Maria Teresa Perez-Prado

List of Publications by Year
in descending order

126	6,809	57758 44	62596 80
papers	citations	h-index	g-index

128	128	128	3681
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A quantitative microplasticity-based approach to rationalize the poor strengthening response of polycrystalline Mg alloys. Journal of Magnesium and Alloys, 2023, 11, 1656-1671.	11.9	3
2	Icosahedral quasicrystal enhanced nucleation in commercially pure Ni processed by selective laser melting. Scripta Materialia, 2022, 211, 114512.	5.2	12
3	The relation between ductility at high temperature and solid solution in Mg alloys. Journal of Magnesium and Alloys, 2022, 10, 224-238.	11.9	16
4	Selective laser melting of a Fe-Si-Cr-B-C-based complex-shaped amorphous soft-magnetic electric motor rotor with record dimensions. Materials and Design, 2022, 215, 110483.	7.0	18
5	An Al-5Fe-6Cr alloy with outstanding high temperature mechanical behavior by laser powder bed fusion. Additive Manufacturing, 2022, 55, 102828.	3.0	6
6	Development of segregations in a Mgâ€“Mnâ€“Nd alloy during HPT processing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 802, 140423.	5.6	9
7	Laserâ€Guided Corrosion Control: A New Approach to Tailor the Degradation of Mgâ€Alloys. Small, 2021, 17, 2100924.	10.0	3
8	Effect of the heat treatment on the microstructure and hardness evolution of a AlSi10MgCu alloy designed for laser powder bed fusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 819, 141487.	5.6	13
9	Icosahedral quasicrystal-enhanced nucleation in Al alloys fabricated by selective laser melting. Additive Manufacturing, 2021, 44, 102053.	3.0	4
10	Precipitation-induced transition in the mechanical behavior of 3D printed Inconel 718 bcc lattices. Scripta Materialia, 2021, 203, 114075.	5.2	10
11	Atomic scale interactions of basal dislocations and twin boundaries with ultrathin precipitates in magnesium alloys. Acta Materialia, 2021, 221, 117442.	7.9	12
12	Gas atomization of Î³â€TiAl Alloy Powder for Additive Manufacturing. Advanced Engineering Materials, 2020, 22, 1900594.	3.5	21
13	Effect of nanoscale Î± precipitation on slip activity in ultrastrong beta titanium alloys. Materials Letters, 2020, 264, 127398.	2.6	8
14	Dislocation-particle interactions in magnesium alloys. Acta Materialia, 2020, 194, 190-206.	7.9	43
15	Evaluating the orientation relationship of prismatic precipitates generated by detwinning in Mg alloys. Acta Materialia, 2020, 195, 263-273.	7.9	26
16	Effect of solutes on strength and ductility of Mg alloys. Acta Materialia, 2019, 180, 218-230.	7.9	77
17	Origin of the low precipitation hardening in magnesium alloys. Acta Materialia, 2019, 165, 164-176.	7.9	80
18	Slip transfer across Î³-TiAl lamellae in tension. Materials and Design, 2018, 146, 81-95.	7.0	34

