IvÃ¡n GutiÃ©rrez-Urrutia

List of Publications by Year
in descending order

69	5,075	186265 28	133252 59
papers	citations	h-index	g-index
71	71	71	3070
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dislocation and twin substructure evolution during strain hardening of an Feâ€“22wt.% Mnâ€“0.6wt.% C TWIP steel observed by electron channeling contrast imaging. Acta Materialia, 2011, 59, 6449-6462.	7.9	697
2	The effect of grain size and grain orientation on deformation twinning in a Feâ€“22wt.% Mnâ€“0.6wt.% C TWIP steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 3552-3560.	5.6	583
3	Revealing the strain-hardening behavior of twinning-induced plasticity steels: Theory, simulations, experiments. Acta Materialia, 2013, 61, 494-510.	7.9	429
4	Multistage strain hardening through dislocation substructure and twinning in a high strength and ductile weight-reduced Feâ€“Mnâ€“Alâ€“C steel. Acta Materialia, 2012, 60, 5791-5802.	7.9	409
5	Influence of Al content and precipitation state on the mechanical behavior of austenitic high-Mn low-density steels. Scripta Materialia, 2013, 68, 343-347.	5.2	274
6	Grain size effect on strain hardening in twinning-induced plasticity steels. Scripta Materialia, 2012, 66, 992-996.	5.2	232
7	Electron channeling contrast imaging of twins and dislocations in twinning-induced plasticity steels under controlled diffraction conditions in a scanning electron microscope. Scripta Materialia, 2009, 61, 737-740.	5.2	213
8	Alloy Design, Combinatorial Synthesis, and Microstructureâ€“Property Relations for Low-Density Fe-Mn-Al-C Austenitic Steels. Jom, 2014, 66, 1845-1856.	1.9	172
9	In situ analysis of the tensile and tensile-creep deformation mechanisms in rolled AZ31. Acta Materialia, 2012, 60, 1889-1904.	7.9	149
10	Contribution of microstructural parameters to strengthening in an ultrafine-grained Alâ€“7% Si alloy processed by severe deformation. Acta Materialia, 2007, 55, 1319-1330.	7.9	145
11	Measuring the critical resolved shear stresses in Mg alloys by instrumented nanoindentation. Acta Materialia, 2014, 71, 283-292.	7.9	128
12	High strength and ductile low density austenitic FeMnAlC steels: Simplex and alloys strengthened by nanoscale ordered carbides. Materials Science and Technology, 2014, 30, 1099-1104.	1.6	117
13	Large recovery strain in Fe-Mn-Si-based shape memory steels obtained by engineering annealing twin boundaries. Nature Communications, 2014, 5, 4964.	12.8	115
14	Coupling of Electron Channeling with EBSD: Toward the Quantitative Characterization of Deformation Structures in the SEM. Jom, 2013, 65, 1229-1236.	1.9	110
15	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
16	The effect of coarse second-phase particles and fine precipitates on microstructure refinement and mechanical properties of severely deformed Al alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 394, 399-410.	5.6	100
17	Deformation mechanisms in an austenitic single-phase duplex microstructured steel with nanotwinned grains. Acta Materialia, 2014, 81, 487-500.	7.9	92
18	Grain boundary segregation in Feâ€“Mnâ€“C twinning-induced plasticity steels studied by correlative electron backscatter diffraction and atom probe tomography. Acta Materialia, 2015, 83, 37-47.	7.9	85

