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 the formation of austenite in the intercritical interval in ductile iron. Journal of Materials Research and Technology, 2022, 16, 1445-1457.	5.8	2
2	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
3	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
4	Microstructural Stability of the CoCrFe2Ni2 High Entropy Alloys with Additions of Cu and Mo. Metals, 2021, 11, 1994.	2.3	1
5	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
6	Tension-shear multiaxial fatigue damage behavior of high-speed railway wheel rim steel. International Journal of Fatigue, 2020, 133, 105416.	5.7	11
7	Effect of the Microsegregation on Martensitic and Bainitic Reactions in a High Carbon-High Silicon Cast Steel. Metals, 2020, 10, 574.	2.3	4
8	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
9	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
10	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
11	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
12	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
13	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
14	Understanding the factors controlling rolling contact fatigue damage in VIM-VAR M50 steel. International Journal of Fatigue, 2018, 108, 68-78.	5.7	41
15	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
16	Simulation and Modeling in High Entropy Alloys. Jom, 2017, 69, 2137-2149.	1.9	28
17	Designing high entropy alloys employing thermodynamics and Gaussian process statistical analysis. Materials and Design, 2017, 115, 486-497.	7.0	76
18	A general formulation for solid solution hardening effect in multicomponent alloys. Scripta Materialia, 2017, 127, 113-117.	5.2	99

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19	Damage evolution around primary carbides under rolling contact fatigue in VIMâ€“VAR M50. International Journal of Fatigue, 2016, 91, 59-67.	5.7	40
20	A criterion for the formation of high entropy alloys based on lattice distortion. Intermetallics, 2016, 71, 76-87.	3.9	101
21	Experimental and computational analysis of abnormal grain growth. Materials Science and Technology, 2015, 31, 1618-1626.	1.6	1
22	Modelling and Design of Magnesium and High Entropy Alloys Through Combining Statistical and Physical Models. Jom, 2015, 67, 108-117.	1.9	11
23	Interatomic spacing distribution in multicomponent alloys. Acta Materialia, 2015, 97, 156-169.	7.9	92
24	Modelling solid solution hardening in high entropy alloys. Acta Materialia, 2015, 85, 14-23.	7.9	456
25	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
26	Understanding the factors influencing yield strength on Mg alloys. Acta Materialia, 2014, 75, 287-296.	7.9	119
27	Chemical banding revealed by chemical etching in a cold-rolled metastable stainless steel. Materials Characterization, 2013, 84, 142-152.	4.4	22
28	Unravelling the materials genome: Symmetry relationships in alloy properties. Journal of Alloys and Compounds, 2013, 566, 217-228.	5.5	37
29	Drag effects on grain growth dynamics. Computational Materials Science, 2013, 68, 95-106.	3.0	17
30	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
31	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
32	Influence of plastic deformation on recrystallized microstructure of Fe-base ods alloy. Metals and Materials International, 2012, 18, 799-804.	3.4	3
33	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
34	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
35	Effect of residual stress on recrystallization behavior of mechanically alloyed steels. Scripta Materialia, 2010, 62, 41-44.	5.2	27
36	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

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37	Applying multiobjective RBFNNs optimization and feature selection to a mineral reduction problem. Expert Systems With Applications, 2010, 37, 4050-4057.	7.6	5
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	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
40	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