

Reduction of porosity content generated during Nd:YAG laser welding of aluminium alloys

Materials Science & Engineering A: Structural Materials: Fundamentals and Processing
363, 40-52

DOI: 10.1016/s0921-5093(03)00637-3

Citation Report

#	ARTICLE	IF	CITATIONS
1	Nd: YAG laser welding of aluminium to low carbon steel. , 2004, , .		2
2	Optimization of aluminium laser welding using Taguchi and EM methods. , 2004, , .		2
3	Comparison of two different nozzles for laser beam welding of AA5083 aluminium alloy. Journal of Materials Processing Technology, 2005, 164-165, 971-977.	6.3	36
4	Pore formation during hybrid laser-tungsten inert gas arc welding of magnesium alloy AZ31Bâ€”mechanism and remedy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 390, 76-80.	5.6	70
5	Hot cracking in Alâ€”Mgâ€”Si alloy laser welding â€” operating parameters and their effects. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 395, 1-9.	5.6	95
6	Microstructure of butt laser joints of aluminium alloy 6056 sheets with an AS12 filler. Materials Science and Technology, 2005, 21, 1329-1336.	1.6	11
7	Investigation on Pore Formation during Hybrid Laser-Tungsten Inert Gas Arc Welding of Magnesium Alloy AZ31B. Materials Science Forum, 2005, 488-489, 361-364.	0.3	5
8	Laser beam welding of Alâ€”Mgâ€”Siâ€”Cu alloy 6013 sheet using silicon rich aluminium filler powders. Materials Science and Technology, 2005, 21, 133-140.	1.6	10
9	Effects of Shielding Gas Flow Rate and Power Waveform on Nd:YAG Laser Welding of A5754-O Aluminum Alloy. Materials Transactions, 2006, 47, 1365-1373.	1.2	13
10	Effect of root flaws on the fatigue property of friction stir welds in 2024-T3 aluminum alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 418, 155-160.	5.6	90
11	Nd:YAG laser butt welding of AA6013 using silicon and magnesium containing filler powders. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 426, 250-262.	5.6	61
12	Effect of kissing bond on fatigue behavior of friction stir welds on Al 5083 alloy. Journal of Materials Science, 2006, 41, 2771-2777.	3.7	55
13	Investigation of microstructures and fatigue properties of friction stir welded Alâ€”Mg alloy. Materials Chemistry and Physics, 2006, 98, 285-290.	4.0	35
14	Experimental Analysis of AA5083 Butt Joints Welded by CO ₂ Laser. Key Engineering Materials, 2007, 344, 745-750.	0.4	4
15	Steel to aluminium key-hole laser welding. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 447, 197-208.	5.6	155
16	Mechanical characterization of CO ₂ laser beam butt welds of AA5083. Journal of Materials Processing Technology, 2007, 191, 381-384.	6.3	37
17	Local Plastic Deformation and Failure Behavior of Nd:YAG Laser Welds in AA5182-O and AA6111-T4. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 3063-3086.	2.2	10
18	Two- and three-dimensional characterizations of hot tears in a Alâ€”Mgâ€”Si alloy laser weld. Scripta Materialia, 2008, 59, 324-327.	5.2	18

#	ARTICLE	IF	CITATIONS
19	Nano WC powder cold enhancing of light metal surface by laser shock peening process. , 2009, , .		3
20	A study about suitability of different welding processes for the production of aluminum stiffeners for ship structure. , 2009, , .		1
21	Laser beam welding of dissimilar aluminium alloys of 2000 and 7000 series: Effect of post-welding thermal treatments on T joint strength. Science and Technology of Welding and Joining, 2009, 14, 484-492.	3.1	27
22	Estimate of maximum pore size in keyhole laser welding of carbon steel. Science and Technology of Welding and Joining, 2009, 14, 106-116.	3.1	10
23	Aluminum Alloy Tube Welding by Means of High Power Diode Laser. Key Engineering Materials, 2009, 410-411, 97-104.	0.4	0
24	Laser welding of aluminium alloys 5083 and 6082 under conduction regime. Applied Surface Science, 2009, 255, 9512-9521.	6.1	88
25	Joint performance of laser-TIG double-side welded 5A06 aluminum alloy. Transactions of Nonferrous Metals Society of China, 2009, 19, 26-31.	4.2	26
26	Porosity in fiber laser formation of 5A06 aluminum alloy. Journal of Mechanical Science and Technology, 2010, 24, 1077-1082.	1.5	54
27	Contact mechanical studies on continuous wave CO2 laser beam weld of mild steel with ambient and under water medium. Materials & Design, 2010, 31, 3610-3617.	5.1	7
28	Proposals for Optimization of Laser Welding in Prosthetic Dentistry. Journal of Prosthodontics, 2010, 19, 69-76.	3.7	22
29	Effect of Laser Welding on Properties of Dissimilar Joint of Al-Mg-Si and Al-Mn Aluminum Alloys. Journal of Materials Science and Technology, 2010, 26, 276-282.	10.7	27
30	Laser Welding of Dissimilar Aluminium Alloys with Filler Materials. Welding in the World, Le Soudage Dans Le Monde, 2010, 54, R333-R341.	2.5	21
31	Investigation on Porosity Content in 2024 Aluminum Alloy Welding by Yb:YAG Disk Laser. Advanced Materials Research, 0, 383-390, 6265-6269.	0.3	10
32	Mechanisms of the porosity formation during the fiber laser lap welding of Al 5754 sheets. , 2011, , .		1
33	The Effects of Electrode Force on the Mechanical Behaviour of Resistance Spotâ€Welded 5083â€Aluminium Alloy Joints. Strain, 2011, 47, e196.	2.4	14
34	Effect of temporal pulse shaping on the reduction of laser weld defects in a Pdâ€Agâ€Sn dental alloy. Dental Materials, 2011, 27, e43-e50.	3.5	7
35	Laser Micro-welding Applied to Target Manufacturing. Physics Procedia, 2011, 12, 363-369.	1.2	4
36	Microstructural and mechanical characterization of laser beam welded AA6056 Al-alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7350-7356.	5.6	143