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19	Understanding the high temperature reversed yield asymmetry in a Mg-rare earth alloy by slip trace analysis. Acta Materialia, 2018, 145, 264-277.	7.9	57
20	Effect of solutes on the rate sensitivity in Ti-xAl-yMo-zV and Ti-xAl-yMo-zCr Î²-Ti alloys. Scripta Materialia, 2018, 149, 129-133.	5.2	7
21	High throughput analysis of solute effects on the mechanical behavior and slip activity of beta titanium alloys. Materials and Design, 2018, 137, 371-383.	7.0	31
22	Effect of nanoscale thick lamellae on the micromechanical response of a TiAl alloy. Scripta Materialia, 2017, 139, 17-21.	5.2	26
23	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
24	Tuning the magnetic properties of pure hafnium by high pressure torsion. Acta Materialia, 2017, 123, 206-213.	7.9	14
25	Controlling the high temperature mechanical behavior of Al alloys by precipitation and severe straining. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 679, 36-47.	5.6	5
26	Precipitation strengthening and reversed yield stress asymmetry in Mg alloys containing rare-earth elements: A quantitative study. Acta Materialia, 2017, 124, 456-467.	7.9	148
27	Microstructure, mechanical properties and creep of magnesium alloy Elektron21 reinforced with AlN nanoparticles by ultrasound-assisted stirring. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 659, 84-92.	5.6	52
28	Microplasticity-based rationalization of the room temperature yield asymmetry in conventional polycrystalline Mg alloys. Acta Materialia, 2016, 108, 304-316.	7.9	52
29	Onset of room temperature ferromagnetism by plastic deformation in three paramagnetic pure metals. Scripta Materialia, 2016, 118, 41-45.	5.2	6
30	EBSD-Assisted Slip Trace Analysis During In Situ SEM Mechanical Testing: Application to Unravel Grain Size Effects on Plasticity of Pure Mg Polycrystals. Jom, 2016, 68, 116-126.	1.9	29
31	Strength ceiling smashed for light metals. Nature, 2015, 528, 486-487.	27.8	16
32	Origin of the twinning to slip transition with grain size refinement, with decreasing strain rate and with increasing temperature in magnesium. Acta Materialia, 2015, 88, 232-244.	7.9	127
33	Origin of the reversed yield asymmetry in Mg-rare earth alloys at high temperature. Acta Materialia, 2015, 92, 265-277.	7.9	39
34	Effect of indentation size on the nucleation and propagation of tensile twinning in pure magnesium. Acta Materialia, 2015, 93, 114-128.	7.9	39
35	High temperature deformation mechanisms in pure magnesium studied by nanoindentation. Scripta Materialia, 2015, 104, 9-12.	5.2	26
36	Effect of Hydrostatic Pressure on the 3D Porosity Distribution and Mechanical Behavior of a High Pressure Die Cast Mg AZ91 Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4056-4069.	2.2	3

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37	Effect of grain size on slip activity in pure magnesium polycrystals. Acta Materialia, 2015, 84, 443-456.	7.9	187
38	Prominent role of basal slip during high-temperature deformation of pure Mg polycrystals. Acta Materialia, 2015, 85, 1-13.	7.9	48
39	Very strong pure titanium by field assisted hot pressing of dual phase powders. Materials Letters, 2014, 123, 75-78.	2.6	4
40	Analysis of crystallographic slip and grain boundary sliding in a Tiâ€“45Alâ€“2Nbâ€“2Mn (at%)â€“0.8vol%TiB2 alloy by high temperature in situ mechanical testing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 606, 276-289.	5.6	19
41	Control of the Mechanical Asymmetry in an Extruded MN11 Alloy by Static Annealing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3282-3291.	2.2	13
42	Measuring the critical resolved shear stresses in Mg alloys by instrumented nanoindentation. Acta Materialia, 2014, 71, 283-292.	7.9	128
43	Effect of rare earth additions on the critical resolved shear stresses of magnesium alloys. Materials Letters, 2014, 128, 199-203.	2.6	78
44	Effect of Nd Additions on Extrusion Texture Development and on Slip Activity in a Mg-Mn Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 4819-4829.	2.2	36
45	Relationship Between the 3D Porosity and Î²-Phase Distributions and the Mechanical Properties of a High Pressure Die Cast AZ91 Mg Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 4391-4403.	2.2	33
46	Effect of Stress Level on the High Temperature Deformation and Fracture Mechanisms of Ti-45Al-2Nb-2Mn-0.8Âvol. pct TiB2: An In Situ Experimental Study. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 1887-1896.	2.2	18
47	Effect of high pressure torsion on the microstructure evolution of a gamma Tiâ€“45Alâ€“2Nbâ€“2Mnâ€“0.8Âvol% TiB2 alloy. Journal of Materials Science, 2013, 48, 4599-4605.	3.7	7
48	Influence of strain rate on the twin and slip activity of a magnesium alloy containing neodymium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 583, 220-231.	5.6	44
49	Three-dimensional investigation of grain boundaryâ€“twin interactions in a Mg AZ31 alloy by electron backscatter diffraction and continuum modeling. Acta Materialia, 2013, 61, 7679-7692.	7.9	101
50	Stabilization of metastable phases in Mgâ€“Li alloys by high-pressure torsion. Scripta Materialia, 2013, 68, 583-586.	5.2	36
51	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
52	Elevated temperature deformation of Zr to large strains. Journal of Materials Science, 2013, 48, 4492-4500.	3.7	15
53	Texture analysis of the effect of non-basal slip systems on the dynamic recrystallization of the Mg alloy AZ31. Materials Characterization, 2013, 75, 101-107.	4.4	33
54	In situanalysis of the tensile deformation mechanisms in extruded Mgâ€“1Mnâ€“1Nd (wt%). Philosophical Magazine, 2013, 93, 598-617.	1.6	26

