Changqing Chen

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3142853/publications.pdf

Version: 2024-02-01

135 papers	5,464 citations	53794 45 h-index	91884 69 g-index
136 all docs	136 docs citations	136 times ranked	4168 citing authors

#	Article	IF	Citations
1	Equilibrium-based convolution neural networks for constitutive modeling of hyperelastic materials. Journal of the Mechanics and Physics of Solids, 2022, 164, 104931.	4.8	8
2	Deployable mechanical metamaterials with multistep programmable transformation. Science Advances, 2022, 8, .	10.3	43
3	Structural periodicity dependent scattering behavior in parity-time symmetric elastic metamaterials. Physical Review B, 2022, 106, .	3.2	16
4	Electronic excitation in graphene under single-particle irradiation. Nanotechnology, 2021, 32, 165702.	2.6	3
5	Large Deformation and Instability of Soft Hollow Cylinder With Surface Effects. Journal of Applied Mechanics, Transactions ASME, 2021, 88, .	2.2	5
6	Bistability-based foldable origami mechanical logic gates. Extreme Mechanics Letters, 2021, 43, 101180.	4.1	50
7	The effective electromechanical properties of three-dimensional piezoelectric fiber networks. International Journal of Mechanical Sciences, 2021, 196, 106306.	6.7	1
8	Amplitude-dependent boundary modes in topological mechanical lattices. Journal of the Mechanics and Physics of Solids, 2021, 153, 104482.	4.8	14
9	Multi-step metamaterials with two phases of elastic and plastic deformation. Composite Structures, 2021, 271, 114152.	5.8	20
10	A mechanical metamaterial with reprogrammable logical functions. Nature Communications, 2021, 12, 7234.	12.8	63
11	Cracking to curling transition in drying colloidal films. European Physical Journal E, 2020, 43, 64.	1.6	7
12	Multi-step deformation mechanical metamaterials. Journal of the Mechanics and Physics of Solids, 2020, 144, 104095.	4.8	60
13	Atomistic investigation of mechanical properties of metallic glass nanocomposites. Modelling and Simulation in Materials Science and Engineering, 2020, 28, 085004.	2.0	1
14	Effect of the oxygen vacancy on the ferroelectricity of 90Â° domain wall structure in PbTiO3: A density functional theory study. Journal of Applied Physics, 2019, 126, .	2.5	16
15	A mechanical wave switch with tunable frequency output. Applied Physics Letters, 2019, 115, .	3.3	5
16	Molecular dynamics simulations of silicon carbide nanowires under single-ion irradiation. Journal of Applied Physics, 2019, 126, 125902.	2.5	2
17	Improving ductility of nanoporous metallic glasses. Computational Materials Science, 2019, 167, 111-117.	3.0	17
18	Thickness effect on mechanical behavior of auxetic sintered metal fiber sheets. Materials and Design, 2019, 167, 107635.	7.0	9

#	Article	IF	Citations
19	Programmable and robust static topological solitons in mechanical metamaterials. Nature Communications, 2019, 10, 5605.	12.8	69
20	Ordered deformation localization in cellular mechanical metamaterials. Journal of the Mechanics and Physics of Solids, 2019, 123, 28-40.	4.8	25
21	Tailoring porous media for controllable capillary flow. Journal of Colloid and Interface Science, 2019, 539, 379-387.	9.4	20
22	Multiscale modeling of the effective elastic properties of fluid-filled porous materials. International Journal of Solids and Structures, 2019, 162, 36-44.	2.7	7
23	High efficiency and broadband acoustic diodes. Applied Physics Letters, 2018, 112, .	3.3	47
24	Tuning capillary penetration in porous media: Combining geometrical and evaporation effects. International Journal of Heat and Mass Transfer, 2018, 123, 239-250.	4.8	31
25	Strengthening mechanisms in nanoporous metallic glasses. Computational Materials Science, 2018, 155, 151-158.	3.0	32
26	Patterning Curved Three-Dimensional Structures With Programmable Kirigami Designs. Journal of Applied Mechanics, Transactions ASME, 2017, 84, .	2.2	32
27	Effects of Thickness on the Responses of Piezoresponse Force Microscopy for Piezoelectric Film/Substrate Systems. Journal of Applied Mechanics, Transactions ASME, 2017, 84, .	2.2	9
28	The pore-load modulus of ordered nanoporous materials with surface effects. AIP Advances, 2016, 6, 035324.	1.3	12
29	Folding to Curved Surfaces: A Generalized Design Method and Mechanics of Origami-based Cylindrical Structures. Scientific Reports, 2016, 6, 33312.	3.3	32
30	Stability and initial post-buckling of a standing sandwich beam under terminal force and self-weight. Archive of Applied Mechanics, 2016, 86, 1063-1082.	2.2	9
31	Two-dimensional modeling of the self-limiting oxidation in silicon and tungsten nanowires. Theoretical and Applied Mechanics Letters, 2016, 6, 195-199.	2.8	26
32	Evaporation Limited Radial Capillary Penetration in Porous Media. Langmuir, 2016, 32, 9899-9904.	3.5	51
33	Analytical solutions for elastic response of coated mesoporous materials to pore pressure. International Journal of Engineering Science, 2016, 107, 68-76.	5.0	10
34	Strengthening and toughening mechanisms of amorphous/amorphous nanolaminates. International Journal of Plasticity, 2016, 80, 75-85.	8.8	63
35	Elastoplastic properties of transversely isotropic sintered metal fiber sheets. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 662, 308-319.	5.6	16
36	Atomistic investigation of the intrinsic toughening mechanism in metallic glass. Computational Materials Science, 2016, 117, 188-194.	3.0	11