#	ARTICLE	IF	CITATIONS
37	Characterization of acoustically engineered polymer nanocomposite metamaterials using x-ray microcomputed tomography. Review of Scientific Instruments, 2011, 82, 034903.	1.3	38
38	Effect of Porosity on Tensile Behaviour of Welded AA6061-T6 Aluminium Alloy. Applied Mechanics and Materials, 0, 66-68, 534-539.	0.2	10
39	Laser material processing. International Materials Reviews, 2011, 56, 341-388.	19.3	209
40	Hybrid Welding of AA5754-H111 Alloy Using a Fiber Laser. Advanced Materials Research, 2012, 628, 193-198.	0.3	7
41	Studies on Dissimilar Welding of AA5083 and AA6061 Alloys by Laser Beam Welding. Advanced Materials Research, 0, 626, 701-705.	0.3	0
42	Laser welding of metals for aerospace and other applications. , 2012, , 75-108.		14
43	Investigation on the Influence of Different Laser Beam Intensity Distributions on Keyhole Geometry During Laser Welding. Physics Procedia, 2012, 39, 17-26.	1.2	15
44	Quantitative characterization of porosity in laser welds of stainless steel. Scripta Materialia, 2012, 67, 783-786.	5.2	65
45	Property and Quality Optimization of Laser Welded Rheo-Cast F357 Aluminum Alloy. Solid State Phenomena, 0, 192-193, 167-172.	0.3	1
46	Mitigation of Pore Generation in Laser Welding of Magnesium Alloy AZ31B in Lap Joint Configuration. , 2012, , .		7
47	Laser welding of metals for aerospace and other applications. , 2012, , 67-94.		2
48	Microstructure and mechanical properties of aluminum 5083 weldments by gas tungsten arc and gas metal arc welding. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 549, 7-13.	5.6	105
49	Effect of heat treatment on the properties of laser-beam welded rheo-cast F357 aluminum. Journal of Materials Processing Technology, 2012, 212, 465-470.	6.3	4
50	Crossed-Wire Laser Microwelding of Pt-10ÂPct Ir to 316 LVM Stainless Steel: Part II. Effect of Orientation on Joining Mechanism. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 1234-1243.	2.2	8
51	Effects of welding speed on the microstructures and mechanical properties of laser welded AZ61 magnesium alloy joints. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 578, 303-309.	5.6	40
52	Coupling 3D Quantitative Interrogation of Weld Microstructure with 3D Models of Mechanical Response. Metallography, Microstructure, and Analysis, 2013, 2, 359-363.	1.0	6
53	Laser welding of light metal alloys: aluminium and titanium alloys. , 2013, , 215-254.		18
54	Introduction to Laser Assisted Fabrication of Materials. Springer Series in Materials Science, 2013, , 1-67.	0.6	16

