

# Erica T Lilleodden

## List of Publications by Year in descending order

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Version: 2024-02-01

55  
papers

3,205  
citations

186265

28  
h-index

168389

53  
g-index

57  
all docs

57  
docs citations

57  
times ranked

2984  
citing authors

#	ARTICLE	IF	CITATIONS
1	Recent trends on studies of nanostructured metals. <i>MRS Bulletin</i> , 2021, 46, 217-224.	3.5	9
2	Image segmentation and analysis for densification mapping of nanoporous gold after nanoindentation. <i>MRS Advances</i> , 2021, 6, 519-523.	0.9	3
3	Grain boundary formation through particle detachment during coarsening of nanoporous metals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	7
4	Detwinning-mediated hardening in Mg: A microcompression study of a single twin boundary. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 772, 138747.	5.6	3
5	The isothermal evolution of nanoporous gold from the ring perspective - an application of graph theory. <i>Acta Materialia</i> , 2020, 199, 669-679.	7.9	6
6	A combined compression and indentation study of mechanical metamaterials based on inverse opal coatings. <i>Acta Materialia</i> , 2020, 195, 98-108.	7.9	9
7	On the Estimation of Thermal Activation Parameters for Portevin-Le Chatelier Effect from Nanoindentation Data. <i>Jom</i> , 2019, 71, 3343-3349.	1.9	3
8	On measuring the independent mechanical response of the polymer phase from nanoporous gold polymer composites. <i>Scripta Materialia</i> , 2019, 170, 67-70.	5.2	3
9	Electro-chemo-mechanical coupling of nanoporous gold at the microscale. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	9
10	Grain-scale investigation of the anisotropy of Portevin-Le Chatelier effect in Mg AZ91 alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 740-741, 226-234.	5.6	11
11	Nanoporous gold: a hierarchical and multiscale 3D test pattern for characterizing X-ray nano-tomography systems. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 194-204.	2.4	16
12	On the topological, morphological, and microstructural characterization of nanoporous metals. <i>MRS Bulletin</i> , 2018, 43, 20-26.	3.5	71
13	On a novel strain indicator based on uncorrelated misorientation angles for correlating dislocation density to local strength. <i>Acta Materialia</i> , 2018, 150, 195-205.	7.9	60
14	Study of slip activity in a Mg-Y alloy by in situ high energy X-ray diffraction microscopy and elastic viscoplastic self-consistent modeling. <i>Acta Materialia</i> , 2018, 155, 138-152.	7.9	90
15	Full-Field Hard X-Ray Microscope Designed for Materials Science Applications. <i>Microscopy and Microanalysis</i> , 2018, 24, 228-229.	0.4	5
16	Temperature dependence of plastic instability in Al alloys: A nanoindentation study. <i>Materials and Design</i> , 2017, 125, 69-75.	7.0	5
17	Influence of Y <sub>2</sub> O <sub>3</sub> nanoparticles on the twinning of single crystalline magnesium. <i>Scripta Materialia</i> , 2017, 138, 79-82.	5.2	3
18	The stiffness and strength of metamaterials based on the inverse opal architecture. <i>Extreme Mechanics Letters</i> , 2017, 12, 86-96.	4.1	41