#	Article	IF	Citations
37	In-plane crushing of a hierarchical honeycomb. International Journal of Solids and Structures, 2016, 85-86, 57-66.	2.7	111
38	Asymptotic Effective Piezoelectric Coefficient Solution of Piezoresponse Force Microscopy for a Transversely Isotropic Piezoelectric Film. , 2015, , .		0
39	Molecular dynamic simulations of the mechanical properties of crystalline/crystalline and crystalline/amorphous nanolayered pillars. Computational Materials Science, 2015, 101, 194-200.	3.0	18
40	Atomistic mechanisms of fatigue in nanotwinned metals. Acta Materialia, 2015, 99, 77-86.	7.9	48
41	Size effects on tensile and compressive strengths in metallic glass nanowires. Journal of the Mechanics and Physics of Solids, 2015, 84, 130-144.	4.8	59
42	Dynamic Crushing of All-Metallic Corrugated Panels Filled With Close-Celled Aluminum Foams. Journal of Applied Mechanics, Transactions ASME, 2015, 82, .	2.2	15
43	Stability, elastic properties, and electronic structure of germanane nanoribbons. Journal of Physics Condensed Matter, 2015, 27, 245303.	1.8	4
44	Impact resistance of uniform and functionally graded auxetic double arrowhead honeycombs. International Journal of Impact Engineering, 2015, 83, 47-58.	5.0	224
45	Analyses on the In-Plane Impact Resistance of Auxetic Double Arrowhead Honeycombs. Journal of Applied Mechanics, Transactions ASME, 2015, 82, .	2.2	99
46	Design optimization of foam-reinforced corrugated sandwich beams. Composite Structures, 2015, 130, 51-62.	5.8	54
47	A micromechanical analysis of the fracture properties of saturated porous media. International Journal of Solids and Structures, 2015, 63, 32-38.	2.7	9
48	An improved semi-analytical solution for stress at round-tip notches. Engineering Fracture Mechanics, 2015, 149, 134-143.	4.3	38
49	Propagation of shear elastic and electromagnetic waves in one dimensional piezoelectric and piezomagnetic composites. Ultrasonics, 2015, 55, 42-47.	3.9	25
50	Wave Characteristics of Two-Dimensional Hierarchical Hexagonal Lattice Structures. Journal of Vibration and Acoustics, Transactions of the ASME, 2014, 136, .	1.6	23
51	Mechanical Properties of the Honeycomb Nanoporous Membranes. Applied Mechanics and Materials, 2014, 633-634, 44-51.	0.2	0
52	The effects of micro-defects and crack on the mechanical properties of metal fiber sintered sheets. International Journal of Solids and Structures, 2014, 51, 1946-1953.	2.7	12
53	Three-point bending of sandwich beams with aluminum foam-filled corrugated cores. Materials & Design, 2014, 60, 510-519.	5.1	120
54	Modelling the mechanics of partially mineralized collagen fibrils, fibres and tissue. Journal of the Royal Society Interface, 2014, 11, 20130835.	3.4	74

