

Alessandro Fortunato

List of Publications by Year in descending order

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103
papers

2,569
citations

236925

25
h-index

214800

47
g-index

104
all docs

104
docs citations

104
times ranked

2145
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of selective laser melting (SLM) process parameters on microstructure and mechanical properties of 316L austenitic stainless steel. <i>Journal of Materials Processing Technology</i> , 2017, 249, 255-263.	6.3	672
2	CoCr alloy processed by Selective Laser Melting (SLM): effect of Laser Energy Density on microstructure, surface morphology, and hardness. <i>Journal of Manufacturing Processes</i> , 2020, 52, 106-119.	5.9	108
3	The influence of arc transfer mode in hybrid laser-mig welding. <i>Journal of Materials Processing Technology</i> , 2007, 191, 111-113.	6.3	89
4	Continuous laser welding with spatial beam oscillation of dissimilar thin sheet materials (Al-Cu and Ti-6Al-4V). <i>Journal of Materials Processing Technology</i> , 2007, 191, 158-165.	5.9	88
5	The influence of process parameters on porosity formation in hybrid LASER-GMA welding of AA6082 aluminum alloy. <i>Optics and Laser Technology</i> , 2012, 44, 1485-1490.	4.6	66
6	The influence of shielding gas in hybrid LASER-MIG welding. <i>Applied Surface Science</i> , 2007, 253, 8050-8053.	6.1	65
7	Milling of maraging steel components produced by selective laser melting. <i>International Journal of Advanced Manufacturing Technology</i> , 2018, 94, 1895-1902.	3.0	62
8	Mechanical interaction between additive-manufactured metal lattice structures and bone in compression: implications for stress shielding of orthopaedic implants. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021, 121, 104608.	3.1	62
9	An efficient model for laser surface hardening of hypo-eutectoid steels. <i>Applied Surface Science</i> , 2010, 256, 1913-1919.	6.1	56
10	Prediction of hypo eutectoid steel softening due to tempering phenomena in laser surface hardening. <i>CIRP Annals - Manufacturing Technology</i> , 2008, 57, 209-212.	3.6	48
11	Hybrid metal-plastic joining by means of laser. <i>International Journal of Material Forming</i> , 2010, 3, 1131-1134.	2.0	47
12	A complete residual stress model for laser surface hardening of complex medium carbon steel components. <i>Surface and Coatings Technology</i> , 2016, 302, 100-106.	4.8	44
13	Dry grinding of gears for sustainable automotive transmission production. <i>Journal of Cleaner Production</i> , 2018, 176, 76-88.	9.3	44
14	The effects of hot isostatic pressing (HIP) and solubilization heat treatment on the density, mechanical properties, and microstructure of austenitic stainless steel parts produced by selective laser melting (SLM). <i>International Journal of Advanced Manufacturing Technology</i> , 2020, 107, 109-122.	3.0	44
15	Hybrid laser-MIG welding of aluminum alloys: The influence of shielding gases. <i>Applied Surface Science</i> , 2009, 255, 5588-5590.	6.1	41
16	Laser cutting of lithium iron phosphate battery electrodes: Characterization of process efficiency and quality. <i>Optics and Laser Technology</i> , 2015, 65, 164-174.	4.6	38
17	Effects of powders and process parameters on density and hardness of A357 aluminum alloy fabricated by selective laser melting. <i>International Journal of Advanced Manufacturing Technology</i> , 2020, 106, 371-383.	3.0	38
18	Warm Laser Shock Peening: New developments and process optimization. <i>CIRP Annals - Manufacturing Technology</i> , 2011, 60, 219-222.	3.6	36

