

# Dabiao Liu

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

64  
papers

1,727  
citations

22  
h-index

40  
g-index

67  
ext. papers

2,017  
ext. citations

4  
avg, IF

5  
L-index

#	Paper	IF	Citations
64	A new torsion tester based on an electronic autocollimator for characterizing the torsional behaviors of microfibers. <i>Review of Scientific Instruments</i> , <b>2021</b> , 92, 103905	1.7	0
63	On energetic and dissipative gradient effects within higher-order strain gradient plasticity: Size effect, passivation effect, and Bauschinger effect. <i>International Journal of Plasticity</i> , <b>2021</b> , 141, 102994	7.6	1
62	Optimal structural patterns of multi-strand wire ropes. <i>International Journal of Solids and Structures</i> , <b>2021</b> , 225, 111070	3.1	1
61	Hydroxyapatite-reinforced alginate fibers with bioinspired dually aligned architectures. <i>Carbohydrate Polymers</i> , <b>2021</b> , 267, 118167	10.3	4
60	On dissipative gradient effect in higher-order strain gradient plasticity: the modelling of surface passivation. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , <b>2020</b> , 36, 840-854	2	6
59	Size effect in cyclic torsion of micron-scale polycrystalline copper wires. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2020</b> , 792, 139671	5.3	4
58	Nanostrain sensitivity in a wire torsion experiment. <i>Review of Scientific Instruments</i> , <b>2020</b> , 91, 013901	1.7	1
57	Effect of lay direction on the mechanical behavior of multi-strand wire ropes. <i>International Journal of Solids and Structures</i> , <b>2020</b> , 185-186, 89-103	3.1	5
56	Experimental and analytical study on the superharmonic resonance of size-dependent cantilever microbeams. <i>JVC/Journal of Vibration and Control</i> , <b>2019</b> , 25, 2733-2748	2	
55	Effect of nonlocal thermoelasticity on buckling of axially functionally graded nanobeams. <i>Journal of Thermal Stresses</i> , <b>2019</b> , 42, 526-539	2.2	10
54	On the Internal Resonances of Size-Dependent Clamped/Binged Microbeams: Continuum Modeling and Numerical Simulations. <i>International Journal of Applied Mechanics</i> , <b>2019</b> , 11, 1950022	2.4	8
53	Spider dragline silk as torsional actuator driven by humidity. <i>Science Advances</i> , <b>2019</b> , 5, eaau9183	14.3	68
52	Geometrically necessary dislocations induced size effect in the torsional stress relaxation behavior of thin metallic wires. <i>Scripta Materialia</i> , <b>2019</b> , 173, 129-133	5.6	6
51	Experimental investigation and theoretical modelling on nonlinear dynamics of cantilevered microbeams. <i>European Journal of Mechanics, A/Solids</i> , <b>2019</b> , 78, 103834	3.7	16
50	Modelling the effect of surface passivation within higher-order strain gradient plasticity: The case of wire torsion. <i>European Journal of Mechanics, A/Solids</i> , <b>2019</b> , 78, 103855	3.7	3
49	Size and stress dependences in the tensile stress relaxation of thin copper wires at room temperature. <i>International Journal of Plasticity</i> , <b>2019</b> , 112, 278-296	7.6	12
48	Postbuckling analysis of bi-directional functionally graded imperfect beams based on a novel third-order shear deformation theory. <i>Composite Structures</i> , <b>2019</b> , 209, 811-829	5.3	27