#	ARTICLE	IF	CITATIONS
55	Arc Leading Versus Laser Leading in the Hybrid Welding of Aluminium Alloy Using a Fiber Laser. Procedia CIRP, 2013, 12, 151-156.	1.9	38
56	Butt autogenous laser welding of AA 2024 aluminium alloy thin sheets with a Yb:YAG disk laser. International Journal of Advanced Manufacturing Technology, 2013, 67, 2157-2169.	3.0	27
57	Influence of CO ₂ -Ar Mixtures as Shielding Gas on Laser Welding of Al-Mg Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 5711-5723.	2.2	8
58	Performance enhancement of aluminum infrared laser welding by preconditioning with nanosecond laser pulses. Journal of Laser Applications, 2014, 26, .	1.7	4
59	Comparative study on laser welding characteristics of aluminium alloy under atmospheric and subatmospheric pressures. Science and Technology of Welding and Joining, 2014, 19, 547-553.	3.1	26
60	The mechanical properties and microstructures of AZ91D magnesium alloy processed by selective laser cladding with Al powder. Optics and Laser Technology, 2014, 60, 61-68.	4.6	26
61	Reliability Analysis and Evaluation of Automobile Welding Structure. Quality and Reliability Engineering International, 2014, 30, 1293-1300.	2.3	14
62	Detection, 3-D positioning, and sizing of small pore defects using digital radiography and tracking. Eurasip Journal on Advances in Signal Processing, 2014, 2014, .	1.7	9
63	Study on arc and laser powers in the hybrid welding of AA5754 Al-alloy. Materials & Design, 2014, 61, 191-198.	5.1	74
64	Porosity and microstructure in pulsed Nd:YAG laser welded Ti6Al4V sheet. Journal of Materials Processing Technology, 2014, 214, 1316-1325.	6.3	84
65	Surface modifications induced by pulsed-laser texturingâ€”Influence of laser impact on the surface properties. Applied Surface Science, 2014, 288, 542-549.	6.1	40
66	Reducing porosity in AlSi10Mg parts processed by selective laser melting. Additive Manufacturing, 2014, 1-4, 77-86.	3.0	608
67	A Comparison of FSW, BHLW and TIG Joints for Al-Si-Mg Alloy (EN AW-6082 T6). Procedia CIRP, 2014, 18, 120-125.	1.9	10
68	Dual-beam laser welding of AZ31B magnesium alloy in zero-gap lap joint configuration. Optics and Laser Technology, 2014, 56, 247-255.	4.6	34
69	The effects of short pulse laser surface cleaning on porosity formation and reduction in laser welding of aluminium alloy for automotive component manufacture. Optics and Laser Technology, 2014, 64, 162-171.	4.6	114
70	Advancing quantitative description of porosity in autogenous laser-welds of 304L stainless steel. Integrating Materials and Manufacturing Innovation, 2014, 3, 141-157.	2.6	6
71	Mechanical Behavior of Aluminum Sandwiches Made by Laser Welding. Procedia Engineering, 2015, 109, 427-434.	1.2	4
73	Formation and reduction of hydrogen porosity during selective laser melting of AlSi10Mg. Journal of Materials Processing Technology, 2015, 221, 112-120.	6.3	428

#	ARTICLE	IF	CITATIONS
74	Reduced hot cracking susceptibility by controlling the fusion ratio in laser welding of dissimilar Al alloys joints. Journal of Materials Research, 2015, 30, 993-1001.	2.6	13
75	On-line monitor of hydrogen porosity based on arc spectral information in Al-Mg alloy pulsed gas tungsten arc welding. Optics and Laser Technology, 2015, 70, 30-38.	4.6	38
76	Comparative Study of 5A06 Aluminum Alloy Welded Joints Obtained by Different Laser-Tungsten Inert Gas Hybrid Welding. Transactions of the Indian Institute of Metals, 2015, 68, 341-351.	1.5	4
77	Nano-hardness and microstructure of selective laser melted AlSi10Mg scan tracks. Proceedings of SPIE, 2015, , .	0.8	5
78	Autogenous Laser Welding of AA 2024 Aluminium Alloy: Process Issues and Bead Features. Procedia CIRP, 2015, 33, 406-411.	1.9	27
79	3D-imaging of selective laser melting defects in a Co-Cr-Mo alloy by synchrotron radiation micro-CT. Acta Materialia, 2015, 98, 1-16.	7.9	158
80	Microstructure characterization and mechanical properties of gas tungsten arc welded cast A356 alloy. Transactions of Nonferrous Metals Society of China, 2015, 25, 2137-2146.	4.2	6
81	On the Mechanism and Detection of Porosity During Pulsed TIG Welding of Aluminum Alloys. Advances in Intelligent Systems and Computing, 2015, , 133-143.	0.6	4
82	Detection and 3-D positioning of small defects using 3-D point reconstruction, tracking, and the radiographic magnification technique. NDT and E International, 2015, 76, 1-8.	3.7	4
83	One-sided laser beam welding of autogenous T-joints for 6013-T4 aluminium alloy. Materials & Design, 2015, 65, 726-736.	5.1	35
84	Two-pass laser welding of AZ31B magnesium alloy. Journal of Materials Processing Technology, 2015, 216, 114-122.	6.3	28
85	Trend and innovations in laser beam welding of wrought aluminum alloys. Welding in the World, Le Soudage Dans Le Monde, 2016, 60, 415-457.	2.5	59
86	Characteristics and formation mechanism of sidewall pores in NG-GMAW of 5083 Al-alloy. Journal of Materials Processing Technology, 2016, 238, 274-283.	6.3	48
87	Microstructure and Porosity of Laser-welded Dissimilar Material Joints of HR-2 and J75. Physics Procedia, 2016, 83, 406-416.	1.2	5
88	ANN modelling to optimize manufacturing processes: the case of laser welding. IFAC-PapersOnLine, 2016, 49, 378-383.	0.9	29
89	Surface Characterization of Carbon Fiber Polymer Composites and Aluminum Alloys After Laser Interference Structuring. Jom, 2016, 68, 1882-1889.	1.9	7
90	Study on laser-MIG hybrid welding characteristics of A7N01-T6 aluminum alloy. International Journal of Advanced Manufacturing Technology, 2016, 87, 1135-1144.	3.0	18
91	Investigation on the effects of parameters on hot cracking and tensile shear strength of overlap joint in laser welding dissimilar Al alloys. International Journal of Advanced Manufacturing Technology, 2016, 86, 2895-2904.	3.0	16

