Isaac Toda-Caraballo

List of Publications by Year
in descending order

40 papers	1,445 citations	471509 17 h-index	345221 36 g-index
43 all docs	43 docs citations	43 times ranked	1265 citing authors

#	Article	IF	Citations
1	Modelling solid solution hardening in high entropy alloys. Acta Materialia, 2015, 85, 14-23.	7.9	456
2	Understanding the factors influencing yield strength on Mg alloys. Acta Materialia, 2014, 75, 287-296.	7.9	119
3	A criterion for the formation of high entropy alloys based on lattice distortion. Intermetallics, 2016, 71, 76-87.	3.9	101
4	A general formulation for solid solution hardening effect in multicomponent alloys. Scripta Materialia, 2017, 127, 113-117.	5.2	99
5	Interatomic spacing distribution in multicomponent alloys. Acta Materialia, 2015, 97, 156-169.	7.9	92
6	Designing high entropy alloys employing thermodynamics and Gaussian process statistical analysis. Materials and Design, 2017, 115, 486-497.	7.0	76
7	Influence of the Î±â€“Î±â€² phase separation on the tensile properties of Fe-base ODS PM 2000 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 7931-7938.	5.6	43
8	Evolutionary design of strong and stable high entropy alloys using multi-objective optimisation based on physical models, statisticsÂandÂthermodynamics. Materials and Design, 2018, 143, 185-195.	7.0	43
9	Understanding the factors controlling rolling contact fatigue damage in VIM-VAR M50 steel. International Journal of Fatigue, 2018, 108, 68-78.	5.7	41
10	Damage evolution around primary carbides under rolling contact fatigue in VIMâ€“VAR M50. International Journal of Fatigue, 2016, 91, 59-67.	5.7	40
11	Unravelling the materials genome: Symmetry relationships in alloy properties. Journal of Alloys and Compounds, 2013, 566, 217-228.	5.5	37
12	Computational design of light and strong high entropy alloys (HEA): Obtainment of an extremely high specific solid solution hardening. Scripta Materialia, 2018, 156, 120-123.	5.2	31
13	Simulation and Modeling in High Entropy Alloys. Jom, 2017, 69, 2137-2149.	1.9	28
14	Effect of residual stress on recrystallization behavior of mechanically alloyed steels. Scripta Materialia, 2010, 62, 41-44.	5.2	27
15	A molecular dynamics study of grain boundary free energies, migration mechanisms and mobilities in a bcc Feâ€“20Cr alloy. Acta Materialia, 2012, 60, 1116-1128.	7.9	27
16	Chemical banding revealed by chemical etching in a cold-rolled metastable stainless steel. Materials Characterization, 2013, 84, 142-152.	4.4	22
17	Influence of laminar plasma quenching on rolling contact fatigue behaviour of high-speed railway wheel steel. International Journal of Fatigue, 2020, 137, 105668.	5.7	18
18	Assessing the scale contributing factors of three carbide-free bainitic steels: A complementary theoretical and experimental approach. Materials and Design, 2021, 197, 109217.	7.0	18

#	Article	IF	Citations
19	Drag effects on grain growth dynamics. Computational Materials Science, 2013, 68, 95-106.	3.0	17
20	An integrated-model for austenite yield strength considering the influence of temperature and strain rate in lean steels. Materials and Design, 2020, 188, 108435.	7.0	17
21	Modelling and Design of Magnesium and High Entropy Alloys Through Combining Statistical and Physical Models. Jom, 2015, 67, 108-117.	1.9	11
22	Tension-shear multiaxial fatigue damage behavior of high-speed railway wheel rim steel. International Journal of Fatigue, 2020, 133, 105416.	5.7	11
23	Influence of cast part size on macro- and microsegregation patterns in a high carbon high silicon steel. Journal of Materials Research and Technology, 2020, 9, 3013-3025.	5.8	11
24	Heterogeneous austenite grain growth in martensitic 9cr steel: Coupled influence of initial metallurgical state and heating rate. Materials Science and Technology, 2013, 29, 1254-1266.	1.6	9
25	Effect of the Starting Microstructure in the Formation of Austenite at the Intercritical Range in Ductile Iron Alloyed with Nickel and Copper. International Journal of Metalcasting, 2020, 14, 836-845.	1.9	9
26	Role of strain heterogeneity on recrystallisation of oxide dispersion strengthened Feâ€“Crâ€“Al alloys for high-temperature applications. Journal of Materials Science, 2012, 47, 5605-5616.	3.7	8
27	Analysis of the Combined Strengthening Effect of Solute Atoms and Precipitates on Creep of Aluminum Alloys. Advanced Engineering Materials, 2020, 22, 1901355.	3.5	8
28	Determination of hot and cold rolling textures of steels: Combined Bayesian neural network model. Materials Science and Technology, 2012, 28, 321-333.	1.6	6
29	Applying multiobjective RBFNNs optimization and feature selection to a mineral reduction problem. Expert Systems With Applications, 2010, 37, 4050-4057.	7.6	5
30	Effect of the Microsegregation on Martensitic and Bainitic Reactions in a High Carbon-High Silicon Cast Steel. Metals, 2020, 10, 574.	2.3	4
31	Influence of plastic deformation on recrystallized microstructure of Fe-base ods alloy. Metals and Materials International, 2012, 18, 799-804.	3.4	3
32	Heterogeneous austenite grain growth in ASTM A213 Grade T91 steels: Analysis of austenitic grain size distribution using kernel density estimation methodology. Materials Science and Technology, 2014, 30, 921-929.	1.6	2
33	Modelling the formation of austenite in the intercritical interval in ductile iron. Journal of Materials Research and Technology, 2022, 16, 1445-1457.	5.8	2
34	Discovery of New Materials and Heat Treatments: Accelerated Metallurgy and the Case of Ferrous and Magnesium Alloys. Materials Science Forum, 0, 783-786, 2188-2193.	0.3	1
35	Experimental and computational analysis of abnormal grain growth. Materials Science and Technology, 2015, 31, 1618-1626.	1.6	1
36	DiseÃ±o de redes neuronales con aprendizaje combinado de retropropagaciÃ³n y bÃºsqueda aleatoria progresiva aplicado a la determinaciÃ³n de austenita retenida en aceros TRIP. Revista De Metalurgia, 2010, 46, 499-510.	0.5	1

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37	Microstructural Stability of the CoCrFe2Ni2 High Entropy Alloys with Additions of Cu and Mo. Metals, 2021, 11, 1994.	2.3	1
38	Influence of Plastic Deformation on Recrystallized Microstructure of Fe-Base ODS Alloy. Materials Science Forum, 2010, 638-642, 2209-2214.	0.3	0
39	Tailoring the Mechanical Properties Through the Control of Heat Treatments in aÂPrecipitation Hardening Metastable Stainless Steel. BHM-Zeitschrift Fuer Rohstoffe Geotechnik Metallurgie Werkstoffe Maschinen-Und Anlagentechnik, 2020, 165, 26-32.	1.0	0
40	Generalized universal equation of states for magnetic materials: A novel formulation for an interatomic potential in Fe. Physical Review Materials, 2022, 6, .	2.4	0