

Ian A Ashcroft

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

81
papers

4,125
citations

27
h-index

63
g-index

83
ext. papers

5,013
ext. citations

4.4
avg, IF

5.96
L-index

#	Paper	IF	Citations
81	Exploiting Generative Design for 3D Printing of Bacterial Biofilm Resistant Composite Devices. <i>Advanced Science</i> , 2021 , 8, e2100249	13.6	3
80	Powder Bed Fusion of nickel-based superalloys: A review. <i>International Journal of Machine Tools and Manufacture</i> , 2021 , 165, 103729	9.4	48
79	Understanding mechanical properties in fused filament fabrication of polyether ether ketone. <i>Additive Manufacturing</i> , 2021 , 37, 101673	6.1	5
78	A multiscale optimisation method for bone growth scaffolds based on triply periodic minimal surfaces. <i>Biomechanics and Modeling in Mechanobiology</i> , 2021 , 20, 2085-2096	3.8	5
77	On the thermal conductivity of AlSi10Mg and lattice structures made by laser powder bed fusion. <i>Additive Manufacturing</i> , 2020 , 34, 101214	6.1	14
76	Phase-field modelling of brittle fracture in thin shell elements based on the MITC4+ approach. <i>Computational Mechanics</i> , 2020 , 65, 1413-1432	4	3
75	Optimal orientation of fibre composites for strength based on Hashin's criteria optimality conditions. <i>Structural and Multidisciplinary Optimization</i> , 2020 , 61, 2155-2176	3.6	10
74	3D Printing as a Technology Enabler for Electrical Machines: Manufacturing and Testing of a Salient Pole Rotor for SRM 2020 ,		3
73	An experimental analysis of deepest bottom-left-fill packing methods for additive manufacturing. <i>International Journal of Production Research</i> , 2020 , 58, 6917-6933	7.8	7
72	Additive Manufacturing and Testing of a Soft Magnetic Rotor for a Switched Reluctance Motor. <i>IEEE Access</i> , 2020 , 8, 206982-206991	3.5	7
71	Additive manufacturing of glass with laser powder bed fusion. <i>Journal of the American Ceramic Society</i> , 2019 , 102, 4410-4414	3.8	26
70	Electrical resistivity of pure copper processed by medium-powered laser powder bed fusion additive manufacturing for use in electromagnetic applications. <i>Additive Manufacturing</i> , 2019 , 29, 100831	6.1	35
69	3D printing of Aluminium alloys: Additive Manufacturing of Aluminium alloys using selective laser melting. <i>Progress in Materials Science</i> , 2019 , 106, 100578	42.2	423
68	Topology optimization of geometrically nonlinear structures using an evolutionary optimization method. <i>Engineering Optimization</i> , 2018 , 50, 1850-1870	2	22
67	Electrical resistivity of additively manufactured AlSi10Mg for use in electric motors. <i>Additive Manufacturing</i> , 2018 , 21, 395-403	6.1	43
66	Numerical Approach: Finite Element Analysis 2018 , 701-739		1
65	Comparison of cohesive zone elements and smoothed particle hydrodynamics for failure prediction of single lap adhesive joints 2017 , 93, 444-460		20

