John Biggins

List of Publications by Year
in descending order

30 papers	1,060 citations	623734 14 h-index	454955 30 g-index
30 all docs	30 docs citations	30 times ranked	1276 citing authors

#	Article	IF	Citations
1	Beyond Simple Crystal Systems: Identifying Twinning in Body-Centered Tetragonal Nanoparticles. Crystal Growth and Design, 2022, 22, 653-660.	3.0	2
2	Opportunities and Challenges for Alternative Nanoplasmonic Metals: Magnesium and Beyond. Journal of Physical Chemistry C, 2022, 126, 10630-10643.	3.1	13
3	Interfacial metric mechanics: stitching patterns of shape change in active sheets. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, .	2.1	4
4	Large deformation analysis of spontaneous twist and contraction in nematic elastomer fibers with helical director. Journal of Applied Physics, 2021, 129, .	2.5	7
5	Shape programming lines of concentrated Gaussian curvature. Journal of Applied Physics, 2021, 129, .	2.5	12
6	Metric mechanics with nontrivial topology: Actuating irises, cylinders, and evertors. Physical Review E, 2021, 104, 065004.	2.1	6
7	Ballooning, bulging, and necking: An exact solution for longitudinal phase separation in elastic systems near a critical point. Physical Review E, 2020, 102, 033007.	2.1	17
8	Defective nematogenesis: Gauss curvature in programmable shape-responsive sheets with topological defects. Soft Matter, 2020, 16, 10935-10945.	2.7	15
9	Evolving, complex topography from combining centers of Gaussian curvature. Physical Review E, 2020, 102, 013003.	2.1	12
10	On the identification of twinning in body-centred cubic nanoparticles. Nanoscale, 2020, 12, 22009-22013.	5.6	6
11	Tents, Chairs, Tacos, Kites, and Rods: Shapes and Plasmonic Properties of Singly Twinned Magnesium Nanoparticles. ACS Nano, 2020, 14, 5968-5980.	14.6	32
12	Giant deformations and soft-inflation in LCE balloons. Europhysics Letters, 2020, 132, 36001.	2.0	9
13	Pattern selection when a layer buckles on a soft substrate. Soft Matter, 2019, 15, 3751-3770.	2.7	4
14	Peristaltic Elastic Instability in an Inflated Cylindrical Channel. Physical Review Letters, 2019, 122, 068003.	7.8	12
15	Decoration of plasmonic Mg nanoparticles by partial galvanic replacement. Journal of Chemical Physics, 2019, 151, 244708.	3.0	18
16	Mechanics of mouse blastocyst hatching revealed by a hydrogel-based microdeformation assay. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 10375-10380.	7.1	59
17	Meniscus instabilities in thin elastic layers. Soft Matter, 2018, 14, 7680-7689.	2.7	11
18	Magnesium Nanoparticle Plasmonics. Nano Letters, 2018, 18, 3752-3758.	9.1	91

#	Article	IF	Citations
19	Plateau-Rayleigh instability in solids is a simple phase separation. Physical Review E, 2017, 95, 053106.	2.1	34
20	Finite-wavelength surface-tension-driven instabilities in soft solids, including instability in a cylindrical channel through an elastic solid. Physical Review E, 2016, 94, 023107.	2.1	27
21	Mechanics of invagination and folding: Hybridized instabilities when one soft tissue grows on another. Physical Review E, 2015, 92, 022720.	2.1	43
22	Fluid-driven fingering instability of a confined elastic meniscus. Europhysics Letters, 2015, 110, 34001.	2.0	11
23	Exactly isochoric deformations of soft solids. Europhysics Letters, 2014, 108, 64001.	2.0	2
24	Growth and shape of a chain fountain. Europhysics Letters, 2014, 106, 44001.	2.0	23
25	Gyrification from constrained cortical expansion. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12667-12672.	7.1	332
26	Surface Sulci in Squeezed Soft Solids. Physical Review Letters, 2013, 110, 024302.	7.8	80
27	Digital instability of a confined elastic meniscus. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 12545-12548.	7.1	44
28	Elasticity of polydomain liquid crystal elastomers. Journal of the Mechanics and Physics of Solids, 2012, 60, 573-590.	4.8	72
29	Textured deformations in liquid crystal elastomers. Liquid Crystals, 2009, 36, 1139-1156.	2.2	6
30	Semisoft elastic response of nematic elastomers to complex deformations. Physical Review E, 2008, 78, 041704.	2.1	56