

Maria Teresa Perez-Prado

List of Publications by Year in descending order

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126
papers

6,809
citations

57758

44
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62596

80
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128
all docs

128
docs citations

128
times ranked

3681
citing authors

#	ARTICLE	IF	CITATIONS
1	Microstructural evolution in adiabatic shear localization in stainless steel. <i>Acta Materialia</i> , 2003, 51, 1307-1325.	7.9	421
2	Mechanical behavior and microstructural evolution of a Mg AZ31 sheet at dynamic strain rates. <i>Acta Materialia</i> , 2010, 58, 2988-2998.	7.9	297
3	Five-power-law creep in single phase metals and alloys. <i>Progress in Materials Science</i> , 2000, 45, 1-102.	32.8	273
4	Texture evolution during large-strain hot rolling of the Mg AZ61 alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003, 355, 68-78.	5.6	267
5	Grain refinement of Mg-Al-Zn alloys via accumulative roll bonding. <i>Scripta Materialia</i> , 2004, 51, 1093-1097.	5.2	253
6	Microstructural evolution during large strain hot rolling of an AM60 Mg alloy. <i>Scripta Materialia</i> , 2004, 50, 661-665.	5.2	194
7	Effect of grain size on slip activity in pure magnesium polycrystals. <i>Acta Materialia</i> , 2015, 84, 443-456.	7.9	187
8	Twinning and grain subdivision during dynamic deformation of a Mg AZ31 sheet alloy at room temperature. <i>Acta Materialia</i> , 2011, 59, 6949-6962.	7.9	176
9	Texture evolution during annealing of magnesium AZ31 alloy. <i>Scripta Materialia</i> , 2002, 46, 149-155.	5.2	171
10	Microstructural evolution in adiabatic shear bands in Ta and Ta-W alloys. <i>Acta Materialia</i> , 2001, 49, 2905-2917.	7.9	167
11	In vitro biocompatibility of an ultrafine grained zirconium. <i>Biomaterials</i> , 2007, 28, 4343-4354.	11.4	161
12	In situ analysis of the tensile and tensile-creep deformation mechanisms in rolled AZ31. <i>Acta Materialia</i> , 2012, 60, 1889-1904.	7.9	149
13	Precipitation strengthening and reversed yield stress asymmetry in Mg alloys containing rare-earth elements: A quantitative study. <i>Acta Materialia</i> , 2017, 124, 456-467.	7.9	148
14	Deformation mechanisms responsible for the high ductility in a Mg AZ31 alloy analyzed by electron backscattered diffraction. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2005, 36, 1427-1438.	2.2	138
15	Texture, microstructure and mechanical properties of equiaxed ultrafine-grained Zr fabricated by accumulative roll bonding. <i>Acta Materialia</i> , 2008, 56, 1228-1242.	7.9	136
16	Achieving high strength in commercial Mg cast alloys through large strain rolling. <i>Materials Letters</i> , 2005, 59, 3299-3303.	2.6	130
17	Measuring the critical resolved shear stresses in Mg alloys by instrumented nanoindentation. <i>Acta Materialia</i> , 2014, 71, 283-292.	7.9	128
18	Origin of the twinning to slip transition with grain size refinement, with decreasing strain rate and with increasing temperature in magnesium. <i>Acta Materialia</i> , 2015, 88, 232-244.	7.9	127