#	ARTICLE	IF	CITATIONS
92	3D imaging and quantification of porosity in electron beam welded dissimilar steel to Fe-Al alloy joints by X-ray tomography. Materials and Design, 2016, 96, 224-231.	7.0	60
93	Micro-scale model based study of solidification cracking formation mechanism in Al fiber laser welds. Journal of Materials Processing Technology, 2016, 231, 18-26.	6.3	20
94	Laser micro-welding of Cu-Al dissimilar metals. International Journal of Advanced Manufacturing Technology, 2016, 85, 185-189.	3.0	14
95	Effect of filler wire properties on porosity formation in laser welding of AC-170PX aluminium alloy for lightweight automotive component manufacture. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2017, 231, 994-1006.	2.4	22
96	Effect of static magnetic field on microstructures and mechanical properties of laser-MIG hybrid welding for 304 stainless steel. International Journal of Advanced Manufacturing Technology, 2017, 91, 3437-3447.	3.0	21
97	Effect of laser speeds on the mechanical property and corrosion resistance of CoCrW alloy fabricated by SLM. Rapid Prototyping Journal, 2017, 23, 28-33.	3.2	26
98	Defect features, texture and mechanical properties of friction stir welded lap joints of 2A97 Al-Li alloy thin sheets. Materials Characterization, 2017, 125, 160-173.	4.4	39
99	Comparative study of hybrid laser-MIG leading configuration on porosity in aluminum alloy bead-on-plate welding. International Journal of Advanced Manufacturing Technology, 2017, 91, 2681-2688.	3.0	26
100	Effects of beam configurations on wire melting and transfer behaviors in dual beam laser welding with filler wire. Optics and Laser Technology, 2017, 91, 138-148.	4.6	29
101	Prospects of laser welding technology in the automotive industry: A review. Journal of Materials Processing Technology, 2017, 245, 46-69.	6.3	227
102	Comparison of single-beam and dual-beam laser welding of Ti-22Al-25Nb/TA15 dissimilar titanium alloys. Optics and Laser Technology, 2017, 93, 118-126.	4.6	38
103	A crack propagation study on T-joints of AA6013-T4 aluminum alloy welded by an Yb: fiber laser. International Journal of Advanced Manufacturing Technology, 2017, 92, 2831-2841.	3.0	5
104	Defect Formation Mechanisms in Selective Laser Melting: A Review. Chinese Journal of Mechanical Engineering (English Edition), 2017, 30, 515-527.	3.7	566
105	Influence of beam current on microstructures and mechanical properties of electron beam welding-brazed aluminum-steel joints with an AlSi filler wire. Vacuum, 2017, 141, 281-287.	3.5	12
106	Investigation of welding parameters on microstructure and mechanical properties of laser beam-welded joint of 2060 Al-Cu-Li alloy. International Journal of Advanced Manufacturing Technology, 2017, 91, 771-780.	3.0	10
107	Mechanical properties and wear resistance of ZrO ₂ particulate-reinforced composite layer on compacted graphite cast iron processed by selective laser alloying. Journal of Laser Applications, 2017, 29, .	1.7	2
108	AA6082 to DX56-Steel Laser Brazing: Process Parameter-Intermetallic Formation Correlation. Journal of Materials Engineering and Performance, 2017, 26, 4274-4281.	2.5	4
109	Tensile, fracture, and fatigue crack growth properties of a 3D printed maraging steel through selective laser melting. Journal of Alloys and Compounds, 2017, 725, 355-364.	5.5	201

#	ARTICLE	IF	CITATIONS
110	Laser micro-welding technology for Cu-Al dissimilar metals and mechanisms of weld defect formation. International Journal of Advanced Manufacturing Technology, 2017, 93, 4197-4201.	3.0	14
111	Macro and nanoscale wear behaviour of Al-Al ₂ O ₃ nanocomposites fabricated by selective laser melting. Composites Part B: Engineering, 2017, 127, 26-35.	12.0	83
112	Laser Welding of Magnesium Alloys: Issues and Remedies. , 0, , .		1
113	Rapid prototyping of 4043 Al-alloy parts by cold metal transfer. Science and Technology of Welding and Joining, 2018, 23, 527-535.	3.1	41
114	Dual beam laser keyhole welding of steel/aluminum lapped joints. Journal of Materials Processing Technology, 2018, 256, 87-97.	6.3	40
115	Effect of gaussian beam on microstructural and mechanical properties of dissimilar laser welding of AA5083 and AA6061 alloys. IOP Conference Series: Materials Science and Engineering, 2018, 330, 012066.	0.6	16
116	Effect of groove shape on laser welding-brazing Al to steel. Journal of Materials Processing Technology, 2018, 252, 573-581.	6.3	60
117	Method for producing porosity-free joints in laser beam welding of maraging steel 250. International Journal of Advanced Manufacturing Technology, 2018, 94, 2763-2771.	3.0	6
118	Vapor plume oscillation mechanisms in transient keyhole during tandem dual beam fiber laser welding. Optics and Lasers in Engineering, 2018, 100, 239-247.	3.8	10
119	Review of research progress on aluminium-magnesium dissimilar friction stir welding. Science and Technology of Welding and Joining, 2018, 23, 256-270.	3.1	103
120	Design guideline for intermetallic compound mitigation in Al-Mg dissimilar welding through addition of interlayer. International Journal of Advanced Manufacturing Technology, 2018, 94, 2667-2678.	3.0	34
121	CoCrWCu alloy with antibacterial activity fabricated by selective laser melting: Densification, mechanical properties and microstructural analysis. Powder Technology, 2018, 325, 289-300.	4.2	41
122	An improved model of porosity formation during pulsed GTA welding of aluminum alloys. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2018, 238-239, 122-129.	3.5	10
123	Mechanical performance of laser spot-welded joints in Al-Al/Cu solar thermal absorbers. Materials and Design, 2018, 155, 148-160.	7.0	12
124	Research on the Thermal Behaviour of a Selectively Laser Melted Aluminium Alloy: Simulation and Experiment. Materials, 2018, 11, 1172.	2.9	35
125	Effect of magnesium content on keyhole-induced porosity formation and distribution in aluminum alloys laser welding. Journal of Manufacturing Processes, 2018, 33, 43-53.	5.9	50
126	Optimisation of process parameters and weld shape of high power Yb-fibre laser welded 2024-T3 aluminium alloy. Journal of Manufacturing Processes, 2018, 34, 70-85.	5.9	40
127	Effect of welding parameters on porosity distribution of dual laser beam bilateral synchronous welding in 2219 aluminum alloy T-joint. Journal of Adhesion Science and Technology, 2019, 33, 2595-2614.	2.6	20