64	A numerical study of the effect of ply-layup on the strength and stiffness of a composite T-joint under three point bending. <i>Journal of Adhesion Science and Technology</i> , 2017 , 31, 2124-2138	2	5
63	Selective laser melting of aluminum alloys. <i>MRS Bulletin</i> , 2017 , 42, 311-319	3.2	62
62	An investigation into the depth and time dependent behavior of UV cured 3D ink jet printed objects. <i>Journal of Materials Research</i> , 2017 , 32, 1407-1420	2.5	9
61	A Fourier-series-based virtual fields method for the identification of three-dimensional stiffness distributions and its application to incompressible materials. <i>Strain</i> , 2017 , 53, e12229	1.7	6
60	Hierarchical remeshing strategies with mesh mapping for topology optimisation. <i>International Journal for Numerical Methods in Engineering</i> , 2017 , 111, 676-700	2.4	21
59	Numerical Approach: Finite Element Analysis 2017 , 1-39		
58	3D reactive inkjet printing of polydimethylsiloxane. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 9733-9743	7.1	32
57	3D inkjet printing of tablets exploiting bespoke complex geometries for controlled and tuneable drug release. <i>Journal of Controlled Release</i> , 2017 , 261, 207-215	11.7	163
56	A combined inverse finite element elastoplastic modelling method to simulate the size-effect in nanoindentation and characterise materials from the nano to micro-scale. <i>International Journal of Solids and Structures</i> , 2017 , 104-105, 25-34	3.1	16
55	On the formation of AlSi10Mg single tracks and layers in selective laser melting: Microstructure and nano-mechanical properties. <i>Journal of Materials Processing Technology</i> , 2016 , 230, 88-98	5.3	179
54	Surface microstructuring to modify wettability for 3D printing of nano-filled inks. <i>Chemical Engineering Research and Design</i> , 2016 , 109, 414-420	5.5	19
53	Nanoindentation Shows Uniform Local Mechanical Properties Across Melt Pools And Layers Produced By Selective Laser Melting Of AlSi 10Mg Alloy. <i>Advanced Materials Letters</i> , 2016 , 7, 13-16	2.4	9
52	Understanding the effect of laser scan strategy on residual stress in selective laser melting through thermo-mechanical simulation. <i>Additive Manufacturing</i> , 2016 , 12, 1-15	6.1	304
51	Metallurgy of high-silicon steel parts produced using Selective Laser Melting. <i>Acta Materialia</i> , 2016 , 110, 207-216	8.4	166
50	The microstructure and mechanical properties of selectively laser melted AlSi10Mg: The effect of a conventional T6-like heat treatment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 667, 139-146	5.3	323
49	Improving the fatigue behaviour of a selectively laser melted aluminium alloy: Influence of heat treatment and surface quality. <i>Materials and Design</i> , 2016 , 104, 174-182	8.1	170
48	Nano-hardness and microstructure of selective laser melted AlSi10Mg scan tracks 2015 ,		4
47	On the Precipitation Hardening of Selective Laser Melted AlSi10Mg. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015 , 46, 3337-3341	2.3	164

46	A Study on the Laser Spatter and the Oxidation Reactions During Selective Laser Melting of 316L Stainless Steel, Al-Si10-Mg, and Ti-6Al-4V. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015 , 46, 3842-3851	2.3	190
45	Drilling in cortical bone: a finite element model and experimental investigations. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2015 , 42, 32-42	4.1	42
44	An inverse method for determining the spatially resolved properties of viscoelastic-viscoplastic three-dimensional printed materials. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2015 , 471, 20150477	2.4	5
43	Three-Dimensional Analysis of the Effect of Material Randomness on the Damage Behaviour of CFRP Laminates with Stochastic Cohesive-Zone Elements. <i>Applied Composite Materials</i> , 2014 , 21, 71-89	2	4
42	Reducing porosity in AlSi10Mg parts processed by selective laser melting. <i>Additive Manufacturing</i> , 2014 , 1-4, 77-86	6.1	512
41	Evolutionary topology optimization using the extended finite element method and isolines. <i>Engineering Optimization</i> , 2014 , 46, 628-647	2	18
40	An X-FEM Based Approach for Topology Optimization of Continuum Structures. <i>Advances in Intelligent Systems and Computing</i> , 2014 , 277-289	0.4	2
39	Modelling Damage and Failure in Adhesive Joints Using A Combined XFEM-Cohesive Element Methodology 2014 , 90, 682-697		36
38	Transparency Built-in. <i>Journal of Industrial Ecology</i> , 2013 , 17, 418-431	7.2	96
37	A hybrid approach to determining cornea mechanical properties in vivo using a combination of nano-indentation and inverse finite element analysis. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013 , 27, 239-48	4.1	15
36	The effects of bidirectional evolutionary structural optimization parameters on an industrial designed component for additive manufacture. <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , 2013 , 227, 794-807	2.4	24
35	Experimental investigation and numerical modelling of the effect of the environment on the mechanical properties of polyurethane lacquer films. <i>Journal of Materials Science</i> , 2012 , 47, 5222-5231	4.3	4
34	Finite element analysis of the high strain rate testing of polymeric materials. <i>Journal of Physics: Conference Series</i> , 2012 , 382, 012043	0.3	7
33	Modelling the mechanical response of urushi lacquer subject to a change in relative humidity. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012 , 468, 3533-3551	2.4	1
32	Damage Analysis of CFRP under Impact Fatigue. <i>Shock and Vibration</i> , 2012 , 19, 573-584	1.1	3
31	A Method of Predicting the Stresses in Adhesive Joints after Cyclic Moisture Conditioning 2011 , 87, 926-950		10
30	The Static Failure of Adhesively Bonded Metal Laminate Structures: A Cohesive Zone Approach. <i>Journal of Adhesion Science and Technology</i> , 2011 , 25, 1131-1157	2	17
29	A Survey of Fitness-for-Service Trends in Industry. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , 2011 , 133,	1.2	3

