Jin-Xiong Zhou

List of Publications by Year
in descending order

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104 papers	6,400 citations	136885 32 h-index	64755 79 g-index
104 all docs	104 docs citations	104 times ranked	7163 citing authors

#	Article	IF	Citations
1	Designing Soft Mobile Machines Enabled by Dielectric Elastomer Minimum Energy Structures. Polymers, 2022, 14, 1466.	2.0	6
2	A dynamic finite element procedure for bending collapse of composite thin-walled lenticular tubes. Composite Structures, 2022, 287, 115364.	3.1	8
3	Multiscale modeling of viscoelastic behavior of unidirectional composite laminates and deployable structures. Materials and Design, 2022, 219, 110754.	3.3	20
4	Surrogate Modeling Accelerated Shape Optimization of Deployable Composite Tape-Spring Hinges. AIAA Journal, 2022, 60, 5942-5953.	1.5	10
5	A predictive deep-learning approach for homogenization of auxetic kirigami metamaterials with randomly orientedÂcuts. Modern Physics Letters B, 2021, 35, 2150033.	1.0	8
6	Folding-mediated soft elasticity and bandgap variation in mechanical metamaterials. Modern Physics Letters B, 2021, 35, 2150239.	1.0	1
7	Implementation of Abaqus user subroutines and plugin for thermal analysis of powder-bed electron-beam-melting additive manufacturing process. Materials Today Communications, 2021, 27, 102307.	0.9	14
8	Exploring the design space for nonlinear buckling of composite thin-walled lenticular tubes under pure bending. International Journal of Mechanical Sciences, 2021, 207, 106661.	3.6	17
9	Enhancing standard finite element codes with POD for reduced order thermal analysis: Application to electron beam melting of pure tungsten. Materials Today Communications, 2021, 29, 102796.	0.9	3
10	Achieving selective snapping-back and enhanced hysteresis in soft mechanical metamaterials via fiber reinforcement. Journal of Applied Physics, 2021, 129, 044903.	1.1	7
11	All-Solid Ionic Eye. Journal of Applied Mechanics, Transactions ASME, 2021, 88, .	1.1	13
12	A soft sandwich structure enables voltage-induced actuation of liquid metal embedded elastomers. AIP Advances, 2020, 10, 015016.	0.6	8
13	Programmable Hierarchical Kirigami. Advanced Functional Materials, 2020, 30, 1906711.	7.8	70
14	Microvascular Scaffolds: A Biomimetic 3Dâ€Selfâ€Forming Approach for Microvascular Scaffolds (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 T	5.6	1
15	A transient fluidâ€“structure interaction analysis strategy and validation of a pressurized reactor with regard to loss-of-coolant accidents. Nuclear Science and Techniques/Hewuli, 2020, 31, 1.	1.3	0
16	A Biomimetic 3Dâ€Selfâ€Forming Approach for Microvascular Scaffolds. Advanced Science, 2020, 7, 1903553.	5.6	46
17	Incremental harmonic balance method for periodic forced oscillation of a dielectric elastomer balloon. Applied Mathematics and Mechanics (English Edition), 2020, 41, 459-470.	1.9	13
18	Modeling SMA-enabled soft deployable structures for kirigami/origami reflectors. International Journal of Mechanical Sciences, 2020, 180, 105753.	3.6	19