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19	Bulk nanocrystalline 1%Zr by high-pressure torsion. Scripta Materialia, 2008, 58, 219-222.	5.2	125
20	First Experimental Observation of Shear Induced hcp to bcc Transformation in Pure Zr. Physical Review Letters, 2009, 102, 175504.	7.8	108
21	Accumulative roll bonding of a Mg-based AZ61 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 410-411, 353-357.	5.6	106
22	Ultrafine-grain-sized zirconium by dynamic deformation. Acta Materialia, 2006, 54, 4111-4127.	7.9	102
23	Three-dimensional investigation of grain boundary twin interactions in a Mg AZ31 alloy by electron backscatter diffraction and continuum modeling. Acta Materialia, 2013, 61, 7679-7692.	7.9	101
24	Effect of lamellar orientation on the strength and operating deformation mechanisms of fully lamellar TiAl alloys determined by micropillar compression. Acta Materialia, 2017, 123, 102-114.	7.9	100
25	Texture analysis of the transition from slip to grain boundary sliding in a discontinuously recrystallized superplastic aluminum alloy. Acta Materialia, 2001, 49, 2259-2268.	7.9	99
26	Continuum modeling of the response of a Mg alloy AZ31 rolled sheet during uniaxial deformation. International Journal of Plasticity, 2011, 27, 1739-1757.	8.8	93
27	Texture evolution during grain growth in annealed MG AZ61 alloy. Scripta Materialia, 2003, 48, 59-64.	5.2	90
28	Effect of sheet thickness on the microstructural evolution of an Mg AZ61 alloy during large strain hot rolling. Scripta Materialia, 2004, 50, 667-671.	5.2	83
29	Comparison of the microstructure and thermal stability of an AZ31 alloy processed by ECAP and large strain hot rolling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 410-411, 308-311.	5.6	81
30	Anisotropy of mechanical properties in high-strength ultra-fine-grained pure Ti processed via a complex severe plastic deformation route. Scripta Materialia, 2011, 64, 69-72.	5.2	80
31	Effect of Nb additions on the microstructure, thermal stability and mechanical behavior of high pressure Zr phases under ambient conditions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 3496-3505.	5.6	80
32	Origin of the low precipitation hardening in magnesium alloys. Acta Materialia, 2019, 165, 164-176.	7.9	80
33	Effect of rare earth additions on the critical resolved shear stresses of magnesium alloys. Materials Letters, 2014, 128, 199-203.	2.6	78
34	Effect of solutes on strength and ductility of Mg alloys. Acta Materialia, 2019, 180, 218-230.	7.9	77
35	Superficial severe plastic deformation of 316 LVM stainless steel through grit blasting: Effects on its microstructure and subsurface mechanical properties. Surface and Coatings Technology, 2010, 205, 1830-1837.	4.8	66
36	On the relation between the microstructure and the mechanical behavior of pure Zn processed by high pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 562, 196-202.	5.6	63

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37	Understanding the high temperature reversed yield asymmetry in a Mg-rare earth alloy by slip trace analysis. <i>Acta Materialia</i> , 2018, 145, 264-277.	7.9	57
38	Microstructure, mechanical properties and creep of magnesium alloy Elektron21 reinforced with AlN nanoparticles by ultrasound-assisted stirring. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 659, 84-92.	5.6	52
39	Microplasticity-based rationalization of the room temperature yield asymmetry in conventional polycrystalline Mg alloys. <i>Acta Materialia</i> , 2016, 108, 304-316.	7.9	52
40	Orientation dependency of the alpha to omega plus beta transformation in commercially pure zirconium by high-pressure torsion. <i>Scripta Materialia</i> , 2011, 65, 241-244.	5.2	51
41	Determination of internal stresses in cyclically deformed copper single crystals using convergent-beam electron diffraction and dislocation dipole separation measurements. <i>Acta Materialia</i> , 2000, 48, 4247-4254.	7.9	49
42	Deformation bands and the formation of grain boundaries in a superplastic aluminum alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2002, 33, 279-290.	2.2	48
43	Prominent role of basal slip during high-temperature deformation of pure Mg polycrystals. <i>Acta Materialia</i> , 2015, 85, 1-13.	7.9	48
44	Influence of strain rate on the twin and slip activity of a magnesium alloy containing neodymium. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 583, 220-231.	5.6	44
45	Dislocation-particle interactions in magnesium alloys. <i>Acta Materialia</i> , 2020, 194, 190-206.	7.9	43
46	Microstructural evolution in electroplated Cu thin films. <i>Scripta Materialia</i> , 2002, 47, 817-823.	5.2	42
47	Dynamic restoration mechanisms in $\hat{\epsilon}$ -zirconium at elevated temperatures. <i>Acta Materialia</i> , 2005, 53, 581-591.	7.9	42
48	Influence of the high pressure torsion die geometry on the allotropic phase transformations in pure Zr. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 3918-3928.	5.6	39
49	Origin of the reversed yield asymmetry in Mg-rare earth alloys at high temperature. <i>Acta Materialia</i> , 2015, 92, 265-277.	7.9	39
50	Effect of indentation size on the nucleation and propagation of tensile twinning in pure magnesium. <i>Acta Materialia</i> , 2015, 93, 114-128.	7.9	39
51	Effect of Nd Additions on Extrusion Texture Development and on Slip Activity in a Mg-Mn Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013, 44, 4819-4829.	2.2	36
52	Stabilization of metastable phases in Mg-Li alloys by high-pressure torsion. <i>Scripta Materialia</i> , 2013, 68, 583-586.	5.2	36
53	Effect of the grain refinement via severe plastic deformation on strength properties and deformation behavior of an Al6061 alloy at room and cryogenic temperatures. <i>Materials Letters</i> , 2011, 65, 2917-2919.	2.6	35
54	Slip transfer across $\hat{\gamma}$ -TiAl lamellae in tension. <i>Materials and Design</i> , 2018, 146, 81-95.	7.0	34