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19	Nanoporous gold: 3D structural analyses of representative volumes and their implications on scaling relations of mechanical behaviour. <i>Philosophical Magazine</i> , 2016, 96, 3322-3335.	1.6	88
20	A principle curvatures analysis of the isothermal evolution of nanoporous gold: Quantifying the characteristic length-scales. <i>Acta Materialia</i> , 2016, 120, 24-31.	7.9	52
21	Nanostructured MW/CNT/Polypyrrole Actuators with Anisotropic Strain Response. <i>Advanced Engineering Materials</i> , 2016, 18, 597-607.	3.5	11
22	Nanoporous Gold—Testing Macro-scale Samples to Probe Small-scale Mechanical Behavior. <i>Materials Research Letters</i> , 2016, 4, 27-36.	8.7	121
23	Kink formation and concomitant twin nucleation in Mg—Y. <i>Scripta Materialia</i> , 2016, 111, 68-71.	5.2	33
24	New insights into plastic instability in precipitation strengthened Al—Li alloys. <i>Acta Materialia</i> , 2015, 89, 88-97.	7.9	67
25	Microstructural influences on strengthening in a naturally aged and overaged Al—Cu—Li—Mg based alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 637, 162-169.	5.6	27
26	Mechanical characterization of oligo(ethylene glycol)-based hydrogels by dynamic nanoindentation experiments. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2015, 46, 1-10.	3.1	12
27	Self-Assembled Ultra High Strength, Ultra Stiff Mechanical Metamaterials Based on Inverse Opals. <i>Advanced Engineering Materials</i> , 2015, 17, 1420-1424.	3.5	48
28	The influence of focused-ion beam preparation technique on microcompression investigations: Lathe vs. annular milling. <i>Scripta Materialia</i> , 2014, 77, 49-51.	5.2	57
29	A combined experimental-numerical approach for elasto-plastic fracture of individual grain boundaries. <i>Journal of the Mechanics and Physics of Solids</i> , 2014, 64, 455-467.	4.8	36
30	Orientation Distribution of Vertically Aligned Multiwalled Carbon Nanotubes. <i>Journal of Physical Chemistry C</i> , 2014, 118, 9507-9513.	3.1	29
31	Computational modeling of intrinsically induced strain gradients during compression of c-axis-oriented magnesium single crystal. <i>Acta Materialia</i> , 2014, 71, 206-219.	7.9	20
32	Mechanical behavior of nanoscale Cu/PdSi multilayers. <i>Acta Materialia</i> , 2013, 61, 4984-4995.	7.9	83
33	Hierarchical flexural strength of enamel: transition from brittle to damage-tolerant behaviour. <i>Journal of the Royal Society Interface</i> , 2012, 9, 1265-1274.	3.4	55
34	Complex Dental Structure and Wear Biomechanics in Hadrosaurid Dinosaurs. <i>Science</i> , 2012, 338, 98-101.	12.6	99
35	The solvent induced interfiber adhesion and its influence on the mechanical and filtration properties of polyethersulfone electrospun nanofibrous microfiltration membranes. <i>Separation and Purification Technology</i> , 2012, 98, 456-463.	7.9	61
36	Mechanical Testing of Solid—Solid Interfaces at the Microscale. <i>Experimental Mechanics</i> , 2012, 52, 649-658.	2.0	35

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37	A method to determine site-specific, anisotropic fracture toughness in biological materials. Scripta Materialia, 2012, 66, 515-518.	5.2	19
38	Compressive failure of UD-CFRP containing void defects: In situ SEM microanalysis. Composites Science and Technology, 2011, 71, 1242-1249.	7.8	58
39	Microcompression study of Mg (0001) single crystal. Scripta Materialia, 2010, 62, 532-535.	5.2	182
40	Twining and Slip Activity in Magnesium <11-20> Single Crystal. Materials Research Society Symposia Proceedings, 2009, 1224, 1.	0.1	10
41	Novel techniques for nanomechanical characterization. Jom, 2009, 61, 13-13.	1.9	0
42	Modeling of DMOS subjected to fast temperature cycle stress and improvement by a novel metallization concept. , 2008, , .		11
43	The coordinated buckling of carbon nanotube turfs under uniform compression. Nanotechnology, 2008, 19, 175704.	2.6	97
44	Deformation at the nanometer and micrometer length scales: Effects of strain gradients and dislocation starvation. Thin Solid Films, 2007, 515, 3152-3157.	1.8	256
45	Microstructural length-scale effects in the nanoindentation behavior of thin gold films. Acta Materialia, 2006, 54, 1583-1593.	7.9	110
46	Defect structure in micropillars using x-ray microdiffraction. Applied Physics Letters, 2006, 89, 151905.	3.3	74
47	Atomistic simulations of elastic deformation and dislocation nucleation during nanoindentation. Journal of the Mechanics and Physics of Solids, 2003, 51, 901-920.	4.8	258
48	In-situ transmission electron microscopy study of the nanoindentation behavior of Al. Journal of Electronic Materials, 2002, 31, 958-964.	2.2	47
49	An Experimental and Computational Study of the Elastic-Plastic Transition in Thin Films. Materials Research Society Symposia Proceedings, 2001, 673, 1.	0.1	7
50	Indentation of Silicate-Glass Films on Al <sub>2</sub> O <sub>3</sub> Substrates. Journal of the American Ceramic Society, 1999, 82, 1803-1808.	3.8	15
51	Anomalous plastic deformation at surfaces: Nanoindentation of gold single crystals. Physical Review B, 1997, 55, R16057-R16060.	3.2	309
52	Effect of Glass Composition on Mechanical Properties of Interfaces Between Alumina and Silicate Glass. Materials Research Society Symposia Proceedings, 1996, 458, 179.	0.1	1
53	Indentation induced dislocation nucleation: The initial yield point. Acta Materialia, 1996, 44, 3585-3598.	7.9	389
54	Alumina-Silicate Glass Interfacial Properties Probed by Micromechanical Testing Techniques. Materials Research Society Symposia Proceedings, 1995, 401, 103.	0.1	1

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55	<i>In situ</i> imaging of $\frac{1}{4}$ N load indents into GaAs. <i>Journal of Materials Research</i> , 1995, 10, 2162-2165.	2.6	73