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19	The influence of laser pulse shape and separation distance on dissimilar welding of Al and Cu films. <i>Journal of Manufacturing Processes</i> , 2019, 45, 331-339.	5.9	36
20	CoCr porous scaffolds manufactured via selective laser melting in orthopedics: Topographical, mechanical, and biological characterization. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2019, 107, 2343-2353.	3.4	35
21	Experimental investigation on the effect of spot diameter on continuous-wave laser welding of copper and aluminum thin sheets for battery manufacturing. <i>Optics and Laser Technology</i> , 2022, 145, 107495.	4.6	35
22	High throughput hybrid laser assisted machining of sintered reaction bonded silicon nitride. <i>Journal of Materials Processing Technology</i> , 2018, 252, 628-635.	6.3	33
23	Laser surface hardening of martensitic stainless steel hollow parts. <i>CIRP Annals - Manufacturing Technology</i> , 2010, 59, 207-210.	3.6	30
24	New comprehensive procedure for custom-made total ankle replacements: Medical imaging, joint modeling, prosthesis design, and 3D printing. <i>Journal of Orthopaedic Research</i> , 2019, 37, 760-768.	2.3	29
25	5 Axes computer aided laser milling. <i>Optics and Lasers in Engineering</i> , 2013, 51, 749-760.	3.8	26
26	Laser Interaction with Carbon Fibre Reinforced Polymers. <i>Procedia CIRP</i> , 2015, 33, 423-427.	1.9	26
27	The effect of radial infeed on surface integrity in dry generating gear grinding for industrial production of automotive transmission gears. <i>Journal of Manufacturing Processes</i> , 2019, 45, 234-241.	5.9	26
28	Additive Manufacturing of WC-Co Cutting Tools for Gear Production. <i>Lasers in Manufacturing and Materials Processing</i> , 2019, 6, 247-262.	2.2	26
29	Laser Welding of Thin Copper and Aluminum Sheets: Feasibility and Challenges in Continuous-Wave Welding of Dissimilar Metals. <i>Lasers in Manufacturing and Materials Processing</i> , 2019, 6, 136-157.	2.2	26
30	The effects of the confining medium and protective layer during femtosecond laser shock peening. <i>Manufacturing Letters</i> , 2021, 27, 26-30.	2.2	24
31	High speed pulsed laser cutting of LiCoO ₂ Li-ion battery electrodes. <i>Optics and Laser Technology</i> , 2017, 94, 90-96.	4.6	23
32	Laser Ablation of Metals: A 3D Process Simulation for Industrial Applications. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2008, 130, .	2.2	22
33	Applying optical coherence tomography for weld depth monitoring in remote laser welding of automotive battery tab connectors. <i>Journal of Laser Applications</i> , 2021, 33, .	1.7	22
34	Laser surface hardening of large cylindrical components utilizing ring spot geometry. <i>CIRP Annals - Manufacturing Technology</i> , 2014, 63, 233-236.	3.6	21
35	A laser assisted hybrid process chain for high removal rate machining of sintered silicon nitride. <i>CIRP Annals - Manufacturing Technology</i> , 2015, 64, 189-192.	3.6	20
36	Surface modification of mild steel using a combination of laser and electrochemical processes. <i>Surface and Coatings Technology</i> , 2016, 307, 849-860.	4.8	20

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37	A study on shielding gas contamination in laser welding of non-ferrous alloys. Applied Surface Science, 2007, 254, 904-907.	6.1	18
38	The virtual design of machining centers for HSM: Towards new integrated tools. Mechatronics, 2013, 23, 264-278.	3.3	18
39	Mechanical and in vitro biological properties of uniform and graded Cobalt-Chrome lattice structures in orthopedic implants. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2021, 109, 2091-2103.	3.4	18
40	Quality factors assessed by analytical modelling in laser cutting. Thin Solid Films, 2004, 453-454, 486-491.	1.8	17
41	Nanosecond pulsed laser welding of high carbon steels. Optics and Laser Technology, 2014, 56, 25-34.	4.6	17
42	Laser foaming for joining aluminum foam cores inside a hollow profile. Optics and Laser Technology, 2013, 48, 331-336.	4.6	16
43	A Comprehensive Model for Laser Hardening of Carbon Steels. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2013, 135, .	2.2	15
44	Chemical and microstructural transformations in lithium iron phosphate battery electrodes following pulsed laser exposure. Applied Surface Science, 2014, 322, 85-94.	6.1	15
45	Long Pulse Laser Micro Welding of Commercially Pure Titanium Thin Sheets. Procedia Engineering, 2017, 184, 274-283.	1.2	13
46	Laser dissimilar welding of copper and steel thin sheets for battery production. Journal of Laser Applications, 2021, 33, .	1.7	13
47	Dry Generating Gear Grinding: Hierarchical Two-Step Finite Element Model for Process Optimization. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2019, 141, .	2.2	12
48	An automated procedure for material removal rate prediction in laser surface micromanufacturing. International Journal of Advanced Manufacturing Technology, 2010, 46, 163-171.	3.0	11
49	Numerical evaluation of the reflectivity coefficient in laser surface hardening simulation. Surface and Coatings Technology, 2012, 206, 3179-3185.	4.8	11
50	Corrosion Resistance and Mechanical Characterization of Ankle Prostheses Fabricated via Selective Laser Melting. Procedia CIRP, 2017, 65, 25-31.	1.9	11
51	Long-pulse quasi-CW laser cutting of metals. International Journal of Advanced Manufacturing Technology, 2018, 94, 155-162.	3.0	11
52	An improved model for cold metal transfer welding of aluminium alloys. Journal of Thermal Analysis and Calorimetry, 2018, 131, 3003-3009.	3.6	11
53	Additive manufacturing of AISI 420 stainless steel: process validation, defect analysis and mechanical characterization in different process and post-process conditions. International Journal of Advanced Manufacturing Technology, 2021, 117, 809-821.	3.0	11
54	Fabrication of Thin Walls with and without Close Loop Control as a Function of Scan Strategy Via Direct Energy Deposition. Lasers in Manufacturing and Materials Processing, 2022, 9, 81-101.	2.2	11

