

Marco Alfano

List of Publications by Year in descending order

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74
papers

1,690
citations

199906
26
h-index

294657
38
g-index

77
all docs

77
docs citations

77
times ranked

1455
citing authors

#	ARTICLE	IF	CITATIONS
1	Mode I fracture of adhesive joints using tailored cohesive zone models. <i>International Journal of Fracture</i> , 2009, 157, 193-204.	2.2	92
2	Analysis of interlaminar fracture toughness and damage mechanisms in composite laminates reinforced with sprayed multi-walled carbon nanotubes. <i>Materials & Design</i> , 2014, 53, 921-927.	5.1	91
3	Laser-based surface patterning of composite plates for improved secondary adhesive bonding. <i>Composites Part A: Applied Science and Manufacturing</i> , 2018, 109, 84-94.	7.7	73
4	An effective finite element model for the prediction of hydrogen induced cracking in steel pipelines. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 16214-16230.	7.1	65
5	Interface debonding characterization by image correlation integrated with Double Cantilever Beam kinematics. <i>International Journal of Solids and Structures</i> , 2015, 55, 79-91.	2.7	65
6	Three-Point Bending Tests of Zirconia Core/Veneer Ceramics for Dental Restorations. <i>International Journal of Dentistry</i> , 2013, 2013, 1-5.	1.5	56
7	Study on the role of laser surface irradiation on damage and decohesion of Al/epoxy joints. <i>International Journal of Adhesion and Adhesives</i> , 2012, 39, 33-41.	3.0	51
8	Surface Patterning of Metal Substrates Through Low Power Laser Ablation for Enhanced Adhesive Bonding. <i>Journal of Adhesion</i> , 2014, 90, 384-400.	3.1	50
9	Surface preparation strategies in secondary bonded thermoset-based composite materials: A review. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021, 147, 106443.	7.7	50
10	In situ analysis of interfacial damage in adhesively bonded composite joints subjected to various surface pretreatments. <i>Composites Part A: Applied Science and Manufacturing</i> , 2019, 116, 216-223.	7.7	49
11	Cohesive Zone Modeling of Mode I Fracture in Adhesive Bonded Joints. <i>Key Engineering Materials</i> , 2007, 348-349, 13-16.	0.2	48
12	A multi-scale based cohesive zone model for the analysis of thickness scaling effect in fiber bridging. <i>Composites Science and Technology</i> , 2017, 139, 90-98.	7.9	44
13	Surface modification of Ti6Al4V alloy by pulsed Yb-laser irradiation for enhanced adhesive bonding. <i>CIRP Annals - Manufacturing Technology</i> , 2015, 64, 527-530.	3.7	43
14	On the effect of interfacial patterns on energy dissipation in plastically deforming adhesive bonded ductile sheets. <i>International Journal of Solids and Structures</i> , 2020, 198, 31-40.	2.7	41
15	Global sensitivity analysis in the identification of cohesive models using full-field kinematic data. <i>International Journal of Solids and Structures</i> , 2015, 55, 66-78.	2.7	40
16	Innovative high-speed femtosecond laser nano-patterning for improved adhesive bonding of Ti6Al4V titanium alloy. <i>CIRP Journal of Manufacturing Science and Technology</i> , 2017, 18, 101-106.	4.6	38
17	Enhancement of static strength and long term durability of steel/epoxy joints through a fiber laser surface pre-treatment. <i>International Journal of Adhesion and Adhesives</i> , 2015, 63, 87-95.	3.0	37
18	Influence of Laser Surface Modification on Bonding Strength of Al/Mg Adhesive Joints. <i>Journal of Adhesion Science and Technology</i> , 2011, 25, 1261-1276.	2.6	35

