

Liping Liu

List of Publications by Year in descending order

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36
papers

876
citations

516215

16
h-index

476904

29
g-index

36
all docs

36
docs citations

36
times ranked

750
citing authors

#	ARTICLE	IF	CITATIONS
1	Flexoelectricity in soft materials and biological membranes. <i>Journal of the Mechanics and Physics of Solids</i> , 2014, 62, 209-227.	2.3	160
2	An energy formulation of continuum magneto-electro-elasticity with applications. <i>Journal of the Mechanics and Physics of Solids</i> , 2014, 63, 451-480.	2.3	95
3	A continuum theory of thermoelectric bodies and effective properties of thermoelectric composites. <i>International Journal of Engineering Science</i> , 2012, 55, 35-53.	2.7	68
4	Electrets in soft materials: Nonlinearity, size effects, and giant electromechanical coupling. <i>Physical Review E</i> , 2014, 90, 012603.	0.8	58
5	On energy formulations of electrostatics for continuum media. <i>Journal of the Mechanics and Physics of Solids</i> , 2013, 61, 968-990.	2.3	50
6	Periodic Inclusion Matrix Microstructures with Constant Field Inclusions. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2007, 38, 781-787.	1.1	36
7	Liquid inclusions in soft materials: Capillary effect, mechanical stiffening and enhanced electromechanical response. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 127, 332-357.	2.3	36
8	Coupling of mechanical deformation and electromagnetic fields in biological cells. <i>Reviews of Modern Physics</i> , 2022, 94, .	16.4	36
9	Rigid proteins and softening of biological membranes with application to HIV-induced cell membrane softening. <i>Scientific Reports</i> , 2016, 6, 25412.	1.6	33
10	Revisiting the entropic force between fluctuating biological membranes. <i>Journal of the Mechanics and Physics of Solids</i> , 2014, 63, 179-186.	2.3	27
11	Giant and universal magnetoelectric coupling in soft materials and concomitant ramifications for materials science and biology. <i>Physical Review E</i> , 2013, 88, 040601.	0.8	21
12	Deformation and relaxation of an incompressible viscoelastic body with surface viscoelasticity. <i>Journal of the Mechanics and Physics of Solids</i> , 2017, 98, 309-329.	2.3	20
13	Soft rubber as a magnetoelectric material Generating electricity from the remote action of a magnetic field. <i>Materials Today</i> , 2021, 43, 8-16.	8.3	20
14	New optimal microstructures and restrictions on the attainable Hashin-Shtrikman bounds for multiphase composite materials. <i>Philosophical Magazine Letters</i> , 2011, 91, 473-482.	0.5	18
15	Feasibility of large-scale power plants based on thermoelectric effects. <i>New Journal of Physics</i> , 2014, 16, 123019.	1.2	18
16	Emergent electromechanical coupling of electrets and some exact relations The effective properties of soft materials with embedded external charges and dipoles. <i>Journal of the Mechanics and Physics of Solids</i> , 2018, 112, 1-24.	2.3	18
17	Coherent Timescales and Mechanical Structure of Multicellular Aggregates. <i>Biophysical Journal</i> , 2018, 114, 2703-2716.	0.2	18
18	Designing soft pyroelectric and electrocaloric materials using electrets. <i>Soft Matter</i> , 2019, 15, 262-277.	1.2	17

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19	Revisiting the curvature-mediated interactions between proteins in biological membranes. <i>Soft Matter</i> , 2016, 12, 8907-8918.	1.2	16
20	Variational formulations, instabilities and critical loadings of space curved beams. <i>International Journal of Solids and Structures</i> , 2016, 87, 48-60.	1.3	16
21	Solutions to the Periodic Eshelby Inclusion Problem in Two Dimensions. <i>Mathematics and Mechanics of Solids</i> , 2010, 15, 557-590.	1.5	14
22	Using electrets to design concurrent magnetoelectricity and piezoelectricity in soft materials. <i>Journal of Materials Research</i> , 2015, 30, 93-100.	1.2	13
23	A new type of Maxwell stress in soft materials due to quantum mechanical-elasticity coupling. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 87, 115-129.	2.3	9
24	Single-cell mechanical analysis and tension quantification via electrodeformation relaxation. <i>Physical Review E</i> , 2021, 103, 032409.	0.8	9
25	Theory of soft solid electrolytes: Overall properties of composite electrolytes, effect of deformation and microstructural design for enhanced ionic conductivity. <i>Journal of the Mechanics and Physics of Solids</i> , 2022, 158, 104621.	2.3	9
26	Interfacial Waves With Surface Elasticity. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2014, 81, .	1.1	8
27	Effective conductivities of two-phase composites with a singular phase. <i>Journal of Applied Physics</i> , 2009, 105, 103503.	1.1	7
28	Contactless Electrical and Structural Characterization of Semiconductor Nanowires with Axially Modulated Doping Profiles. <i>Small</i> , 2019, 15, 1805140.	5.2	6
29	From atomistics to continuum: Effects of a free surface and determination of surface elasticity properties. <i>Mechanics of Materials</i> , 2015, 90, 202-211.	1.7	5
30	Solitary waves in two-dimensional nonlinear lattices. <i>Acta Mechanica</i> , 2017, 228, 3155-3171.	1.1	5
31	Geometries of inhomogeneities with minimum field concentration. <i>Mechanics of Materials</i> , 2014, 75, 95-102.	1.7	4
32	E2 and gamma distributions in polygonal networks. <i>Physical Review Research</i> , 2021, 3, .	1.3	4
33	Equilibrium shapes of a heterogeneous bubble in an electric field: a variational formulation and numerical verifications. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017, 473, 20160494.	1.0	1
34	Electric-field-controlled diffusion of anisotropic particles: theory and experiment. <i>Journal of Fluid Mechanics</i> , 2021, 924, .	1.4	1
35	A differential approach to microstructure-dependent bounds for multiphase heterogeneous media. <i>Acta Mechanica</i> , 2014, 225, 1245-1266.	1.1	0
36	Micro-Structural Design of Soft Solid Composite Electrolytes With Enhanced Ionic Conductivity. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2022, 89, .	1.1	0