

# Flaviana Calignano

## List of Publications by Year in descending order

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109  
papers

5,374  
citations

81839

39  
h-index

88593

70  
g-index

115  
all docs

115  
docs citations

115  
times ranked

4550  
citing authors

#	ARTICLE	IF	CITATIONS
1	Overview on Additive Manufacturing Technologies. Proceedings of the IEEE, 2017, 105, 593-612.	16.4	402
2	Influence of process parameters on surface roughness of aluminum parts produced by DMLS. International Journal of Advanced Manufacturing Technology, 2013, 67, 2743-2751.	1.5	372
3	Design optimization of supports for overhanging structures in aluminum and titanium alloys by selective laser melting. Materials & Design, 2014, 64, 203-213.	5.1	355
4	On the Selective Laser Melting (SLM) of the AlSi10Mg Alloy: Process, Microstructure, and Mechanical Properties. Materials, 2017, 10, 76.	1.3	323
5	From Powders to Dense Metal Parts: Characterization of a Commercial AlSiMg Alloy Processed through Direct Metal Laser Sintering. Materials, 2013, 6, 856-869.	1.3	257
6	3D Printing of Conductive Complex Structures with In Situ Generation of Silver Nanoparticles. Advanced Materials, 2016, 28, 3712-3717.	11.1	200
7	Influence of heat treatments on microstructure evolution and mechanical properties of Inconel 625 processed by laser powder bed fusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 729, 64-75.	2.6	171
8	Rough surfaces with enhanced heat transfer for electronics cooling by direct metal laser sintering. International Journal of Heat and Mass Transfer, 2014, 75, 58-74.	2.5	159
9	Additive manufacturing of titanium alloys in the biomedical field: processes, properties and applications. Journal of Applied Biomaterials and Functional Materials, 2018, 16, 57-67.	0.7	136
10	Characterization and Comparison of Inconel 625 Processed by Selective Laser Melting and Laser Metal Deposition. Advanced Engineering Materials, 2017, 19, 1600635.	1.6	128
11	Investigation of the accuracy and roughness in the laser powder bed fusion process. Virtual and Physical Prototyping, 2018, 13, 97-104.	5.3	121
12	Selective Laser Melting Manufacturing of Microwave Waveguide Devices. Proceedings of the IEEE, 2017, 105, 620-631.	16.4	108
13	Effect of heat treatment on corrosion resistance of DMLS AlSi10Mg alloy. Electrochimica Acta, 2016, 206, 346-355.	2.6	105
14	On the effect of process parameters on properties of AlSi10Mg parts produced by DMLS. Rapid Prototyping Journal, 2014, 20, 449-458.	1.6	101
15	Study of graphene oxide-based 3D printable composites: Effect of the in situ reduction. Composites Part B: Engineering, 2017, 124, 9-15.	5.9	98
16	3D Printed PEG-Based Hybrid Nanocomposites Obtained by Sol-Gel Technique. ACS Applied Materials & Interfaces, 2016, 8, 5627-5633.	4.0	81
17	A study of the microstructure and the mechanical properties of AlSiNi alloy produced via selective laser melting. Journal of Alloys and Compounds, 2017, 695, 1470-1478.	2.8	72
18	Additive Manufacturing of a Microbial Fuel Cell—A detailed study. Scientific Reports, 2015, 5, 17373.	1.6	71