#	Article	IF	Citations
55	The shear properties and deformation mechanisms of porous metal fiber sintered sheets. Mechanics of Materials, 2014, 70, 33-40.	3.2	18
56	Collapse mechanisms of metallic sandwich structures with aluminum foam-filled corrugated cores. Journal of Mechanics of Materials and Structures, 2014, 9, 397-425.	0.6	36
57	Compressive strength and energy absorption of sandwich panels with aluminum foam-filled corrugated cores. Composites Science and Technology, 2013, 86, 142-148.	7.8	161
58	Tuning the locally resonant phononic band structures of two-dimensional periodic electroactive composites. Physica B: Condensed Matter, 2013, 431, 23-31.	2.7	44
59	Phonon-polariton and band structure of electro-magneto-acoustic SH wave propagation oblique to the periodic layered piezoelectric structures. Physics Letters, Section A: General, Atomic and Solid State Physics, 2013, 377, 895-902.	2.1	9
60	A phenomenological elastoplastic model for porous metal fiber sintered sheets. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 582, 188-193.	5.6	11
61	Elastic properties of tetragonal BiFeO3 from first-principles calculations. Applied Physics Letters, 2013, 102, .	3.3	55
62	The Existence of Simultaneous Bragg and Locally Resonant Band Gaps in Composite Phononic Crystal. Chinese Physics Letters, 2013, 30, 044301.	3.3	11
63	The mechanical behavior of porous metal fiber sintered sheets. Journal of the Mechanics and Physics of Solids, 2013, 61, 161-174.	4.8	51
64	TUNABLE BAND STRUCTURES OF 2D MULTI-ATOM ARCHIMEDEAN-LIKE PHONONIC CRYSTALS. International Journal of Computational Materials Science and Engineering, 2012, 01, 1250016.	0.7	2
65	Pointwise Plucking of Suspended Carbon Nanotubes. Nano Letters, 2012, 12, 3663-3667.	9.1	5
66	First-principles investigations of ferroelectricity and piezoelectricity in BaTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>/PbTiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>superlattices. Physical Review B, 2012, 85, .	3.2	35
67	Intrinsic and extrinsic size effects in the deformation of metallic glass nanopillars. Acta Materialia, 2012, 60, 889-898.	7.9	144
68	The impact response of clamped sandwich beams with ordinary and hierarchical cellular cores. International Journal of Impact Engineering, 2012, 47, 14-23.	5.0	21
69	Multiaxial creep of low density open-cell foams. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 540, 83-88.	5.6	14
70	Band structures of two dimensional solid/air hierarchical phononic crystals. Physica B: Condensed Matter, 2012, 407, 1995-2001.	2.7	35
71	A coupled analysis of the piezoresponse force microscopy signals. Applied Physics Letters, 2011, 99, 171913.	3.3	9
72	Perspectives in mechanics of heterogeneous solids. Acta Mechanica Solida Sinica, 2011, 24, 1-26.	1.9	47

#	Article	IF	Citations
73	Indentation responses of piezoelectric films ideally bonded to an elastic substrate. International Journal of Solids and Structures, 2011, 48, 2743-2754.	2.7	31
74	The mechanical properties of a transverse isotropic voided material. Composite Structures, 2011, 93, 2213-2221.	5.8	0
75	Mechanisms of Bimaterial Attachment at the Interface of Tendon to Bone. Journal of Engineering Materials and Technology, Transactions of the ASME, 2011, 133, .	1.4	96
76	Pulsed DC sputtered DLC based nanocomposite films: controlling growth dynamics, microstructure and frictional properties. Materials Technology, 2011, 26, 15-19.	3.0	6
77	Elastoplastic Indentation Responses of Nanoporous Film/Substrate System. Integrated Ferroelectrics, 2011, 129, 85-94.	0.7	0
78	Strain rate sensitivity of skin tissue under thermomechanical loading. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 679-690.	3.4	59
79	Influence of Uniaxial Tensile Stress on the Mechanical and Piezoelectric Properties of Short-period Ferroelectric Superlattice. Nanoscale Research Letters, 2010, 5, 448-452.	5.7	4
80	Effect of epitaxial strain on the properties of short-period BaTiO3/PbTiO3 superlattice from first-principles calculations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 2075-2078.	2.1	6
81	Effects of size on the mechanical response of metallic glasses investigated through in situ TEM bending and compression experiments. Acta Materialia, 2010, 58, 189-200.	7.9	246
82	Tunable self-organization of nanocomposite multilayers. Applied Physics Letters, 2010, 96, .	3.3	30
83	Dynamic smoothing of nanocomposite films. Applied Physics Letters, 2010, 96, 151910.	3.3	7
84	United steering of Control Moment Gyros for small satellite with limited gimbal rate. , 2010, , .		1
85	On the evolution of film roughness during magnetron sputtering deposition. Journal of Applied Physics, 2010, 108, 094330.	2.5	19
86	Sound Transmission Through Simply Supported Finite Double-Panel Partitions With Enclosed Air Cavity. Journal of Vibration and Acoustics, Transactions of the ASME, 2010, 132, .	1.6	56
87	On the dynamic roughening transition in nanocomposite film growth. Applied Physics Letters, 2009, 95, 223102.	3.3	16
88	Influence of in-plane biaxial stress on the structural properties, ferroelectric response, and piezoelectricity of tetragonal PbTiO3. Journal of Applied Physics, 2009, 105, 033706.	2.5	6
89	Strength of submicrometer diameter pillars of metallic glasses investigated within situtransmission electron microscopy. Philosophical Magazine Letters, 2009, 89, 633-640.	1.2	25
90	Surface roughness evolution of nanocomposite thin films. Journal of Applied Physics, 2009, 105, .	2.5	14

