Claudio Aguilar

List of Publications by Year
in descending order

97 papers	1,165 citations	471509 17 h-index	477307 29 g-index
98 all docs	98 docs citations	98 times ranked	904 citing authors

#	Article	IF	Citations
1	Enhanced mechanical and electrical properties of novel graphene reinforced copper matrix composites. Journal of Alloys and Compounds, 2019, 777, 309-316.	5.5	68
2	Mechanical alloying of Cuâ€“Mo powder mixtures and thermodynamic study of solubility. Materials Letters, 2007, 61, 929-933.	2.6	64
3	A thermodynamic approach to energy storage on mechanical alloying of the Cuâ€“Cr system. Scripta Materialia, 2007, 57, 213-216.	5.2	62
4	Study on the microstructural evolution of Ti-Nb based alloy obtained by high-energy ball milling. Journal of Alloys and Compounds, 2017, 720, 254-263.	5.5	54
5	FEA evaluation of the Al4C3 formation effect on the Youngâ€™s modulus of carbon nanotube reinforced aluminum matrix composites. Composite Structures, 2015, 127, 420-425.	5.8	48
6	Study and methods of analysis of mechanically alloyed Cuâ€“Mo powders. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 464, 288-294.	5.6	44
7	Structural study of nanocrystalline solid solution of Cuâ€“Mo obtained by mechanical alloying. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 548, 189-194.	5.6	41
8	Synthesis and characterization of Tiâ€“Taâ€“Nbâ€“Mn foams. Materials Science and Engineering C, 2016, 58, 420-431.	7.3	37
9	Mechanical alloying of Cuâ€“xCr (x=3, 5 and 8wt.%) alloys. Journal of Alloys and Compounds, 2010, 504, 102-109.	5.5	31
10	Simple thermodynamic model of the extension of solid solution of Cuâ€“Mo alloys processed by mechanical alloying. Materials Chemistry and Physics, 2011, 128, 539-542.	4.0	30
11	Solid solution and amorphous phase in Tiâ€“Nbâ€“Taâ€“Mn systems synthesized by mechanical alloying. Journal of Alloys and Compounds, 2016, 670, 346-355.	5.5	30
12	Thermodynamic analysis of the change of solid solubility in a binary system processed by mechanical alloying. Journal of Alloys and Compounds, 2009, 471, 336-340.	5.5	27
13	Fabrication of nanocrystalline alloys Cuâ€“Crâ€“Mo super satured solid solution by mechanical alloying. Materials Chemistry and Physics, 2014, 146, 493-502.	4.0	26
14	Effect of porosity on mechanical and electrochemical properties of Tiâ€“6Alâ€“4V alloy. Electrochimica Acta, 2020, 338, 135858.	5.2	24
15	Development of a novel fcc structure for an amorphous-nanocrystalline Ti-33Nb-4Mn (at.%) ternary alloy. Materials Characterization, 2018, 135, 46-56.	4.4	21
16	In situ monitoring of dislocation proliferation during plastic deformation using ultrasound. International Journal of Plasticity, 2017, 97, 178-193.	8.8	19
17	Microstructural and mechanical characterization of copper, nickel, and Cu-based alloys obtained by mechanical alloying and hot pressing. Materials Letters, 2017, 209, 509-512.	2.6	19
18	Simplified fractal FEA model for the estimation of the Youngâ€™s modulus of Ti foams obtained by powder metallurgy. Materials and Design, 2015, 83, 276-283.	7.0	18

