

Andrew John Pinkerton

List of Publications by Year in descending order

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93
papers

3,604
citations

126858

33
h-index

143943

57
g-index

95
all docs

95
docs citations

95
times ranked

2459
citing authors

#	ARTICLE	IF	CITATIONS
1	[INVITED] Lasers in additive manufacturing. Optics and Laser Technology, 2016, 78, 25-32.	2.2	156
2	Advances in the modeling of laser direct metal deposition. Journal of Laser Applications, 2015, 27, .	0.8	121
3	Combined vibration and thermal analysis for the condition monitoring of rotating machinery. Structural Health Monitoring, 2014, 13, 281-295.	4.3	38
4	Parametric study of development of Inconel-steel functionally graded materials by laser direct metal deposition. Materials & Design, 2014, 54, 531-538.	5.1	194
5	Vibration-Based Delamination Detection in a Composite Plate. Mechanics of Advanced Materials and Structures, 2013, 20, 536-551.	1.5	6
6	An anisotropic enhanced thermal conductivity approach for modelling laser melt pools for Ni-base super alloys. Applied Mathematical Modelling, 2013, 37, 1187-1195.	2.2	56
7	Direct laser deposition with different types of 316L steel particle: A comparative study of final part properties. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2013, 227, 520-531.	1.5	29
8	Coupled Computational Fluid Dynamic and Finite Element Multiphase Modeling of Laser Weld Bead Geometry Formation and Joint Strengths. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2013, 135, .	1.3	34
9	A Coupled Approach to Weld Pool, Phase and Residual Stress Modelling of Laser Direct Metal Deposition (LDMD) Processes. , 2013, , 231-236.		2
10	Laser clad corrosion protection for mild and harsh environments. Surface Engineering, 2012, 28, 576-584.	1.1	5
11	Guest Editorial: The 36th MATADOR Conference 2010. Materials and Manufacturing Processes, 2012, 27, 363-363.	2.7	0
12	A verified model of transient and residual stresses in laser direct metal deposition. , 2012, , .		3
13	Analysis and simulation of the effects of the melt pool flow during laser deposition of a multiphase material. , 2012, , .		0
14	Laser surface modification using Inconel 617 machining swarf as coating material. Journal of Materials Processing Technology, 2012, 212, 1271-1280.	3.1	17
15	A CFD model of laser cladding: From deposition head to melt pool dynamics. , 2011, , .		11
16	Laser Metal Deposition of Steel Components using Machining Waste as Build Material. , 2011, , .		3
17	Fibre laser welding of dissimilar alloys of Ti-6Al-4V and Inconel 718 for aerospace applications. International Journal of Advanced Manufacturing Technology, 2011, 52, 977-987.	1.5	176
18	Porous structures fabrication by continuous and pulsed laser metal deposition for biomedical applications; modelling and experimental investigation. Journal of Materials Processing Technology, 2011, 211, 602-609.	3.1	56

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19	Residual stresses in laser direct metal deposited Waspaloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 2288-2298.	2.6	149
20	Innovative reconsolidation of carbon steel machining swarf by laser metal deposition. Optics and Lasers in Engineering, 2011, 49, 240-247.	2.0	18
21	Gap-free fibre laser welding of Zn-coated steel on Al alloy for light-weight automotive applications. Materials & Design, 2011, 32, 495-504.	5.1	101
22	A comparative study of laser direct metal deposition characteristics using gas and plasma-atomized Ti-6Al-4V powders. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7648-7657.	2.6	129
23	Microcomputed tomography analysis of intralayer porosity generation in laser direct metal deposition and its causes. Journal of Laser Applications, 2011, 23, .	0.8	64
24	An analytical-numerical model of laser direct metal deposition track and microstructure formation. Modelling and Simulation in Materials Science and Engineering, 2011, 19, 055003.	0.8	47
25	Numerical investigation of powder heating in coaxial laser metal deposition. Surface Engineering, 2011, 27, 754-761.	1.1	30
26	Material-efficient laser cladding for corrosion resistance. , 2011, , .		1
27	The effect of continuous and pulsed beam modes on cut path deviation in diode laser cutting of glass. International Journal of Advanced Manufacturing Technology, 2010, 49, 167-175.	1.5	16
28	A CFD model of the laser, coaxial powder stream and substrate interaction in laser cladding. Physics Procedia, 2010, 5, 337-346.	1.2	41
29	An iterative, energy-mass balance model for laser metal deposition. , 2010, , .		0
30	X-ray analysis of pore formation in direct metal deposition and its causes. , 2010, , .		0
31	Laser direct deposition of carbon steel machining waste. , 2010, , .		0
32	Effects of Melt Pool Variables and Process Parameters in Laser Direct Metal Deposition of Aerospace Alloys. Materials and Manufacturing Processes, 2010, 25, 1372-1380.	2.7	97
33	The Effect of Laser Beam Geometry on Cut Path Deviation in Diode Laser Chip-Free Cutting of Glass. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2010, 132, .	1.3	21
34	A numerical investigation of powder heating in coaxial laser metal deposition. , 2010, , 455-458.		1
35	Process characteristics of single mode fibre laser net shape welding. , 2010, , .		0
36	Selective laser sintering of calcium polyphosphate - Polyvinyl alcohol for biomedical applications. , 2010, , .		0