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19	Processing, Microstructure and Mechanical Properties of Air Plasma-Sprayed Ceria-Yttria Co-stabilized Zirconia Coatings. <i>Strain</i> , 2010, 46, 409-418.	2.4	34
20	Evaluation of mechanical and laser surface pre-treatments on the strength of adhesive bonded steel joints for the automotive industry. <i>Journal of Adhesion Science and Technology</i> , 2016, 30, 747-758.	2.6	33
21	On the enhancement of bond toughness for Al/epoxy T-peel joints with laser treated substrates. <i>International Journal of Fracture</i> , 2011, 171, 139-150.	2.2	32
22	Enhancement of fracture toughness in secondary bonded CFRP using hybrid thermoplastic/thermoset bondline architecture. <i>Composites Science and Technology</i> , 2020, 199, 108346.	7.9	31
23	The influence of high-temperature sintering on microstructure and mechanical properties of free-standing APS CeO ₂ -Y ₂ O ₃ -ZrO ₂ coatings. <i>Journal of Materials Science</i> , 2010, 45, 2662-2669.	3.7	30
24	On controlling interfacial heterogeneity to trigger bridging in secondary bonded composite joints: An efficient strategy to introduce crack-arrest features. <i>Composites Science and Technology</i> , 2020, 188, 107964.	7.9	30
25	Improving adhesion of copper/epoxy joints by pulsed laser ablation. <i>International Journal of Adhesion and Adhesives</i> , 2016, 64, 23-32.	3.0	28
26	Determining the elastic constants of isotropic materials by modal vibration testing of rectangular thin plates. <i>Journal of Sound and Vibration</i> , 2006, 293, 426-439.	4.0	27
27	On the Early Stage Isothermal Oxidation of APS CoNiCrAlY Coatings. <i>Journal of Materials Engineering and Performance</i> , 2012, 21, 1989-1997.	2.4	27
28	Appraisal of surface preparation in adhesive bonding of additive manufactured substrates. <i>International Journal of Adhesion and Adhesives</i> , 2021, 106, 102802.	3.0	27
29	A non-destructive technique for the elastic characterization of thin isotropic plates. <i>NDT and E International</i> , 2007, 40, 112-120.	3.7	25
30	Determining the mixed mode stress intensity factors of surface cracks in functionally graded hollow cylinders. <i>Materials & Design</i> , 2013, 43, 475-484.	5.1	23
31	Tuning energy dissipation in damage tolerant bio-inspired interfaces. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 141, 103965.	4.9	23
32	Laser-based interfacial patterning enables toughening of CFRP/epoxy joints through bridging of adhesive ligaments. <i>Composites Part A: Applied Science and Manufacturing</i> , 2020, 139, 106094.	7.7	22
33	Analysis of debonding in bio-inspired interfaces obtained by additive manufacturing. <i>Procedia Structural Integrity</i> , 2018, 8, 604-609.	0.8	21
34	Toughness amplification in copper/epoxy joints through pulsed laser micro-machined interface heterogeneities. <i>Scientific Reports</i> , 2017, 7, 16344.	3.4	20
35	Analysis of Fracture in Aluminum Joints Bonded with a Bi-Component Epoxy Adhesive. <i>Journal of Testing and Evaluation</i> , 2011, 39, 296-303.	0.8	20
36	Laser-based surface preparation of composite laminates leads to improved electrodes for electrical measurements. <i>Applied Surface Science</i> , 2015, 359, 388-397.	6.2	18

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37	Finite element evaluation of stress intensity factors in curved non-planar cracks in FGMs. <i>Mechanics Research Communications</i> , 2011, 38, 17-23.	1.9	15
38	Simulation of debonding in Al/epoxy T-peel joints using a potential-based cohesive zone model. <i>Procedia Engineering</i> , 2011, 10, 1760-1765.	1.2	15
39	On the effect of pulsed laser ablation on shear strength and mode I fracture toughness of Al/epoxy adhesive joints. <i>Journal of Adhesion Science and Technology</i> , 2015, 29, 1820-1830.	2.6	15
40	A systematic study on the effect of coating type and surface preparation on the wettability of Si-Bronze brazing filler material on GI and GA-coated DP600. <i>Surface and Coatings Technology</i> , 2021, 425, 127735.	4.8	14
41	Nanoindentation of single-crystal Bi_2Te_3 topological insulators grown with the Bridgman-Stockbarger method. <i>Physica Status Solidi (B): Basic Research</i> , 2016, 253, 1082-1086.	1.6	13
42	Measurement of the dynamic elastic properties of a thin coating. <i>Review of Scientific Instruments</i> , 2006, 77, 056107.	1.4	12
43	An improved numerical method for computation of stress intensity factors along 3D curved non-planar cracks in FGMs. <i>International Journal of Solids and Structures</i> , 2011, 48, 208-216.	2.7	12
44	Analysis of crack trapping in 3D printed bio-inspired structural interfaces. <i>Procedia Structural Integrity</i> , 2018, 12, 561-566.	0.8	12
45	How variability in interfacial properties results in tougher bonded composite joints by triggering bridging. <i>International Journal of Solids and Structures</i> , 2020, 191-192, 87-98.	2.7	12
46	Toughening adhesive joints through crack path engineering using integrated polyamide wires. <i>Composites Part A: Applied Science and Manufacturing</i> , 2022, 158, 106954.	7.7	11
47	Mechanical and Functional Properties of Nickel Titanium Adhesively Bonded Joints. <i>Journal of Materials Engineering and Performance</i> , 2014, 23, 2385-2390.	2.4	10
48	Determination of stress intensity factors of 3D curved non-planar cracks in FGMs subjected to thermal loading. <i>Engineering Fracture Mechanics</i> , 2015, 146, 172-184.	4.3	10
49	Thermoelastic analysis of surface cracks in FGMs hollow cylinders using the interaction energy integral method. <i>Engineering Fracture Mechanics</i> , 2018, 202, 103-115.	4.3	10
50	Effect of Mechanical Pretreatments on Damage Mechanisms and Fracture Toughness in CFRP/Epoxy Joints. <i>Materials</i> , 2021, 14, 1512.	3.0	10
51	A Review of Patented Works on the Mechanical Characterization of Materials at Micro- and Nano-Scale. <i>Recent Patents on Nanotechnology</i> , 2011, 5, 37-45.	1.5	8
52	Fracture toughness of structural adhesives for the automotive industry. <i>Procedia Structural Integrity</i> , 2018, 8, 561-565.	0.8	8
53	Recent Developments and Selected Patents on Vibration Based Methods for the Elastic Characterization of Isotropic Materials. <i>Recent Patents on Mechanical Engineering</i> , 2009, 2, 130-143.	0.4	8
54	Fatigue analysis of adhesive joints with laser treated substrates. <i>Procedia Structural Integrity</i> , 2016, 2, 120-127.	0.8	7