#	ARTICLE	IF	CITATIONS
128	Influence of laser process parameters on the densification, microstructure, and mechanical properties of a selective laser melted AZ61 magnesium alloy. Journal of Alloys and Compounds, 2019, 808, 151160.	5.5	69
129	3D printing of Aluminium alloys: Additive Manufacturing of Aluminium alloys using selective laser melting. Progress in Materials Science, 2019, 106, 100578.	32.8	872
130	Surface chemistry and composition-induced variation of laser interference-based surface treatment of Al alloys. Applied Surface Science, 2019, 489, 893-904.	6.1	9
131	Laser Weldability of AlSi10Mg Alloy Produced by Selective Laser Melting: Microstructure and Mechanical Behavior. Journal of Materials Engineering and Performance, 2019, 28, 6714-6719.	2.5	28
133	Laser welding of AlSi10Mg aluminium-based alloy produced by Selective Laser Melting (SLM). Procedia Manufacturing, 2019, 36, 88-94.	1.9	25
134	Three-dimensional cellular automaton simulation of coupled hydrogen porosity and microstructure during solidification of ternary aluminum alloys. Scientific Reports, 2019, 9, 13099.	3.3	13
135	Optimization of welding parameters on pores migration in Laser-GMAW of 5083 aluminum alloy based on response surface methodology. SN Applied Sciences, 2019, 1, 1.	2.9	4
136	The impact of powder oxygen content on formability of 12CrNi2 alloy steel fabricated by laser melting deposition. Powder Metallurgy, 2019, 62, 186-195.	1.7	16
137	Experimental assessment of self-healing characteristics in AA2014matrix with nitinol wire and solder alloy as healing agents. Materials Research Express, 2019, 6, 085704.	1.6	6
138	Parameter optimization and microhardness experiment of AlSi10Mg alloy prepared by selective laser melting. Materials Research Express, 2019, 6, 086592.	1.6	19
139	Tribological properties of selective laser melted Al 12Si alloy. Tribology International, 2019, 137, 94-101.	5.9	48
140	Influence of wire feed rate on mechanical and microstructure characteristics of aluminum to galvanized steel laser brazed joint. Journal of Manufacturing Processes, 2019, 39, 271-281.	5.9	12
142	Effects of Power Modulation, Multipass Remelting and Zr Addition Upon Porosity Defects in Laser Seal Welding of End Plug to Thin-Walled Molybdenum Alloy. Journal of Manufacturing Processes, 2019, 41, 197-207.	5.9	20
143	Comparative Analysis of the Mechanical Properties of the Friction Stir Welding Joints of Various Aluminum Alloys. Russian Metallurgy (Metally), 2019, 2019, 1531-1536.	0.5	3
144	Correlation of Process Parameters and Porosity in Laser Welding of 7A52 Aluminum Alloy using Response Surface Methodology. Procedia Manufacturing, 2019, 37, 294-298.	1.9	14
145	Structural optimization under internal porosity constraints using topological derivatives. Computer Methods in Applied Mechanics and Engineering, 2019, 345, 1-25.	6.6	16
146	Effect of beam oscillation on porosity and intermetallics of electron beam welded DP600-steel to Al 5754-alloy. Journal of Materials Processing Technology, 2019, 265, 191-200.	6.3	43
147	Mitigation of porosity defects in fiber laser welding under low vacuum. Journal of Materials Processing Technology, 2020, 276, 116385.	6.3	39