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19	Single scan track analyses on aluminium based powders. Journal of Materials Processing Technology, 2018, 255, 17-25.	3.1	70
20	In Situ Thermal Generation of Silver Nanoparticles in 3D Printed Polymeric Structures. Materials, 2016, 9, 589.	1.3	69
21	Investigation of accuracy and dimensional limits of part produced in aluminum alloy by selective laser melting. International Journal of Advanced Manufacturing Technology, 2017, 88, 451-458.	1.5	69
22	Effect of Process and Post-Process Conditions on the Mechanical Properties of an A357 Alloy Produced via Laser Powder Bed Fusion. Metals, 2017, 7, 68.	1.0	67
23	Additive Manufacturing of Al Alloys and Aluminium Matrix Composites (AMCs). , 0, , .		66
24	An integrated design methodology for components produced by laser powder bed fusion (L-PBF) process. Virtual and Physical Prototyping, 2018, 13, 191-202.	5.3	66
25	Texture and Microstructural Features at Different Length Scales in Inconel 718 Produced by Selective Laser Melting. Materials, 2019, 12, 1293.	1.3	58
26	Abrasive Fluidized Bed (AFB) finishing of AlSi10Mg substrates manufactured by Direct Metal Laser Sintering (DMLS). Additive Manufacturing, 2016, 10, 15-23.	1.7	56
27	Corrosion Behavior of Heat-Treated AlSi10Mg Manufactured by Laser Powder Bed Fusion. Materials, 2018, 11, 1051.	1.3	54
28	Design of Additively Manufactured Structures for Biomedical Applications: A Review of the Additive Manufacturing Processes Applied to the Biomedical Sector. Journal of Healthcare Engineering, 2019, 2019, 1-6.	1.1	54
29	Manufacturing of thin wall structures in AlSi10Mg alloy by laser powder bed fusion through process parameters. Journal of Materials Processing Technology, 2018, 255, 773-783.	3.1	52
30	Investigation of the Mechanical Properties of a Carbon Fibre-Reinforced Nylon Filament for 3D Printing. Machines, 2020, 8, 52.	1.2	52
31	Corrosion resistance of direct metal laser sintering AlSiMg alloy. Surface and Interface Analysis, 2016, 48, 818-826.	0.8	50
32	Study of Internal Channel Surface Roughnesses Manufactured by Selective Laser Melting in Aluminum and Titanium Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 3837-3844.	1.1	48
33	Direct Fabrication of Joints based on Direct Metal Laser Sintering in Aluminum and Titanium Alloys. Procedia CIRP, 2014, 21, 129-132.	1.0	46
34	Integration of an $\pi$ -Plane Bend, a Twist, and a Filter in Ku/K-Band Through Additive Manufacturing. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 2210-2219.	2.9	46
35	Passive heat transfer enhancement by 3D printed Pitot tube based heat sink. International Communications in Heat and Mass Transfer, 2016, 74, 36-39.	2.9	45
36	Tribological Behavior of Aluminum Alloy AlSi10Mg-TiB <sub>2</sub> Composites Produced by Direct Metal Laser Sintering (DMLS). Journal of Materials Engineering and Performance, 2016, 25, 3152-3160.	1.2	44

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37	Additive manufacturing of Ku/K $\epsilon$ -band waveguide filters: a comparative analysis among selective laser melting and stereo lithography. IET Microwaves, Antennas and Propagation, 2017, 11, 1936-1942.	0.7	42
38	Additive Manufacturing of Ka-Band Dual-Polarization Waveguide Components. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 3589-3596.	2.9	42
39	Enhanced Topology of $\epsilon$ -Plane Resonators for High-Power Satellite Applications. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 3361-3373.	2.9	41
40	Solution Treatment Study of Inconel 718 Produced by SLM Additive Technique in View of the Oxidation Resistance. Advanced Engineering Materials, 2018, 20, 1800351.	1.6	41
41	Corrosion behavior of AlSi10Mg alloy produced by laser powder bed fusion under chloride exposure. Corrosion Science, 2019, 152, 101-108.	3.0	41
42	Statistical approach for electrochemical evaluation of the effect of heat treatments on the corrosion resistance of AlSi10Mg alloy by laser powder bed fusion. Electrochimica Acta, 2019, 305, 459-466.	2.6	39
43	Comparing geometric tolerance capabilities of additive manufacturing systems for polymers. Additive Manufacturing, 2020, 32, 101103.	1.7	35
44	Microstructural investigation of as-fabricated and heat-treated Inconel 625 and Inconel 718 fabricated by direct metal laser sintering: contribution of Politecnico di Torino and Istituto Italiano di Tecnologia (IIT) di Torino. Metal Powder Report, 2016, 71, 273-278.	0.3	34
45	Effect of the build orientation on the mechanical performance of polymeric parts produced by multi jet fusion and selective laser sintering. Journal of Manufacturing Processes, 2021, 65, 271-282.	2.8	34
46	Laser Powder Bed Fusion of a High Strength Al-Si-Zn-Mg-Cu Alloy. Metals, 2018, 8, 300.	1.0	33
47	3-D Printing of High-Performance Feed Horns From Ku- to V-Bands. IEEE Antennas and Wireless Propagation Letters, 2018, 17, 2036-2040.	2.4	32
48	Microstructural and Mechanical Characterization of Aluminum Matrix Composites Produced by Laser Powder Bed Fusion. Advanced Engineering Materials, 2017, 19, 1700180.	1.6	31
49	Additive manufacturing for agile legged robots with hydraulic actuation. , 2015, , .		30
50	A Metal Powder Bed Fusion Process in Industry: Qualification Considerations. Machines, 2019, 7, 72.	1.2	29
51	Photopolymerization of Ceramic Resins by Stereolithography Process: A Review. Applied Sciences (Switzerland), 2022, 12, 3591.	1.3	26
52	Soft Tissue Diagnosis in Maxillofacial Surgery: A Preliminary Study on Three-Dimensional Face Geometrical Features-Based Analysis. Aesthetic Plastic Surgery, 2010, 34, 200-211.	0.5	25
53	A Robust Multifunctional Sandwich Panel Design with Trabecular Structures by the Use of Additive Manufacturing Technology for a New De-Icing System. Technologies, 2017, 5, 35.	3.0	25
54	Development and Characterisation of Aluminium Matrix Nanocomposites AlSi10Mg/MgAl <sub>2</sub> O <sub>4</sub> by Laser Powder Bed Fusion. Metals, 2018, 8, 175.	1.0	24