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55	On the Controversy about the Presence of Grain Boundary Sliding in Mg AZ31. Materials Science Forum, 2012, 735, 22-25.	0.3	0
56	In situ SEM Observations of the Tensile-Creep Deformation Behavior and Fracture Mechanisms of a Î³-TiAl Intermetallic Alloy at Low and High Stresses.. Materials Research Society Symposia Proceedings, 2012, 1516, 65-70.	0.1	0
57	Influence of thermomechanical processing on the grain size, texture and mechanical properties of Mg-Al alloys. Metallic Materials, 2012, 50, 1-23.	0.3	1
58	In situ analysis of the tensile and tensile-creep deformation mechanisms in rolled AZ31. Acta Materialia, 2012, 60, 1889-1904.	7.9	149
59	In Situ Observations of the Deformation Behavior and Fracture Mechanisms of Ti-45Al-2Nb-2MnÂ+Â0.8ÂvolÂpct TiB2. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 1198-1208.	2.2	15
60	Dynamic deformation of high pressure die-cast magnesium alloys. Revista De Metalurgia, 2012, 48, 351-357.	0.5	2
61	Influence of texture on the recrystallization mechanisms in an AZ31 Mg sheet alloy at dynamic rates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, , .	5.6	4
62	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
63	Orientation dependency of the alpha to omega plus beta transformation in commercially pure zirconium by high-pressure torsion. Scripta Materialia, 2011, 65, 241-244.	5.2	51
64	Effect of the grain refinement via severe plastic deformation on strength properties and deformation behavior of an Al6061 alloy at room and cryogenic temperatures. Materials Letters, 2011, 65, 2917-2919.	2.6	35
65	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
66	Twinning and grain subdivision during dynamic deformation of a Mg AZ31 sheet alloy at room temperature. Acta Materialia, 2011, 59, 6949-6962.	7.9	176
67	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
68	High strength ultra-fine grained titanium produced via a novel SPD processing route. International Journal of Material Forming, 2010, 3, 407-410.	2.0	7
69	Application of equal channel angular pressing with parallel channels for grain refinement in aluminium alloys and its effect on deformation behavior. International Journal of Material Forming, 2010, 3, 411-414.	2.0	27
70	Thermal stability of pure bcc Zr fabricated by high pressure torsion. Materials Letters, 2010, 64, 211-214.	2.6	11
71	Phase Transformations During Highâ€Pressure Torsion of Pure Zr and of a Zrâ€2.5%Nb Alloy. Advanced Engineering Materials, 2010, 12, 754-757.	3.5	13
72	Influence of the high pressure torsion die geometry on the allotropic phase transformations in pure Zr. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 3918-3928.	5.6	39