#	ARTICLE	IF	CITATIONS
148	Influence of laser post-processing on pore evolution of Ti-6Al-4V alloy by laser powder bed fusion. Journal of Alloys and Compounds, 2020, 818, 152845.	5.5	34
149	Additive manufacturing with the lightweight material aluminium alloy EN AW-7075. Welding in the World, Le Soudage Dans Le Monde, 2020, 64, 429-436.	2.5	11
150	Selective Laser Melting of Aluminum and Its Alloys. Materials, 2020, 13, 4564.	2.9	55
151	Investigating the effect of process parameters on the mechanical properties and temperature distribution in fiber laser welding of AISI304 and AISI 420 sheet using response surface methodology. Infrared Physics and Technology, 2020, 111, 103478.	2.9	9
152	A solution to the hot cracking problem for aluminium alloys manufactured by laser beam melting. Acta Materialia, 2020, 197, 40-53.	7.9	144
153	Invited Review Article: Review of the formation and impact of flaws in powder bed fusion additive manufacturing. Additive Manufacturing, 2020, 36, 101457.	3.0	62
154	Study on fatigue strength of FSW joints of 5083 aluminum alloy with kissing bond defect. Journal of Mechanical Science and Technology, 2020, 34, 2761-2766.	1.5	6
155	Thermography analysis and porosity formation during laser beam welding of AA5083-H111 aluminum alloy. Journal of Thermal Analysis and Calorimetry, 2020, 146, 1551.	3.6	2
156	Characterisation of figure-eight shaped oscillation laser welding behaviour of 5083 aluminium alloy. Science and Technology of Welding and Joining, 2020, 25, 609-616.	3.1	7
157	Thermographic detectability of porosity in multi-layered bare and anodized aluminum laser welds. Procedia Manufacturing, 2020, 48, 165-171.	1.9	3
158	In situ radiographic and ex situ tomographic analysis of pore interactions during multilayer builds in laser powder bed fusion. Additive Manufacturing, 2020, 36, 101512.	3.0	20
159	Laser powder bed fusion of high solute Al-Zn-Mg alloys: Processing, characterisation and properties. Materials and Design, 2020, 196, 109183.	7.0	20
160	Influence of an AlSi5 filler wire on microstructures and mechanical properties of EBW-brazed CP-Al to 304 SS joint. Journal of Manufacturing Processes, 2020, 56, 12-18.	5.9	3
161	Mechanical Properties of High Strength Aluminum Alloy EN AW-7075 Additively Manufactured by Directed Energy Deposition. Metals, 2020, 10, 579.	2.3	21
162	Influence of selective laser melting scanning speed parameter on the surface morphology, surface roughness, and micropores for manufactured Ti6Al4V parts. Journal of Materials Research, 2020, 35, 2025-2035.	2.6	35
163	Wire and arc additive manufacturing of 4043 Al alloy using a cold metal transfer method. International Journal of Minerals, Metallurgy and Materials, 2020, 27, 783-791.	4.9	23
164	Microstructural, porosity and mechanical properties of lap joint laser welding for 5182 and 6061 dissimilar aluminum alloys under different place configurations. Materials and Design, 2020, 191, 108625.	7.0	40
165	Revolutionizing Aircraft Materials and Processes. , 2020, , .		35

#	ARTICLE	IF	CITATIONS
166	Physical and mechanical characterization of dissimilar laser welded joints of AISI 316/Cu/SMA using fiber laser technology. Journal of Laser Applications, 2020, 32, 032018.	1.7	10
167	Laser metal deposition for additive manufacturing of AA5024 and nanoparticulate TiC modified AA5024 alloy composites prepared with balling milling process. Optics and Laser Technology, 2020, 131, 106438.	4.6	38
168	Hyper-reduced direct numerical simulation of voids in welded joints via image-based modeling. International Journal for Numerical Methods in Engineering, 2020, 121, 2581-2599.	2.8	7
169	Recent research progress in solid state friction-stir welding of aluminium-magnesium alloys: a critical review. Journal of Materials Research and Technology, 2020, 9, 6217-6256.	5.8	151
170	Processing parameters in laser powder bed fusion metal additive manufacturing. Materials and Design, 2020, 193, 108762.	7.0	444
171	Mechanical Properties and Microstructure of a High-Power Laser-Welded Ti6Al4V Titanium Alloy. Journal of Materials Engineering and Performance, 2020, 29, 2296-2304.	2.5	14
172	Control of gravity effects on weld porosity distribution during variable polarity plasma arc welding of aluminum alloys. Journal of Materials Processing Technology, 2020, 282, 116693.	6.3	14
173	Modeling and numerical study of keyhole-induced porosity formation in laser beam oscillating welding of 5A06 aluminum alloy. Optics and Laser Technology, 2021, 133, 106540.	4.6	103
174	Low-Defect AM of High Strength Aluminium Alloy by LMD. SSRN Electronic Journal, 0, , .	0.4	3
175	An Investigation on Laser Welding Parameters on the Strength of TRIP Steel. Strojnicki Vestnik/Journal of Mechanical Engineering, 2021, 67, 45-52.	1.1	4
176	Quantitative analysis of surfaces of cross-section in butt welding of aluminum alloy 5083 using laser-arc hybrid welding. International Journal of Modern Physics B, 2021, 35, 2140031.	2.0	0
177	Numerical modeling and simulation for laser beam welding of ultrafine-grained aluminium. Laser Physics, 2021, 31, 066001.	1.2	1
178	Advanced high-strength AA5083 welds by high-speed hybrid laser-arc welding. Materials Letters, 2021, 291, 129594.	2.6	10
179	COMSOL SIMULATION OF LASER WELDING OF ALUMINUM. Environment Technology Resources Proceedings of the International Scientific and Practical Conference, 0, 3, 25-29.	0.0	0
180	Characterization of 304L laser welds using digital image correlation and x-ray computed tomography. Measurement Science and Technology, 2021, 32, 104010.	2.6	3
181	Laser Beam and Laser-Arc Hybrid Welding of Aluminium Alloys. Metals, 2021, 11, 1150.	2.3	20
182	Weldability improvement by wobbling technique in high power density laser welding of two aluminum alloys: Al-5052 and Al-6061. Journal of Laser Applications, 2021, 33, .	1.7	16
183	Effect of porosity morphology and elements characteristics on mechanical property in T-joints during dual laser-beam bilateral synchronous welding of 2060/2099 Al-Li alloys. Optics and Laser Technology, 2021, 140, 107019.	4.6	16

