IvÃ¡n GutiÃ©rrez-Urrutia

List of Publications by Year
in descending order

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

#	Article	IF	Citations
1	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
2	Multi-scale three-dimensional analysis on local arrestability of intergranular crack in high-strength martensitic steel. Acta Materialia, 2022, 234, 118053.	7.9	9
3	Analysis of Electron Channeling Contrast of Stacking Faults in fcc Materials. Microscopy and Microanalysis, 2021, 27, 318-325.	0.4	5
4	Microstructure-twinning relations in beta-Ti alloys. MATEC Web of Conferences, 2020, 321, 12021.	0.2	0
5	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
6	Quantitative analysis of electron channeling contrast of dislocations. Ultramicroscopy, 2019, 206, 112826.	1.9	11
7	Twinning behavior of orthorhombic-Î±â€•martensite in a Ti-7.5Mo alloy. Science and Technology of Advanced Materials, 2019, 20, 401-411.	6.1	39
8	Twinning and Detwinning Mechanisms in Beta-Ti Alloys. Materials Science Forum, 2018, 941, 821-826.	0.3	2
9	Quantitative analysis of {332}ã€˚113ã€‰ twinning in a Ti-15Mo alloy by in situ scanning electron microscopy. Science and Technology of Advanced Materials, 2018, 19, 474-483.	6.1	7
10	{332}<113> detwinning in a multilayered bcc-Tiâ€“10Moâ€“Fe alloy. Journal of Materials Science, 2017, 52, 7858-7867.	3.7	9
11	Analysis of FIBâ€•induced damage by electron channelling contrast imaging in the SEM. Journal of Microscopy, 2017, 265, 51-59.	1.8	13
12	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
13	Ab initio-guided design of twinning-induced plasticity steels. MRS Bulletin, 2016, 41, 320-325.	3.5	25
14	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
15	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
16	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
17	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
18	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

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19	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
20	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
21	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
22	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
23	Deformation mechanisms in an austenitic single-phase duplex microstructured steel with nanotwinned grains. Acta Materialia, 2014, 81, 487-500.	7.9	92
24	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
25	Measuring the critical resolved shear stresses in Mg alloys by instrumented nanoindentation. Acta Materialia, 2014, 71, 283-292.	7.9	128
26	Coupling of Electron Channeling with EBSD: Toward the Quantitative Characterization of Deformation Structures in the SEM. Jom, 2013, 65, 1229-1236.	1.9	110
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	Revealing the strain-hardening behavior of twinning-induced plasticity steels: Theory, simulations, experiments. Acta Materialia, 2013, 61, 494-510.	7.9	429
29	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
30	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
31	Stabilization of metastable phases in Mgâ€“Li alloys by high-pressure torsion. Scripta Materialia, 2013, 68, 583-586.	5.2	36
32	Microbanding mechanism in an Feâ€“Mnâ€“C high-Mn twinning-induced plasticity steel. Scripta Materialia, 2013, 69, 53-56.	5.2	74
33	In situanalysis of the tensile deformation mechanisms in extruded Mgâ€“1Mnâ€“1Nd (wt%). Philosophical Magazine, 2013, 93, 598-617.	1.6	26
34	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
35	On the Controversy about the Presence of Grain Boundary Sliding in Mg AZ31. Materials Science Forum, 2012, 735, 22-25.	0.3	0
36	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

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37	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
38	In situ analysis of the tensile and tensile-creep deformation mechanisms in rolled AZ31. Acta Materialia, 2012, 60, 1889-1904.	7.9	149
39	Adiabatic temperature increase associated with deformation twinning and dislocation plasticity. Acta Materialia, 2012, 60, 3994-4004.	7.9	39
40	Dislocation density measurement by electron channeling contrast imaging in a scanning electron microscope. Scripta Materialia, 2012, 66, 343-346.	5.2	81
41	Grain size effect on strain hardening in twinning-induced plasticity steels. Scripta Materialia, 2012, 66, 992-996.	5.2	232
42	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
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	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
45	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
46	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
47	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
48	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
49	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
50	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
51	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
52	High temperature creep behaviour of an FeAl intermetallic strengthened by nanoscale oxide particles. International Journal of Plasticity, 2008, 24, 1205-1223.	8.8	39
53	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
54	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

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55	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
56	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
57	Hardening and softening in milled nanostructured FeAl on annealing. Scripta Materialia, 2007, 57, 369-372.	5.2	13
58	The high-temperature creep behaviour of an Feâ€“Alâ€“Zr alloy strengthened by intermetallic precipitates. Scripta Materialia, 2007, 57, 449-452.	5.2	25
59	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
60	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
61	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
62	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
63	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
64	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
65	High performance very low frequency forced pendulum. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 370, 435-439.	5.6	29
66	Î´ Precipitation Kinetics of SiC Particle Reinforced 8090 Al-Li Alloy. Materials Science Forum, 2000, 331-337, 1181-1186.	0.3	0
67	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
68	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
69	Study of Dislocation Substructures in High-Mn Steels by Electron Channeling Contrast Imaging. Materials Science Forum, 0, 783-786, 750-754.	0.3	0