28	Investigation of the effect of relative humidity on polymers by depth sensing indentation. <i>Journal of Materials Science</i> , 2011 , 46, 7551-7557	4.3	2
27	Load Ratio Effect on the Fatigue Behaviour of Adhesively Bonded Joints: An Enhanced Damage Model 2010 , 86, 257-272		25
26	A Model to Predict the Anomalous Fatigue Crack Growth Behaviour Seen in Mixed Mechanism Fracture 2010 , 86, 522-538		10
25	A Comparison of the Prediction of Fatigue Damage and Crack Growth in Adhesively Bonded Joints Using Fracture Mechanics and Damage Mechanics Progressive Damage Methods 2010 , 86, 1203-1230		16
24	Multi-physics optimisation of Brass Instruments – a new method to include structural and acoustical interactions. <i>Structural and Multidisciplinary Optimization</i> , 2010 , 40, 611-624	3.6	8
23	Development of Delamination in Cross-Ply Laminates: Effect of Microstructure. <i>Key Engineering Materials</i> , 2009 , 413-414, 229-236	0.4	3
22	Modelling Cyclic Moisture Uptake in an Epoxy Adhesive 2009 , 85, 711-735		40
21	Simulations of delamination in CFRP laminates: Effect of microstructural randomness. <i>Computational Materials Science</i> , 2009 , 46, 607-613	3.2	23
20	Impact fatigue in adhesive joints. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2008 , 222, 1981-1994	1.3	9
19	Mixed-mode crack growth in bonded composite joints under standard and impact-fatigue loading. <i>Journal of Materials Science</i> , 2008 , 43, 6704-6713	4.3	17
18	Experimental and Numerical Investigation of Mechanical and Thermal Residual Strains in Adhesively Bonded Joints. <i>Strain</i> , 2007 , 43, 319-331	1.7	25
17	Fatigue initiation in adhesively-bonded single-lap joints. <i>Journal of Adhesion Science and Technology</i> , 2007 , 21, 1343-1357	2	27
16	Continuum damage modelling of environmental degradation in joints bonded with E32 epoxy adhesive. <i>Journal of Adhesion Science and Technology</i> , 2007 , 21, 179-195	2	18
15	Numerical and experimental investigation of three-dimensional strains in adhesively bonded joints. <i>Journal of Strain Analysis for Engineering Design</i> , 2006 , 41, 583-596	1.3	18
14	Modelling Environmental Degradation in EA9321-Bonded Joints using a Progressive Damage Failure Model 2006 , 82, 135-160		43
13	Modelling the Environmental Degradation of the Interface in Adhesively Bonded Joints using a Cohesive Zone Approach 2006 , 82, 1061-1089		48
12	Damage modelling of adhesively bonded joints. <i>International Journal of Fracture</i> , 2006 , 141, 147-161	2.3	116
11	A comparison of failure prediction methods for an adhesively bonded composite beam. <i>Journal of Strain Analysis for Engineering Design</i> , 2004 , 39, 173-185	1.3	13

10	Laser transformation hardening using customised laser beam intensity profiles 2004 ,		2
9	Crack growth in adhesively bonded joints subjected to variable frequency fatigue loading 2003 , 79, 1161-1182	24	
8	Modelling interfacial degradation using interfacial rupture elements 2003 , 79, 1135-1160		40
7	Predicting Degradation in Bonded Composite Joints Using a Semi-Coupled Finite-Element Method. <i>Mechanics of Advanced Materials and Structures</i> , 2003 , 10, 227-248	1.8	16
6	Investigating Fatigue Damage Evolution In Adhesively Bonded Structures Using Backface Strain Measurement 2002 , 78, 745-776		68
5	Effect of Temperature on the Quasi-static Strength and Fatigue Resistance of Bonded Composite Double Lap Joints 2001 , 75, 61-88		62
4	Prediction of fatigue thresholds in adhesively bonded joints using damage mechanics and fracture mechanics. <i>Journal of Adhesion Science and Technology</i> , 2001 , 15, 763-781	2	75
3	A Comparison of Laboratory-conditioned and Naturally-weathered Bonded Joints 2001 , 75, 175-201		19
2	Diffusion of Moisture in Adhesively Bonded Joints 2001 , 77, 43-80		41
1	Reactive Jetting of High Viscosity Nanocomposites for Dielectric Elastomer Actuation. <i>Advanced Materials Technologies</i> , 2101111	6.8	0