Christopher L Muhlstein

List of Publications by Year
in descending order

51	586	623574	610775
papers	citations	14 h-index	24 g-index

52	52	52	496
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Mode I crack growth in paper exhibits three stages of strain evolution in reaching steady-state. Theoretical and Applied Fracture Mechanics, 2022, 118, 103279.	2.1	3
2	Crack closure of Ni-based superalloy 718 at high negative stress ratios. International Journal of Fatigue, 2022, 160, 106822.	2.8	5
3	Steady-state crack growth in heterogeneous fiber network thin sheets. Engineering Fracture Mechanics, 2021, , 108133.	2.0	0
4	High-cycle fatigue damage accumulation in paper. Communications Materials, 2020, 1, .	2.9	2
5	The development of zones of active plasticity during mode I steady-state crack growth in thin aluminum sheets. Engineering Fracture Mechanics, 2019, 218, 106540.	2.0	1
6	Relating Nonuniform Deformations to Fracture in Uniaxially Loaded Non-Woven Fiber Networks. Experimental Mechanics, 2019, 59, 1127-1144.	1.1	4
7	Mode I steady-state crack propagation through a fully-yielded ligament in thin ductile metal foils. Theoretical and Applied Fracture Mechanics, 2019, 101, 141-151.	2.1	4
8	On the origins of anomalous elastic moduli and failure strains of GaP nanowires. Nanotechnology, 2017, 28, 065703.	1.3	6
9	Reconciling fracture toughness parameter contradictions in thin ductile metal sheets. Fatigue and Fracture of Engineering Materials and Structures, 2017, 40, 1809-1824.	1.7	8
10	Correlating bonded joint deformation with failure using a free surface strain field mining methodology. Fatigue and Fracture of Engineering Materials and Structures, 2016, 39, 1124-1137.	1.7	2
11	The effects of texture and grain morphology on the fracture toughness and fatigue crack growth resistance of nanocrystalline platinum films. International Journal of Fatigue, 2015, 70, 258-269.	2.8	7
12	Strengthening Mechanisms in MLCCs: Residual Stress Versus Crack Tip Shielding. Journal of the American Ceramic Society, 2014, 97, 283-289.	1.9	0
13	Softening under membrane contact stress due to ultra-thin Ru coatings on Au films. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 565, 172-179.	2.6	0
14	The role of deposited layers in the nonlinear constitutive behavior of Si nanowires. Journal of Applied Physics, 2013, 114, 193507.	1.1	4
15	The role of specimen thickness in the fracture toughness and fatigue crack growth resistance of nanocrystalline platinum films. Acta Materialia, 2012, 60, 1408-1417.	3.8	30
16	Oxidation of RuAl and NiAl Thin Films: Evolution of Surface Morphology and Electrical Resistance. Journal of Microelectromechanical Systems, 2011, 20, 933-942.	1.7	4
17	Cyclic Stabilization of Electrodeposited Nickel Structural Films. Journal of Microelectromechanical Systems, 2011, 20, 753-763.	1.7	8
18	Dependence on diameter and growth direction of apparent strain to failure of Si nanowires. Journal of Applied Physics, 2011, 109, .	1.1	23