#	Article	IF	Citations
91	In-situ TEM investigation of deformation behavior of metallic glass pillars. Materials Research Society Symposia Proceedings, 2009, 1185, 106.	0.1	0
92	Nanoscale deformation mechanism of TiC/a-C nanocomposite thin films. Journal of Applied Physics, 2009, 105, .	2.5	29
93	Ultralight X-type lattice sandwich structure (I): Concept, fabrication and experimental characterization. Science in China Series D: Earth Sciences, 2009, 52, 2147-2154.	0.9	66
94	Ultralight X-type lattice sandwich structure (II): Micromechanics modeling and finite element analysis. Science in China Series D: Earth Sciences, 2009, 52, 2670-2680.	0.9	32
95	Multiaxial behavior of nanoporous single crystal copper: a molecular dynamics study. Acta Mechanica Solida Sinica, 2009, 22, 650-656.	1.9	24
96	External Mean Flow Influence on Noise Transmission Through Double-Leaf Aeroelastic Plates. AIAA Journal, 2009, 47, 1939-1951.	2.6	61
97	Dynamic response and acoustic radiation of double-leaf metallic panel partition under sound excitation. Computational Materials Science, 2009, 46, 728-732.	3.0	22
98	Molecular dynamics study on the nano-void growth in face-centered cubic single crystal copper. Computational Materials Science, 2009, 46, 749-754.	3.0	109
99	Numerical modeling the bonding mechanism of HVOF sprayed particles. Computational Materials Science, 2009, 46, 1038-1043.	3.0	21
100	Dynamic smoothening and tribological properties of pulsed-DC sputtered DLC based nanocomposite films. , 2009, , .		0
101	Numerical modelling of sequential droplet impingements. Journal Physics D: Applied Physics, 2008, 41, 165303.	2.8	36
102	Vibroacoustic behavior of clamp mounted double-panel partition with enclosure air cavity. Journal of the Acoustical Society of America, 2008, 124, 3604-3612.	1.1	98
103	Computational simulation of thermally sprayed WCâ€“Co powder. Computational Materials Science, 2008, 43, 1172-1182.	3.0	45
104	Nanoscale deformation in TiCâˆ•a-C multilayered nanocomposite coatings. Applied Physics Letters, 2008, 92, 241913.	3.3	9
105	Abnormal ferroelectric response and enhancement of piezoelectricity of PbTiO3 under uniaxial compression. Journal of Applied Physics, 2008, 103, .	2.5	16
106	A direct finite element method study of generalized thermoelastic problems. International Journal of Solids and Structures, 2006, 43, 2050-2063.	2.7	76
107	Uniaxial electromechanical behavior of ferroelectric ceramic PZT-53. Journal of Materials Science, 2006, 41, 549-555.	3.7	1
108	Electromechanical coupling properties of [001], [011] and [111] poled Pb(Mg1/3Nb2/3)O3-0.32PbTiO3 single crystals. Journal of Materials Science, 2006, 41, 2993-3000.	3.7	28

