zr-Based Amorphous Alloy Composites Fabricated by Liquid Pressing Process. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2008**, 39, 763-771	2.3	20
129	Microstructure and Mechanical Properties of Twin-Roll Strip Cast Mg Alloys. *Materials Science Forum*, **2007**, 539-543, 119-126	0.4	20
128	Fabrication of Mg Alloy Strips by Strip Casting. *Materials Science Forum*, **2003**, 419-422, 599-604	0.4	20
127	Development of Creep Resistant Mg Alloys. *Materials Science Forum*, **2005**, 475-479, 521-524	0.4	20
126	Analysis and prevention of edge cracking phenomenon during hot rolling of non-oriented electrical steel sheets. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1999**, 264, 47-59	5.3	20
125	{100} texture evolution in bcc Fe sheets - Computational design and experiments. *Acta Materialia*, **2016**, 106, 106-116	8.4	18
124	Deformation behavior of ferrite-austenite duplex high nitrogen steel. *Metals and Materials International*, **2014**, 20, 35-39	2.4	18

123	Development of Mg Alloy Sheets via Strip Casting. *Materials Science Forum*, **2005**, 475-479, 457-462	0.4	18
122	Segregation in twin-roll cast Mg alloy and its suppression through alloy design. *Materials Letters*, **2014**, 132, 361-364	3.3	17
121	Dislocation evolution with creep strain and dislocation emission related with β-phase dissolution. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **1997**, 239-240, 457-463	5.3	17
120	Applications of thermodynamic calculations to Mg alloy design: Mg–Sn based alloy development. *International Journal of Materials Research*, **2007**, 98, 807-815	0.5	17
119	Correlation of microstructure with hardness and wear resistance of stainless steel blend coatings fabricated by atmospheric plasma spraying. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2006**, 429, 189-195	5.3	17
118	Correlation of microstructure and fracture toughness in high-chromium white iron hardfacing alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1996**, 27, 3881-3891	2.3	17
117	Interpretation of quasi-static and dynamic tensile behavior by digital image correlation technique in TWinning Induced Plasticity (TWIP) and low-carbon steel sheets. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 693, 170-177	5.3	16
116	In-situ neutron diffraction analysis on deformation behavior of duplex high Mn steel containing austenite and e-martensite. *Metals and Materials International*, **2012**, 18, 751-755	2.4	16
115	Design of high performance structural alloys using second phases. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 449-451, 51-56	5.3	16
114	Development of Strip Casting Process for Fabrication of Wrought Mg Alloys. *Materials Science Forum*, **2005**, 488-489, 431-434	0.4	16
113	Fabrication of multilayered titanium aluminide sheets by self-propagating high-temperature synthesis reaction using hot rolling and heat treatment. *Journal of Materials Science*, **2003**, 38, 3647-3651	4.3	16
112	Correlation of microstructure and fracture toughness of a rapid solidification-powder metallurgy Al?Fe?V?Si alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1991**, 147, 33-44	5.3	16
111	In situ observation of microfracture processes in an 8090 Al?Li alloy plate. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1993**, 163, 11-21	5.3	16
110	Effects of Al addition on tensile properties of partially recrystallized austenitic TRIP/TWIP steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2021**, 806, 140823	5.3	16
109	Dynamic deformation and fracture behaviors of two Zr-based amorphous alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2006**, 37, 2893-2897	2.3	15
108	Hardness and wear resistance of Zr-based bulk metallic glass/Ti surface composites fabricated by high-energy electron beam irradiation. *Surface and Coatings Technology*, **2006**, 201, 1620-1628	4.4	15
107	Effects of thickness on fatigue properties of investment cast Ti-6Al-4V alloy plates. *Journal of Materials Science*, **2004**, 39, 587-591	4.3	15
106	Identification of the dispersoid in a Mg-Al-Y alloy. *Scripta Metallurgica Et Materialia*, **1995**, 32, 1747-1752		15

105	Atomistic modeling of an impurity element and a metal-impurity system: pure P and Fe-P system. *Journal of Physics Condensed Matter*, **2012**, 24, 225002	1.8	14