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37	The significance of melt pool variables in laser direct deposition of functionally graded aerospace alloys. , 2009, , .		1
38	Oxide formation in acute laser percussion drilled holes in single crystal nickel superalloy. , 2009, , .		0
39	A method and model for deposition of Ti-6Al-4V with controlled porosity. , 2009, , .		4
40	Technology vision. Surface Engineering, 2009, 25, 177-179.	1.1	5
41	Crystallographic texture and microstructure of pulsed diode laser-deposited Waspaloy. Acta Materialia, 2009, 57, 1220-1229.	3.8	70
42	Fibre laser welding of Zn-coated steel on Al alloy for next generation lightweight vehicles. , 2009, , .		3
43	A comparison of cut path deviation with continuous and pulsed beam modes in diode laser chip-free cutting of glass. , 2009, , .		0
44	Fibre laser net-shape welding of steels. , 2009, , .		3
45	Component repair using laser direct metal deposition. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2008, 222, 827-836.	1.5	129
46	Laser surface colouring of titanium for contemporary jewellery. Surface Engineering, 2008, 24, 147-153.	1.1	46
47	Femtosecond laser micromachining of fibre Bragg gratings for simultaneous measurement of temperature and concentration of liquids. Journal Physics D: Applied Physics, 2008, 41, 185101.	1.3	10
48	Direct laser deposited titanium with controlled porosity for bone tissue engineering. , 2008, , .		1
49	Three dimensional analytical and finite element methods for simulating a moving melt pool with mass addition. , 2008, , .		5
50	A comparative study of single mode fibre laser and Nd:YAG laser welding of Ti-6Al-4V. , 2008, , .		0
51	Direct diode laser deposition of functionally graded Ti-6Al-4V and inconel 718 components. , 2008, , .		2
52	A gas-free powder delivery system for 100% deposition efficiency in direct laser deposition. , 2008, , .		5
53	Single mode fibre laser welding of dissimilar aerospace alloys. , 2008, , .		1
54	An analytical model of beam attenuation and powder heating during coaxial laser direct metal deposition. Journal Physics D: Applied Physics, 2007, 40, 7323-7334.	1.3	111

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55	Theoretical Analysis of the Coincident Wire-Powder Laser Deposition Process. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2007, 129, 1019-1027.	1.3	9
56	An anisotropic enhanced thermal conductivity approach for modelling laser melt pools. , 2007, , .		4
57	A verified model of laser direct metal deposition using an analytical enthalpy balance method. , 2007, , .		7
58	Coincident wire and powder deposition by laser to form compositionally graded material. Surface and Coatings Technology, 2007, 201, 7083-7091.	2.2	24
59	Single-step laser deposition of functionally graded coating by dual "wire" powder™ or "powder" powder™ feeding" A comparative study. Applied Surface Science, 2007, 253, 7926-7931.	3.1	24
60	Diode laser metal deposition: The effect of pulsed beam parameters on superalloy microstructure and deposit morphology. , 2006, , .		1
61	An analytical model of the combined powder-wire deposition process. , 2006, , .		0
62	Combining wire and coaxial powder feeding in laser direct metal deposition for rapid prototyping. Applied Surface Science, 2006, 252, 4803-4808.	3.1	108
63	Effect of beam angle on HAZ, recast and oxide layer characteristics in laser drilling of TBC nickel superalloys. International Journal of Machine Tools and Manufacture, 2006, 46, 1972-1982.	6.2	108
64	Simultaneous wire- and powder-feed direct metal deposition: An investigation of the process characteristics and comparison with single-feed methods. Journal of Laser Applications, 2006, 18, 65-72.	0.8	24
65	Thermal and microstructural aspects of the laser direct metal deposition of waspaloy. Journal of Laser Applications, 2006, 18, 216-226.	0.8	39
66	An experimental and theoretical investigation of combined gas- and water-atomized powder deposition with a diode laser. Journal of Laser Applications, 2006, 18, 73-80.	0.8	8
67	Rapid additive manufacturing of functionally graded structures using simultaneous wire and powder laser deposition. Virtual and Physical Prototyping, 2006, 1, 217-225.	5.3	22
68	Microstructure characterisation and process optimization of laser assisted rapid fabrication of 316L stainless steel. Applied Surface Science, 2005, 247, 320-327.	3.1	94
69	Multiple-layer laser deposition of steel components using gas- and water-atomised powders: the differences and the mechanisms leading to them. Applied Surface Science, 2005, 247, 175-181.	3.1	34
70	Mechanical and electrochemical properties of multiple-layer diode laser cladding of 316L stainless steel. Applied Surface Science, 2005, 247, 373-377.	3.1	83
71	A comparative study of wire feeding and powder feeding in direct diode laser deposition for rapid prototyping. Applied Surface Science, 2005, 247, 268-276.	3.1	155
72	Direct additive laser manufacturing using gas- and water-atomised H13 tool steel powders. International Journal of Advanced Manufacturing Technology, 2005, 25, 471-479.	1.5	87

