Louis McCartney

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Theory of stress transfer in a 0Â°â€"90Â°â€"0Â° cross-ply laminate containing a parallel array of transverse cracks. Journal of the Mechanics and Physics of Solids, 1992, 40, 27-68.	4.8	194
2	PREDICTING TRANSVERSE CRACK FORMATION IN CROSS-PLY LAMINATES. Composites Science and Technology, 1998, 58, 1069-1081.	7.8	139
3	Model to predict effects of triaxial loading on ply cracking in general symmetric laminates. Composites Science and Technology, 2000, 60, 2255-2279.	7.8	120
4	A model to predict the evolution of pitting corrosion and the pit-to-crack transition incorporating statistically distributed input parameters. Corrosion Science, 2006, 48, 2084-2105.	6.6	119
5	A physics-based life prediction methodology for thermal barrier coating systems. Acta Materialia, 2007, 55, 1491-1503.	7.9	116
6	Statistical Theory of the Strength of Fiber Bundles. Journal of Applied Mechanics, Transactions ASME, 1983, 50, 601-608.	2.2	78
7	Comparison of models for transverse ply cracks in composite laminates. Composites Science and Technology, 2000, 60, 2347-2359.	7.8	73
8	Maxwell's far-field methodology applied to the prediction of properties of multi-phase isotropic particulate composites. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 423-446.	2.1	64
9	Maxwell's far-field methodology predicting elastic properties of multiphase composites reinforced with aligned transversely isotropic spheroids. Philosophical Magazine, 2010, 90, 4175-4207.	1.6	62
10	Prediction of fatigue crack growth rates: theory, mechanisms, and experimental results. Metal Science, 1977, 11, 351-361.	0.7	60
11	Modelling of the evolution of stress corrosion cracks from corrosion pits. Scripta Materialia, 2006, 54, 575-578.	5.2	59
12	Predicting the effect of non-uniform ply cracking on the thermoelastic properties of cross-ply laminates. Composites Science and Technology, 2002, 62, 1841-1856.	7.8	57
13	A new approach to Weibull's statistical theory of brittle fracture. International Journal of Fracture, 1979, 15, 365-375.	2.2	55
14	Crack propagation, resulting from a monotonic increasing applied stress, in a linear viscoelastic material. International Journal of Fracture, 1977, 13, 641-654.	2.2	47
15	Composite materials of controlled thermal expansion. Composites Science and Technology, 2006, 66, 154-159.	7.8	47
16	Extensions of a statistical approach to fracture. International Journal of Fracture, 1979, 15, 477-487.	2.2	44
17	Prediction of ply crack formation and failure in laminates. Composites Science and Technology, 2002, 62, 1619-1631.	7.8	38
18	The prediction of cracking in biaxially loaded cross-ply laminates having brittle matrices. Composites, 1993, 24, 84-92.	0.7	34

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19	Controlling thermal expansion to obtain negative expansivity using laminated composites. Composites Science and Technology, 2005, 65, 47-59.	7.8	33
20	Experimental determination of the magnetoelectric coupling coefficient via piezoelectric measurements. Measurement Science and Technology, 2008, 19, 045106.	2.6	32
21	Stress state characterization of delamination cracks in [0/90] symmetric laminates by BEM. International Journal of Solids and Structures, 2008, 45, 1632-1662.	2.7	27
22	Cavities under stress at high temperatures. Acta Metallurgica, 1977, 25, 221-230.	2.1	26
23	Discussion: ?The use of the J-integral in thermal stress crack problems,?. International Journal of Fracture, 1979, 15, R217-R221.	2.2	25
24	Energy-based prediction of failure in general symmetric laminates. Engineering Fracture Mechanics, 2005, 72, 909-930.	4.3	24
25	Crack propagation in linear viscoelastic solids: some new results. International Journal of Fracture, 1978, 14, 547-554.	2.2	23
26	Effect of Off â€“ Axis Matrix Cracking on Stiffness of Symmetric Angle-Ply Composite Laminates. International Journal of Fracture, 2006, 139, 529-536.	2.2	23
27	Mechanical property test procedures for metal matrix composites. Materials Science and Technology, 1989, 5, 105-117.	1.6	22
28	Energy methods for modelling damage in laminates. Journal of Composite Materials, 2013, 47, 2613-2640.	2.4	22
29	Comparison of Variational and Generalized Plane Strain approaches for matrix cracking in general symmetric laminates. International Journal of Damage Mechanics, 2018, 27, 507-540.	4.2	22
30	Effective thermal and elastic properties of [+Î¸/â^'Î¸]s laminates. Composites Science and Technology, 2007, 67, 646-661.	7.8	21
31	Energy methods for fatigue damage modelling of laminates. Composites Science and Technology, 2008, 68, 2601-2615.	7.8	20
32	Derivations of energy-based modelling for ply cracking in general symmetric laminates. Journal of Composite Materials, 2013, 47, 2641-2673.	2.4	20
33	Energy-based prediction of progressive ply cracking and strength of general symmetric laminates using an homogenisation method. Composites Part A: Applied Science and Manufacturing, 2005, 36, 119-128.	7.6	20
34	Prediction of the reflected spectra from chirped fibre Bragg gratings embedded within cracked crossply laminates. Measurement Science and Technology, 2006, 17, 1609-1614.	2.6	19
35	Theory of variational stress transfer in general symmetric composite laminates containing non-uniformly spaced ply cracks. Composites Part A: Applied Science and Manufacturing, 2018, 107, 374-386.	7.6	19
36	A software tool for lifetime prediction of thermal barrier coating systems. Materials and Corrosion - Werkstoffe Und Korrosion, 2008, 59, 556-565.	1.5	18