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19	Neural interfaces by hydrogels. Extreme Mechanics Letters, 2019, 30, 100510.	2.0	51
20	Snap-back induced hysteresis in an elastic mechanical metamaterial under tension. Applied Physics Letters, 2019, 115, .	1.5	32
21	Modeling soft machines driven by buckling actuators. International Journal of Mechanical Sciences, 2019, 157-158, 662-667.	3.6	11
22	Large deformation shape optimization of cut-mediated soft mechanical metamaterials. Materials Research Express, 2019, 6, 055802.	0.8	7
23	Engineering ellipsoidal cap-like hydrogel particles as building blocks or sacrificial templates for three-dimensional cell culture. Biomaterials Science, 2018, 6, 885-892.	2.6	9
24	Modeling and understanding locomotion of pneumatic soft robots. Soft Materials, 2018, 16, 151-159.	0.8	11
25	Method towards optimal design of dielectric elastomer actuated soft machines. Science China Technological Sciences, 2018, 61, 959-964.	2.0	2
26	Harnessing programmed holes in hydrogel bilayers to design soft self-folding machines. International Journal of Mechanical Sciences, 2018, 140, 271-278.	3.6	21
27	Shooting and Arc-Length Continuation Method for Periodic Solution and Bifurcation of Nonlinear Oscillation of Viscoelastic Dielectric Elastomers. Journal of Applied Mechanics, Transactions ASME, 2018, 85, .	1.1	36
28	Soft electroactive actuators and hard ratchet-wheels enable unidirectional locomotion of hybrid machine. AIP Advances, 2017, 7, .	0.6	4
29	Electroluminescence of Giant Stretchability. Advanced Materials, 2016, 28, 4480-4484.	11.1	230
30	Soft mobile robots driven by foldable dielectric elastomer actuators. Journal of Applied Physics, 2016, 120, .	1.1	43
31	Switching of deformation modes in soft mechanical metamaterials. Soft Materials, 2016, 14, 180-186.	0.8	7
32	Predicting origami-inspired programmable self-folding of hydrogel trilayers. Smart Materials and Structures, 2016, 25, 11LT02.	1.8	22
33	The performance analysis of a new type DEAP vibration isolator. International Journal of Applied Electromagnetics and Mechanics, 2016, 52, 1351-1358.	0.3	5
34	Analysis, experiment, and correlation of a petal-shaped actuator based on dielectric elastomer minimum-energy structures. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	15
35	Voltageâ€induced wrinkling behavior of dielectric elastomer. Journal of Applied Polymer Science, 2016, 133, .	1.3	20
36	Instability of liquid crystal elastomers. Smart Materials and Structures, 2016, 25, 015016.	1.8	17

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37	Ionic cable. Extreme Mechanics Letters, 2015, 3, 59-65.	2.0	179
38	Photoactive Selfâ€Shaping Hydrogels as Noncontact 3D Macro/Microscopic Photoprinting Platforms. Macromolecular Rapid Communications, 2015, 36, 2129-2136.	2.0	17
39	Reaction-induced swelling of ionic gels. Soft Matter, 2015, 11, 449-455.	1.2	7
40	Tough Al-alginate/Poly(N-isopropylacrylamide) Hydrogel with Tunable LCST for Soft Robotics. ACS Applied Materials & Interfaces, 2015, 7, 1758-1764.	4.0	350
41	Novel Biocompatible Polysaccharideâ€Based Selfâ€Healing Hydrogel. Advanced Functional Materials, 2015, 25, 1352-1359.	7.8	526
42	Actuation and instability of interconnected dielectric elastomer balloons. Applied Physics A: Materials Science and Processing, 2015, 119, 443-449.	1.1	15
43	Tough Photoluminescent Hydrogels Doped with Lanthanide. Macromolecular Rapid Communications, 2015, 36, 465-471.	2.0	66
44	Facile fabrication of self-healing carboxymethyl cellulose hydrogels. European Polymer Journal, 2015, 72, 514-522.	2.6	91
45	Exceptionally tough and notch-insensitive magnetic hydrogels. Soft Matter, 2015, 11, 8253-8261.	1.2	97
46	Actuating dielectric elastomers in pure shear deformation by elastomeric conductors. Applied Physics Letters, 2014, 104, .	1.5	31
47	Constrained swelling and instability of a temperature-sensitive hydrogel ring. E-Polymers, 2014, 14, 103-106.	1.3	3
48	Inhomogeneous deformation of circular dielectric elastomer: simulation and experiment. Proceedings of SPIE, 2014, , .	0.8	1
49	Dielectric elastomer cantilever beam sensor. Proceedings of SPIE, 2014, , .	0.8	3
50	Cyclic performance of viscoelastic dielectric elastomers with solid hydrogel electrodes. Applied Physics Letters, 2014, 104, .	1.5	63
51	Stretchable and transparent hydrogels as soft conductors for dielectric elastomer actuators. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 1055-1060.	2.4	94
52	Transparent hydrogel with enhanced water retention capacity by introducing highly hydratable salt. Applied Physics Letters, 2014, 105, .	1.5	292
53	Photo-thermo-mechanically actuated bending and snapping kinetics of liquid crystal elastomer cantilever. Smart Materials and Structures, 2014, 23, 125012.	1.8	20
54	Mechanics of dielectric elastomer-activated deformable transmission grating. Smart Materials and Structures, 2014, 23, 095010.	1.8	14

