Josep Costa Balanzat

List of Publications by Year
in descending order

113 papers	5,457 citations	136740 32 h-index	82410 72 g-index
114 all docs	114 docs citations	114 times ranked	2919 citing authors

#	Article	IF	Citations
1	A computationally efficient methodology to simulate hybrid bolted joints including thermal effects. Mechanics of Advanced Materials and Structures, 2023, 30, 48-66.	1.5	3
2	Detailed experimental validation and benchmarking of six models for longitudinal tensile failure of unidirectional composites. Composite Structures, 2022, 279, 114828.	3.1	27
3	Should the translaminar fracture toughness of laminated composites be represented by the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e397" altimg="si66.svg"><mml:mi>R</mml:mi></mml:math> or the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e402" altimg="si67.svg"><mml:mi>J</mml:mi></mml:math> curve? A comparison of their consistency and predictive capability. Composites Part A: Applied Science and Manufacturing, 2022, 156, 106867.	3.8	4
4	Study into the Mechanical Properties of a New Aeronautic-Grade Epoxy-Based Carbon-Fiber-Reinforced Vitrimer. Polymers, 2022, 14, 1223.	2.0	11
5	Testing and simulation of a composite-aluminium wingbox subcomponent subjected to thermal loading. Composite Structures, 2022, 296, 115887.	3.1	2
6	Blind benchmarking of seven longitudinal tensile failure models for two virtual unidirectional composites. Composites Science and Technology, 2021, 202, 108555.	3.8	14
7	Size effects in hybrid unidirectional polymer composites under longitudinal tension: A micromechanical investigation. Composites Part A: Applied Science and Manufacturing, 2021, 140, 106186.	3.8	4
8	Numerical study to understand thermo-mechanical effects on a composite-aluminium hybrid bolted joint. Composite Structures, 2021, 275, 114396.	3.1	11
9	A synchrotron computed tomography dataset for validation of longitudinal tensile failure models based on fibre break and cluster development. Data in Brief, 2021, 39, 107590.	0.5	5
10	Interleaving light veils to minimise the trade-off between mode-I interlaminar fracture toughness and in-plane properties. Composites Part A: Applied Science and Manufacturing, 2020, 128, 105659.	3.8	22
11	Failure of hybrid composites under longitudinal tension: Influence of dynamic effects and thermal residual stresses. Composite Structures, 2020, 233, 111732.	3.1	9
12	High-fidelity computational micromechanics of first-fibre failure in unidirectional composites: Deformation mechanisms and stress concentration factors. International Journal of Solids and Structures, 2020, 204-205, 18-33.	1.3	5
13	Experimental demonstration of the in-situ effect under transverse shear. Composites Part A: Applied Science and Manufacturing, 2020, 138, 106047.	3.8	5
14	Measuring fracture energy of interfaces under mode I loading with the wedge driven test. Engineering Fracture Mechanics, 2020, 239, 107210.	2.0	6
15	A virtual testing based search for optimum compression after impact strength in thin laminates using ply-thickness hybridization and unsymmetrical designs. Composites Science and Technology, 2020, 196, 108188.	3.8	8
16	On how unsymmetrical laminate designs with tailored ply clusters affect compression after impact strength compared to symmetric baseline. Composite Structures, 2020, 238, 111958.	3.1	8
17	Mitigating the weak impact response of thin-ply based thin laminates through an unsymmetrical laminate design incorporating intermediate grade plies. Composite Structures, 2019, 220, 93-104.	3.1	25
18	Effect of ply thickness and ply level hybridization on the compression after impact strength of thin laminates. Composites Part A: Applied Science and Manufacturing, 2019, 121, 232-243.	3.8	48