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37	CAN SAFETY FACTORS BE REDUCED SAFELY WHEN DESIGNING AGAINST FATIGUE?. Fatigue and Fracture of Engineering Materials and Structures, 1979, 2, 387-400.	3.4	15
38	Methods for determining piezoelectric properties of thin epitaxial films: Theoretical foundations. Journal of Applied Physics, 2014, 116, .	2.5	15
39	Electrode size and boundary condition independent measurement of the effective piezoelectric coefficient of thin films. APL Materials, 2015, 3, .	5.1	15
40	Creep under Varying Load. Metal Science J, 1973, 7, 196-204.	0.9	13
41	Crack-growth predictions for viscoelastic materials exhibiting non-uniform craze deformation. International Journal of Fracture, 1988, 37, 279-301.	2.2	13
42	No timeâ€”gentlemen please!. Philosophical Magazine and Journal, 1976, 33, 689-695.	1.7	11
43	Derivation of crack growth laws for linear viscoelastic solids based upon the concept of a fracture process zone. International Journal of Fracture, 1980, 16, 375-382.	2.2	11
44	Discussion: "A rate-dependent criterion for crack growth," by R. M. christensen. International Journal of Fracture, 1980, 16, R229-R232.	2.2	10
45	The effect of periodic-random loading on fatigue crack growth. International Journal of Fracture, 1976, 12, 273-288.	2.2	9
46	Theory of stable crack growth in an elastic-perfectly plastic material. International Journal of Fracture, 1978, 14, 429-438.	2.2	9
47	Viscoelastic crack growth. International Journal of Fracture, 1983, 23, R11-R13.	2.2	9
48	A novel method of determining residual stress distributions in plates using the incremental slitting technique. Journal of Strain Analysis for Engineering Design, 2011, 46, 280-297.	1.8	9
49	A numerical method of processing fatigue crack propagation data. Engineering Fracture Mechanics, 1977, 9, 265-272.	4.3	8
50	A new method of analysing fatigue crack propagation data. Engineering Fracture Mechanics, 1977, 9, 273-290.	4.3	8
51	BEM analysis of damage progress in 0/90 laminates. Engineering Analysis With Boundary Elements, 2009, 33, 762-769.	3.7	8
52	A note on closure during fatigue crack growth. International Journal of Fracture, 1979, 15, R21-R24.	2.2	7
53	Response to discussion concerning kinetic criteria for crack in viscoelastic materials. International Journal of Fracture, 1981, 17, R161-R161.	2.2	7
54	Energy-based delamination theory for biaxial loading in the presence of thermal stresses. Composites Science and Technology, 2012, 72, 1753-1766.	7.8	7

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55	On the energy balance approach to fracture in creeping materials. International Journal of Fracture, 1982, 19, 99-113.	2.2	6
56	Constitutive relations describing creep deformation for multi-axial time-dependent stress states. Journal of the Mechanics and Physics of Solids, 1981, 29, 13-33.	4.8	5
57	Physically based damage models for laminated composites. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 2003, 217, 163-199.	1.1	5
58	Statistics for static strength of fibre bundles. Metal Science, 1981, 15, 471-474.	0.7	4
59	Time-dependent strength of large bundles of fibres loaded in corrosive environments. Fibre Science and Technology, 1982, 16, 95-109.	0.2	4
60	Modelling long term deformation behaviour of polymers for finite element analysis. Plastics, Rubber and Composites, 2009, 38, 433-443.	2.0	4
61	Modeling nonlinear viscoelasticity in polymers for design using finite element analysis. Polymer Engineering and Science, 2011, 51, 2210-2219.	3.1	4
62	General solution of a certain mixed boundary value crack problem. International Journal of Engineering Science, 1983, 21, 131-142.	5.0	3
63	A new boundary element technique for solving plane problems of linear elasticity: 1. Theory. Applied Mathematical Modelling, 1983, 7, 441-451.	4.2	3
64	Multiscale Modeling of Composites Using Analytical Methods. , 2008, , 271-316.		3
65	Verification of a 3D analytical model of multilayered piezoelectric systems using finite element analysis. Journal of Applied Physics, 2019, 125, 184503.	2.5	3
66	Vacancy diffusion in a crystal. Acta Metallurgica, 1975, 23, 769-777.	2.1	2
67	Strain/Time Relations Describing Creep. Journal of Mechanical Engineering Science, 1976, 18, 39-45.	0.2	2
68	Response: Discussion of ?Crack growth laws for a variety of visco-elastic solids using energy and COD fracture criteria,?. International Journal of Fracture, 1980, 16, R27-R30.	2.2	2
69	A new boundary element technique for solving plane problems of linear elasticity: improved theory and an application to fracture mechanics. Applied Mathematical Modelling, 1984, 8, 243-250.	4.2	2
70	Measurement and analysis of slow crack growth in a viscoelastic material. Polymer Testing, 1984, 4, 253-272.	4.8	2
71	Analytical Methods of Predicting Performance of Composite Materials. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2015, , 191-254.	0.6	2
72	Response: Further discussion of ?crack growth laws for a variety of visco-elastic solids using energy and COD fracture criteria,?. International Journal of Fracture, 1980, 16, R109-R110.	2.2	1

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73	Prediction of dislocation formation in epitaxial multilayers subject to in-plane loading. Philosophical Magazine, 2005, 85, 1575-1610.	1.6	0
74	A collection of papers on Materials Science to celebrate the 80thbirthday of Professor Anthony Kelly, CBE, FRS. Philosophical Magazine, 2010, 90, 4075-4080.	1.6	0
75	Modelling Failure Mechanisms in Laminated Composites. Solid Mechanics and Its Applications, 2002, , 31-40.	0.2	0