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55	Wear of 17-4 PH Stainless Steel Patterned Surfaces Fabricated Using Selective Laser Melting. Applied Sciences (Switzerland), 2021, 11, 9317.	2.6	7
56	Effect of Strain Rates and Heat Exposure on Polyamide (PA12) Processed via Selective Laser Sintering. Materials, 2023, 16, 4654.	3.0	6
57	On the Performance of Welded, Riveted and Adhesive Bonded Al/Mg Sheet Metal Joints. Key Engineering Materials, 0, 473, 237-242.	0.2	5
58	Toughening effect in adhesive joints comprising a CFRP laminate and a corrugated lightweight aluminum alloy. Materials Today Communications, 2022, 32, 104103.	2.0	5
59	An investigation of the mechanical behaviour of vinyl ester resins cured by microwave irradiation. Materials & Design, 2009, 30, 4537-4542.	5.1	4
60	Identifying Elastic Properties of Isotropic Materials by Finite Element Analyses and Vibration Data. Key Engineering Materials, 2007, 345-346, 1327-1330.	0.2	3
61	Improving performance of composite/metal T-joints by using corrugated aluminum stiffeners. Composite Structures, 2023, 307, 116652.	5.9	3
62	Finite Element Analysis of Crack Propagation in Adhesive Joints with Notched Adherends. Materials, 2023, 16, 391.	3.0	3
63	An Inverse Procedure for Determining the Material Constants of Isotropic Square Plates by Impulse Excitation of Vibration. Applied Mechanics and Materials, 2006, 3-4, 287-292.	0.1	2
64	Interfacial Fracture Toughness of Adhesively Bonded Joints. Key Engineering Materials, 2006, 324-325, 149-152.	0.2	2
65	Double Cantilever Beam Testing of Al/Epoxy Joints with Low Power Laser Treated Substrates. , 2014, 3, 1479-1484.		2
66	Experimental analysis of steel joints bonded with automotive grade hot setting structural adhesives. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 2019, 233, 2084-2093.	1.0	2
67	Multi-response optimization of M2 steel coatings deposited by co-axial laser cladding on A2 steel tool surfaces. Journal of Materials Research and Technology, 2024, 29, 1102-1117.	5.9	2
68	Stress Intensity Factor in Alumina-Zirconia Composites by a Hybrid Finite Element Method. Key Engineering Materials, 2006, 324-325, 1135-1138.	0.2	1
69	Simulating fracture in bonded composite joints using cohesive zone models. , 2011, , 341-362.		1
70	Snap-through Crack Propagation in Architected Bonded Interfaces Analyzed Using a Mechanoluminescent SAO/E Coating. ACS Applied Materials & Interfaces, 2023, 15, 40887-40897.	8.2	1
71	Mixed Mode Fracture Toughness of an Adhesive Bonded Joint. , 2007, , 267-268.		0
72	Analysis of the resistance of adhesively bonded joints with rigid-flexible substrates. IOP Conference Series: Materials Science and Engineering, 2021, 1038, 012017.	0.6	0

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73	Effect of processing parameters on the microhardness, shear, and tensile properties of layer-cladded Inconel 718. <i>Journal of Materials Research and Technology</i> , 2024, 28, 4725-4737.	5.9	0
74	Comparative assessment of supervised machine learning algorithms for predicting geometric characteristics of laser cladded inconel 718. <i>Materials Research Express</i> , 2024, 11, 046516.	1.6	0