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19	The influence of mechanical activation process on the microstructure and mechanical properties of bulk Ti2AlN MAX phase obtained by reactive hot pressing. Ceramics International, 2019, 45, 17793-17799.	4.8	18
20	Indications of the formation of an oversaturated solid solution during hydrogenation of Mgâ€“Ni based nanocomposite produced by mechanical alloying. International Journal of Hydrogen Energy, 2009, 34, 5429-5438.	7.1	16
21	Effect of mechanical activation on the barite carbothermic reduction. International Journal of Mineral Processing, 2012, 102-103, 124-129.	2.6	16
22	DEMâ€“FEA estimation of pores arrangement effect on the compressive Youngâ€™s modulus for Mg foams. Computational Materials Science, 2015, 110, 281-286.	3.0	16
23	Linear Versus Nonlinear Acoustic Probing of Plasticity in Metals: A Quantitative Assessment. Materials, 2018, 11, 2217.	2.9	16
24	Evolution of oxide film on the internal porosity of Ti-30Nb-13Ta-2Mn alloy foam. Electrochimica Acta, 2018, 283, 676-682.	5.2	16
25	Influence of Porosity on the Elastic Modulus of Ti-Zr-Ta-Nb Foams with a Low Nb Content. Metals, 2019, 9, 176.	2.3	16
26	The effect of Staphylococcus aureus on the electrochemical behavior of porous Ti-6Al-4V alloy. Bioelectrochemistry, 2020, 136, 107622.	4.6	16
27	Improving the mechanical strength of ternary beta titanium alloy (Ti-Ta-Sn) foams, using a bimodal microstructure. Materials and Design, 2020, 195, 108945.	7.0	14
28	Thermal stability of amorphous Mg50Ni50 alloy produced by mechanical alloying. Journal of Non-Crystalline Solids, 2010, 356, 120-123.	3.1	13
29	Effect of added porosity on a novel porous Ti-Nb-Ta-Fe-Mn alloy exposed to simulated body fluid. Materials Science and Engineering C, 2020, 111, 110758.	7.3	13
30	Synthesis of Agâ€“ZnO powders by means of a mechanochemical process. Applied Physics A: Materials Science and Processing, 2014, 117, 871-875.	2.3	12
31	Effects of Zr on the amorphization of Cu-Ni-Zr alloys prepared by mechanical alloying. Journal of Alloys and Compounds, 2018, 765, 771-781.	5.5	12
32	Structural Study of Novel Nanocrystalline fcc Ti-Ta-Sn Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 2061-2065.	2.2	12
33	Effect of amorphous Mg50Ni50 on hydriding and dehydriding behavior of Mg2Ni alloy. Materials Characterization, 2011, 62, 442-450.	4.4	11
34	Microstructure and Mechanical Properties of Copper, Nickel and Ternary Alloys Cu-Ni-Zr Obtained by Mechanical Alloying and Hot Pressing. MRS Advances, 2017, 2, 2831-2836.	0.9	11
35	Composite materials made of waste tires and polyurethane resin: A case study of flexible tiles successfully applied in industry. Case Studies in Construction Materials, 2021, 15, e00681.	1.7	11
36	Mechanically enhanced novel Ti-based alloy foams obtained by hot pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 759, 112-123.	5.6	10

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37	Semi-empirical computational thermodynamic calculations used to predict carbide dissociation in Fe matrix. Materials Chemistry and Physics, 2020, 240, 122313.	4.0	10
38	Mechanical alloying and subsequent heat treatment of Agâ€“Zn powders. Transactions of Nonferrous Metals Society of China, 2013, 23, 2071-2078.	4.2	9
39	Improvement of FEA estimations for compression behavior of Mg foams based on experimental observations. Computational Materials Science, 2014, 91, 359-363.	3.0	9
40	Fractal analysis of the heat treatment response for multiphase Al alloys. Materials Research, 2016, 19, 628-639.	1.3	9
41	Advances on indirect methods to evaluate tool wear for Radiata pine solid wood molding. Wear, 2016, 350-351, 27-34.	3.1	9
42	Study of silicon carbide dissociation into Fe and Fe C matrixes produced by die pressing and sintering. Materials Chemistry and Physics, 2020, 253, 123442.	4.0	9
43	Production of Agâ^'ZnO powders by hot mechanochemical processing. Transactions of Nonferrous Metals Society of China, 2019, 29, 365-373.	4.2	8
44	Effect of Sn on synthesis of nanocrystalline Ti-based alloy with fcc structure. Transactions of Nonferrous Metals Society of China, 2020, 30, 2119-2131.	4.2	8
45	Synthesis of nanostructured carbon derived from the solid-state reaction between iron and boron carbide. Materials Chemistry and Physics, 2022, 276, 125396.	4.0	8
46	An Overview of Highly Porous Titanium Processed via Metal Injection Molding in Combination with the Space Holder Method. Metals, 2022, 12, 783.	2.3	8
47	Sustainability and Circular Economy Perspectives of Materials for Thermoelectric Modules. Sustainability, 2022, 14, 5987.	3.2	8
48	A novel solid state method for manufacturing Al foams by over solution heat treatment. Materials Letters, 2016, 174, 6-9.	2.6	7
49	Characterization of Al-Si-Cu-Mg foams manufactured in-situ. Journal of Alloys and Compounds, 2017, 722, 797-808.	5.5	7
50	Influence of the Mn content on the TiNbxMn alloys with a novel fcc structure. Journal of Alloys and Compounds, 2018, 746, 601-610.	5.5	7
51	Production of aluminum foams with hierarchical porosity by a combination of two different manufacturing methods. Journal of Alloys and Compounds, 2020, 831, 154780.	5.5	6
52	Thermodynamic Analysis of the Formation of FCC and BCC Solid Solutions of Ti-Based Ternary Alloys by Mechanical Alloying. Metals, 2020, 10, 510.	2.3	6
53	Evolution of synthesis of FCC nanocrystalline solid solution and amorphous phase in the Ti-Ta based alloy by high milling energy. Journal of Alloys and Compounds, 2021, 854, 155980.	5.5	6
54	Materials analysis applying thermodynamic (MAAT) software: AÂfriendly and free tool to analyze the formation of solid solutions, amorphous phases and intermetallic compounds. Computer Physics Communications, 2021, 259, 107573.	7.5	6

