

X Cao

List of Publications by Year in descending order

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83
papers

5,051
citations

101384

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69
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85
all docs

85
docs citations

85
times ranked

2953
citing authors

#	ARTICLE	IF	CITATIONS
1	A review of laser welding techniques for magnesium alloys. <i>Journal of Materials Processing Technology</i> , 2006, 171, 188-204.	3.1	506
2	Review of tools for friction stir welding and processing. <i>Canadian Metallurgical Quarterly</i> , 2012, 51, 250-261.	0.4	367
3	Strain hardening behavior of a friction stir welded magnesium alloy. <i>Scripta Materialia</i> , 2007, 57, 1004-1007.	2.6	351
4	Microstructure and tensile properties of friction stir welded AZ31B magnesium alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 472, 179-186.	2.6	307
5	The nucleation of Fe-Rich phases on oxide films in Al-11.5Si-0.4Mg cast alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2003, 34, 1409-1420.	1.1	181
6	Effect of welding speed on butt joint quality of Ti-6Al-4V alloy welded using a high-power Nd:YAG laser. <i>Optics and Lasers in Engineering</i> , 2009, 47, 1231-1241.	2.0	180
7	Effect of tool rotational speed and probe length on lap joint quality of a friction stir welded magnesium alloy. <i>Materials & Design</i> , 2011, 32, 1-11.	5.1	166
8	Hybrid fiber laser Arc welding of thick section high strength low alloy steel. <i>Materials & Design</i> , 2011, 32, 3399-3413.	5.1	148
9	Effect of welding speed on the quality of friction stir welded butt joints of a magnesium alloy. <i>Materials & Design</i> , 2009, 30, 2033-2042.	5.1	144
10	Tensile properties of a friction stir welded magnesium alloy: Effect of pin tool thread orientation and weld pitch. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 6064-6075.	2.6	140
11	Research and Progress in Laser Welding of Wrought Aluminum Alloys. II. Metallurgical Microstructures, Defects, and Mechanical Properties. <i>Materials and Manufacturing Processes</i> , 2003, 18, 23-49.	2.7	130
12	The solidification characteristics of Fe-rich intermetallics in Al-11.5Si-0.4Mg cast alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2004, 35, 1425-1435.	1.1	128
13	Effect of pre- and post-weld heat treatment on metallurgical and tensile properties of Inconel 718 alloy butt joints welded using 4kW Nd:YAG laser. <i>Journal of Materials Science</i> , 2009, 44, 4557-4571.	1.7	114
14	Research and Progress in Laser Welding of Wrought Aluminum Alloys. I. Laser Welding Processes. <i>Materials and Manufacturing Processes</i> , 2003, 18, 1-22.	2.7	111
15	Morphology of β -Al ₅ FeSi Phase in Al-Si Cast Alloys. <i>Materials Transactions</i> , 2006, 47, 1303-1312.	0.4	110
16	Polishing-assisted galvanic corrosion in the dissimilar friction stir welded joint of AZ31 magnesium alloy to 2024 aluminum alloy. <i>Materials Characterization</i> , 2009, 60, 370-376.	1.9	105
17	Tensile properties and strain-hardening behavior of double-sided arc welded and friction stir welded AZ31B magnesium alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 2951-2961.	2.6	105
18	Lap shear strength and fatigue behavior of friction stir spot welded dissimilar magnesium-to-aluminum joints with adhesive. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 562, 53-60.	2.6	97