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19	Unsymmetrical stacking sequences as a novel approach to tailor damage resistance under out-of-plane impact loading. Composites Science and Technology, 2019, 173, 125-135.	3.8	18
20	Impact and compression after impact response in thin laminates of spread-tow woven and non-crimp fabrics. Composite Structures, 2019, 215, 432-445.	3.1	40
21	Effects of local stress fields around broken fibres on the longitudinal failure of composite materials. International Journal of Solids and Structures, 2019, 156-157, 294-305.	1.3	8
22	A benchmark test for validating 3D simulation methods for delamination growth under quasi-static and fatigue loading. Composite Structures, 2019, 210, 932-941.	3.1	24
23	An analytical model to predict stress fields around broken fibres and their effect on the longitudinal failure of hybrid composites. Composite Structures, 2019, 211, 564-576.	3.1	7
24	Improving damage resistance and load capacity of thin-ply laminates using ply clustering and small mismatch angles. Composites Part A: Applied Science and Manufacturing, 2019, 117, 76-91.	3.8	41
25	Computed Tomography of Polymer Composites Reinforced with Natural Short Fiber. Lecture Notes in Computer Science, 2019, , 452-467.	1.0	1
26	The effect interleaving has on thin-ply non-crimp fabric laminate impact response: X-ray tomography investigation. Composites Part A: Applied Science and Manufacturing, 2018, 107, 409-420.	3.8	31
27	A 3D Progressive Failure Model for predicting pseudo-ductility in hybrid unidirectional composite materials under fibre tensile loading. Composites Part A: Applied Science and Manufacturing, 2018, 107, 579-591.	3.8	38
28	Analytical model for predicting the tensile strength of unidirectional composites based on the density of fiber breaks. Composites Part B: Engineering, 2018, 141, 84-91.	5.9	9
29	Fabrication of hybrid thin ply tapes. IOP Conference Series: Materials Science and Engineering, 2018, 406, 012067.	0.3	3
30	A new testing device to simultaneously measure the mode I fatigue delamination behavior of a batch of specimens. International Journal of Fatigue, 2018, 116, 275-283.	2.8	7
31	A 3D tomographic investigation to elucidate the low-velocity impact resistance, tolerance and damage sequence of thin non-crimp fabric laminates: effect of ply-thickness. Composites Part A: Applied Science and Manufacturing, 2018, 113, 53-65.	3.8	23
32	Suitable specimen dimensions for the determination of mode II fracture toughness of bonded joints by means of the ELS test. Engineering Fracture Mechanics, 2018, 202, 350-362.	2.0	8
33	Experimental study into compression after impact strength of laminates with conventional and nonconventional ply orientations. Composites Part B: Engineering, 2017, 126, 133-142.	5.9	34
34	An efficient methodology for the experimental characterization of mode II delamination growth under fatigue loading. International Journal of Fatigue, 2017, 95, 185-193.	2.8	26
35	A quick procedure to predict free-edge delamination in thin-ply laminates under tension. Engineering Fracture Mechanics, 2016, 168, 28-39.	2.0	23
36	A data reduction method based on the J -integral to obtain the interlaminar fracture toughness in a mode II end-loaded split (ELS) test. Composites Part A: Applied Science and Manufacturing, 2016, 90, 670-677.	3.8	33