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55	Effect of hot pressing and hot isostatic pressing on the microstructure, hardness, and wear behavior of nickel. Materials Letters, 2020, 273, 127944.	2.6	6
56	Influence of the synthesis technique on tribological behavior of a Ti-6Al-4V alloy. Materials Letters, 2020, 281, 128627.	2.6	6
57	A Study on the Phase Formation and Magnetic Properties of FeNiCoCuM (M = Mo, Nb) High-Entropy Alloys Processed Through Powder Metallurgy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 1044-1058.	2.2	5
58	Structural study of Cu-Cr mechanical alloying powders. Revista De Metalurgia, 2006, 42, .	0.5	5
59	Fractal and Conventional Analysis of Cu Content Effect on the Microstructure of Al-Si-Cu-Mg Alloys. Materials Research, 2020, 23, .	1.3	5
60	Degradation of metalâ€“polymer composite submitted to uniaxial deformations in 3.5% NaCl solution. Journal of Adhesion Science and Technology, 2013, 27, 939-950.	2.6	4
61	Characterization of phase changes during fabrication of copper alloys, crystalline and non-crystalline, prepared by mechanical alloying. Ingenieria E Investigacion, 2016, 36, 102.	0.4	4
62	The effect of alumina particles on the microstructural and mechanical properties of copper foams fabricated by space-holder method. Materials Research Express, 2018, 5, 056514.	1.6	4
63	Effect of Heat Treatments and SiC Content in the Mechanical Properties and Microstructure of Self-Lubricating Steels. Materials Research, 2018, 21, .	1.3	4
64	Synthesis and Electrochemical Properties of Ti-Si Alloys Prepared by Mechanical Alloying and Heat Treatment. Metals, 2018, 8, 417.	2.3	4
65	Effects of Mo Concentration on the Structural and Corrosion Properties of Cuâ€“Alloy. Metals, 2019, 9, 1307.	2.3	4
66	A Tribological and Ion Released Research of Ti-Materials for Medical Devices. Materials, 2022, 15, 131.	2.9	4
67	FabricaciÃ³n de vidrios metÃ¡licos base cobre: evoluciÃ³n de las fases durante el procesode aleaciÃ³n mecÃ¡nica. Revista Materia, 2015, 20, 705-713.	0.2	3
68	Estudio de los cambios microestructurales del Ni al ser sometido a molienda de alta energÃa. Revista Materia, 2015, 20, 621-626.	0.2	3
69	Production and characterisation of mechanical properties of Tiâ€“Nbâ€“Taâ€“Mn alloys foams for biomedical applications. Powder Metallurgy, 2015, 58, 12-15.	1.7	3
70	Thermodynamic analysis of Fe contamination in Cu-Mo alloys processed by mechanical alloying. Philosophical Magazine Letters, 2018, 98, 341-349.	1.2	3
71	Study of the Adhesion Mechanism of Acidithiobacillus ferrooxidans to Pyrite in Fresh and Saline Water. Minerals (Basel, Switzerland), 2019, 9, 306.	2.0	3
72	Study of the Effect of the Floating Die Compaction on Mechanical Properties of Titanium Foams. Metals, 2020, 10, 1621.	2.3	3