104	Effect of tempering on hardness improvement in a VC/steel surface-alloyed material fabricated by high-energy electron-beam irradiation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2003**, 346, 228-236	5.3	14
103	Effects of crystalline particles on mechanical properties of strip-cast Zr-base bulk amorphous alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2005**, 390, 427-436	5.3	14
102	Microstructure and mechanical properties of rapidly solidified Al-Si-Fe-X base alloys. *Materials & Design*, **1996**, 17, 255-259		14
101	Effects of solute segregation on tensile properties and serration behavior in ultra-high-strength high-Mn TRIP steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 740-741, 16-27	5.3	14
100	Wear resistance and thermal conductivity of Zr-base amorphous alloy/metal surface composites fabricated by high-energy electron beam irradiation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 449-451, 937-940	5.3	13
99	Microstructure and mechanical properties of powder-injection-molded products of Cu-based amorphous powders and Fe-based metamorphic powders. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2008**, 476, 69-77	5.3	13
98	Twin-Roll Strip Casting of Iron-Base Amorphous Alloys. *Materials Transactions*, **2007**, 48, 1584-1588	1.3	13
97	Charpy Impact Properties of Heat Affected Zones of API X80 Linepipe Steels Containing Complex Oxides. *Journal of Korean Institute of Metals and Materials*, **2010**, 48, 875-883	1	13
96	Correlation study of microstructure, hardness, and Charpy impact properties in heat affected zones of three API X80 linepipe steels containing complex oxides. *Metals and Materials International*, **2011** , 17, 29-40	2.4	12
95	Tensile creep deformation and fracture behaviors of the lamellar TiAl alloy of elemental powder metallurgy. *Scripta Materialia*, **1997**, 36, 1295-1301	5.6	12
94	Tensile and Creep Properties of Magnesium Alloys Incorporating Dispersoids within Matrix. *Materials Science Forum*, **2005**, 488-489, 759-762	0.4	12
93	Role of interface boundaries in the deformation behavior of TiAl polysynthetically twinned crystal: In situ transmission electron microscopy deformation study. *Journal of Materials Research*, **2005**, 20, 1888-1901	2.5	12
92	Microstructure and mechanical properties of duplex tiAl alloys containing Mn. *Metals and Materials International*, **1995**, 1, 107-115		12
91	Orientations of dynamically recrystallized grains nucleated at double twins in Mg-4Zn-1Sn alloy. *Scripta Materialia*, **2019**, 170, 11-15	5.6	11
90	Effect of Tempering Time on Microstructure, Tensile Properties, and Deformation Behavior of a Ferritic Light-Weight Steel. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2013**, 44, 235-247	2.3	11
89	Kinetics of crystallization in continuously cooled BMG. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2005**, 404, 153-158	5.3	11
88	Effect of composite Al3 (Li,Zr) precipitate on the mechanical behavior of a rapidly solidified Al-3.7Li-0.5Zr alloy. *Scripta Metallurgica*, **1986**, 20, 1107-1110		11

87	Microstructure and Tensile Properties of Ferritic Lightweight Steel Produced by Twin-Roll Casting. *Metals and Materials International*, **2020**, 26, 75-82	2.4	11
86	Formation Mechanisms of Cracks Formed During Hot Rolling of Free-Machining Steel Billets. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 882-892	2.3	10
85	Manipulation of surface energy anisotropy in iron using surface segregation of phosphorus: An atomistic simulation. *Scripta Materialia*, **2013**, 68, 329-332	5.6	10
84	Superplastic deformation behavior of a rapidly solidified Al□i alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1998**, 256, 208-213	5.3	10
83	Correlation of Yield Ratio with Materials Constants of Constitutive Equation. *Materials Science Forum*, **2005**, 475-479, 289-292	0.4	10
82	Morphological effect on the mechanical. *Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science*, **1993**, 24, 1785-1793		10
81	Simple method for tailoring the optimum microstructures of high-strength low-alloyed steels by the use of constitutive equation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 743, 138-147	5.3	10