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19	Dislocation density measurement by electron channeling contrast imaging in a scanning electron microscope. Scripta Materialia, 2012, 66, 343-346.	5.2	81
20	Microbanding mechanism in an Feâ€“Mnâ€“C high-Mn twinning-induced plasticity steel. Scripta Materialia, 2013, 69, 53-56.	5.2	74
21	Study of internal stresses in a TWIP steel analyzing transient and permanent softening during reverse shear tests. Journal of Materials Science, 2010, 45, 6604-6610.	3.7	45
22	High temperature creep behaviour of an FeAl intermetallic strengthened by nanoscale oxide particles. International Journal of Plasticity, 2008, 24, 1205-1223.	8.8	39
23	Adiabatic temperature increase associated with deformation twinning and dislocation plasticity. Acta Materialia, 2012, 60, 3994-4004.	7.9	39
24	Twinning behavior of orthorhombic-Î±â€³martensite in a Ti-7.5Mo alloy. Science and Technology of Advanced Materials, 2019, 20, 401-411.	6.1	39
25	Influence of processing temperature and die angle on the grain microstructure produced by severe deformation of an Alâ€“7% Si alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 475, 268-278.	5.6	38
26	Stabilization of metastable phases in Mgâ€“Li alloys by high-pressure torsion. Scripta Materialia, 2013, 68, 583-586.	5.2	36
27	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
28	Matrix grain refinement in Alâ€“TiAl composites by severe plastic deformation: Influence of particle size and processing route. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 425, 131-137.	5.6	30
29	High performance very low frequency forced pendulum. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 370, 435-439.	5.6	29
30	Recovery of deformation substructure and coarsening of particles on annealing severely plastically deformed Alâ€“Mgâ€“Si alloy and analysis of strengthening mechanisms. Journal of Materials Research, 2006, 21, 329-342.	2.6	28
31	In situanalysis of the tensile deformation mechanisms in extruded Mgâ€“1Mnâ€“1Nd (wt%). Philosophical Magazine, 2013, 93, 598-617.	1.6	26
32	The high-temperature creep behaviour of an Feâ€“Alâ€“Zr alloy strengthened by intermetallic precipitates. Scripta Materialia, 2007, 57, 449-452.	5.2	25
33	Analysis of strengthening mechanisms in a severely-plastically-deformed Alâ€“Mgâ€“Si alloy with submicron grain size. Journal of Materials Science, 2007, 42, 1439-1443.	3.7	25
34	The effect of geometrically necessary dislocations on grain refinement during severe plastic deformation and subsequent annealing of Alâ€“7% Si. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 493, 141-147.	5.6	25
35	<i>Ab initio</i>-guided design of twinning-induced plasticity steels. MRS Bulletin, 2016, 41, 320-325.	3.5	25
36	Study of {332}<113> twinning in a multilayered Ti-10Mo-xFe (x = 1â€“3) alloy by ECCI and EBSD. Science and Technology of Advanced Materials, 2016, 17, 220-228.	6.1	25

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37	Effect of equal channel angular pressing on strength and ductility of Alâ€“TiAl composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 396, 3-10.	5.6	24
38	Evolution of microstructure of an iron aluminide during severe plastic deformation by heavy rolling. Journal of Materials Science, 2008, 43, 7438-7444.	3.7	17
39	Precipitation in ductile Feâ€“18Alâ€“5Cr alloys with additions of Mo, W and C and effects on high-temperature strength. Intermetallics, 2009, 17, 404-413.	3.9	17
40	Microstructural study of microbands in a Fe-30Mn-6.5Al-0.3C low-density steel deformed at cryogenic temperature by combined electron channeling contrast imaging and electron backscatter diffraction. Acta Materialia, 2022, 233, 117980.	7.9	17
41	Refinement of precipitates and deformation substructure in an Alâ€“Cuâ€“Li alloy during heavy rolling at elevated temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 492, 268-275.	5.6	16
42	Influence of nanoprecipitates on the creep strength and ductility of a Feâ€“Niâ€“Al alloy. International Journal of Plasticity, 2009, 25, 1011-1023.	8.8	15
43	Study of isothermal Î´â€² (Al3Li) precipitation in an Alâ€“Li alloy by thermoelectric power. Journal of Materials Science, 2011, 46, 3144-3150.	3.7	14
44	Multi-Scale Correlative Microscopy Investigation of Both Structure and Chemistry of Deformation Twin Bundles in Feâ€“Mnâ€“C Steel. Microscopy and Microanalysis, 2013, 19, 1581-1585.	0.4	14
45	Hardening and softening in milled nanostructured FeAl on annealing. Scripta Materialia, 2007, 57, 369-372.	5.2	13
46	Study of Deformation Twinning and Planar Slip in a TWIP Steel by Electron Channeling Contrast Imaging in a SEM. Materials Science Forum, 0, 702-703, 523-529.	0.3	13
47	Microstructureâ€“magnetic property relations in grain-oriented electrical steels: quantitative analysis of the sharpness of the Goss orientation. Journal of Materials Science, 2014, 49, 269-276.	3.7	13
48	Plastic accommodation at homophase interfaces between nanotwinned and recrystallized grains in an austenitic duplex-microstructured steel. Science and Technology of Advanced Materials, 2016, 17, 29-36.	6.1	13
49	Analysis of FIBâ€induced damage by electron channelling contrast imaging in the SEM. Journal of Microscopy, 2017, 265, 51-59.	1.8	13
50	Quantitative analysis of electron channeling contrast of dislocations. Ultramicroscopy, 2019, 206, 112826.	1.9	11
51	{332}<113> detwinning in a multilayered bcc-Tiâ€“10Moâ€“Fe alloy. Journal of Materials Science, 2017, 52, 7858-7867.	3.7	9
52	Multi-scale three-dimensional analysis on local arrestability of intergranular crack in high-strength martensitic steel. Acta Materialia, 2022, 234, 118053.	7.9	9
53	Quantitative analysis of {332}ã€ˆ113ã€‰ twinning in a Ti-15Mo alloy by <i>in situ</i> scanning electron microscopy. Science and Technology of Advanced Materials, 2018, 19, 474-483.	6.1	7
54	Recrystallization in Fe3Al following rolling to high levels of strain. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 528, 143-153.	5.6	6

