

Irene Fernandez Villegas

List of Publications by Year in descending order

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Version: 2024-02-01

35
papers

1,489
citations

304743

22
h-index

361022

35
g-index

35
all docs

35
docs citations

35
times ranked

496
citing authors

#	ARTICLE	IF	CITATIONS
1	Process and performance evaluation of ultrasonic, induction and resistance welding of advanced thermoplastic composites. <i>Journal of Thermoplastic Composite Materials</i> , 2013, 26, 1007-1024.	4.2	139
2	Strength development versus process data in ultrasonic welding of thermoplastic composites with flat energy directors and its application to the definition of optimum processing parameters. <i>Composites Part A: Applied Science and Manufacturing</i> , 2014, 65, 27-37.	7.6	103
3	Modeling of the heating phenomena in ultrasonic welding of thermoplastic composites with flat energy directors. <i>Journal of Materials Processing Technology</i> , 2014, 214, 1361-1371.	6.3	99
4	Ultrasonic welding of advanced thermoplastic composites: An investigation on energy directing surfaces. <i>Advances in Polymer Technology</i> , 2010, 29, 112-121.	1.7	91
5	In situ monitoring of ultrasonic welding of thermoplastic composites through power and displacement data. <i>Journal of Thermoplastic Composite Materials</i> , 2015, 28, 66-85.	4.2	87
6	On avoiding thermal degradation during welding of high-performance thermoplastic composites to thermoset composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2015, 77, 172-180.	7.6	74
7	On the effect of flat energy directors thickness on heat generation during ultrasonic welding of thermoplastic composites. <i>Composite Interfaces</i> , 2017, 24, 203-214.	2.3	68
8	Ultrasonic welding of carbon/epoxy and carbon/PEEK composites through a PEI thermoplastic coupling layer. <i>Composites Part A: Applied Science and Manufacturing</i> , 2018, 109, 75-83.	7.6	66
9	Hybrid welding of carbon-fiber reinforced epoxy based composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2018, 104, 32-40.	7.6	64
10	Mechanical behaviour of thermoplastic composites spot-welded and mechanically fastened joints: A preliminary comparison. <i>Composites Part B: Engineering</i> , 2017, 112, 224-234.	12.0	61
11	Ultrasonic Welding of Thermoplastic Composites. <i>Frontiers in Materials</i> , 2019, 6, .	2.4	55
12	Investigation on energy director-less ultrasonic welding of polyetherimide (PEI)- to epoxy-based composites. <i>Composites Part B: Engineering</i> , 2019, 173, 107014.	12.0	48
13	A study on amplitude transmission in ultrasonic welding of thermoplastic composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2018, 113, 339-349.	7.6	44
14	Modeling and experimental investigation of induction welding of thermoplastic composites and comparison with other welding processes. <i>Journal of Composite Materials</i> , 2016, 50, 2895-2910.	2.4	43
15	Towards robust sequential ultrasonic spot welding of thermoplastic composites: Welding process control strategy for consistent weld quality. <i>Composites Part A: Applied Science and Manufacturing</i> , 2018, 109, 355-367.	7.6	39
16	Ultrasonic welding of CF/PPS composites with integrated triangular energy directors: melting, flow and weld strength development. <i>Composite Interfaces</i> , 2017, 24, 515-528.	2.3	38
17	Continuous resistance welding of thermoplastic composites: Modelling of heat generation and heat transfer. <i>Composites Part A: Applied Science and Manufacturing</i> , 2015, 70, 16-26.	7.6	36
18	On differences and similarities between static and continuous ultrasonic welding of thermoplastic composites. <i>Composites Part B: Engineering</i> , 2020, 203, 108466.	12.0	34

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19	Continuous ultrasonic welding of thermoplastic composites: Enhancing the weld uniformity by changing the energy director. <i>Journal of Composite Materials</i> , 2020, 54, 2023-2035.	2.4	33
20	Analysis of void formation in thermoplastic composites during resistance welding. <i>Journal of Thermoplastic Composite Materials</i> , 2017, 30, 1654-1674.	4.2	29
21	On sequential ultrasonic spot welding as an alternative to mechanical fastening in thermoplastic composite assemblies: A study on single-column multi-row single-lap shear joints. <i>Composites Part A: Applied Science and Manufacturing</i> , 2019, 120, 1-11.	7.6	27
22	Effect of resin-rich bond line thickness and fibre migration on the toughness of unidirectional Carbon/PEEK joints. <i>Composites Part A: Applied Science and Manufacturing</i> , 2018, 109, 197-206.	7.6	26
23	Interlaminar fracture toughness of 5HS Carbon/PEEK laminates. A comparison between DCB, ELS and mandrel peel tests. <i>Polymer Testing</i> , 2018, 66, 13-23.	4.8	22
24	Diagnostic of manufacturing defects in ultrasonically welded thermoplastic composite joints using ultrasonic guided waves. <i>NDT and E International</i> , 2019, 107, 102126.	3.7	22
25	On the sensitivity of ultrasonic welding of epoxy- to polyetheretherketone (PEEK)-based composites to the heating time during the welding process. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021, 144, 106334.	7.6	22
26	Effect of cooling rate on the interlaminar fracture toughness of unidirectional Carbon/PPS laminates. <i>Engineering Fracture Mechanics</i> , 2018, 203, 126-136.	4.3	20
27	Experimental assessment of the influence of welding process parameters on Lamb wave transmission across ultrasonically welded thermoplastic composite joints. <i>Mechanical Systems and Signal Processing</i> , 2018, 99, 197-218.	8.0	17
28	Enhancing weld attributes in ultrasonic spot welding of carbon fibre-reinforced thermoplastic composites: Effect of sonotrode configurations and process control. <i>Composites Part B: Engineering</i> , 2021, 211, 108648.	12.0	17
29	Ultrasonic welding of epoxy- to polyetheretherketone- based composites: Investigation on the material of the energy director and the thickness of the coupling layer. <i>Journal of Composite Materials</i> , 2020, 54, 3081-3098.	2.4	16
30	Improving the quality of continuous ultrasonically welded thermoplastic composite joints by adding a consolidator to the welding setup. <i>Composites Part A: Applied Science and Manufacturing</i> , 2022, 155, 106808.	7.6	14
31	A Study on Through-the-Thickness Heating in Continuous Ultrasonic Welding of Thermoplastic Composites. <i>Materials</i> , 2021, 14, 6620.	2.9	11
32	Characterisation of a metal mesh heating element for closed-loop resistance welding of thermoplastic composites. <i>Journal of Thermoplastic Composite Materials</i> , 2015, 28, 46-65.	4.2	8
33	The dangers of single-lap shear testing in understanding polymer composite welded joints. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021, 379, 20200296.	3.4	6
34	Effects of release media on the fusion bonding of carbon/PEEK laminates. <i>Composites Part A: Applied Science and Manufacturing</i> , 2017, 94, 70-76.	7.6	5
35	On the sensitivity of the ultrasonic welding process of epoxy- to polyetheretherketone (PEEK)-based composites to the welding force and amplitude of vibrations. <i>Composites Part C: Open Access</i> , 2021, 5, 100141.	3.2	5