Gui Wang

List of Publications by Year in descending order

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59 papers	1,617 citations	257450 24 h-index	315739 38 g-index
61 all docs	61 docs citations	61 times ranked	1300 citing authors

#	Article	IF	Citations
1	The role of ultrasonic treatment in refining the as-cast grain structure during the solidification of an Alâ€“2Cu alloy. Journal of Crystal Growth, 2014, 408, 119-124.	1.5	108
2	The dynamic response of a Î² titanium alloy to high strain rates and elevated temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 607, 417-426.	5.6	86
3	The dynamic response of a metastable Î² Tiâ€“Nb alloy to high strain rates at room and elevated temperatures. Acta Materialia, 2016, 105, 104-113.	7.9	71
4	Effects of deformation twinning on the mechanical properties of biodegradable Zn-Mg alloys. Bioactive Materials, 2019, 4, 8-16.	15.6	70
5	Constitutive modelling of the flow behaviour of a Î² titanium alloy at high strain rates and elevated temperatures using the Johnsonâ€“Cook and modified Zerilliâ€“Armstrong models. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 612, 71-79.	5.6	62
6	SPH/FE modeling of cutting force and chip formation during thermally assisted machining of Ti6Al4V alloy. Computational Materials Science, 2014, 84, 188-197.	3.0	58
7	Strength enhancement of a biomedical titanium alloy through a modified accumulative roll bonding technique. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 405-416.	3.1	56
8	Effects of phase stability and processing on the mechanical properties of Tiâ€“Nb based Î² Ti alloys. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 28, 15-25.	3.1	53
9	Nucleation and grain formation of pure Al under Pulsed Magneto-Oscillation treatment. Materials Letters, 2014, 130, 48-50.	2.6	53
10	On the deformation mechanisms and strain rate sensitivity of a metastable Î² Tiâ€“Nb alloy. Scripta Materialia, 2015, 107, 34-37.	5.2	52
11	Simulation of convective flow and thermal conditions during ultrasonic treatment of an Al-2Cu alloy. Computational Materials Science, 2017, 134, 116-125.	3.0	49
12	Role of ultrasonic treatment, inoculation and solute in the grain refinement of commercial purity aluminium. Scientific Reports, 2017, 7, 9729.	3.3	46
13	Modelling, simulation and experimental investigation of cutting forces during helical milling operations. International Journal of Advanced Manufacturing Technology, 2012, 63, 839-850.	3.0	45
14	Finite Element Modeling of Cutting Force and Chip Formation During Thermally Assisted Machining of Ti6Al4V Alloy. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2013, 135, .	2.2	41
15	Microstructural characteristics of adiabatic shear localization in a metastable beta titanium alloy deformed at high strain rate and elevated temperatures. Materials Characterization, 2015, 102, 103-113.	4.4	38
16	Effect of ultrasonic treatment on the alloying and grain refinement efficiency of a Mg â€“ Zr master alloy added to magnesium at hypo- and hyper-peritectic compositions. Journal of Crystal Growth, 2019, 512, 20-32.	1.5	37
17	Grain refinement of hypoeutectic Al-7wt.%Si alloy induced by an Alâ€“Vâ€“B master alloy. Journal of Alloys and Compounds, 2020, 812, 152022.	5.5	34
18	The Effect of Ultrasonic Melt Treatment on Macro-Segregation and Peritectic Transformation in an Al-19Si-4Fe Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 5579-5590.	2.2	31

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19	Numerical modeling of laser assisted machining of a beta titanium alloy. Computational Materials Science, 2014, 92, 149-156.	3.0	30
20	Influence of strain rate and crystallographic orientation on dynamic recrystallization of pure Zn during room-temperature compression. Journal of Materials Science and Technology, 2021, 86, 237-250.	10.7	30
21	Elevated temperature mechanical properties and microstructures of high pressure die cast magnesium AZ91 alloy cast with different section thicknesses. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 523, 282-288.	5.6	29
22	Strengthening of cast Tiâ€“25Nbâ€“3Moâ€“3Zrâ€“2Sn alloy through precipitation of Î± in two discrete crystallographic orientations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 6601-6606.	5.6	29
23	Dynamic recrystallization of pure zinc during high strain-rate compression at ambient temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 784, 139325.	5.6	28
24	Current understanding of the origin of equiaxed grains in pure metals during ultrasonic solidification and a comparison of grain formation processes with low frequency vibration, pulsed magnetic and electric-current pulse techniques. Journal of Materials Science and Technology, 2021, 65, 38-53.	10.7	26
25	Cutting force, chip formation, and tool wear during the laser-assisted machining a near-alpha titanium alloy BTi-6431S. International Journal of Advanced Manufacturing Technology, 2015, 79, 1949-1960.	3.0	25
26	Identifying the Stages during Ultrasonic Processing that Reduce the Grain Size of Aluminum with Added Al3Ti1B Master Alloy. Advanced Engineering Materials, 2017, 19, 1700264.	3.5	24
27	The effect of ultrasonic treatment on the mechanisms of grain formation in as-cast high purity zinc. Journal of Crystal Growth, 2018, 495, 20-28.	1.5	24
28	A comparative study of the role of solute, potent particles and ultrasonic treatment during solidification of pure Mg, Mgâ€“Zn and Mgâ€“Zr alloys. Journal of Magnesium and Alloys, 2020, , .	11.9	23
29	Experimental investigation of laser assisted machining of AZ91 magnesium alloy. International Journal of Precision Engineering and Manufacturing, 2013, 14, 1263-1265.	2.2	22
30	An investigation of the mechanical behaviour of fine tubes fabricated from a Tiâ€“25Nbâ€“3Moâ€“3Zrâ€“2Sn alloy. Materials and Design, 2015, 85, 256-265.	7.0	22
31	Microstructure, elastic deformation behavior and mechanical properties of biomedical Î²-type titanium alloy thin-tube used for stents. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 45, 132-141.	3.1	22
32	Manufacturing of graded titanium scaffolds using a novel space holder technique. Bioactive Materials, 2017, 2, 248-252.	15.6	21
33	The corrosion behaviours of plasma-sprayed Fe-based amorphous coatings. Surface Engineering, 2018, 34, 634-639.	2.2	21
34	Effect of ultrasonic melt treatment on intermetallic phase formation in a manganese-modified Al-17Si-2Fe alloy. Journal of Materials Processing Technology, 2019, 271, 346-356.	6.3	20
35	The cold-rolling behaviour of AZ31 tubes for fabrication of biodegradable stents. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 39, 292-303.	3.1	18
36	Thermal analysis of precipitation reactions in a Tiâ€“25Nbâ€“3Moâ€“3Zrâ€“2Sn alloy. Applied Physics A: Materials Science and Processing, 2012, 107, 835-841.	2.3	17