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19	Lap shear strength and fatigue life of friction stir spot welded AZ31 magnesium and 5754 aluminum alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 556, 500-509.	2.6	94
20	Oxide films in laser additive manufactured Inconel 718. <i>Acta Materialia</i> , 2013, 61, 6562-6576.	3.8	93
21	Friction Stir Welded AZ31 Magnesium Alloy: Microstructure, Texture, and Tensile Properties. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013, 44, 323-336.	1.1	84
22	Linear friction welding of a near- β^2 titanium alloy. <i>Acta Materialia</i> , 2012, 60, 770-780.	3.8	75
23	Microstructure and hardness of fiber laser deposited Inconel 718 using filler wire. <i>International Journal of Advanced Manufacturing Technology</i> , 2013, 69, 2569-2581.	1.5	72
24	Solidification of Iron-Rich Intermetallic Phases in Al-4.5Cu-0.3Fe Cast Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011, 42, 2004-2016.	1.1	69
25	Effect of iron and manganese contents on convection-free precipitation and sedimentation of primary $\text{Al}(\text{FeMn})\text{Si}$ phase in liquid Al-11.5Si-0.4Mg alloy. <i>Journal of Materials Science</i> , 2004, 39, 2303-2314.	1.7	64
26	Effect of Mn, Si, and Cooling Rate on the Formation of Iron-Rich Intermetallics in 206 Al-Cu Cast Alloys. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2012, 43, 1231-1240.	1.0	57
27	Effect of Postweld Heat Treatment on Microstructure, Hardness, and Tensile Properties of Laser-Welded Ti-6Al-4V. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012, 43, 4171-4184.	1.1	56
28	Laser cladding of Inconel 718 with 75Cr3C2+ ϵ 25(80Ni20Cr) powder: Statistical modeling and optimization. <i>Surface and Coatings Technology</i> , 2019, 378, 124933.	2.2	53
29	Tensile Properties of Al-Cu 206 Cast Alloys with Various Iron Contents. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 2498-2507.	1.1	48
30	Continuous Wave ND:YAG Laser Welding of Sand-Cast ZE41A-T5 Magnesium Alloys. <i>Materials and Manufacturing Processes</i> , 2005, 20, 987-1004.	2.7	46
31	Nd:YAG laser welding of aerospace grade ZE41A magnesium alloy: Modeling and experimental investigations. <i>Materials Chemistry and Physics</i> , 2008, 109, 61-76.	2.0	46
32	Precipitation of primary intermetallic compounds in liquid Al 11.5Si 0.4Mg alloy. <i>International Journal of Cast Metals Research</i> , 2000, 13, 175-184.	0.5	45
33	Optimization of Processing Parameters During Laser Cladding of ZE41A-T5 Magnesium Alloy Castings Using Taguchi Method. <i>Materials and Manufacturing Processes</i> , 2008, 23, 413-418.	2.7	43
34	A New Iron-Rich Intermetallic-Al m Fe Phase in Al-4.6Cu-0.5Fe Cast Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012, 43, 1097-1101.	1.1	42
35	OXIDE INCLUSION DEFECTS IN Al-Si-Mg CAST ALLOYS. <i>Canadian Metallurgical Quarterly</i> , 2005, 44, 435-448.	0.4	41
36	Microstructure and Fatigue Properties of a Friction Stir Lap Welded Magnesium Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013, 44, 3732-3746.	1.1	41

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37	Tensile properties of laser additive manufactured Inconel 718 using filler wire. Journal of Materials Research, 2014, 29, 2006-2020.	1.2	36
38	Precipitation of iron-rich intermetallic phases in Al-4.6Cu-0.5Fe-0.5Mn cast alloy. Journal of Materials Science, 2012, 47, 4290-4298.	1.7	35
39	Microstructural evolution of laser-clad 75Cr3C2+25(80Ni20Cr) powder on Inconel 718 superalloy. Journal of Materials Processing Technology, 2020, 284, 116735.	3.1	35
40	Effect of pin tool thread orientation on fatigue strength of friction stir welded AZ31B-H24 Mg butt joints. Procedia Engineering, 2010, 2, 825-833.	1.2	34
41	Inspection of additive manufactured parts using laser ultrasonics. AIP Conference Proceedings, 2016, , .	0.3	31
42	Formation and Phase Selection of Iron-Rich Intermetallics in Al-4.6Cu-0.5Fe Cast Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 682-695.	1.1	29
43	Effect of precipitation and sedimentation of primary δ -Fe phase on liquid metal quality of cast Al-11.1Si-0.4Mg alloy. International Journal of Cast Metals Research, 2004, 17, 1-11.	0.5	28
44	Effect of joint gap on the quality of laser beam welded near- β Ti-5553 alloy with the addition of Ti-6Al-4V filler wire. Journal of Materials Science, 2012, 47, 866-875.	1.7	23
45	Microstructural Evaluation of Friction Stir Processed AZ31B-H24 Magnesium Alloy. Canadian Metallurgical Quarterly, 2007, 46, 425-432.	0.4	22
46	Global and Local Mechanical Properties of Autogenously Laser Welded Ti-6Al-4V. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 1258-1272.	1.1	20
47	Solid-State Transformation of Iron-Rich Intermetallic Phases in Al-Cu 206 Cast Alloys During Solution Heat Treatment. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 3494-3503.	1.1	19
48	Texture Development in a Friction Stir Lap-Welded AZ31B Magnesium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 4333-4349.	1.1	18
49	Effect of melt superheating on convection-free precipitation and sedimentation of primary δ -Fe phase in liquid Al-11.5Si-0.4Mg alloy. International Journal of Cast Metals Research, 2003, 15, 595-608.	0.5	17
50	Optimization of bead spacing during laser cladding of ZE41A-T5 magnesium alloy castings. Journal of Materials Processing Technology, 2008, 205, 322-331.	3.1	15
51	Examination and verification of the filtration mechanism of cake mode during the pressure filtration tests of liquid Al-Si cast alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 408, 234-242.	2.6	13
52	Laser welding of Ti-5Al-5V-5Mo-3Cr. Canadian Metallurgical Quarterly, 2011, 50, 263-272.	0.4	13
53	Use of filler wire for laser welding of Ti-6Al-4V. Canadian Metallurgical Quarterly, 2012, 51, 320-327.	0.4	13
54	Phase structures and morphologies of tempered CA6NM stainless steel welded by hybrid laser-arc process. Materials Characterization, 2017, 123, 264-274.	1.9	13

