Lawrence H Friedman

List of Publications by Year
in descending order

46 papers	745 citations	759233 12 h-index	526287 27 g-index
46 all docs	46 docs citations	46 times ranked	648 citing authors

#	Article	IF	Citations
1	High-throughput bend-strengths of ultra-small polysilicon MEMS components. Applied Physics Letters, 2021, 118, 201601.	3.3	8
2	Local Structural Distortions and Failure of the Surface-Stress â€œCoreâ€"Shellâ€•Model in Brookite Titania Nanorods. Chemistry of Materials, 2020, 32, 286-298.	6.7	5
3	Microscale Mapping of Structure and Stress in Barium Titanate. Journal of Research of the National Institute of Standards and Technology, 2020, 125, 125013.	1.2	1
4	Shoulder fillet effects in strength distributions of microelectromechanical system components. Journal of Micromechanics and Microengineering, 2020, 30, 125013.	2.6	6
5	Electron reflectometry for measuring nanostructures on opaque substrates. Applied Physics Letters, 2019, 115, 023105.	3.3	0
6	Sample pattern and temperature distribution in nanocalorimetry measurements. Journal of Thermal Analysis and Calorimetry, 2019, 138, 3367-3373.	3.6	7
7	Lamellar and bundled domain rotations in barium titanate. Journal of Materials Science, 2019, 54, 116-129.	3.7	2
8	10.1063/1.5113489.1. , 2019, , .		0
9	Strain measurement of 3D structured nanodevices by EBSD. Ultramicroscopy, 2018, 184, 88-93.	1.9	6
10	Weakly anisotropic residual contact stress in silicon demonstrated by electron backscatter diffraction and expanding cavity models. Applied Physics Letters, 2018, 113, 231903.	3.3	1
11	Stress and strain mapping of micro-domain bundles in barium titanate using electron backscatter diffraction. Journal of Materials Science, 2017, 52, 12608-12623.	3.7	4
12	Two-dimensional strain-mapping by electron backscatter diffraction and confocal Raman spectroscopy. Journal of Applied Physics, 2017, 122, 205101.	2.5	5
13	Reflective small angle electron scattering to characterize nanostructures on opaque substrates. Applied Physics Letters, 2017, 111, 123106.	3.3	2
14	10.1063/1.4991696.1. , 2017, , .		0
15	Assessing strain mapping by electron backscatter diffraction and confocal Raman microscopy using wedge-indented Si. Ultramicroscopy, 2016, 163, 75-86.	1.9	18
16	Near-theoretical fracture strengths in native and oxidized silicon nanowires. Nanotechnology, 2016, 27, 31LT02.	2.6	8
17	Stochastic behavior of nanoscale dielectric wall buckling. Journal of Applied Physics, 2016, 119, .	2.5	3
18	10.1063/1.4943615.1. , 2016, , .		0

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19	Designing a standard for strain mapping: HR-EBSD analysis of SiGe thin film structures on Si. Ultramicroscopy, 2015, 148, 94-104.	1.9	22
20	Combining nanocalorimetry and dynamic transmission electron microscopy for <i>in situ</i> characterization of materials processes under rapid heating and cooling. Review of Scientific Instruments, 2014, 85, 084902.	1.3	39
21	Decoupling small-scale roughness and long-range features on deep reactive ion etched silicon surfaces. Journal of Applied Physics, 2013, 114, 113506.	2.5	4
22	Foreword: Modeling, Simulation, and Theory of Nanomechanical Materials Behavior. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3867-3867.	2.2	0
23	Prototype cantilevers for quantitative lateral force microscopy. Review of Scientific Instruments, 2011, 82, 093706.	1.3	9
24	Deformation behavior of nanograined platinum films. Thin Solid Films, 2010, 518, 3866-3874.	1.8	14
25	Practical Implications of Instrument Displacement Drift during Force-Controlled Nanoindentation. Journal of Testing and Evaluation, 2010, 38, 203-210.	0.7	1
26	Augmented instrumented indentation using nonlinear electrical contact current-voltage curves. Journal of Materials Research, 2009, 24, 1820-1832.	2.6	2
27	Surface energy effects on the self-assembly of epitaxial quantum dots. , 2009, , .		2
28	Stochastic continuum modeling self-assembled epitaxial quantum dot formation. , 2008, , .		1
29	Continuous electrical in situ contact area measurement during instrumented indentation. Journal of Materials Research, 2008, 23, 2480-2485.	2.6	11
30	Effects of elastic heterogeneity and anisotropy on the morphology of self-assembled epitaxial quantum dots. Journal of Applied Physics, 2008, 104, 034902.	2.5	0
31	Anisotropy and morphology of strained III-V heteroepitaxial films. Physical Review B, 2008, 78, .	3.2	4
32	Order of epitaxial self-assembled quantum dots: linear analysis. Journal of Nanophotonics, 2007, 1, 013513.	1.0	3
33	Simulation of thermal-field directed self-assembly of epitaxial quantum dots. Journal of Applied Physics, 2007, 101, 094903.	2.5	3
34	Anisotropy and order of epitaxial self-assembled quantum dots. Physical Review B, 2007, 75, .	3.2	6
35	Analytic treatment of metallic multilayer strength at all length scales: Influence of dislocation sources. Acta Materialia, 2007, 55, 1505-1514.	7.9	20
36	Predicting and Understanding Order of Heteroepitaxial Quantum Dots. Journal of Electronic Materials, 2007, 36, 1546-1554.	2.2	6

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37	Exponent for Hallâ€“Petch behaviour of ultra-hard multilayers. Philosophical Magazine, 2006, 86, 1443-1481.	1.6	5
38	Feasibility study for thermal-field directed self-assembly of heteroepitaxial quantum dots. Applied Physics Letters, 2006, 88, 093105.	3.3	4
39	Strength of metallic multilayers at all length scales from analytic theory of discrete dislocation pileups. Philosophical Magazine, 2005, 85, 3321-3355.	1.6	16
40	Towards a full analytic treatment of the Hallâ€“Petch behavior in multilayers: putting the pieces together. Scripta Materialia, 2004, 50, 763-767.	5.2	22
41	Aspects of boundary-value problem solutions with three-dimensional dislocation dynamics. Modelling and Simulation in Materials Science and Engineering, 2002, 10, 437-468.	2.0	236
42	Continuum simulation of dislocation dynamics: predictions for internal friction response. Computational Materials Science, 2002, 25, 387-403.	3.0	3
43	Discrete dislocation modeling in three-dimensional confined volumes. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 309-310, 420-424.	5.6	64
44	Frank-Read sources within a continuum simulation. Modelling and Simulation in Materials Science and Engineering, 1999, 7, 479-494.	2.0	13
45	Continuum analysis of dislocation pile-ups: Influence of sources. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 77, 1185-1204.	0.6	55
46	Scaling Theory of the Hall-Petch Relation for Multilayers. Physical Review Letters, 1998, 81, 2715-2718.	7.8	104