80	Improvement of impact toughness of 5Mn-1Al-0.5Ti steel by intercritical annealing. *Metals and Materials International*, **2017**, 23, 283-289	2.4	9
79	Improvement of tensile properties in (austenite+ferrite+□arbide) triplex hot-rolled lightweight steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 730, 177-186	5.3	9
78	Effect of alloying elements on the crystallization kinetics of Mg□u□(Y, Gd) bulk amorphous alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2007**, 449-451, 489-492	5.3	9
77	Crystallisation kinetics of Zr41.2Ti13.8Cu12.5Ni10Be22.5 BMG alloy during heating. *Philosophical Magazine*, **2005**, 85, 139-152	1.6	9
76	Identification of Metastable Phases in Strip-cast and Spray-cast Al–Fe–V–Si Alloys. *Materials Transactions, JIM*, **1998**, 39, 982-988		9
75	Microstructure and tensile properties of hot-rolled Fe□□Mn□Si□Cu multiphase steel. *Scripta Materialia*, **2008**, 59, 83-86	5.6	8
74	Mechanical Properties and Microstructure of Twin-Roll Cast Mg-Zn-Y Alloy. *Materials Transactions*, **2008**, 49, 980-985	1.3	8
73	In situ fracture observation and fracture toughness analysis of Zr-based bulk amorphous alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2007**, 464, 261-268	5.3	8
72	Two-layered Zr-base amorphous alloy/metal surface composites fabricated by high-energy electron-beam irradiation. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2004**, 35, 3455-3460	2.3	8
71	Fabrication of Zr- and Cu-base bulk metallic glass/Cu surface composites by high-energy electron-beam irradiation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2005**, 408, 92-101	5.3	8
70	Correlation of microstructure and fracture properties of API X70 pipeline steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2005**, 36, 725-739	2.3	8

69	Effect of differential speed rolling on the texture evolution of Mg-4Zn-1Gd alloy. *Metals and Materials International*, **2015**, 21, 490-497	2.4	7
68	Effects of Processing Parameters on Microstructure and Properties of Ultra High Strength Linepipe Steel. *Journal of Materials Science and Technology*, **2012**, 28, 889-894	9.1	7
67	Twin-Roll Cast Al-Clad Magnesium Alloy. *Materials Science Forum*, **2009**, 618-619, 467-470	0.4	7
66	Effect of B on the microstructure and mechanical properties of mechanically milled TiAl alloys. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1998**, 29, 2273-2283	2.3	7
65	Microstructural analysis of TiC reinforced ferrous surface composites processed by accelerated electron beam irradiation. *Current Applied Physics*, **2001**, 1, 467-471	2.6	7
64	Investigation of primary and secondary creep deformation mechanism of TiAl. *Metals and Materials International*, **2000**, 6, 287-292		7
63	LiMAT-93: Light materials for transportation systems. *Jom*, **1994**, 46, 44-47	2.1	7
62	Effects of Cu addition on formability and surface delamination phenomenon in high-strength high-Mn steels. *Journal of Materials Science and Technology*, **2020**, 43, 44-51	9.1	6
61	Structure and properties of rapidly solidified Mg-Al-Zn-Nd alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1997**, 226-228, 1030-1034	5.3	6
60	Deformation behavior of strip-cast bulk amorphous matrix composites containing various crystalline particles. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2007**, 449-451, 176-180	5.3	6
59	Deformation and fracture behavior of an 8090 Al-Li alloy at cryogenic temperature. *Scripta Metallurgica Et Materialia*, **1995**, 32, 1255-1260		6
58	Effect of microstructure on the tensile and fracture behavior of cast A356 composite. *Scripta Metallurgica Et Materialia*, **1994**, 31, 1629-1634		6
57	Structure and properties of rapidly solidified Al?Li?Cu?Mg?Zr alloys with a high zirconium content. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **1992**, 158, 103-110	5.3	6
56	Effect of 1Al addition on deformation behavior of Mg. *Journal of Magnesium and Alloys*, **2021**, 9, 489-498	8.8	6
55	Exceptional combination of ultra-high strength and excellent ductility by inevitably generated Mn-segregation in austenitic steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 737, 69-76	5.3	6