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55	Modeling contacts of ionic polymer metal composites based tactile sensors. Acta Mechanica Solida Sinica, 2014, 27, 407-411.	1.0	5
56	Highly Stretchable and Transparent Ionogels as Nonvolatile Conductors for Dielectric Elastomer Transducers. ACS Applied Materials & Interfaces, 2014, 6, 7840-7845.	4.0	226
57	Self-healing gels based on constitutional dynamic chemistry and their potential applications. Chemical Society Reviews, 2014, 43, 8114-8131.	18.7	733
58	Nano-optomechanical Actuator and Pull-Back Instability. ACS Nano, 2013, 7, 1676-1681.	7.3	69
59	Strengthening Alginate/Polyacrylamide Hydrogels Using Various Multivalent Cations. ACS Applied Materials & Interfaces, 2013, 5, 10418-10422.	4.0	520
60	Kinetic modelling and bifurcation analysis of chemomechanically miniaturized gels under mechanical load. European Physical Journal E, 2013, 36, 108.	0.7	3
61	Electromechanical stability of dielectric elastomer composites with enhanced permittivity. Composites Part A: Applied Science and Manufacturing, 2013, 52, 55-61.	3.8	22
62	Modeling of the muscle-like actuation in soft dielectrics: deformation mode and electromechanical stability. Applied Physics A: Materials Science and Processing, 2013, 110, 59-63.	1.1	10
63	Effect of viscoelastic relaxation on the electromechanical coupling of dielectric elastomer. Proceedings of SPIE, 2013, , .	0.8	3
64	Energy Diagrams of Dielectric Elastomer Generators under Different Types of Deformation. Chinese Physics Letters, 2013, 30, 066103.	1.3	11
65	Editorial: Mechanics of soft materials, structures and systems. Theoretical and Applied Mechanics Letters, 2013, 3, 054001.	1.3	1
66	Finite element implementation of poroelasticity theory for swelling dynamics of hydrogels. Theoretical and Applied Mechanics Letters, 2013, 3, 054009.	1.3	10
67	Modeling programmable deformation of self-folding all-polymer structures with temperature-sensitive hydrogels. Smart Materials and Structures, 2013, 22, 115028.	1.8	77
68	SYNTHESIS, EXPERIMENTAL CHARACTERIZATION AND PARAMETRIC IDENTIFICATION OF IONIC-POLYMER METAL COMPOSITE BENDING ACTUATORS. International Journal of Computational Materials Science and Engineering, 2012, 01, 1250012.	0.5	0
69	Modeling deformation and contacts of pH sensitive hydrogels for microfluidic flow control. Soft Matter, 2012, 8, 3083.	1.2	32
70	A model for conditional polarization of the actuation enhancement of a dielectric elastomer. Soft Matter, 2012, 8, 311-317.	1.2	41
71	Extended Stress-Diffusion Coupling Model for Swelling Dynamics of Polymer Gels. Industrial & Engineering Chemistry Research, 2012, 51, 3466-3471.	1.8	1
72	Surface instability of a swollen cylinder hydrogel. Acta Mechanica Solida Sinica, 2012, 25, 550-556.	1.0	10