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55	Weldability and mechanical properties of dissimilar laser welded aluminum alloys thin sheets produced by conventional rolling and Additive Manufacturing. <i>Journal of Materials Processing Technology</i> , 2022, 302, 117512.	6.3	11
56	Quality and Productivity Considerations for Laser Cutting of LiFePO ₄ and LiNiMnCoO ₂ Battery Electrodes. <i>Procedia CIRP</i> , 2016, 42, 433-438.	1.9	10
57	Stiffness prediction and deformation analysis of Cobalt-Chromium lattice structures: From periodic to functionally graded structures produced by additive manufacturing. <i>Journal of Manufacturing Processes</i> , 2021, 68, 104-114.	5.9	10
58	Dynamic Hybrid Modeling of the Vertical Z Axis in a High-Speed Machining Center: Towards Virtual Machining. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2007, 129, 780-788.	2.2	8
59	Numerical simulation of nanosecond pulsed laser welding of eutectoid steel components. <i>Optics and Laser Technology</i> , 2012, 44, 1999-2003.	4.6	8
60	Pulsed Laser Profiling of Grinding Wheels at Normal and Quasi-Tangential Incidence. <i>Lasers in Manufacturing and Materials Processing</i> , 2016, 3, 158-173.	2.2	8
61	Laser Directed Energy Deposition of Bulk 316L Stainless Steel. <i>Lasers in Manufacturing and Materials Processing</i> , 2020, 7, 426-448.	2.2	8
62	Short pulse laser welding of aluminum and copper alloys in dissimilar configuration. <i>Journal of Laser Applications</i> , 2020, 32, .	1.7	8
63	Prediction of Micro-scale Forces in Dry Grinding Process Through a FEM-ML Hybrid Approach. <i>International Journal of Precision Engineering and Manufacturing</i> , 2022, 23, 15-29.	2.2	8
64	A New Computationally Efficient Model for Tempering in Multitrack Laser Hardening in Medium Carbon Steels. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2011, 133, .	2.2	7
65	Micro-machinability of A-286 Steel with and without Laser Assist. <i>Procedia CIRP</i> , 2016, 46, 432-435.	1.9	7
66	Dissimilar laser welding of copper and aluminum alloys in multilayer configuration for battery applications. <i>Journal of Laser Applications</i> , 2021, 33, .	1.7	7
67	Relationship between microstructure, mechanical and magnetic properties of pure iron produced by laser powder bed fusion (L-PBF) in the as-built and stress relieved conditions. <i>Progress in Additive Manufacturing</i> , 2022, 7, 1195-1212.	4.8	7
68	Evaluation of molten pool geometry with induced plasma plume absorption in laser-material interaction zone. <i>International Journal of Machine Tools and Manufacture</i> , 2007, 47, 971-977.	13.4	6
69	Lithium iron phosphate battery electrode integrity following high speed pulsed laser cutting. <i>Applied Physics A: Materials Science and Processing</i> , 2015, 119, 431-435.	2.3	6
70	A New Computationally Efficient Model for Tempering in Multi-Tracks Laser Hardening. , 2009, , .		5
71	A Modeling Approach for Plastic-Metal Laser Direct Joining. <i>Lasers in Manufacturing and Materials Processing</i> , 2017, 4, 136-151.	2.2	5
72	Hybrid laser assisted machining: a new manufacturing technology for ceramic components. <i>Procedia CIRP</i> , 2018, 74, 761-764.	1.9	5