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55	Evaluation of Corrosion Resistance of Alloy 625 Obtained by Laser Powder Bed Fusion. Journal of the Electrochemical Society, 2019, 166, C3399-C3408.	1.3	24
56	A sensor for direct measurement of small convective heat fluxes: Validation and application to micro-structured surfaces. Experimental Thermal and Fluid Science, 2014, 55, 42-53.	1.5	23
57	A customer oriented methodology for reverse engineering software selection in the computer aided inspection scenario. Computers in Industry, 2015, 67, 54-71.	5.7	23
58	Computer-aided morphological analysis for maxillo-facial diagnostic: a preliminary study. Journal of Plastic, Reconstructive and Aesthetic Surgery, 2010, 63, 218-226.	0.5	22
59	Influence of Process Parameters on the Porosity, Accuracy, Roughness, and Support Structures of Hastelloy X Produced by Laser Powder Bed Fusion. Materials, 2019, 12, 3178.	1.3	21
60	Accuracy of complex internal channels produced by laser powder bed fusion process. Journal of Manufacturing Processes, 2020, 54, 48-53.	2.8	18
61	Optimizing Quality Inspection and Control in Powder Bed Metal Additive Manufacturing: Challenges and Research Directions. Proceedings of the IEEE, 2021, 109, 326-346.	16.4	18
62	Studies on electrodischarge drilling of an Al <sub>2</sub> O <sub>3</sub> â€“TiC composite. International Journal of Advanced Manufacturing Technology, 2013, 66, 1757.	1.5	16
63	Heat Transfer Enhancement by Finned Heat Sinks with Micro-structured Roughness. Journal of Physics: Conference Series, 2014, 494, 012009.	0.3	16
64	Microstructure and Selective Corrosion of Alloy 625 Obtained by Means of Laser Powder Bed Fusion. Materials, 2019, 12, 1742.	1.3	16
65	In situ alloying of AlSi10Mg-5wt% Ni through laser powder bed fusion and subsequent heat treatment. Journal of Alloys and Compounds, 2022, 904, 164081.	2.8	16
66	Corrosion resistance in chloride solution of the AlSi10Mg alloy obtained by means of LPBF. Surface and Interface Analysis, 2019, 51, 1159-1164.	0.8	15
67	Disclosing the build-up mechanisms of multi jet fusion: Experimental insight into the characteristics of starting materials and finished parts. Journal of Manufacturing Processes, 2020, 57, 244-253.	2.8	15
68	A methodology for evaluating the aesthetic quality of 3D printed parts. Procedia CIRP, 2019, 79, 95-100.	1.0	14
69	Machining induced residual stresses in AlSi10Mg component produced by Laser Powder Bed Fusion (L-PBF). Procedia CIRP, 2019, 79, 101-106.	1.0	14
70	Comparison of dimensional tolerance grades for metal AM processes. Procedia CIRP, 2020, 88, 399-404.	1.0	14
71	A357 Alloy by LPBF for Industry Applications. Materials, 2020, 13, 1488.	1.3	14
72	Design and characterization of trabecular structures for an anti-icing sandwich panel produced by additive manufacturing. Journal of Sandwich Structures and Materials, 2020, 22, 1111-1131.	2.0	13