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55	Linear Friction Welding of Dissimilar Materials 316L Stainless Steel to Zircaloy-4. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1641-1652.	1.1	13
56	A new analysis of pressure filtration curves for liquid aluminum alloys. Scripta Materialia, 2005, 52, 839-842.	2.6	12
57	Effect of Pre- and Post-weld Heat Treatments on Linear Friction Welded Ti-5553. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 5138-5157.	1.1	12
58	Effects of Iron-Rich Intermetallics on Tensile Deformation of Al-Cu 206 Cast Alloys. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 1566-1575.	1.0	12
59	Effect of Sr on primary β -Fe phase in liquid Al-11.5Si-0.4Mg cast alloy. Materials Science and Technology, 2004, 20, 514-520.	0.8	11
60	Tolerances of joint gaps in Nd:YAG laser welded Ti-6Al-4V alloy with the addition of filler wire. Journal of Laser Applications, 2011, 23, .	0.8	11
61	Pressure filtration tests of liquid Al-Si cast alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 403, 101-111.	2.6	10
62	Post-weld Tempered Microstructure and Mechanical Properties of Hybrid Laser-Arc Welded Cast Martensitic Stainless Steel CA6NM. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 3245-3256.	1.0	10
63	Hybrid Laser-Arc Welding of 10-mm-Thick Cast Martensitic Stainless Steel CA6NM: As-Welded Microstructure and Mechanical Properties. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 3545-3563.	1.1	10
64	Mechanisms of pressure filtration of liquid aluminum alloys. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2006, 37, 1075-1083.	1.0	9
65	Technical Challenges in Narrow-Gap Root Pass Welding during Tandem and Hybrid Laser-Arc Welding of a Thick Martensitic Stainless Steel. Materials Science Forum, 2016, 879, 1305-1310.	0.3	9
66	Estimation of resistance of filter media used for Prefil Footprinter tests of liquid aluminium alloys. Materials Science and Technology, 2005, 21, 1192-1198.	0.8	8
67	Pressure filtration tests of liquid Al-Si cast alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 403, 94-100.	2.6	7
68	Autogenous fiber laser welding of 70/30 Cu-Ni alloy plates. Materials and Design, 2019, 181, 108075.	3.3	7
69	Calculation of solid inclusion concentrations from filter cakes. International Journal of Cast Metals Research, 2006, 19, 371-374.	0.5	6
70	Reliability of Laser Welding Process for ZE41A-T5 Magnesium Alloy Sand Castings. Materials Transactions, 2008, 49, 774-781.	0.4	6
71	Residual Stresses and Tensile Properties of Friction Stir Welded AZ31B-H24 Magnesium Alloy in Lap Configuration. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 1626-1637.	1.0	6
72	Microstructural Evaluation of Friction Stir Processed AZ31B-H24 Magnesium Alloy. Canadian Metallurgical Quarterly, 2007, 46, 425-432.	0.4	4

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73	Modelling of work-hardening behaviour for laser welded magnesium alloy. International Journal of Materials Research, 2008, 99, 216-221.	0.1	3
74	A new indirect method of measuring the contents of solid inclusions in liquid aluminium alloys. Journal of Materials Science, 2006, 41, 4285-4292.	1.7	2
75	Effect of joint gap on Nd: YAG laser welded Ti-6Al-4V. , 2009, , .		2
76	Filtration resistance during pressure filtration tests of liquid aluminium alloys. International Journal of Materials Research, 2006, 97, 1163-1171.	0.1	2
77	Solid inclusion cakes formed during pressure filtration tests of liquid aluminum alloys. International Journal of Materials Research, 2008, 99, 109-113.	0.1	1
78	Laser-ultrasonic inspection of hybrid laser-arc welded HSLA-65 steel. , 2014, , .		1
79	Fiber Laser Deposition of Nickel-Based Superalloys Using Filler Wire Feed. , 2015, , .		1
80	Effect of Fe-Rich Intermetallics on Tensile Behavior of Al-Cu 206 Cast Alloys at Solid and Near-Solid States. Minerals, Metals and Materials Series, 2019, , 85-96.	0.3	1
81	Filtration resistance during pressure filtration tests of liquid aluminium alloys. International Journal of Materials Research, 2022, 97, 1163-1171.	0.1	1
82	Advances in Materials Manufacturing II. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 3244-3244.	1.0	0
83	Effect of Cooling Rate on Iron-rich Intermetallic Phases in 206 Cast Alloys. Minerals, Metals and Materials Series, 2016, , 311-316.	0.3	0