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73	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
74	Mechanical behavior and microstructural evolution of a Mg AZ31 sheet at dynamic strain rates. Acta Materialia, 2010, 58, 2988-2998.	7.9	297
75	Continuum modeling of {10á¿™2} twinning in a Mg-3%Al-1%Zn rolled sheet. Revista De Metalurgia, 2010, 46, 133-137.	0.5	4
76	First Experimental Observation of Shear Induced hcp to bcc Transformation in Pure Zr. Physical Review Letters, 2009, 102, 175504.	7.8	108
77	Texture, microstructure and mechanical properties of equiaxed ultrafine-grained Zr fabricated by accumulative roll bonding. Acta Materialia, 2008, 56, 1228-1242.	7.9	136
78	Bulk nanocrystalline Ï‰-Zr by high-pressure torsion. Scripta Materialia, 2008, 58, 219-222.	5.2	125
79	Influence of thermomechanical processing on superplastic forming of Mgâ€“Al alloys. Materials Science and Technology, 2007, 23, 444-450.	1.6	4
80	Nanostructuring a Zr-Hf Alloy via Large Strain Rolling. Materials Science Forum, 2007, 539-543, 2843-2848.	0.3	1
81	In vitro biocompatibility of an ultrafine grained zirconium. Biomaterials, 2007, 28, 4343-4354.	11.4	161
82	Symbiosis between grain boundary sliding and slip creep to obtain high-strain-rate superplasticity in aluminum alloys. Journal of the European Ceramic Society, 2007, 27, 3385-3390.	5.7	18
83	The fabrication of bulk ultrafine-grained zirconium by accumulative roll bonding. Jom, 2007, 59, 42-45.	1.9	25
84	Ultrafine-grain-sized zirconium by dynamic deformation. Acta Materialia, 2006, 54, 4111-4127.	7.9	102
85	Lattice rotation during severe local shear in a fully hardened Alâ€“4%Cuâ€“0.1%Fe single crystal alloy. Scripta Materialia, 2006, 54, 915-919.	5.2	5
86	Single crystal like thin films by selective ion-induced grain growth. Scripta Materialia, 2006, 55, 103-106.	5.2	12
87	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
88	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
89	Dynamic restoration mechanisms in Î±-zirconium at elevated temperatures. Acta Materialia, 2005, 53, 581-591.	7.9	42
90	Deformation mechanisms responsible for the high ductility in a Mg AZ31 alloy analyzed by electron backscattered diffraction. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 1427-1438.	2.2	138

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91	Achieving high strength in commercial Mg cast alloys through large strain rolling. Materials Letters, 2005, 59, 3299-3303.	2.6	130
92	Geometric Dynamic Recrystallization in Î±-Zirconium at Elevated Temperatures. Materials Science Forum, 2004, 467-470, 1145-1150.	0.3	7
93	Superplastic Behavior of a Fine Grained AZ61 Alloy Processed by Large Strain Hot Rolling. Materials Science Forum, 2004, 447-448, 221-226.	0.3	8
94	Microstructural evolution during large strain hot rolling of an AM60 Mg alloy. Scripta Materialia, 2004, 50, 661-665.	5.2	194
95	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
96	Grain refinement of Mgâ€“Alâ€“Zn alloys via accumulative roll bonding. Scripta Materialia, 2004, 51, 1093-1097.	5.2	253
97	Texture evolution during grain growth in annealed MG AZ61 alloy. Scripta Materialia, 2003, 48, 59-64.	5.2	90
98	Texture analysis of the transition from slip to grain boundary sliding in a continuously recrystallized superplastic aluminum alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 342, 216-230.	5.6	22
99	Texture evolution during large-strain hot rolling of the Mg AZ61 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 355, 68-78.	5.6	267
100	Microstructural evolution in adiabatic shear localization in stainless steel. Acta Materialia, 2003, 51, 1307-1325.	7.9	421
101	Microstructural Evolution during Hot Rolling of an AZ31 Mg Alloy. Materials Science Forum, 2003, 426-432, 637-642.	0.3	1
102	Grain Refinement in a Mg AZ91 Alloy via Large Strain Hot Rolling. Materials Transactions, 2003, 44, 2625-2630.	1.2	30
103	Texture Evolution of Cu Thin Films during Annealing. Materials Science Forum, 2002, 408-412, 1639-1644.	0.3	0
104	Texture evolution during annealing of magnesium AZ31 alloy. Scripta Materialia, 2002, 46, 149-155.	5.2	171
105	Microstructural evolution in electroplated Cu thin films. Scripta Materialia, 2002, 47, 817-823.	5.2	42
106	Deformation bands and the formation of grain boundaries in a superplastic aluminum alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 279-290.	2.2	48
107	Dislocation microstructure and internal-stress measurements by convergent-beam electron diffraction on creep-deformed Cu and Al. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 311-317.	2.2	24
108	Large-strain softening of aluminum in shear at elevated temperature. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 3145-3153.	2.2	24