54	Control of magnesium in vitro degradation based on ultrafine-grained surface gradient structure using ultrasonic nanocrystalline surface modification. *Materialia*, **2020**, 12, 100821	3.2	5
53	Effects of Alloying Elements on High-Temperature Oxidation and Sticking Occurring During Hot Rolling of Modified Ferritic STS430J1L Stainless Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 74-86	2.3	5
52	Analysis and estimation of yield strength of API X80 linepipe steel pipe by low-cycle fatigue tests. *Metals and Materials International*, **2012**, 18, 597-606	2.4	5

51	Cracking Phenomenon Occurring in Bi-SB Based Free-Machining Steel Wire Rods During Hot Rolling. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2011**, 42, 3095-3105	2.3	5
50	Microstructural characterization of 2124 Al-SiCW composite. *Scripta Materialia*, **1997**, 36, 1045-1051	5.6	5
49	Effect of Sb and Sr Additions on the Microstructural Evolution of Mg-Sn-Al-Si Based Alloys. *Materials Transactions*, **2008**, 49, 936-940	1.3	5
48	Correlation of microstructure with hardness and wear resistance in (TiC, SiC)/stainless steel surface composites fabricated by high-energy electron-beam irradiation. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2004**, 35, 1029-1038	2.3	5
47	Microstructural Evolution in Al/AlN Composites Processed by Mechanical Alloying. *Journal of Metastable and Nanocrystalline Materials*, **2003**, 15-16, 457-462	0.2	5
46	Effects of microstructural evolution on superplastic deformation characteristics of a rapidly solidified Al-Li alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2001**, 32, 1649-1658	2.3	5
45	Origin of heterogeneous microstructure in mechanically alloyed NiAl. *Scripta Materialia*, **1996**, 34, 1231-1235	5.6	5
44	Analysis and prevention of vertical cracking phenomena during deep drawing of hot- rolled sg295 steel strips. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **1996**, 27, 1241-1250	2.3	5
43	Fracture Mechanisms of Cold-Rolled Light-Weight Steel Plates Containing Different Carbon Content. *Journal of Korean Institute of Metals and Materials*, **2010**, 48, 377-386	1	5
42	Effect of annealing conditions on the microstructure and tensile properties of 0.5 V containing Fe-16Mn-0.8C-0.5Si steel. *Scripta Materialia*, **2019**, 172, 125-129	5.6	4
41	Strengthening mechanism of a spray-formed Cu-TiB2 composite. *Metals and Materials International*, **1998**, 4, 610-615		4
40	Wear and thermal properties of Zr-based amorphous surface alloyed materials fabricated by high-energy electron beam irradiation. *Journal of Alloys and Compounds*, **2005**, 400, 171-177	5.7	4
39	Effect of Strain on the Crystallization Kinetics of Bulk Amorphous Alloys. *Journal of Metastable and Nanocrystalline Materials*, **2005**, 24-25, 691-694	0.2	4
38	Unique Appearance of Lamellar Cleavage Patterns on Fracture Surfaces of Ti-Based Amorphous Matrix Composite. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2015**, 46, 2506-2515	2.3	3
37	Understanding and Avoiding Intergranular Fracture Characteristics of Hadfield/Hot-Press-Forming Multi-Layer Steel Sheets. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2019**, 50, 4085-4097	2.3	3
36	Effects of Strain Rate and Test Temperature on Torsional Deformation Behavior of API X70 and X80 Linepipe Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science* , **2010**, 41, 1961-1972	2.3	3
35	Improvement of the plasticity of bulk amorphous alloys via a low-angle shear-deforming process. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2008**, 487, 400-404	5.3	3
34	Correlation of crack-tip opening angle for stable crack propagation with charpy and drop-weight tear test properties in high-toughness API X70 pipeline steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2006**, 37, 371-380	2.3	3

33	Effect of Second Phase on Mechanical Properties of Bainite-Base Steels. *Advanced Materials Research*, **2006**, 15-17, 780-785	0.5	3
32	Formation of Crystalline Phase in Strip Cast Zr-Ti-Cu-Ni-Be Bulk Amorphous Alloy. *Journal of Metastable and Nanocrystalline Materials*, **2003**, 15-16, 43-48	0.2	3
31	Microstructural evolution during reactive spray forming of dispersion strengthened Cu alloy. *Metals and Materials International*, **1999**, 5, 141-147		3