#	ARTICLE	IF	CITATIONS
184	Substrate Cleaning Threshold for Various Coated Al Alloys Using a Continuous-Wave Laser. Photonics, 2021, 8, 395.	2.0	5
185	Microstructure and Mechanical Properties of TiC-Reinforced Al-Mg-Sc-Zr Composites Additively Manufactured by Laser Direct Energy Deposition. Acta Metallurgica Sinica (English Letters), 2022, 35, 411-424.	2.9	8
186	Some factors affecting porosity in directed energy deposition of AlMgScZr-alloys. Optics and Laser Technology, 2021, 143, 107337.	4.6	18
187	Laser Material Processing. , 1998, , .		355
188	Dual Focus Nd:YAG Laser Welding of Titanium Alloys. , 2010, , 279-282.		4
189	Hot Tearing During Laser Butt Welding of 6xxx Aluminium Alloys: Process Optimisation and 2D/3D Characterisation of Hot Tears. , 2008, , 241-255.		2
190	Effects of interface gap and shielding gas on the quality of alloy AA6061 fiber laser lap weldings. Journal of Materials Processing Technology, 2019, 268, 201-212.	6.3	25
191	Weldability of 5754 aluminum alloy using a pulsed Nd:YAG micro scale laser. Materialpruefung/Materials Testing, 2016, 58, 963-969.	2.2	11
192	Analysis of Laser Micro Welding of Copper-Aluminum Dissimilar Metals and Its Mechanism. Journal of Applied Mathematics and Physics, 2019, 07, 3192-3200.	0.4	3
193	Development of Methodology to Determine the Temperature Influence on Microstructure Evolution during Friction Stir Welding. , 2018, , .		2
194	Large-scale metal additive manufacturing: a holistic review of the state of the art and challenges. International Materials Reviews, 2022, 67, 410-459.	19.3	34
195	Characterizing the effects of laser control in laser powder bed fusion on near-surface pore formation via combined analysis of in-situ melt pool monitoring and X-ray computed tomography. Additive Manufacturing, 2021, 48, 102372.	3.0	5
196	Laser welding process parameter effects on hot tearing of an aerospace aluminium alloy. , 2004, , .		0
197	ND:YAG laser welding of AA6061: Experimental differences between the TEE and LAP joint configurations. , 2005, , .		0
198	Effect of laser welding parameters on welding defects analyzed by the analytic hierarchy process. , 2006, , .		0
199	Analysis and digitalization of expert's skills for laser welding using analytic hierarchy process (AHP). , 2006, , .		0
200	Schmelzschweißen. , 2014, , 599-630.		0
201	Influence of Heat Input on the Performance of Joint with Filling Wire Laser Welding 5A06 Aluminum Alloy. Advances in Intelligent Systems and Computing, 2015, , 87-94.	0.6	0