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109	The distribution of disorientation angles in a rolled AZ31 Mg alloy. Revista De Metalurgia, 2002, 38, 353-357.	0.5	16
110	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
111	Microstructural evolution in adiabatic shear bands in Ta and Taâ€“W alloys. Acta Materialia, 2001, 49, 2905-2917.	7.9	167
112	Internal stress measurements by convergent beam electron diffraction on creep-deformed Al single crystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 319-321, 730-734.	5.6	4
113	Texture, Grain Boundaries and Deformation of Superplastic Aluminum Alloys. Materials Science Forum, 2001, 357-359, 255-260.	0.3	1
114	Deformation Mechanisms of Superplastic Al–Li 8090 Alloy Examined by X-Ray Texture Measurements. Materials Transactions, JIM, 2000, 41, 1562-1568.	0.9	2
115	Five-power-law creep in single phase metals and alloys. Progress in Materials Science, 2000, 45, 1-102.	32.8	273
116	Determination of internal stresses in cyclically deformed copper single crystals using convergent-beam electron diffraction and dislocation dipole separation measurements. Acta Materialia, 2000, 48, 4247-4254.	7.9	49
117	Grain boundary evolution and continuous recrystallization of a superplastic Alâ€”Cuâ€”Zr alloy. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 1999, 357, 1683-1705.	3.4	16
118	Dependence of the grain boundary misorientation distribution in supral 2004 on the plane of observation. Scripta Materialia, 1999, 40, 1401-1406.	5.2	7
119	Computer Simulation of Grain Boundary Character in a Superplastic Aluminum Alloy. Materials Research Society Symposia Proceedings, 1999, 601, 3.	0.1	1
120	Texture Stability of a Rapidly Solidified Dispersion Strengthened Al-Fe-V-Si Material. Scripta Materialia, 1998, 38, 1427-1433.	5.2	16
121	Grain boundary sliding and crystallographic slip during superplasticity of Alâ€“5%Caâ€“5%Zn as studied by texture analysis. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1998, 244, 216-223.	5.6	32
122	Microstructural evolution of annealed Alâ€“5 wt% Caâ€“5 wt% Zn sheet alloy. Journal of Materials Science, 1997, 32, 1313-1318.	3.7	12
123	Texture gradient evolution in Al-5%Ca-5%Zn sheet alloy after tensile deformation at high superplastic strain rate. Scripta Materialia, 1996, 35, 1455-1460.	5.2	17
124	Bond Strength of Ultrafine Grained Zr Fabricated by Accumulative Roll Bonding. Materials Science Forum, 0, 584-586, 243-248.	0.3	2
125	Evolution of Texture and Microstructure of AZ31 Mg Alloy Sheet at High Strain Rates. Materials Science Forum, 0, 706-709, 1255-1260.	0.3	4
126	EBSD Study of Annealing Rolled Zirconium. Ceramic Transactions, 0, , 555-562.	0.1	1