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55	Relationship Between the 3D Porosity and β -Phase Distributions and the Mechanical Properties of a High Pressure Die Cast AZ91 Mg Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013, 44, 4391-4403.	2.2	33
56	Texture analysis of the effect of non-basal slip systems on the dynamic recrystallization of the Mg alloy AZ31. <i>Materials Characterization</i> , 2013, 75, 101-107.	4.4	33
57	Grain boundary sliding and crystallographic slip during superplasticity of Al-5%Ca-5%Zn as studied by texture analysis. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1998, 244, 216-223.	5.6	32
58	High throughput analysis of solute effects on the mechanical behavior and slip activity of beta titanium alloys. <i>Materials and Design</i> , 2018, 137, 371-383.	7.0	31
59	Grain Refinement in a Mg AZ91 Alloy via Large Strain Hot Rolling. <i>Materials Transactions</i> , 2003, 44, 2625-2630.	1.2	30
60	EBSD-Assisted Slip Trace Analysis During In Situ SEM Mechanical Testing: Application to Unravel Grain Size Effects on Plasticity of Pure Mg Polycrystals. <i>Jom</i> , 2016, 68, 116-126.	1.9	29
61	Application of equal channel angular pressing with parallel channels for grain refinement in aluminium alloys and its effect on deformation behavior. <i>International Journal of Material Forming</i> , 2010, 3, 411-414.	2.0	27
62	In situ analysis of the tensile deformation mechanisms in extruded Mg-1Mn-1Nd (wt%). <i>Philosophical Magazine</i> , 2013, 93, 598-617.	1.6	26
63	High temperature deformation mechanisms in pure magnesium studied by nanoindentation. <i>Scripta Materialia</i> , 2015, 104, 9-12.	5.2	26
64	Effect of nanoscale thick lamellae on the micromechanical response of a TiAl alloy. <i>Scripta Materialia</i> , 2017, 139, 17-21.	5.2	26
65	Evaluating the orientation relationship of prismatic precipitates generated by detwinning in Mg alloys. <i>Acta Materialia</i> , 2020, 195, 263-273.	7.9	26
66	The fabrication of bulk ultrafine-grained zirconium by accumulative roll bonding. <i>Jom</i> , 2007, 59, 42-45.	1.9	25
67	Dislocation microstructure and internal-stress measurements by convergent-beam electron diffraction on creep-deformed Cu and Al. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2002, 33, 311-317.	2.2	24
68	Large-strain softening of aluminum in shear at elevated temperature. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2002, 33, 3145-3153.	2.2	24
69	Texture analysis of the transition from slip to grain boundary sliding in a continuously recrystallized superplastic aluminum alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003, 342, 216-230.	5.6	22
70	Gas atomization of β -TiAl Alloy Powder for Additive Manufacturing. <i>Advanced Engineering Materials</i> , 2020, 22, 1900594.	3.5	21
71	Analysis of crystallographic slip and grain boundary sliding in a Ti-45Al-2Nb-2Mn (at%)-0.8vol%TiB ₂ alloy by high temperature in situ mechanical testing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 606, 276-289.	5.6	19
72	Symbiosis between grain boundary sliding and slip creep to obtain high-strain-rate superplasticity in aluminum alloys. <i>Journal of the European Ceramic Society</i> , 2007, 27, 3385-3390.	5.7	18