#	ARTICLE	IF	CITATIONS
202	Aluminum Surface Texturing by Means of Laser Interference Metallurgy. , 2015, , 427-429.		0
203	Tensile Fracture in Laser Welding Joints of Al-Cu-Li-Mg-X Alloy Bearing Gaseous Porosity. International Journal of Manufacturing, Materials, and Mechanical Engineering, 2015, 5, 63-79.	0.4	1
204	Lazer KaynaÄŸÄ± ve Lazer KaynaÄŸÄ±nÄ±n BaÄŸÄ±ca UygulamalarÄ±. El-Cezeri Journal of Science and Engineering, 2018, 5, 693-705.	0.1	3
205	Development of a Low-Cost Arc Spectrum Sensor for Monitoring Pore Defects in Welding Process. Transactions on Intelligent Welding Manufacturing, 2019, , 75-92.	0.3	0
206	Low Porosity in Cast Magnesium Welds by Advanced Laser Twin-Spot Welding. Materials Sciences and Applications, 2019, 10, 53-64.	0.4	0
207	Laser Joining Processes for Lightweight Aircraft Structures. , 2020, , 303-335.		0
208	Advances in Online Detection Technology for Laser Additive Manufacturing: A Review. 3D Printing and Additive Manufacturing, 2023, 10, 467-489.	2.9	2
209	SchmelzschweiÄŸen von Aluminium. , 2007, , 591-623.		0
210	Simulation study on the cleaning threshold of continuous laser removal of various coated aluminum alloy substrates. , 2021, , .		0
211	Effects of laser pulse modulation on intermetallic compounds formation for welding of Ti-6Al-4V and AA7075 using AA4047 filler. Materials and Design, 2022, 213, 110325.	7.0	27
212	Effect of ambient pressure on laser welding of AlSi10Mg fabricated by selected laser melting. Materials and Design, 2022, 215, 110427.	7.0	10
213	A comprehensive review on laser powder bed fusion of steels: Processing, microstructure, defects and control methods, mechanical properties, current challenges and future trends. Journal of Manufacturing Processes, 2022, 75, 375-414.	5.9	109
214	Microstructural and Mechanical Properties Analysis of Fibre Laser Welding of Dissimilar AA6061 and AA2024 Aluminium Alloy. Lecture Notes in Mechanical Engineering, 2022, , 681-688.	0.4	4
215	Metallurgical and Mechanical Characterization of MIG Welded Repair Joints for 6082-T6 Aluminum Alloy with ER 4043 and ER 5356. Transactions of the Indian Institute of Metals, 0, , 1.	1.5	3
216	Issues in Metal Matrix Composites Fabricated by Laser Powder Bed Fusion Technique: A Review. Advanced Engineering Materials, 2022, 24, .	3.5	11
217	Single-Pass Full Penetration Laser Welding of 10-mm-Thick EH40 Using External Magnetic Field. Journal of Materials Engineering and Performance, 2022, 31, 9399-9410.	2.5	3
218	Aluminum matrix composites reinforced with multi-walled carbon nanotubes and C60 manufactured by laser powder bed fusion. Journal of Materials Science, 2022, 57, 17984-17999.	3.7	1
219	Optimization of parameters in laser welding of aluminum alloy 5052-H32 using beam oscillation technique for mechanical performance improvement. International Journal of Lightweight Materials and Manufacture, 2022, 5, 470-483.	2.1	5

#	ARTICLE	IF	CITATIONS
220	Design and prediction of healing assessment for AA2014-Nitinol strip-Solder alloy based hybrid self-healing composite structure via Taguchi analysis and fuzzy logic approach. Mechanics of Advanced Materials and Structures, 2023, 30, 4196-4215.	2.6	3
221	Research Progress and Challenges in Laser-Controlled Cleaning of Aluminum Alloy Surfaces. Materials, 2022, 15, 5469.	2.9	7
222	Analysis of the interdependent relationship between porosity, deformation, and crack growth during compression loading of LPBF AlSi10Mg. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 852, 143640.	5.6	8
223	Macro/micro-structure and mechanical properties of Al-6Mg-0.3Sc alloy fabricated by oscillating laser-arc hybrid additive manufacturing. Journal of Alloys and Compounds, 2022, 929, 167325.	5.5	16
224	Powder bed fusion of aluminium alloys: A review of experimental explorations “ Microstructure, mechanical properties, and recent advances. Materials Today: Proceedings, 2023, 82, 168-177.	1.8	3
225	Heat transfer and melt flow of keyhole, transition and conduction modes in laser beam oscillating welding. International Journal of Heat and Mass Transfer, 2023, 203, 123821.	4.8	18
226	Planetary laser welding system induced equiaxed and refined grains in 2A12 aluminum alloy weldments. Optics and Laser Technology, 2023, 161, 109162.	4.6	3
227	Microstructure formation in 6061 aluminum alloy during nano-second pulsed laser processing. Journal of Materials Processing Technology, 2023, 314, 117898.	6.3	4
228	Effects of laser scanning speed on the microstructure and mechanical properties of 2205 duplex stainless steel fabricated by selective laser melting. Journal of Manufacturing Processes, 2023, 94, 1-9.	5.9	13
229	Effect of process parameters on porosities in electron beam welded AA-6061 to AA-2024 dissimilar joints. Welding in the World, Le Soudage Dans Le Monde, 2023, 67, 2007-2016.	2.5	2
230	Joining Technologies for Aluminium Castings“A Review. Coatings, 2023, 13, 958.	2.6	3
231	Influence of selective laser melting process parameters on the surface integrity of difficult-to-cut alloys: comprehensive review and future prospects. International Journal of Advanced Manufacturing Technology, 2023, 127, 1071-1102.	3.0	4
232	Numerical analysis of the dynamic behavior of arc by rotating laser-GMAW hybrid welding of T-joints. Optics and Laser Technology, 2023, 167, 109802.	4.6	1
233	Microstructure and Corrosion Behavior of Laser-Welded Al“Mn“Zr Alloy for Heat Exchanger. Materials, 2023, 16, 6009.	2.9	2
235	Tuning hatch distance to optimize microstructure and mechanical properties of 2205 duplex stainless steel produced by laser powder bed fusion. Optics and Laser Technology, 2024, 172, 110536.	4.6	0
236	On the Effect of Exposure Time on Al-Si10-Mg Powder Processed by Selective Laser Melting. Metals, 2024, 14, 76.	2.3	0
237	Numerical simulation on pore formation and suppression for dual-beam laser welding of sandwich structure. International Journal of Advanced Manufacturing Technology, 2024, 130, 6011-6025.	3.0	0
238	Microscopic and Mechanical Properties Characterization of Laser Beam Welded 5754 to 6063 Aluminum Alloys. International Journal of Advanced Manufacturing Technology, 2024, 132, 1869-1881.	3.0	0