30	Densification Behavior of PIMed TiAl Parts.. *Funtai Oyobi Fummatsu Yakin/Journal of the Japan Society of Powder and Powder Metallurgy*, **1999**, 46, 882-886	0.2	3
29	Improvement of low temperature toughness of ferritic Mn steels by alloy modification. *Metals and Materials International*, **2015**, 21, 461-469	2.4	2
28	Room Temperature Formability of Mg Alloys. *Materials Science Forum*, **2009**, 618-619, 463-466	0.4	2
27	Friction-Stir Welding and Surface-Friction Welding of Twin-Roll Strip Cast ZMA611 Mg Alloy. *Advanced Materials Research*, **2006**, 15-17, 333-338	0.5	2
26	Compositional dependence of the deformation behaviour of ultrahigh-purity TiAl alloys. *Philosophical Magazine*, **2004**, 84, 3001-3017	1.6	2
25	On the Undercooling of Aluminum Powders Produced by Uniform Droplet Spray (UDS) Process. *Journal of Metastable and Nanocrystalline Materials*, **2003**, 15-16, 433-438	0.2	2
24	High-cycle fatigue properties of investment cast Ti-6Al-4V alloy welds. *Journal of Materials Science Letters*, **2001**, 20, 2183-2187		2
23	Carbide Assisted Nucleation of B2: A Novel Pathway to Develop High Specific Strength Steels. *Acta Materialia*, **2021**, 117349	8.4	2
22	Estimation of Glass Forming Ability of Amorphous Alloys Based on the Thermal Analysis Data during Cooling. *Materials Transactions*, **2007**, 48, 1501-1504	1.3	1
21	TEM Investigation on Microstructural Characteristics in Nanostructured Al-Mg Alloy. *Materials Research Society Symposia Proceedings*, **2003**, 791, 256		1
20	Development of Microstructure in Mechanically Alloyed NiAl. *Materials Research Society Symposia Proceedings*, **1994**, 364, 585		1
19	Thermodynamic Approach for Predicting the Glass Forming Ability of Amorphous Alloys. *Journal of Metastable and Nanocrystalline Materials*, **2005**, 24-25, 475-478	0.2	0
18	Effects of Microstructure and Environment on Fatigue Properties of Investment Cast Ti-6Al-4V Alloy Welds. *Materials Science Forum*, **2005**, 475-479, 595-598	0.4	0
17	Microstructure and mechanical properties of twin-roll cast Mg6Zn1Mn1Al alloy joined by surface-friction welding. *Materials Characterization*, **2017**, 124, 8-13	3.9	
16	Melt Refining Technology of Highly-Contaminated Magnesium Alloy Scraps via a Sequential Refining Process. *Materials Science Forum*, **2015**, 828-829, 82-86	0.4	

15	Effects of Texture and Alloying Elements on Stretch Formability of Mg Alloy Sheets **2015**, 277-281	
14	Analysis and prevention of cracking phenomena during bending of cold-rolled 430 stainless steel. *Journal of Materials Science Letters*, **1998**, 17, 573-576	
13	Solidification Behavior of Fe-Base Amorphous Alloys during Twin-Roll Strip Casting. *Advanced Materials Research*, **2006**, 15-17, 433-438	0.5
12	Dynamic Deformation and Fracture Behavior of Zr-Based Bulk Metallic Glasses. *Key Engineering Materials*, **2007**, 345-346, 629-632	0.4
11	Microfracture Observation of Zr-Based Bulk Metallic Glasses. *Key Engineering Materials*, **2007**, 345-346, 645-648	0.4
10	Synthesis of Zr-Based Glassy Alloy Foams. *Advanced Materials Research*, **2007**, 26-28, 739-742	0.5
9	Estimation of Relative Glass Forming Abilities of Multicomponent Alloy Systems. *Materials Transactions*, **2007**, 48, 1671-1674	1.3
8	Improvement of the Oxidation Resistance of EPM Gamma-TiAl Alloy by Y-Addition. *Materials Science Forum*, **2003**, 426-432, 1807-1812	0.4
7	Solidification Modeling of Bulk Amorphous Alloys. *Materials Research Society Symposia Proceedings*, **2003**, 806, 120	
6	Fabrication of Bulk Amorphous Alloy Sheets by Strip Casting. *Journal of Metastable and Nanocrystalline Materials*, **2005**, 24-25, 371-374	0.2
5	Modeling of Crystallization Kinetics of Bulk Amorphous Alloys during Cooling. *Journal of Metastable and Nanocrystalline Materials*, **2005**, 24-25, 327-330	0.2
4	High-Performance Light-Weight Allovs by Rapid Solidification Processing. *Materials Research Society Symposia Proceedings*, **1986**, 80, 213	
3	Effects of Texture and Alloying Elements on Stretch Formability of Mg Alloy Sheets **2015**, 277-281	
2	Mechanical Properties and High-Temperature Oxidation Behavior of Mg-Al-Zn-Ca-Y Magnesium Alloys **2012**, 217-219	
1	Development of Wrought Mg Alloys VIA Strip Casting233-238	