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73	Effect of Stress Level on the High Temperature Deformation and Fracture Mechanisms of Ti-45Al-2Nb-2Mn-0.8 vol. pct TiB ₂ : An In Situ Experimental Study. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013, 44, 1887-1896.	2.2	18
74	Selective laser melting of a Fe-Si-Cr-B-C-based complex-shaped amorphous soft-magnetic electric motor rotor with record dimensions. <i>Materials and Design</i> , 2022, 215, 110483.	7.0	18
75	Texture gradient evolution in Al-5%Ca-5%Zn sheet alloy after tensile deformation at high superplastic strain rate. <i>Scripta Materialia</i> , 1996, 35, 1455-1460.	5.2	17
76	Texture Stability of a Rapidly Solidified Dispersion Strengthened Al-Fe-V-Si Material. <i>Scripta Materialia</i> , 1998, 38, 1427-1433.	5.2	16
77	Grain boundary evolution and continuous recrystallization of a superplastic Al-Cu-Zr alloy. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 1999, 357, 1683-1705.	3.4	16
78	Strength ceiling smashed for light metals. <i>Nature</i> , 2015, 528, 486-487.	27.8	16
79	The distribution of disorientation angles in a rolled AZ31 Mg alloy. <i>Revista De Metalurgia</i> , 2002, 38, 353-357.	0.5	16
80	The relation between ductility at high temperature and solid solution in Mg alloys. <i>Journal of Magnesium and Alloys</i> , 2022, 10, 224-238.	11.9	16
81	In Situ Observations of the Deformation Behavior and Fracture Mechanisms of Ti-45Al-2Nb-2Mn-0.8 vol pct TiB ₂ . <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012, 43, 1198-1208.	2.2	15
82	Elevated temperature deformation of Zr to large strains. <i>Journal of Materials Science</i> , 2013, 48, 4492-4500.	3.7	15
83	Tuning the magnetic properties of pure hafnium by high pressure torsion. <i>Acta Materialia</i> , 2017, 123, 206-213.	7.9	14
84	Phase Transformations During High Pressure Torsion of Pure Zr and of a Zr-2.5%Nb Alloy. <i>Advanced Engineering Materials</i> , 2010, 12, 754-757.	3.5	13
85	Control of the Mechanical Asymmetry in an Extruded MN11 Alloy by Static Annealing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 3282-3291.	2.2	13
86	Effect of the heat treatment on the microstructure and hardness evolution of a AlSi10MgCu alloy designed for laser powder bed fusion. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 819, 141487.	5.6	13
87	Microstructural evolution of annealed Al-5 wt% Ca-5 wt% Zn sheet alloy. <i>Journal of Materials Science</i> , 1997, 32, 1313-1318.	3.7	12
88	Single crystal like thin films by selective ion-induced grain growth. <i>Scripta Materialia</i> , 2006, 55, 103-106.	5.2	12
89	Atomic scale interactions of basal dislocations and twin boundaries with ultrathin precipitates in magnesium alloys. <i>Acta Materialia</i> , 2021, 221, 117442.	7.9	12
90	Icosahedral quasicrystal enhanced nucleation in commercially pure Ni processed by selective laser melting. <i>Scripta Materialia</i> , 2022, 211, 114512.	5.2	12

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91	Thermal stability of pure bcc Zr fabricated by high pressure torsion. <i>Materials Letters</i> , 2010, 64, 211-214.	2.6	11
92	Precipitation-induced transition in the mechanical behavior of 3D printed Inconel 718 bcc lattices. <i>Scripta Materialia</i> , 2021, 203, 114075.	5.2	10
93	Development of segregations in a Mg-Mn-Nd alloy during HPT processing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 802, 140423.	5.6	9
94	Superplastic Behavior of a Fine Grained AZ61 Alloy Processed by Large Strain Hot Rolling. <i>Materials Science Forum</i> , 2004, 447-448, 221-226.	0.3	8
95	Effect of nanoscale $\hat{\pm}$ precipitation on slip activity in ultrastrong beta titanium alloys. <i>Materials Letters</i> , 2020, 264, 127398.	2.6	8
96	Dependence of the grain boundary misorientation distribution in supral 2004 on the plane of observation. <i>Scripta Materialia</i> , 1999, 40, 1401-1406.	5.2	7
97	Geometric Dynamic Recrystallization in $\hat{\pm}$ -Zirconium at Elevated Temperatures. <i>Materials Science Forum</i> , 2004, 467-470, 1145-1150.	0.3	7
98	High strength ultra-fine grained titanium produced via a novel SPD processing route. <i>International Journal of Material Forming</i> , 2010, 3, 407-410.	2.0	7
99	Effect of high pressure torsion on the microstructure evolution of a gamma Ti-45Al-2Nb-2Mn-0.8%TiB2 alloy. <i>Journal of Materials Science</i> , 2013, 48, 4599-4605.	3.7	7
100	Effect of solutes on the rate sensitivity in Ti-xAl-yMo-zV and Ti-xAl-yMo-zCr $\hat{\pm}$ -Ti alloys. <i>Scripta Materialia</i> , 2018, 149, 129-133.	5.2	7
101	Onset of room temperature ferromagnetism by plastic deformation in three paramagnetic pure metals. <i>Scripta Materialia</i> , 2016, 118, 41-45.	5.2	6
102	An Al-5Fe-6Cr alloy with outstanding high temperature mechanical behavior by laser powder bed fusion. <i>Additive Manufacturing</i> , 2022, 55, 102828.	3.0	6
103	Lattice rotation during severe local shear in a fully hardened Al-4Cu-0.1%Fe single crystal alloy. <i>Scripta Materialia</i> , 2006, 54, 915-919.	5.2	5
104	Controlling the high temperature mechanical behavior of Al alloys by precipitation and severe straining. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 679, 36-47.	5.6	5
105	Internal stress measurements by convergent beam electron diffraction on creep-deformed Al single crystals. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001, 319-321, 730-734.	5.6	4
106	Influence of thermomechanical processing on superplastic forming of Mg-Al alloys. <i>Materials Science and Technology</i> , 2007, 23, 444-450.	1.6	4
107	Influence of texture on the recrystallization mechanisms in an AZ31 Mg sheet alloy at dynamic rates. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, , .	5.6	4
108	Evolution of Texture and Microstructure of AZ31 Mg Alloy Sheet at High Strain Rates. <i>Materials Science Forum</i> , 0, 706-709, 1255-1260.	0.3	4

