Junlan Wang

List of Publications by Year
in descending order

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66 papers	1,930 citations	257101 24 h-index	264894 42 g-index
69 all docs	69 docs citations	69 times ranked	2061 citing authors

#	Article	IF	Citations
1	An overview of interface-dominated deformation mechanisms in metallic multilayers. Current Opinion in Solid State and Materials Science, 2011, 15, 20-28.	5.6	390
2	Mechanical and Dielectric Properties of Pure-Silica-Zeolite Low-k Materials. Angewandte Chemie - International Edition, 2006, 45, 6329-6332.	7.2	136
3	A parametric study of laser induced thin film spallation. Experimental Mechanics, 2002, 42, 74-83.	1.1	107
4	Influence of grain size on transition temperature of thermochromic VO2. Journal of Applied Physics, 2015, 117, .	1.1	82
5	Pureâ€Silicaâ€Zeolite MFI and MEL Lowâ€Dielectricâ€Constant Films with Fluoroâ€Organic Functionalization. Advanced Functional Materials, 2008, 18, 3454-3460.	7.8	68
6	Mechanical characterization of zeolite low dielectric constant thin films by nanoindentation. Thin Solid Films, 2007, 515, 3164-3170.	0.8	56
7	Grain size and grain boundary effects on the mechanical behavior of fully stabilized zirconia investigated by nanoindentation. Scripta Materialia, 2007, 56, 1095-1098.	2.6	54
8	The limiting layer of fish scales: Structure and properties. Acta Biomaterialia, 2018, 67, 319-330.	4.1	53
9	Tensile and mixed-mode strength of a thin film-substrate interface under laser induced pulse loading. Journal of the Mechanics and Physics of Solids, 2004, 52, 999-1022.	2.3	50
10	Laser-induced decompression shock development in fused silica. Journal of Applied Physics, 2003, 93, 9529-9536.	1.1	41
11	All solid thick oxide cathodes based on low temperature sintering for high energy solid batteries. Energy and Environmental Science, 2021, 14, 5044-5056.	15.6	41
12	MELâ€type Pureâ€Silica Zeolite Nanocrystals Prepared by an Evaporationâ€Assisted Twoâ€Stage Synthesis Method as Ultraâ€Lowâ€k Materials. Advanced Functional Materials, 2008, 18, 1732-1738.	7.8	39
13	Thermal fracture of oxidized polydimethylsiloxane during soft lithography of nanopost arrays. Journal of Micromechanics and Microengineering, 2011, 21, 054013.	1.5	34
14	Mixed-mode failure of thin films using laser-generated shear waves. Experimental Mechanics, 2003, 43, 323-330.	1.1	31
15	Cell adhesion measurement by laser-induced stress waves. Journal of Applied Physics, 2006, 100, 084701.	1.1	31
16	Size effect in contact compression of nano- and microscale pyramid structures. Acta Materialia, 2006, 54, 3973-3982.	3.8	30
17	Onâ€Wafer Crystallization of Ultralowâ€Î² Pure Silica Zeolite Films. Angewandte Chemie - International Edition, 2009, 48, 4777-4780.	7.2	30
18	Bioactive Materials for Regenerative Medicine: Zeoliteâ€Hydroxyapatite Bone Mimetic Coatings. Advanced Engineering Materials, 2012, 14, 200-206.	1.6	30

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19	Multilayer ITO/VO 2 /TiO 2 thin films for control of solar and thermal spectra. Solar Energy Materials and Solar Cells, 2016, 154, 88-93.	3.0	29
20	Coupled annealing temperature and layer thickness effect on strengthening mechanisms of Ti/Ni multilayer thin films. Journal of the Mechanics and Physics of Solids, 2016, 88, 72-82.	2.3	28
21	Surface Residual Stress Measurement Using Curvature Interferometry. Experimental Mechanics, 2006, 46, 39-46.	1.1	27
22	Pressure and Temperature Effects on Stoichiometry and Microstructure of Nitrogen-Rich TiN Thin Films Synthesized via Reactive Magnetron DC-Sputtering. Journal of Nanomaterials, 2008, 2008, 1-9.	1.5	26
23	Laser-induced surface acoustic waves: An alternative method to nanoindentation for the mechanical characterization of porous nanostructured thin film electrode media. Mechanics of Materials, 2015, 91, 333-342.	1.7	26
24	Evolution of the Laser-Induced Spallation Technique in Film Adhesion Measurement. Applied Mechanics Reviews, 2021, 73, 030802.	4.5	26
25	High strain-rate spallation and fracture of tungsten by laser-induced stress waves. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 504, 73-80.	2.6	24
26	Zeolite as a wear-resistant coating. Microporous and Mesoporous Materials, 2012, 151, 346-351.	2.2	23
27	A parametric study of laser induced thin film spallation. , 2002, 42, 74.		22
28	Effect of calcination and polycrystallinity on mechanical properties of nanoporous MFI zeolites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 456, 58-63.	2.6	21
29	Engineering size-scaling of plastic deformation in nanoscale asperities. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 9580-9585.	3.3	21
30	Point-wise and whole-field laser speckle intensity fluctuation measurements applied to botanical specimens. Optics and Lasers in Engineering, 1997, 28, 443-456.	2.0	20
31	Optical properties of VO₂ thin films deposited on different glass substrates. Optical Materials Express, 2019, 9, 663.	1.6	20
32	Pure-shear Failure of Thin Films by Laser-induced Shear Waves. Experimental Mechanics, 2006, 46, 637-645.	1.1	19
33	Interfacial adhesion of nanoporous zeolite thin films. Journal of Materials Research, 2006, 21, 505-511.	1.2	18
34	Mechanical behavior of Auâ€“In intermetallics for low temperature solder diffusion bonding. Journal of Materials Science, 2009, 44, 6155-6161.	1.7	18
35	Hydrofluoric-Acid-Resistant and Hydrophobic Pure-Silica-Zeolite MEL Low-Dielectric-Constant Films. Langmuir, 2009, 25, 5039-5044.	1.6	18
36	Finite element simulation of cellâ€“substrate decohesion by laser-induced stress waves. Journal of the Mechanical Behavior of Biomedical Materials, 2010, 3, 268-277.	1.5	18