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73	Single-step graded surface coating using combined wire and powder feeding laser cladding. , 2005, , .		1
74	The effect of process parameters on residual stresses within an inconel 718 part produced by the direct laser deposition process. , 2005, , .		4
75	Explaining microstructural and physical variations in rapid additive manufactured waspaloy parts through the laser-deposition thermal cycle. , 2005, , .		1
76	Combined wire and powder feeding laser direct metal deposition for rapid prototyping. , 2004, , .		5
77	Modelling Powder Concentration Distribution From a Coaxial Deposition Nozzle for Laser-Based Rapid Tooling. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2004, 126, 33-41.	1.3	116
78	An analytical model of energy distribution in laser direct metal deposition. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2004, 218, 363-374.	1.5	68
79	The development of temperature fields and powder flow during laser direct metal deposition wall growth. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2004, 218, 531-541.	1.1	29
80	Multiple-layer cladding of stainless steel using a high-powered diode laser: an experimental investigation of the process characteristics and material properties. Thin Solid Films, 2004, 453-454, 471-476.	0.8	47
81	The behaviour of water- and gas-atomised tool steel powders in coaxial laser freeform fabrication. Thin Solid Films, 2004, 453-454, 600-605.	0.8	17
82	The significance of deposition point standoff variations in multiple-layer coaxial laser cladding (coaxial cladding standoff effects). International Journal of Machine Tools and Manufacture, 2004, 44, 573-584.	6.2	59
83	Modelling the geometry of a moving laser melt pool and deposition track via energy and mass balances. Journal Physics D: Applied Physics, 2004, 37, 1885-1895.	1.3	169
84	Diode laser deposition of microstructurally graded components using gas- and water-atomised powder blends. , 2004, , .		1
85	Effects of Powder Geometry and Composition in Coaxial Laser Deposition of 316L Steel for Rapid Prototyping. CIRP Annals - Manufacturing Technology, 2003, 52, 181-184.	1.7	25
86	An investigation of the effect of pulse frequency in laser multiple-layer cladding of stainless steel. Applied Surface Science, 2003, 208-209, 405-410.	3.1	56
87	The effect of laser pulse width on multiple-layer 316L steel clad microstructure and surface finish. Applied Surface Science, 2003, 208-209, 411-416.	3.1	60
88	Rapid prototyping using direct laser deposition— the effect of powder atomization type and flowrate. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2003, 217, 741-752.	1.5	27
89	Process characteristics and effects of gas- and water-atomized stainless steel powders in laser-based rapid tooling. Journal of Laser Applications, 2003, 15, 172-178.	0.8	8
90	The effect of diode laser beam shape and traverse direction on the direct metal deposition process. , 2003, , .		1

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91	A comparative study of multiple layer laser deposition using water and gas atomised 316L stainless steel powders. , 2002, , .		2
92	A verified model of the behaviour of the axial powder stream concentration from a coaxial laser cladding nozzle. , 2002, , .		17
93	A Coupled Approach to Weld Pool, Phase and Residual Stress Modelling of Laser Direct Metal Deposition (LDMD) Processes. , 0, , 231-236.		3