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109	Very strong pure titanium by field assisted hot pressing of dual phase powders. <i>Materials Letters</i> , 2014, 123, 75-78.	2.6	4
110	Icosahedral quasicrystal-enhanced nucleation in Al alloys fabricated by selective laser melting. <i>Additive Manufacturing</i> , 2021, 44, 102053.	3.0	4
111	Continuum modeling of {10 $\bar{1}$ 2} twinning in a Mg-3%Al-1%Zn rolled sheet. <i>Revista De Metalurgia</i> , 2010, 46, 133-137.	0.5	4
112	Effect of Hydrostatic Pressure on the 3D Porosity Distribution and Mechanical Behavior of a High Pressure Die Cast Mg AZ91 Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015, 46, 4056-4069.	2.2	3
113	Laser-Guided Corrosion Control: A New Approach to Tailor the Degradation of Mg-Alloys. <i>Small</i> , 2021, 17, 2100924.	10.0	3
114	A quantitative microplasticity-based approach to rationalize the poor strengthening response of polycrystalline Mg alloys. <i>Journal of Magnesium and Alloys</i> , 2023, 11, 1656-1671.	11.9	3
115	Deformation Mechanisms of Superplastic Al–Li 8090 Alloy Examined by X-Ray Texture Measurements. <i>Materials Transactions, JIM</i> , 2000, 41, 1562-1568.	0.9	2
116	Bond Strength of Ultrafine Grained Zr Fabricated by Accumulative Roll Bonding. <i>Materials Science Forum</i> , 0, 584-586, 243-248.	0.3	2
117	Dynamic deformation of high pressure die-cast magnesium alloys. <i>Revista De Metalurgia</i> , 2012, 48, 351-357.	0.5	2
118	Computer Simulation of Grain Boundary Character in a Superplastic Aluminum Alloy. <i>Materials Research Society Symposia Proceedings</i> , 1999, 601, 3.	0.1	1
119	Texture, Grain Boundaries and Deformation of Superplastic Aluminum Alloys. <i>Materials Science Forum</i> , 2001, 357-359, 255-260.	0.3	1
120	Microstructural Evolution during Hot Rolling of an AZ31 Mg Alloy. <i>Materials Science Forum</i> , 2003, 426-432, 637-642.	0.3	1
121	Nanostructuring a Zr-Hf Alloy via Large Strain Rolling. <i>Materials Science Forum</i> , 2007, 539-543, 2843-2848.	0.3	1
122	Influence of thermomechanical processing on the grain size, texture and mechanical properties of Mg-Al alloys. <i>Metallic Materials</i> , 2012, 50, 1-23.	0.3	1
123	EBSD Study of Annealing Rolled Zirconium. <i>Ceramic Transactions</i> , 0, , 555-562.	0.1	1
124	Texture Evolution of Cu Thin Films during Annealing. <i>Materials Science Forum</i> , 2002, 408-412, 1639-1644.	0.3	0
125	On the Controversy about the Presence of Grain Boundary Sliding in Mg AZ31. <i>Materials Science Forum</i> , 2012, 735, 22-25.	0.3	0
126	In situ SEM Observations of the Tensile-Creep Deformation Behavior and Fracture Mechanisms of a β -TiAl Intermetallic Alloy at Low and High Stresses.. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1516, 65-70.	0.1	0