

Steve Bull

List of Publications by Year in descending order

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Version: 2024-02-01

67
papers

3,185
citations

236925

25
h-index

149698

56
g-index

68
all docs

68
docs citations

68
times ranked

2576
citing authors

#	ARTICLE	IF	CITATIONS
1	Investigation of the effect of raster angle, build orientation, and infill density on the elastic response of 3D printed parts using finite element microstructural modeling and homogenization techniques. International Journal of Advanced Manufacturing Technology, 2022, 118, 1485-1510.	3.0	37
2	Technique for measuring the residual strain in strained Si/SiGe MOSFET structures using Raman spectroscopy. International Journal of Materials Research, 2022, 95, 340-344.	0.3	0
3	Obtaining mechanical parameters for metallisation stress sensor design using nanoindentation. International Journal of Materials Research, 2022, 96, 1262-1266.	0.3	3
4	Unravelling the combined effect of cooling rate and microalloying on the microstructure and tribological performance of Cu50Zr50. Wear, 2022, 494-495, 204276.	3.1	0
5	Investigation of Chemomechanical Effects on Sapphire Surfaces Modified by Ion-Implantation-Induced Carbon Impurities. Journal of Bio- and Tribo-Corrosion, 2021, 7, 1.	2.6	0
6	Fatigue damage analysis of GFRP composites using digital image correlation. Journal of Ocean Engineering and Marine Energy, 2021, 7, 25-40.	1.7	14
7	Structural performance of composite tidal turbine blades. Composite Structures, 2021, 278, 114679.	5.8	15
8	The effect of processing parameters on the mechanical characteristics of PLA produced by a 3D FFF printer. International Journal of Advanced Manufacturing Technology, 2020, 111, 695-709.	3.0	102
9	Using CFD Modelling to Relate Pig Lying Locations to Environmental Variability in Finishing Pens. Sustainability, 2020, 12, 1928.	3.2	6
10	Microstructure and indentation response of TiN coatings: The effect of measurement method. Thin Solid Films, 2019, 688, 137452.	1.8	14
11	Finite element modeling of nanoindentation response of elastic fiber-matrix composites. Journal of Materials Research, 2018, 33, 2494-2503.	2.6	9
12	Application of dynamic thermal engineering principles to improve the efficiency of resource use in UK pork production chains. Energy and Buildings, 2017, 139, 53-62.	6.7	9
13	Mechanistic Study of the Wear of Ceramic Heads by Metallic Stems in Modular Implants. Journal of Bio- and Tribo-Corrosion, 2017, 3, 1.	2.6	12
14	Fatigue of Sandwich Composites in Air and Seawater. Journal of Bio- and Tribo-Corrosion, 2016, 2, 1.	2.6	2
15	Nanoindentation in studying mechanical properties of heterogeneous materials. Journal of Mining Science, 2015, 51, 470-476.	0.6	29
16	A simple method for the assessment of the contact modulus for coated systems. Philosophical Magazine, 2015, 95, 1907-1927.	1.6	15
17	Elastic properties of multilayer oxide coatings on float glass. Vacuum, 2015, 114, 150-157.	3.5	3
18	Experimental assessment of the elastic properties of thin TiN/AlN superlattice and nano-multilayer coatings. Surface and Coatings Technology, 2014, 257, 87-94.	4.8	18

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19	A comparison of nanoindentation pile-up in bulk materials and thin films. <i>Thin Solid Films</i> , 2014, 572, 189-199.	1.8	62
20	Elastic properties of eta carbide (η -Fe ₂ C) from ab initio calculations: application to cryogenically treated gear steel. <i>Journal of Materials Science</i> , 2014, 49, 2383-2390.	3.7	19
21	Size effects in the mechanical response of nanoscale multilayer coatings on glass. <i>Thin Solid Films</i> , 2014, 571, 290-295.	1.8	9
22	Microbiological influence of metal ion electrodeposition: Studies using graphite electrodes, [AuCl ₄] ⁻ and <i>Shewanella putrefaciens</i> . <i>Electrochimica Acta</i> , 2014, 115, 344-351.	5.2	17
23	Why does titanium alloy wear cobalt chrome alloy despite lower bulk hardness: A nanoindentation study?. <i>Thin Solid Films</i> , 2013, 549, 79-86.	1.8	57
24	Effectiveness of the Reverse Bending and Straightening Tests in Detecting Laminations in Wires for Civil Engineering Applications. <i>Archives of Civil Engineering</i> , 2013, 59, 423-439.	0.7	2
25	Effect of microstructure on hardness of submicrometre thin films and nanostructured devices. <i>Materials Science and Technology</i> , 2012, 28, 1177-1185.	1.6	6
26	Hardness across the multi-scales of structure and loading rate: A post-meeting response to the "pre-editorial". <i>Materials Science and Technology</i> , 2012, 28, 1025-1027.	1.6	1
27	Critical review of claims for ultra-hardness in nanocomposite coatings. <i>Philosophical Magazine</i> , 2012, 92, 1601-1630.	1.6	20
28	The investigation of creep of electroplated Sn and Ni-Sn coating on copper at room temperature by nanoindentation. <i>Surface and Coatings Technology</i> , 2009, 203, 1609-1617.	4.8	37
29	On the factors affecting the critical indenter penetration for measurement of coating hardness. <i>Vacuum</i> , 2009, 83, 911-920.	3.5	108
30	Investigation of the relationship between work done during indentation and the hardness and Young's modulus obtained by indentation testing. <i>International Journal of Materials Research</i> , 2008, 99, 852-857.	0.3	6
31	Intentional Polymer Particle Contamination and the Simulation of Adhesion Failure due to Transit Scratches in Ultra-thin Solar Control Coatings on Glass. <i>Journal of Adhesion Science and Technology</i> , 2008, 22, 121-132.	2.6	9
32	Nanometer strain profiling through Si/SiGe quantum layers. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	7
33	A critical examination of the relationship between plastic deformation zone size and Young's modulus to hardness ratio in indentation testing. <i>Journal of Materials Research</i> , 2006, 21, 2617-2627.	2.6	50
34	On the relationship between plastic zone radius and maximum depth during nanoindentation. <i>Surface and Coatings Technology</i> , 2006, 201, 4289-4293.	4.8	73
35	Assessment of the toughness of thin coatings using nanoindentation under displacement control. <i>Thin Solid Films</i> , 2006, 494, 1-7.	1.8	112
36	Impact of strained-Si thickness and Ge out-diffusion on gate oxide quality for strained-Si surface channel n-MOSFETs. <i>IEEE Transactions on Electron Devices</i> , 2006, 53, 1142-1152.	3.0	74