47	Effect of friction on the mechanical behavior of wire rope with hierarchical helical structures. <i>Mathematics and Mechanics of Solids</i> , <b>2019</b> , 24, 2154-2180	2.3	8
46	Experimental investigation on size-dependent higher-mode vibration of cantilever microbeams. <i>Microsystem Technologies</i> , <b>2019</b> , 25, 3005-3015	1.7	23
45	The influence of fiber migration on the mechanical properties of yarns with hierarchical helical structures. <i>Journal of Strain Analysis for Engineering Design</i> , <b>2018</b> , 53, 88-105	1.3	3
44	A standard experimental method for determining the material length scale based on modified couple stress theory. <i>International Journal of Mechanical Sciences</i> , <b>2018</b> , 141, 198-205	5.5	90
43	Critical thickness phenomenon in single-crystalline wires under torsion. <i>Acta Materialia</i> , <b>2018</b> , 150, 213-223	2.2	5
42	Dynamic transverse vibration characteristics and vibro-buckling analyses of axially moving and rotating nanobeams based on nonlocal strain gradient theory. <i>Microsystem Technologies</i> , <b>2018</b> , 24, 963-977	1.7	16
41	A Brief Note on the Nix-Gao Strain Gradient Plasticity Theory. <i>Metals</i> , <b>2018</b> , 8, 708	2.3	1
40	Torsional stress relaxation behavior of microscale copper wire. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2017</b> , 698, 277-281	5.3	10
39	Individual strain gradient effect on torsional strength of electropolished microscale copper wires. <i>Scripta Materialia</i> , <b>2017</b> , 130, 124-127	5.6	34
38	Thermal buckling and vibration of functionally graded sinusoidal microbeams incorporating nonlinear temperature distribution using DQM. <i>Journal of Thermal Stresses</i> , <b>2017</b> , 40, 665-689	2.2	22
37	Material length scale of strain gradient plasticity: A physical interpretation. <i>International Journal of Plasticity</i> , <b>2017</b> , 98, 156-174	7.6	42
36	Peculiar torsion dynamical response of spider dragline silk. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 013701	3.4	10
35	Characterizing Torsional Properties of Microwires Using an Automated Torsion Balance. <i>Experimental Mechanics</i> , <b>2017</b> , 57, 297-311	2.6	10
34	An improved torsion pendulum based on image processing for single fibers. <i>Measurement Science and Technology</i> , <b>2016</b> , 27, 075601	2	8
33	Experimental Investigation of Large Time-Bandwidth Product Photonic Hilbert Transformer Based on Compact Bragg Grating. <i>IEEE Photonics Journal</i> , <b>2016</b> , 8, 1-8	1.8	2
32	Direct measurement of torsional properties of single fibers. <i>Measurement Science and Technology</i> , <b>2016</b> , 27, 115017	2	6
31	Prediction of residual stress components and their directions from pile-up morphology: An experimental study. <i>Journal of Materials Research</i> , <b>2016</b> , 31, 2392-2397	2.5	2
30	Size-dependent vibration of nickel cantilever microbeams: Experiment and gradient elasticity. <i>AIP Advances</i> , <b>2016</b> , 6, 105202	1.5	116