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73	Cell-encapsulating microfluidic hydrogels with enhanced mechanical stability. Soft Matter, 2012, 8, 10687.	1.2	34
74	A dynamic finite element method for inhomogeneous deformation and electromechanical instability of dielectric elastomer transducers. International Journal of Solids and Structures, 2012, 49, 2187-2194.	1.3	83
75	Homogeneous large deformation analysis of a dielectric elastomer peristaltic actuator. Science China Technological Sciences, 2012, 55, 537-541.	2.0	6
76	Polarization-modified instability and actuation transition of deformable dielectric. Europhysics Letters, 2011, 95, 37006.	0.7	23
77	Electromechanical stability in charge-controlled dielectric elastomer actuation. Applied Physics Letters, 2011, 99, .	1.5	46
78	Mechanisms of large actuation strain in dielectric elastomers. Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 504-515.	2.4	252
79	Three dimensional phase field study on the thickness effect of ferroelectric polymer thin film. Theoretical and Applied Mechanics Letters, 2011, 1, 011008.	1.3	2
80	MULTIPHYSICS MODELING OF IONIC GEL ACTUATORS. Materials Research Society Symposia Proceedings, 2011, 1345, 1.	0.1	0
81	MULTIPHYSICS MODELING OF SELF-OSCILLATIONS OF IONIC POLYMER GEL ACTUATORS. International Journal of Applied Mechanics, 2011, 03, 355-363.	1.3	6
82	Nonlinear dynamics of self-oscillating polymer gels. Science China Technological Sciences, 2010, 53, 1862-1868.	2.0	3
83	Stress evolution in a phase-separating polymeric gel. Modelling and Simulation in Materials Science and Engineering, 2010, 18, 025002.	0.8	6
84	Meshless approximation combined with implicit topology description for optimization of continua. Structural and Multidisciplinary Optimization, 2008, 36, 347-353.	1.7	36
85	A theory of coupled diffusion and large deformation in polymeric gels. Journal of the Mechanics and Physics of Solids, 2008, 56, 1779-1793.	2.3	790
86	Propagation of instability in dielectric elastomers. International Journal of Solids and Structures, 2008, 45, 3739-3750.	1.3	143
87	A theory of large deformation in soft active materials. , 2008, , .		2
88	Simulating Surface-Mediated Self Assembly Patterns by a Stabilized Fourier Spectral Method. Materials Transactions, 2008, 49, 2028-2032.	0.4	0
89	A subdomain collocation method based on Voronoi domain partition and reproducing kernel approximation. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 1958-1967.	3.4	8
90	A Truly Meshless Method based on Partition of Unity Quadrature for Shape Optimization of Continua. Computational Mechanics, 2007, 39, 357-365.	2.2	12

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91	On the enhancement of computation and exploration of discretization approaches for meshless shape design sensitivity analysis. Structural and Multidisciplinary Optimization, 2006, 31, 96-104.	1.7	3
92	Solving phase field equations using a meshless method. Communications in Numerical Methods in Engineering, 2006, 22, 1109-1115.	1.3	13
93	Reproducing kernel particle method for free and forced vibration analysis. Journal of Sound and Vibration, 2005, 279, 389-402.	2.1	15
94	Incremental harmonic balance method for predicting amplitudes of a multi-d.o.f. non-linear wheel shimmy system with combined Coulomb and quadratic damping. Journal of Sound and Vibration, 2005, 279, 403-416.	2.1	39
95	Explicit 3-D RKPM shape functions in terms of kernel function moments for accelerated computation. Computer Methods in Applied Mechanics and Engineering, 2005, 194, 1027-1035.	3.4	9
96	Shape optimization using reproducing kernel particle method and an enriched genetic algorithm. Computer Methods in Applied Mechanics and Engineering, 2005, 194, 4048-4070.	3.4	26
97	h-adaptivity analysis based on multiple scale reproducing kernel particle method. Applied Mathematics and Mechanics (English Edition), 2005, 26, 1064-1071.	1.9	3
98	ON SOME ENRICHMENTS OF REPRODUCING KERNEL PARTICLE METHOD. International Journal of Computational Methods, 2004, 01, 519-533.	0.8	7
99	Investigations on reproducing kernel particle method enriched by partition of unity and visibility criterion. Computational Mechanics, 2004, 34, 310.	2.2	7
100	Thermal deformation analysis of the shadow mask and prediction of beam landing shifts for CRT using finite element method. Advances in Engineering Software, 2004, 35, 503-509.	1.8	2
101	Optimal placement of sensors for structural health monitoring using improved genetic algorithms. Smart Materials and Structures, 2004, 13, 528-534.	1.8	193
102	Experimental study of the semi-active control of building structures using the shaking table. Earthquake Engineering and Structural Dynamics, 2003, 32, 2353-2376.	2.5	24
103	An adaptive beam model and dynamic characteristics of magnetorheological materials. Journal of Sound and Vibration, 2003, 261, 465-481.	2.1	141
104	A nodal integration and post-processing technique based on Voronoi diagram for Galerkin meshless methods. Computer Methods in Applied Mechanics and Engineering, 2003, 192, 3831-3843.	3.4	16