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37	Measuring and modelling the instrumented indentation (nanoindentation) response of coated systems. Philosophical Magazine, 2006, 86, 5331-5346.	1.6	6
38	Phase transformations associated with micropitting in rolling/sliding contacts. Journal of Materials Science, 2005, 40, 4767-4774.	3.7	32
39	Test Chip for the Development and Evaluation of Sensors for Measuring Stress in Metal Interconnects. IEEE Transactions on Semiconductor Manufacturing, 2005, 18, 255-261.	1.7	14
40	Calibration of MEMS-based test structures for predicting thermomechanical stress in integrated circuit interconnect structures. IEEE Transactions on Device and Materials Reliability, 2005, 5, 713-719.	2.0	11
41	Nanoindentation of coatings. Journal Physics D: Applied Physics, 2005, 38, R393-R413.	2.8	305
42	Measurement of the residual macro and microstrain in strained Si/SiGe using Raman spectroscopy. Materials Research Society Symposia Proceedings, 2004, 809, B3.4.1.	0.1	3
43	Dependence of Process Parameters on Stress Generation in Aluminum Thin Films. IEEE Transactions on Device and Materials Reliability, 2004, 4, 482-487.	2.0	20
44	On the origins and mechanisms of the indentation size effect. International Journal of Materials Research, 2003, 94, 787-792.	0.8	74
45	Hinge Sensitivity in a Micro-Rotating Structure for predicting Induced Thermo Mechanical Stress in Integrated Circuit Metal Interconnects. Materials Research Society Symposia Proceedings, 2003, 795, 52.	0.1	0
46	Determination of mechanical parameters for rotating MEMS structures as a function of deposition method. Materials Research Society Symposia Proceedings, 2003, 795, 535.	0.1	1
47	Modelling of the mechanical and tribological properties of coatings and surface treatments. Materials Research Society Symposia Proceedings, 2002, 750, 1.	0.1	1
48	Assessment of aluminium metallisation by nanoindentation. Materials Research Society Symposia Proceedings, 2002, 750, 1.	0.1	1
49	How hard is fullerene-like CN _x ? Some observations from the nanoindentation response of a magnetron-sputtered coating. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 2133-2147.	0.6	26
50	Modelling the hardness response of bulk materials, single and multilayer coatings. Thin Solid Films, 2001, 398-399, 291-298.	1.8	39
51	Mechanism of improvement of TiN-coated tool life by nitrogen implantation. Journal of Materials Research, 2001, 16, 3293-3303.	2.6	23
52	Interface engineering and graded films: Structure and characterization. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2001, 19, 1404-1414.	2.1	53
53	Modelling of the hardness of electroplated nickel coatings on copper substrates. Surface and Coatings Technology, 2000, 127, 1-8.	4.8	82
54	On the hardness of coated systems. Surface and Coatings Technology, 1998, 99, 171-183.	4.8	518

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55	Multilayer coatings for improved performance. Surface and Coatings Technology, 1996, 78, 173-184.	4.8	232
56	Thermal effects on the microstructure and mechanical properties of ion implanted ceramics. Journal of Materials Science, 1991, 26, 3086-3106.	3.7	26
57	New developments in the modelling of the hardness and scratch adhesion of thin films. Surface and Coatings Technology, 1990, 42, 149-164.	4.8	261
58	Chemomechanical effects in ion-implanted MgO. Journal Physics D: Applied Physics, 1989, 22, 941-947.	2.8	13
59	Engineering with surface coatings: The role of coating microstructure. Surface and Coatings Technology, 1989, 39-40, 315-328.	4.8	75
60	An explanation of the indentation size effect in ceramics. Philosophical Magazine Letters, 1989, 59, 281-288.	1.2	316
61	The abrasive wear resistance of sputter ion plated titanium nitride coatings. Surface and Coatings Technology, 1988, 36, 743-754.	4.8	61
62	The charge state of titanium ions implanted into sapphire: An EXAFS investigation. Journal of Materials Science, 1986, 21, 1547-1552.	3.7	18
63	A novel sensor for the direct measurement of process induced residual stress in interconnects. , 0, , .		11
64	Calibration and optimization of interconnect based MEMS test structures for predicting thermo-mechanical stress in metallization. , 0, , .		0
65	Test chip for the development and evaluation of test structures for measuring stress in metal interconnect. , 0, , .		0
66	Potential of householdsâ€™ solar PV consumption in South Africa. African Journal of Science, Technology, Innovation and Development, 0, , 1-10.	1.6	1
67	Investigation of anisotropy effects in glass fibre reinforced polymer composites on tensile and shear properties using full field strain measurement and finite element multi-scale techniques. Journal of Composite Materials, 0, , 002199832110542.	2.4	4