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73	Additive Manufacturing Redesigning of Metallic Parts for High Precision Machines. Crystals, 2020, 10, 161.	1.0	13
74	Ti-6Al-4V lattice structures produced by EBM: Heat treatment and mechanical properties. Procedia CIRP, 2020, 88, 411-416.	1.0	13
75	Effects of the solution and first aging treatment applied to as-built and post-HIP CM247 produced via laser powder bed fusion (LPBF). Journal of Alloys and Compounds, 2022, 905, 164213.	2.8	12
76	High-performance microwave waveguide devices produced by laser powder bed fusion process. Procedia CIRP, 2019, 79, 85-88.	1.0	11
77	3D Printing of a Monolithic K/Ka-Band Dual-Circular Polarization Antenna-Feeding Network. IEEE Access, 2021, 9, 88243-88255.	2.6	11
78	A Morphological Methodology for Three-dimensional Human Face Soft-tissue Landmarks Extraction: A Preliminary Study. Aesthetic Plastic Surgery, 2011, 35, 289-302.	0.5	10
79	Integration of RF functionalities in microwave waveguide components through 3D metal printing. , 2017, , .		10
80	Electrodischarge drilling performance on parts produced by DMLS. International Journal of Advanced Manufacturing Technology, 2012, 58, 1003-1018.	1.5	8
81	3D Printing: 3D Printing of Conductive Complex Structures with In Situ Generation of Silver Nanoparticles (Adv. Mater. 19/2016). Advanced Materials, 2016, 28, 3711-3711.	11.1	7
82	3D Printing of Ka band Orthomode Transducers. , 2018, , .		7
83	Manufacturing of waveguide components for SatCom through selective laser melting. , 2017, , .		6
84	Electromagnetic and mechanical analyses of a 3D-printed ka-band integrated twist and orthomode transducer. , 2019, , .		6
85	Understanding Friction and Wear Behavior at the Nanoscale of Aluminum Matrix Composites Produced by Laser Powder Bed Fusion. Advanced Engineering Materials, 2020, 22, 1900815.	1.6	6
86	Very High Q-Factor Bandpass Filter Using Additive Manufacturing. , 2021, , .		6
87	Experimental research activity on additive manufacturing of microwave passive waveguide components. , 2017, , .		5
88	Enhanced Efficiency and Reduced Side Lobe Level Convex Conformal Reflectarray. Applied Sciences (Switzerland), 2021, 11, 9893.	1.3	5
89	Feed system optimization for convex conformal reflectarray antennas. , 2017, , .		4
90	TiO <sub>2</sub> nanotube-based smart 3D electrodes by anodic oxidation of additively manufactured Ti6Al4V structures. Materials Today Communications, 2018, 15, 165-170.	0.9	4

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91	Accuracy of down-facing surfaces in complex internal channels produced by laser powder bed fusion (L-PBF). Procedia CIRP, 2020, 88, 423-426.	1.0	4
92	Combined reverse engineering and CAD approach for mould modelling in casting simulation. International Journal of Cast Metals Research, 2014, 27, 213-220.	0.5	3
93	Additive manufacturing of antenna-feed chains. , 2017, , .		3
94	Failure mode analysis on compression of lattice structures with internal cooling channels produced by laser powder bed fusion. Advances in Manufacturing, 2021, 9, 403-413.	3.2	3
95	Additive Manufacturing of RF Waveguide Components. , 0, , .		3
96	Additive Manufacturing (AM) of Metallic Alloys. Crystals, 2020, 10, 704.	1.0	2
97	Experimental validation of laser powder bed fusion simulation. IOP Conference Series: Materials Science and Engineering, 2021, 1091, 012048.	0.3	2
98	Experimental testing of 3D printed polymeric heat exchangers. IOP Conference Series: Materials Science and Engineering, 2021, 1136, 012047.	0.3	2
99	Experimental assessment of compensated distortion in selective laser melting of Ti6Al4V parts. IOP Conference Series: Materials Science and Engineering, 2021, 1136, 012048.	0.3	2
100	Application of selective laser melting to the manufacturing of antenna-feed chain components. , 2017, , .		1
101	Laser powder bed fusion of aluminum, titanium and nickel based alloys: Materials and design investigations. , 2017, , .		1
102	Additive Manufacturing Technology for High Performances Feed Horn. , 2018, , .		1
103	Redesigning a flexural joint for metal-based additive manufacturing. Procedia CIRP, 2021, 100, 469-475.	1.0	1
104	Proposal of an Innovative Benchmark for the Evaluation of 3D Printing Accuracy for Photopolymers. Materials Science Forum, 0, 1048, 279-290.	0.3	1
105	Production of Dense Cu-10Sn Part by Laser Powder Bed Fusion with Low Surface Roughness and High Dimensional Accuracy. Materials, 2022, 15, 3352.	1.3	1
106	Integration of Microwave Components through Selective Laser Melting. , 2019, , .		0
107	Aluminium matrix composites (AMCs) by DMLS. , 2013, , 249-253.		0
108	Electro-discharge drilling on DMLS parts in Co-Cr-Mo alloy. , 2013, , 237-242.		0

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109	Experimental Study on Forces and Surface Roughness in Peripheral Grinding of an Aluminum Alloy. SAE International Journal of Materials and Manufacturing, 0, 12, .	0.3	0