29	Torsional vibration of carbon nanotube with axial velocity and velocity gradient effect. <i>International Journal of Mechanical Sciences</i> , <b>2016</b> , 119, 88-96	5.5	39
28	A novel chaotic system with suppressed time-delay signature based on multiple electro-optic nonlinear loops. <i>Nonlinear Dynamics</i> , <b>2015</b> , 82, 611-617	5	13
27	A novel method for determining surface residual stress components and their directions in spherical indentation. <i>Journal of Materials Research</i> , <b>2015</b> , 30, 1078-1089	2.5	21
26	Digital image frequency spectrum method for analyzing speckle displacement in frequency domain. <i>Optics Letters</i> , <b>2015</b> , 40, 942-5	3	1
25	Accounting for the recoverable plasticity and size effect in the cyclic torsion of thin metallic wires using strain gradient plasticity. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2015</b> , 647, 84-90	5.3	25
24	A size-dependent FG micro-plate model incorporating higher-order shear and normal deformation effects based on a modified couple stress theory. <i>International Journal of Mechanical Sciences</i> , <b>2015</b> , 104, 8-23	5.5	55
23	Free vibration analysis of four-unknown shear deformable functionally graded cylindrical microshells based on the strain gradient elasticity theory. <i>Composite Structures</i> , <b>2015</b> , 119, 578-597	5.3	66
22	Formulation of Toupin-Mindlin strain gradient theory in prolate and oblate spheroidal coordinates. <i>European Journal of Mechanics, A/Solids</i> , <b>2015</b> , 49, 227-241	3.7	4
21	A size-dependent third-order shear deformable plate model incorporating strain gradient effects for mechanical analysis of functionally graded circular/annular microplates. <i>Composites Part B: Engineering</i> , <b>2015</b> , 79, 553-580	10	72
20	An efficient size-dependent plate theory for bending, buckling and free vibration analyses of functionally graded microplates resting on elastic foundation. <i>Applied Mathematical Modelling</i> , <b>2015</b> , 39, 3814-3845	4.5	67
19	Size-dependent functionally graded beam model based on an improved third-order shear deformation theory. <i>European Journal of Mechanics, A/Solids</i> , <b>2014</b> , 47, 211-230	3.7	59
18	A continuum theory of stress gradient plasticity based on the dislocation pile-up model. <i>Acta Materialia</i> , <b>2014</b> , 80, 350-364	8.4	35
17	Enhanced Secure Strategy for OFDM-PON System by Using Hyperchaotic System and Fractional Fourier Transformation. <i>IEEE Photonics Journal</i> , <b>2014</b> , 6, 1-9	1.8	17
16	A Modified torsion pendulum for measuring the shear modulus of a single micro-sized filament. <i>Acta Mechanica Solida Sinica</i> , <b>2014</b> , 27, 221-233	2	9
15	Hall-Petch effect and strain gradient effect in the torsion of thin gold wires. <i>Scripta Materialia</i> , <b>2014</b> , 87, 41-44	5.6	28
14	Non-classical Timoshenko beam element based on the strain gradient elasticity theory. <i>Finite Elements in Analysis and Design</i> , <b>2014</b> , 79, 22-39	2.2	74
13	Towards a further understanding of dislocation pileups in the presence of stress gradients. <i>Philosophical Magazine</i> , <b>2013</b> , 93, 2340-2362	1.6	10
12	A novel size-dependent functionally graded curved microbeam model based on the strain gradient elasticity theory. <i>Composite Structures</i> , <b>2013</b> , 106, 374-392	5.3	75

11	Toward a further understanding of size effects in the torsion of thin metal wires: An experimental and theoretical assessment. <i>International Journal of Plasticity</i> , <b>2013</b> , 41, 30-52	7.6	133
10	A non-classical Mindlin plate finite element based on a modified couple stress theory. <i>European Journal of Mechanics, A/Solids</i> , <b>2013</b> , 42, 63-80	3.7	69
9	Anomalous plasticity in the cyclic torsion of micron scale metallic wires. <i>Physical Review Letters</i> , <b>2013</b> , 110, 244301	7.4	81
8	Size effects in the torsion of microscale copper wires: Experiment and analysis. <i>Scripta Materialia</i> , <b>2012</b> , 66, 406-409	5.6	137
7	Channel-switchable single-/dual-wavelength single-longitudinal-mode laser and THz beat frequency generation up to 3.6 THz. <i>Applied Physics B: Lasers and Optics</i> , <b>2012</b> , 106, 373-377	1.9	9
6	Single- and Multiband OFDM Photonic Wireless Links in the 75-110 GHz Band Employing Optical Combs. <i>IEEE Photonics Journal</i> , <b>2012</b> , 4, 2027-2036	1.8	8
5	Solitary filamentary structures and nanosecond dynamics in atmospheric-pressure plasmas driven by tailored dc pulses. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 161503	3.4	16
4	Multi-point abnormal-temperature warning sensor system with different thresholds. <i>Applied Physics B: Lasers and Optics</i> , <b>2009</b> , 96, 833-841	1.9	1
3	Tunable wavelength conversion between picosecond pulses using cascaded second-order nonlinearity in LiNbO3 waveguides. <i>Applied Physics B: Lasers and Optics</i> , <b>2005</b> , 80, 681-685	1.9	19
2	Modeling of Cyclic Bending of Thin Foils Using Higher-Order Strain Gradient Plasticity. <i>Acta Mechanica Sinica</i> , 1	2	0
1	A finite element approach for flexoelectric nonuniform nanobeam energy harvesters. <i>Mechanics of Advanced Materials and Structures</i> , 1-12	1.8	2