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73	Biodepression of Copper-Activated Pyrite with Acidithiobacillus ferrooxidans in Flotation with Fresh and Seawater. Minerals (Basel, Switzerland), 2021, 11, 1039.	2.0	3
74	Un estudio adicional de la cinÃ©tica de recristalizaciÃ³n y crecimiento de grano del acero twip laminado en frÃ¤o. Revista De Metalurgia, 2018, 54, 131.	0.5	3
75	An Overview of the Interactions Between Reinforcements and Al Matrices with Si, Cu And Mg as Alloying Elements in Aluminum Matrix Composites: Case of Oxide Reinforcements. Materials Research, 0, 25, .	1.3	3
76	AnÃ¡lisis de perfiles de difracciÃ³n de rayos X de una aleaciÃ³n Cu-8% en peso de Cr obtenida por medio de aleado mecÃ¡nico. Revista Materia, 2009, 14, 777-786.	0.2	2
77	Structural study by X-ray profile analysis and thermodynamics properties of Cu-Cr and Cu-Mo alloys processed by mechanical alloying. Acta Crystallographica Section A: Foundations and Advances, 2010, 66, s154-s154.	0.3	2
78	Synthesis and Characterization of Mechanical Alloyed Mg-Ni-Ca and Mg-Cu-Ca Amorphous Alloys. , 2015, 9, 428-434.		2
79	Powder Metallurgy Production of Ti-2ÂWtÂPct Si Alloy: Structural, Mechanical, and Electrochemical Characterization of the Sintered Material. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 6461-6469.	2.2	2
80	Effect of Ni addition and cryogenic hardening on the mechanical and tribological properties of self-lubricating steels produced by MIM. Powder Metallurgy, 2020, 63, 163-173.	1.7	2
81	Relationship between the chemical composition and atomic volume in Ag- x % at Zn (x â‰¤ 20) solid solutions. DYNA (Colombia), 2014, 81, 144.	0.4	2
82	Estudio de la influencia del Cu y Ni en la cinÃ©tica de transformaciÃ³n martensÃ¤tica inducida por deformaciÃ³n en fundiciones nodulares austemperadas. Revista De Metalurgia, 2013, 49, 213-222.	0.5	2
83	Particularities of the Formation and Modification of Si and Mg2si as Second Phases in Casting Al Alloys: Use of Shape Descriptors and Fractal Dimension. Transactions of the Indian Institute of Metals, 0, , .	1.5	2
84	Influence of plasma nitriding treatment on the micro-scale abrasive wear behavior of AISI 4140 steel. Materials Letters, 2022, 324, 132629.	2.6	2
85	Novel route to synthesize metallic alloys by applying low energy centrifugal field. Physica Status Solidi (B): Basic Research, 2017, 254, 1600641.	1.5	1
86	Characterization of Cu-30Mo Alloys Synthesized by Mechanical Alloying. Microscopy and Microanalysis, 2017, 23, 1944-1945.	0.4	1
87	ObtenciÃ³n del compuesto Mg2Ni0.5Co0.5 mediante aleado mecÃ¡nico y estudio de su comportamiento frente al proceso de hidruraciÃ³n. DYNA (Colombia), 2017, 84, 240-246.	0.4	1
88	Structural Characterization of Cu10Mo Alloy Synthesized by Mechanical Alloying. Microscopy and Microanalysis, 2018, 24, 800-801.	0.4	1
89	Synthesis, characterization and mechanical properties of Ti-Nb-Ta-Zr foams for biomedical applications. Materials Today: Proceedings, 2019, 13, 353-361.	1.8	1
90	Tribological Performance of Porous Tiâ€“Nbâ€“Taâ€“Feâ€“Mn Alloy in Dry Condition. Materials, 2020, 13, 3284.	2.9	1

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91	Analysis of microstructural parameters and quantification of phases in a plasma-nitrided AISI 4140 steel. Philosophical Magazine Letters, 2020, 100, 452-460.	1.2	1
92	Efecto del tiempo de molienda sobre la estabilidad termica del amorfo Mg₅₀Ni₅₀ producido mediante aleado mecÃ¡nico. Revista De Metalurgia, 2009, 45, 375-383.	0.5	1
93	EliminaciÃ³n de arsÃ©nico mediante flotaciÃ³n por adsorciÃ³n coloidal utilizando flÃ³culos de Fe(OH)₃ en un sistema de flotaciÃ³n por aire disuelto. Revista De Metalurgia, 2009, 45, 85-91.	0.5	1
94	Estudio de perfiles de difracciÃ³n de rayos X de una aleaciÃ³n Ti-13Ta-3Sn obtenida por aleado mecÃ¡nico. Revista Materia, 2020, 25, .	0.2	1
95	Evolution of Face-Centered Cubic Ti Alloys Transformation by X-ray Diffraction Profile Analysis in Mechanical Alloying. Metals, 2021, 11, 1841.	2.3	1
96	In-situ monitoring of dislocation proliferation during plastic deformation of 304L steel using ultrasound. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 849, 143416.	5.6	1
97	Organic Template-Free Synthesis of Mesoporous ZnO Microparticles by Sol-Gel Method and Low-Temperature Hydrothermal Treatment. Journal of Nanomaterials, 2022, 2022, 1-8.	2.7	0