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37	An experimental analysis of the fracture behavior of composite bonded joints in terms of cohesive laws. Composites Part A: Applied Science and Manufacturing, 2016, 90, 234-242.	3.8	45
38	On the validity of linear elastic fracture mechanics methods to measure the fracture toughness of adhesive joints. International Journal of Solids and Structures, 2016, 81, 110-116.	1.3	50
39	A quasi-static indentation test to elucidate the sequence of damage events in low velocity impacts on composite laminates. Composites Part A: Applied Science and Manufacturing, 2016, 82, 180-189.	3.8	103
40	An automated methodology for mode II delamination tests under fatigue loading based on the real time monitoring of the specimenâ€™s compliance. International Journal of Fatigue, 2016, 82, 634-642.	2.8	20
41	Mode I fatigue behaviour and fracture of adhesively-bonded fibre-reinforced polymer (FRP) composite joints for structural repairs. , 2015, , 121-147.		6
42	An experimental study on matrix crack induced delamination in composite laminates. Composite Structures, 2015, 127, 10-17.	3.1	65
43	An experimental data reduction method for the Mixed Mode Bending test based on the J-integral approach. Composites Science and Technology, 2015, 117, 85-91.	3.8	44
44	Delamination Under Fatigue Loads in Composite Laminates: A Review on the Observed Phenomenology and Computational Methods. Applied Mechanics Reviews, 2014, 66, .	4.5	121
45	Variable-stiffness composite panels: As-manufactured modeling and its influence on the failure behavior. Composites Part B: Engineering, 2014, 56, 660-669.	5.9	54
46	Influence of pre-bond moisture in the adherents on the fracture toughness of bonded joints for composite repairs. International Journal of Adhesion and Adhesives, 2014, 49, 80-89.	1.4	22
47	Variable-stiffness composite panels: Defect tolerance under in-plane tensile loading. Composites Part A: Applied Science and Manufacturing, 2014, 63, 21-31.	3.8	40
48	An energy based failure criterion for matrix crack induced delamination in laminated composite structures. Composite Structures, 2014, 112, 339-344.	3.1	41
49	Measurement of the in situ transverse tensile strength of composite plies by means of the real time monitoring of microcracking. Composites Part B: Engineering, 2014, 65, 40-46.	5.9	49
50	Damage occurrence at edges of non-crimp-fabric thin-ply laminates under off-axis uniaxial loading. Composites Science and Technology, 2014, 98, 44-50.	3.8	67
51	Damage resistance and damage tolerance of dispersed CFRP laminates: The bending stiffness effect. Composite Structures, 2013, 106, 30-32.	3.1	14
52	Damage resistance and damage tolerance of dispersed CFRP laminates: Effect of the mismatch angle between plies. Composite Structures, 2013, 101, 255-264.	3.1	90
53	Assessment of the influence of the crack monitoring method in interlaminar fatigue tests using fiber Bragg grating sensors. Composites Science and Technology, 2013, 84, 44-50.	3.8	12
54	Two-pheromone Ant Colony Optimization to design dispersed laminates for aeronautical structural applications. Advances in Engineering Software, 2013, 66, 10-18.	1.8	6

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55	Damage resistance and damage tolerance of dispersed CFRP laminates: Design and optimization. Composite Structures, 2013, 95, 569-576.	3.1	48
56	Damage resistance and damage tolerance of dispersed CFRP laminates: Effect of ply clustering. Composite Structures, 2013, 106, 96-103.	3.1	57
57	Characterization of crack propagation in mode I delamination of multidirectional CFRP laminates. Composites Science and Technology, 2012, 72, 1251-1256.	3.8	91
58	Numerical investigation to prevent crack jumping in Double Cantilever Beam tests of multidirectional composite laminates. Composites Science and Technology, 2011, 71, 1587-1592.	3.8	45
59	Ant Colony Optimization for dispersed laminated composite panels under biaxial loading. Composite Structures, 2011, 94, 31-36.	3.1	43
60	Side Clamped Beam (SCB) hinge system for delamination tests in beam-type composite specimens. Composites Science and Technology, 2011, 71, 1023-1029.	3.8	29
61	Accurate simulation of delamination growth under mixed-mode loading using cohesive elements: Definition of interlaminar strengths and elastic stiffness. Composite Structures, 2010, 92, 1857-1864.	3.1	367
62	Mechanical hinge system for delamination tests in beam-type composite specimens. Composites Science and Technology, 2008, 68, 1837-1842.	3.8	11
63	Delamination propagation under cyclic loading. , 2008, , 485-513.		4
64	Simulation of delamination in composites under high-cycle fatigue. Composites Part A: Applied Science and Manufacturing, 2007, 38, 2270-2282.	3.8	312
65	An engineering solution for mesh size effects in the simulation of delamination using cohesive zone models. Engineering Fracture Mechanics, 2007, 74, 1665-1682.	2.0	1,212
66	Quality control of CFRP by means of digital image processing and statistical point pattern analysis. Composites Science and Technology, 2007, 67, 2438-2446.	3.8	11
67	Random models versus periodic models for fibre reinforced composites. Computational Materials Science, 2006, 38, 316-324.	1.4	153
68	Determination of the critical size of a statistical representative volume element (SRVE) for carbon reinforced polymersâ˜†. Acta Materialia, 2006, 54, 3471-3484.	3.8	200
69	An exact solution for the determination of the mode mixture in the mixed-mode bending delamination test. Composites Science and Technology, 2006, 66, 1256-1258.	3.8	13
70	A two-scale method for matrix cracking probability in fibre-reinforced composites based on a statistical representative volume element. Composites Science and Technology, 2006, 66, 1766-1777.	3.8	30
71	Analysis of the mixed-mode end load split delamination test. Composite Structures, 2006, 76, 14-20.	3.1	17
72	A damage model for the simulation of delamination in advanced composites under variable-mode loading. Mechanics of Materials, 2006, 38, 1072-1089.	1.7	722