#	Article	IF	Citations
109	A Micromechanics-based Finite Element Model for the Constitutive Behavior of Polycrystalline Ferromagnets. Acta Mechanica Sinica/Lixue Xuebao, 2006, 22, 257-264.	3.4	6
110	Electromechanical properties of [001], [011] and [111] oriented Pb(Mg1/3Nb2/3)O3â€“0.32PbTiO3 crystals under uniaxial stress. Materials Research Bulletin, 2006, 41, 778-783.	5.2	7
111	Investigations of the Nonlinear Behavior of Piezoceramic Hollow Cylinders. Journal of Intelligent Material Systems and Structures, 2006, 17, 521-532.	2.5	8
112	A constitutive model for transversely isotropic foams, and its application to the indentation of balsa wood. International Journal of Mechanical Sciences, 2005, 47, 666-686.	6.7	59
113	Three-dimensional modeling of the mechanical property of linearly elastic open cell foams. International Journal of Solids and Structures, 2005, 42, 6628-6642.	2.7	115
114	Dynamic stability of functionally graded piezoelectric circular cylindrical shells. Materials Letters, 2005, 59, 477-485.	2.6	37
115	Effects of stress and electric field on the electromechanical properties of Pb(Mg1â•3Nb2â•3)O3â€“0.32PbTiO3 single crystals. Journal of Applied Physics, 2005, 98, 024103.	2.5	44
116	The plastic collapse and energy absorption capacity of egg-box panels. International Journal of Mechanical Sciences, 2003, 45, 851-871.	6.7	69
117	Three dimensional analysis of the dynamic stability ofÂpiezoelectric circular cylindrical shells. European Journal of Mechanics, A/Solids, 2003, 22, 401-411.	3.7	18
118	An exact solution for functionally graded piezothermoelastic cylindrical shell as sensors or actuators. Materials Letters, 2003, 57, 3532-3542.	2.6	64
119	Creep Response of Sandwich Beams with a Metallic Foam Core. Advanced Engineering Materials, 2002, 4, 777-780.	3.5	17
120	A high order theory for functionally graded piezoelectric shells. International Journal of Solids and Structures, 2002, 39, 5325-5344.	2.7	85
121	The mode I crack growth resistance of metallic foams. Journal of the Mechanics and Physics of Solids, 2001, 49, 231-259.	4.8	45
122	The effect of hole size upon the strength of metallic and polymeric foams. Journal of the Mechanics and Physics of Solids, 2001, 49, 2015-2030.	4.8	62
123	The plastic collapse of sandwich beams with a metallic foam core. International Journal of Mechanical Sciences, 2001, 43, 1483-1506.	6.7	142
124	Effect of inclusions and holes on the stiffness and strength of honeycombs. International Journal of Mechanical Sciences, 2001, 43, 487-504.	6.7	73
125	Thermal transport and fire retardance properties of cellular aluminium alloys. Acta Materialia, 1999, 47, 1469-1485.	7.9	201
126	Effect of imperfections on the yielding of two-dimensional foams. Journal of the Mechanics and Physics of Solids, 1999, 47, 2235-2272.	4.8	381

#	Article	IF	Citations
127	Three-Dimensional Analysis for the Free Vibration of Finite-Length Orthotropic Piezoelectric Circular Cylindrical Shells. Journal of Vibration and Acoustics, Transactions of the ASME, 1998, 120, 194-198.	1.6	22
128	Optimal control of active structures with piezoelectric modal sensors and actuators. Smart Materials and Structures, 1997, 6, 403-409.	3.5	51
129	Finite element approach of vibration control using self-sensing piezoelectric actuators. Computers and Structures, 1996, 60, 505-512.	4.4	56
130	Exact solution of orthotropic cylindrical shell with piezoelectric layers under cylindrical bending. International Journal of Solids and Structures, 1996, 33, 4481-4494.	2.7	65
131	Piezothermoelasticity analysis for a circular cylindrical shell under the state of axisymmetric deformation. International Journal of Engineering Science, 1996, 34, 1585-1600.	5.0	55
132	A method of solution for effective modulus for periodic distributed voids. International Journal of Fracture, 1993, 63, R75-R80.	2.2	0
133	A Numerical Study on the Large Deformations of Polymer Foams with Spherical Pores. Advanced Materials Research, 0, 295-297, 1581-1585.	0.3	1
134	Numerical Study on the Large Deformation of Silicone Rubber Foams Based on Random Cell Models. Advanced Materials Research, 0, 189-193, 2087-2091.	0.3	3
135	Determination of Elastic Modulus and Poisson Ratio for Nanoporous Materials. Advanced Materials Research, 0, 466-467, 366-370.	0.3	0