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19	Optimal Design and Fabrication of Narrow-Gauge Compliant Forceps. Journal of Mechanical Design, Transactions of the ASME, 2011, 133, .	1.7	11
20	Fatigue-induced grain coarsening in nanocrystalline platinum films. Acta Materialia, 2011, 59, 1141-1149.	3.8	53
21	Developing Niâ€“Al and Ruâ€“Al intermetallic films for use in microelectromechanical systems. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 042002.	0.6	10
22	Effects of Surface Chemistry on the Nanomechanical Properties of Commercial Float Glass. Journal of the American Ceramic Society, 2010, 93, 838-847.	1.9	23
23	Practical Implications of Instrument Displacement Drift during Force-Controlled Nanoindentation. Journal of Testing and Evaluation, 2010, 38, 203-210.	0.4	1
24	Augmented instrumented indentation using nonlinear electrical contact current-voltage curves. Journal of Materials Research, 2009, 24, 1820-1832.	1.2	2
25	Lost Mold Rapid Infiltration Forming of Mesoscale Ceramics: Part 1, Fabrication. Journal of the American Ceramic Society, 2009, 92, S63-S69.	1.9	20
26	Lost Moldâ€Rapid Infiltration Forming of Mesoscale Ceramics: Part 2, Geometry and Strength Improvements. Journal of the American Ceramic Society, 2009, 92, S70-S78.	1.9	17
27	Design, Fabrication, and Performance of a Piezoelectric Uniflex Microactuator. Journal of Microelectromechanical Systems, 2009, 18, 616-625.	1.7	17
28	Nanoindentation of glass wool fibers. Journal of Non-Crystalline Solids, 2008, 354, 3887-3895.	1.5	41
29	Continuous electrical in situ contact area measurement during instrumented indentation. Journal of Materials Research, 2008, 23, 2480-2485.	1.2	11
30	Velocity-Dependent Fatigue Crack Paths in Nanograined Pt Films. Physical Review Letters, 2008, 101, 085503.	2.9	15
31	Notch Root Oxide Formation During Fatigue of Polycrystalline Silicon Structural Films. Journal of Microelectromechanical Systems, 2007, 16, 1441-1450.	1.7	17
32	The role of debris-induced cantilever effects in cyclic fatigue of micron-scale silicon films. Fatigue and Fracture of Engineering Materials and Structures, 2007, 30, 57-63.	1.7	12
33	Fatigue of polycrystalline silicon films with thin surface oxides. , 2006, , .		0
34	Characterization of structural films using microelectromechanical resonators. Fatigue and Fracture of Engineering Materials and Structures, 2005, 28, 711-721.	1.7	6
35	The Extended Range of Reaction-layer Fatigue Susceptibility of Polycrystalline Silicon Thin Films. International Journal of Fracture, 2005, 135, 1-18.	1.1	17
36	Fatigue failure in thin-film polycrystalline silicon is due to subcritical cracking within the oxide layer. Applied Physics Letters, 2005, 86, 041914.	1.5	47

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37	Galvanic effects in Si-based microelectromechanical systems: Thick oxide formation and its implications for fatigue reliability. Applied Physics Letters, 2005, 86, 211919.	1.5	42
38	Reaction-layer fatigue: understanding the limitations of structural silicon. , 2004, , .		1
39	Using the Electron Microscope to Explore Reliability in Microelectromechanical Systems and Nanostructured Materials. Microscopy and Microanalysis, 2004, 10, 354-355.	0.2	0
40	Failure by Fracture and Fatigue in “Nano” and “Bio” Materials. JSME International Journal Series A-Solid Mechanics and Material Engineering, 2004, 47, 238-251.	0.4	5
41	Fatigue Degradation of Nanometer-Scale Silicon Dioxide Reaction Layers on Silicon Structural Films. Materials Research Society Symposia Proceedings, 2003, 778, 721.	0.1	0
42	OS06W0368 Characterization of structural films using microelectromechanical resonators. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003.2, _OS06W0368-_OS06W0368.	0.0	0
43	PL-2(PL2W0466) On the Fatigue and Fracture of "Nano" and "Bio" Materials. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003, 4.	0.0	0
44	PL2W0466 On the fatigue and fracture of "nano" and "bio" materials. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003.2, _PL2W0466--_PL2W0466-.	0.0	0
45	OS6(4)-14(OS06W0368) Characterization of Structural Films Using Microelectromechanical Resonators. The Abstracts of ATEM International Conference on Advanced Technology in Experimental Mechanics Asian Conference on Experimental Mechanics, 2003, 2003, 229.	0.0	0
46	Interfacial Effects on the Premature Failure of Polycrystalline Silicon Structural Films. Materials Research Society Symposia Proceedings, 2002, 741, 351.	0.1	0
47	Mechanism of fatigue in micron-scale films of polycrystalline silicon for microelectromechanical systems. Applied Physics Letters, 2002, 80, 1532-1534.	1.5	96
48	Surface Engineering of Polycrystalline Silicon Microelectromechanical Systems for Fatigue Resistance. Materials Research Society Symposia Proceedings, 2002, 729, 211.	0.1	0
49	On the Mechanism of Fatigue in Micron-Scale Structural Films of Polycrystalline Silicon. Materials Research Society Symposia Proceedings, 2001, 687, 1.	0.1	1
50	On The Mechanism of Fatigue in Micron-Scale Structural Films of Polycrystalline Silicon. Materials Research Society Symposia Proceedings, 2001, 697, 671.	0.1	0
51	High-Cycle Fatigue of Polycrystalline Silicon Thin Films in Laboratory Air. Materials Research Society Symposia Proceedings, 2000, 657, 581.	0.1	10