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37	Evolution of the microstructure and mechanical properties during fabrication of mini-tubes from a biomedical Î²-titanium alloy. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 42, 207-218.	3.1	16
38	Effect of Mg on dynamic recrystallization of Znâ€“Mg alloys during room-temperature compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 830, 142243.	5.6	16
39	Interfacial Heat Transfer during Die Casting of an Al-Si-Cu Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 3056-3058.	2.2	14
40	Ultrasonic Processing for Structure Refinement: An Overview of Mechanisms and Application of the Interdependence Theory. Materials, 2019, 12, 3187.	2.9	14
41	The Role of Ultrasonically Induced Acoustic Streaming in Developing Fine Equiaxed Grains During the Solidification of an Al-2ÂPct Cu Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 5253-5263.	2.2	14
42	Enhanced Heterogeneous Nucleation by Pulsed Magnetoâ€Oscillation Treatment of Liquid Aluminum Containing Al3Ti1B Additions. Advanced Engineering Materials, 2015, 17, 1465-1469.	3.5	13
43	Improvements in Microstructure and Wear Resistance of Plasma-Sprayed Fe-Based Amorphous Coating by Laser-Remelting. Journal of Thermal Spray Technology, 2017, 26, 778-786.	3.1	12
44	Development in plasma surface diffusion techniques of Ti-6Al-4V alloy: a review. International Journal of Advanced Manufacturing Technology, 2017, 92, 1901-1912.	3.0	11
45	In vivo performance of a rare earth free Mgâ€“Znâ€“Ca alloy manufactured using twin roll casting for potential applications in the cranial and maxillofacial fixation devices. Bioactive Materials, 2022, 12, 85-96.	15.6	10
46	The Effect of Temperature on the Microstructure of a Metastable Î² Ti Alloy. Materials Science Forum, 2010, 654-656, 847-850.	0.3	9
47	Ultrasonic Processing of Aluminumâ€“Magnesium Alloys. Materials, 2018, 11, 1994.	2.9	9
48	Fine equiaxed dendritic structure of a medium carbon steel cast using pulsed magneto-oscillation melt treatment. Advances in Manufacturing, 2018, 6, 189-194.	6.1	7
49	Evolution of the Asâ€Cast Grain Microstructure of an Ultrasonically Treated Alâ€“2Cu Alloy. Advanced Engineering Materials, 2018, 20, 1800521.	3.5	7
50	The Poisoning Effect of Al and Be on Mgâ€”1 wt.% Zr Alloy and the Role of Ultrasonic Treatment on Grain Refinement. Frontiers in Materials, 2019, 6, .	2.4	7
51	Mechanisms of the Origin of Fine and Non-Dendritic Grains at the Sonotrodeâ€“Liquid Metal Interface During Ultrasonic Solidification of Metals. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 2676-2688.	2.2	6
52	The characterisation and formation of novel microstructural features in a Tiâˆ’Nbâˆ’Zrâˆ’Moâˆ’Sn alloy manufactured by Laser Engineered Net Shaping (LENS). Additive Manufacturing, 2021, 37, 101705.	3.0	5
53	Investigating the Grain Refinement Mechanisms of Pulsed Electric Current, Ultrasonic and Melt Stirring Solidification of Pure Aluminium. Jom, 2021, 73, 3873-3882.	1.9	5
54	The Aging Response of a Metastable Î² Ti Alloy, BTi-6554. Materials Science Forum, 0, 690, 29-32.	0.3	4

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55	Treatment by External Fields. , 2018, , 279-332.		4
56	Precipitation of string-shaped morphologies consisting of aligned Î± phase in a metastable Î² titanium alloy. Scientific Reports, 2018, 8, 2038.	3.3	3
57	Mechanisms of Grain Formation During Ultrasonic Solidification of Commercial Purity Magnesium. Minerals, Metals and Materials Series, 2019, , 1579-1586.	0.4	3
58	Grain Refinement of Al-Si Hypoeutectic Alloys by Al3Ti1B Master Alloy and Ultrasonic Treatment. , 2016, , 143-150.		2
59	Cellular Automation Finite Element Modeling of the Evolution of the As-Cast Microstructure of an Ultrasonically Treated Al-2Cu Alloy. Minerals, Metals and Materials Series, 2019, , 1617-1622.	0.4	0