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73	3-D Modelling of Laser Ablation of Metals in Mould Manufacturing. , 2006, , 21.		4
74	Characterization of Lattice Structures for Additive Manufacturing of Lightweight Mechanical Components. , 2017, , .		4
75	Optimization Strategies of Laser Hardening of Hypo-eutectoid Steel. , 2008, , 355-360.		4
76	The influence of geometric defects and microstructure in the simulation of the mechanical behaviour of laser powder-bed fusion components: Application to endoprosthesis. Journal of Manufacturing Processes, 2021, 71, 541-549.	5.9	4
77	The effect of femto-second laser shock peening on the microstructures and surface roughness of AlSi10Mg samples produced with selective laser melting (SLM).. Procedia CIRP, 2022, 108, 77-81.	1.9	4
78	From Traditional to Virtual Design of Machine-Tools: A Long Way to Go ... Part 1 " Problem Identification and Model Validation. , 2006, , 297.		3
79	Laser ablation simulation for copper. International Journal of Nanomanufacturing, 2009, 3, 279.	0.3	3
80	Long Pulse Laser Wire Deposition of Hard Steels. Physics Procedia, 2016, 83, 723-732.	1.2	3
81	Abrasive Grains Micro Geometry: A Comparison between Two Acquisition Methods. Procedia CIRP, 2018, 67, 302-306.	1.9	3
82	Laser dissimilar welding of highly reflective materials for E-Mobility applications. , 2022, , 579-645.		3
83	Surface integrity evaluation within dry grinding process on automotive gears. Cleaner Engineering and Technology, 2022, 9, 100522.	4.0	3
84	A New Computationally Efficient Method in Laser Hardening Modeling. , 2008, , .		2
85	Laser shock peening and warm laser shock peening: process modeling and pulse shape influence. Proceedings of SPIE, 2013, , .	0.8	2
86	Pulsed Laser Ablation of Lithium Ion Battery Electrodes. , 2014, , .		2
87	Fabrication of Knee Prostheses by Means of SLM: Process and Functional Characterization. , 2018, , .		2
88	From Traditional to Virtual Design of Machine-Tools: A Long Way to Go ... Part 2 " The Talk Between Two Worlds. , 2006, , .		2
89	Continuous generating grinding method for beveloid gears and analysis of grinding characteristics. Advances in Manufacturing, 0, , 1.	6.1	2
90	Hardness Penetration Depth Prediction in the Grind-Hardening Process through a Combined FEM model. Procedia CIRP, 2022, 108, 194-198.	1.9	2

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91	3-D Transient Simulation Model for Laser Micromilling Processes. , 2007, , 319.		1
92	Laser Assisted Cold Bending of High Strength Steels. , 2014, , .		1
93	A Multi-Axis Deep Drawing Servo Press With Non-Overconstrained Architecture. , 2014, , .		1
94	Laser Profiling of Aluminum Oxide Grinding Wheels. , 2015, , .		1
95	Design and fabrication of personalized knee prostheses by laser-based powder bed fusion: Influence of manufacturing process on geometric accuracy. Journal of Laser Applications, 2021, 33, 042045.	1.7	1
96	An exhaustive model for the laser hardening of hypo eutectoid steel. Proceedings of SPIE, 2013, , .	0.8	0
97	A Comprehensive Model for Laser Hardening of Carbon Steels. , 2013, , .		0
98	Non-conventional laser surface hardening for axisymmetric components. Proceedings of SPIE, 2014, , .	0.8	0
99	Forming Behaviour at Elevated Temperature of a Laser Heat-Treated AZ31 Magnesium Alloy Sheet. Materials Science Forum, 2018, 941, 1270-1275.	0.3	0
100	3D Printing of Non-Metallic Materials. , 0, , .		0
101	Investigation on Porosity Formation in AA6082 Hybrid Laser-GMAW Welding. , 2010, , .		0
102	Laser Direct Energy Deposition Welding of AISI 316 Stainless Steel Sheets. , 2019, , .		0
103	Prediction of the grinding wheel specification influence on thermal defects in dry grinding through a hierarchical FEM model. International Journal of Advanced Manufacturing Technology, 0, , .	3.0	0