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55	Internal friction behavior in SiC particle reinforced 8090 Alâ€“Li metal matrix composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 370, 555-559.	5.6	5
56	Analysis of Electron Channeling Contrast of Stacking Faults in fcc Materials. Microscopy and Microanalysis, 2021, 27, 318-325.	0.4	5
57	New insights on quantitative microstructure characterization by electron channeling contrast imaging under controlled diffraction conditions in SEM. Microscopy and Microanalysis, 2012, 18, 686-687.	0.4	3
58	Twinning and Detwinning Mechanisms in Beta-Ti Alloys. Materials Science Forum, 2018, 941, 821-826.	0.3	2
59	Revealing the Strain-Hardening Mechanisms of Advanced High-Mn Steels by Multi-Scale Microstructure Characterization. Materials Science Forum, 0, 783-786, 755-760.	0.3	1
60	Deformation mechanisms and effect of oxygen addition on mechanical properties of Ti-7.5Mo alloy with Î±â€•martensite. MATEC Web of Conferences, 2020, 321, 11059.	0.2	1
61	Î´ Precipitation Kinetics of SiC Particle Reinforced 8090 Al-Li Alloy. Materials Science Forum, 2000, 331-337, 1181-1186.	0.3	0
62	The Influence of Work Hardening, Internal Stresses, and Stress Relaxation on Ductility of Ultrafine Grained Materials Prepared by Severe Plastic Deformation. Materials Science Forum, 2009, 633-634, 263-272.	0.3	0
63	On the Controversy about the Presence of Grain Boundary Sliding in Mg AZ31. Materials Science Forum, 2012, 735, 22-25.	0.3	0
64	Study of Dislocation Substructures in High-Mn Steels by Electron Channeling Contrast Imaging. Materials Science Forum, 0, 783-786, 750-754.	0.3	0
65	B13-O-02Electron Channeling Contrast Imaging: A powerful technique to quantitative microstructure characterization in the SEM. Microscopy (Oxford, England), 2015, 64, i32.1-i32.	1.5	0
66	Microstructural analysis in the Fe-30.5Mn-8.0Al-1.2C and Fe-30.5Mn-2.1Al-1.2C steels upon cold rolling. Revista Escola De Minas, 2016, 69, 167-173.	0.1	0
67	Analysis of dislocation configurations in a [0 0 1] fcc single crystal by electron channeling contrast imaging in the SEM. Microscopy (Oxford, England), 2016, 66, 63-67.	1.5	0
68	Microstructure-twinning relations in beta-Ti alloys. MATEC Web of Conferences, 2020, 321, 12021.	0.2	0
69	The influence of severe plastic deformation on microstructure of CoCrFeMnNi High-Entropy Alloy.. The Proceedings of the Materials and Mechanics Conference, 2016, 2016, PS-36.	0.0	0