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73	A progressive damage model for unidirectional fibre-reinforced composites based on fibre fragmentation. Part I: Formulation. Composites Science and Technology, 2005, 65, 2039-2048.	3.8	39
74	A progressive damage model for unidirectional fibre-reinforced composites based on fibre fragmentation. Part II: Stiffness reduction in environment sensitive fibres under fatigue. Composites Science and Technology, 2005, 65, 2269-2275.	3.8	14
75	Mixed-mode delamination growth in carbonâ€“fibre composite laminates under cyclic loading. International Journal of Solids and Structures, 2004, 41, 4219-4235.	1.3	126
76	Radiative thermal emission from silicon nanoparticles: a reversed story from quantum to classical theory. European Journal of Physics, 2002, 23, 191-203.	0.3	29
77	Is sintering enhanced under non-isothermal conditions?. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 337, 248-253.	2.6	14
78	Thermal Oxidation of Si Nanoparticles Grown by Plasma-Enhanced CVD. Materials Research Society Symposia Proceedings, 2000, 609, 5111.	0.1	0
79	Nanometric powder of stoichiometric silicon carbide produced in square-wave modulated RF glow discharges. Vacuum, 1999, 52, 183-186.	1.6	14
80	Accurate electrical measurements for in situ diagnosis of RF discharges in plasma CVD processes. Vacuum, 1999, 53, 1-5.	1.6	13
81	Nanoparticles of Siâ€“Câ€“N from low temperature RF plasmas: selective size, composition and structure. Applied Surface Science, 1999, 144-145, 702-707.	3.1	12
82	High nucleation rate in pure SiC nanometric powder by a combination of room temperature plasmas and post-thermal treatments. Diamond and Related Materials, 1999, 8, 364-368.	1.8	6
83	Blackbody emission under laser excitation of silicon nanopowder produced by plasma-enhanced chemical-vapor deposition. Journal of Applied Physics, 1998, 83, 7879-7885.	1.1	45
84	Effect of the Nanoparticles on the Structure and Crystallization of Amorphous Silicon Thin Films Produced by rf Glow Discharge. Journal of Materials Research, 1998, 13, 2476-2479.	1.2	30
85	Black-body emission from nanostructured materials. Journal of Luminescence, 1998, 80, 519-522.	1.5	21
86	Deposition of Nanostructured Silicon Thin Films by Means of the Selective Contribution of Particles in Pecvd. Materials Research Society Symposia Proceedings, 1998, 507, 499.	0.1	16
87	Structural Characterization and Crystallization Process of Nanostructured Silicon Thin Films Produced in Low-Pressure Silane Plasma. Materials Research Society Symposia Proceedings, 1998, 507, 933.	0.1	10
88	Thermal Desorption of Hydrogen in Si and Sic Nanoparticles Produced by Plasma-Enhanced Chemical-Vapor Deposition. Materials Research Society Symposia Proceedings, 1998, 513, 427.	0.1	3
89	In situ fast ellipsometric analysis of repetitive surface phenomena. Review of Scientific Instruments, 1997, 68, 3135-3139.	0.6	4
90	Gas collisions and pressure quenching of the photoluminescence of silicon nanopowder grown by plasma-enhanced chemical vapor deposition. Journal of Applied Physics, 1997, 81, 3290-3293.	1.1	3