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37	Sample boundary effect in nanoindentation of nano and microscale surface structures. Journal of the Mechanics and Physics of Solids, 2009, 57, 812-827.	2.3	17
38	Molecular dynamics simulation of thin film interfacial strength dependency on lattice mismatch. Thin Solid Films, 2013, 537, 190-197.	0.8	17
39	Microstructure and Mechanical Anisotropy of Crab Cancer Magister Exoskeletons. Experimental Mechanics, 2014, 54, 229-239.	1.1	16
40	Numerical simulation of laser-induced thin film delamination. Thin Solid Films, 2008, 516, 971-981.	0.8	15
41	Influence of Na diffusion on thermochromism of vanadium oxide films and suppression through mixed-alkali effect. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2015, 200, 50-58.	1.7	15
42	Residual Stresses in Cu/Ni Multilayer Thin Films Measured Using the Sin2Ï^ Method. Experimental Mechanics, 2019, 59, 111-120.	1.1	14
43	Hydrophobicity-dependent friction and wear of spin-on zeolite thin films. Scripta Materialia, 2008, 58, 41-44.	2.6	13
44	Orientation-Dependent Hardness in As-Deposited and Low-Temperature Annealed Ti/Ni Multilayer Thin Films. Journal of Applied Mechanics, Transactions ASME, 2015, 82, .	1.1	13
45	Coupled effects of deposition and annealing temperatures on optical, electrical and mechanical properties of titanium oxide thin films. Vacuum, 2015, 120, 155-161.	1.6	11
46	Microstructural evolution and surface strengthening of pulse-laser treated Ti/Ni multilayer thin films. Extreme Mechanics Letters, 2015, 4, 45-51.	2.0	10
47	Optical properties of super stoichiometric TiN1+x thin films. Thin Solid Films, 2012, 524, 272-277.	0.8	7
48	Correlation Between Laser-Induced Surface Acoustic Waves and Nanoindentation on Elastic Modulus Measurement of a Nanoporous Zeolite Thin Film. Experimental Mechanics, 2015, 55, 647-650.	1.1	7
49	A Force Domain Analog-to-Digital Converter Applied to Microscale Tensile Test. Experimental Mechanics, 2013, 53, 795-806.	1.1	6
50	Dislocation Nucleation and Segregation in Nano-scale Contact of Stepped Surfaces. Materials Research Society Symposia Proceedings, 2003, 795, 39.	0.1	5
51	Engineering the Interface: Effects of Interfacial Adhesion and Substrate Thickness on the Ductility of Polymer-supported Metal Films. Experimental Mechanics, 2022, 62, 49-58.	1.1	5
52	Insight into On-Wafer Crystallization of Pure-Silica-Zeolite Films through Nutrient Replenishment. Langmuir, 2011, 27, 3283-3285.	1.6	4
53	Laser-Induced Spallation of Microsphere Monolayers. Langmuir, 2016, 32, 7730-7734.	1.6	4
54	A Novel Technique for Mixed-mode Thin Film Adhesion Measurement. Materials Research Society Symposia Proceedings, 2002, 750, 1.	0.1	3

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55	Nanomechanics and Nanostructured Multifunctional Materials: Experiments, Theories, and Simulations. Journal of Nanomaterials, 2008, 2008, 1-1.	1.5	3
56	Microstructure and Mechanical Properties of Dungeness Crab Exoskeletons. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 93-99.	0.3	3
57	Pure-Silica-Zeolite Low-Dielectric Constant Materials. , 2009, , 335-364.		2
58	Microstructure, mechanical properties and elemental composition of the terrestrial isopod Armadillidium vulgare cuticle. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 132, 105299.	1.5	2
59	Effect of pulse duration and confinement on laser-induced stress waves for high strain-rate material testing. Optics and Lasers in Engineering, 2022, 151, 106919.	2.0	1
60	Pulsed-laser induced shock wave in fused silica for thin film interfacial testing. , 2005, , .		0
61	Interfacial Adhesion of Pure-Silica-Zeolite Low-k Thin Films. Materials Research Society Symposia Proceedings, 2005, 875, 1.	0.1	0
62	Effect of annealing process on mechanical properties of n-type La1.9Ce0.1CuO4 superconducting films by depth sensing nanoindentation. Materials Research Express, 2019, 6, 056418.	0.8	0
63	Interfacial Adhesion of Nanoporous Zeolite Thin Films. , 2004, , .		0
64	Design and Analysis of a MEMS Based Auto-Focusing System. , 2007, , .		0
65	High Strain-Rate Ductile to Brittle Transition in Nanoporous Zeolite. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 129-139.	0.3	0
66	Correction to: Residual Stresses in Cu/Ni Multilayer Thin Films Measured Using the Sin2Ïˆ Method. Experimental Mechanics, 0, , .	1.1	0