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91	Calorimetric Study of the Thermal Induced Transformations of Ultrafine Silicon Carbide Powder Produced by RF Glow Discharge. Key Engineering Materials, 1997, 132-136, 145-148.	0.4	1
92	Nanostructured Silicon thin films Deposited by PECVD in the Presence of Silicon Nanoparticles. Materials Research Society Symposia Proceedings, 1997, 467, 313.	0.1	12
93	Effects of thermal and laser annealing on silicon carbide nanopowder produced in radio frequency glow discharge. Diamond and Related Materials, 1997, 6, 1559-1563.	1.8	8
94	Silicon carbide nanoparticles for advanced materials produced in radio frequency modulated glow discharges. Vacuum, 1997, 48, 665-668.	1.6	8
95	Production of boron nitride nanometric powder by plasma-enhanced chemical vapor deposition: microstructural characterization. Diamond and Related Materials, 1996, 5, 544-547.	1.8	8
96	On the structural origin of the photoluminescence in silicon powder produced in PECVD processes. Thin Solid Films, 1996, 276, 96-99.	0.8	5
97	Production of nanometric particles in radio frequency glow discharges in mixtures of silane and methane. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1996, 14, 567-571.	0.9	17
98	Role of structural saturation and geometry in the luminescence of silicon-based nanostructured materials. Physical Review B, 1996, 53, 7847-7850.	1.1	40
99	Produiion of a-Si1-x Cx:H powders using radiofrequency glow discharges of silane and methane mixtures.. Materials Research Society Symposia Proceedings, 1995, 410, 173.	0.1	3
100	Real Time Ellipsometric Study of Boron Nitride Thin Film Growth. Materials Research Society Symposia Proceedings, 1995, 410, 307.	0.1	1
101	Pressure dependence of photoluminescence in amorphous silicon nanopowder produced by plasma enhanced chemical vapour deposition. Materials Science and Technology, 1995, 11, 707-710.	0.8	4
102	Pressure influence on the decay of the photoluminescence in Si nanopowder grown by plasmaâ€enhanced chemical vapor deposition. Applied Physics Letters, 1995, 67, 2830-2832.	1.5	6
103	Effects of plasma processing on the microstructural properties of silicon powders. Plasma Sources Science and Technology, 1994, 3, 348-354.	1.3	33
104	Photoluminescence in silicon powder grown by plasma-enhanced chemical-vapor deposition: Evidence of a multistep-multiphoton excitation process. Physical Review B, 1994, 50, 18124-18133.	1.1	15
105	Preparation of nanoscale amorphous silicon based powder in a square-wave-modulated rf plasma reactor. Vacuum, 1994, 45, 1115-1117.	1.6	14
106	Unusual photoluminescence properties in amorphous silicon nanopowder produced by plasma enhanced chemical vapor deposition. Applied Physics Letters, 1994, 64, 463-465.	1.5	27
107	IR-Visible Photoluminescence Study of Nanometer-Size Amorphous Silicon Powder Produced by Square-Wave-Modulated RF Glow Discharge. Materials Research Society Symposia Proceedings, 1994, 351, 405.	0.1	1
108	Optical, vibrational and compositional study of amorphous silicon oxynitride thin films grown by an RF plasma using N2O + SiH4 gas mixtures. Applied Surface Science, 1993, 70-71, 695-700.	3.1	9

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109	In situ real-time ellipsometric study of the growth of r.f. plasma deposited amorphous hydrogenated silicon oxynitride thin films. Thin Solid Films, 1993, 228, 137-140.	0.8	3
110	Study of thin films of transparent electronic materials by phase-modulated spectroellipsometry. Thin Solid Films, 1993, 233, 223-226.	0.8	1
111	Error minimization method for spectroscopic and phase-modulated ellipsometric measurements on highly transparent thin films. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1993, 10, 713.	0.8	11
112	Microstructural and Vibrational Characterization of the Hydrogenated Amorphous Silicon Powders. Materials Research Society Symposia Proceedings, 1993, 297, 1031.	0.1	6
113	Production of Silicon Powder by Square-Wave Modulated Rf Silane Plasma. Materials Research Society Symposia Proceedings, 1992, 286, 155.	0.1	5