Junqian Zhang

List of Publications by Year
in descending order

82 papers	2,342 citations	218592 26 h-index	233338 45 g-index
82 all docs	82 docs citations	82 times ranked	1516 citing authors

#	Article	IF	Citations
1	Stress-Induced Uphill Diffusion with Interfacial Contact Loss in Solid-State Electrodes. Acta Mechanica Solida Sinica, 2022, 35, 113-128.	1.0	2
2	Crocodile skin inspired rigid-supple integrated flexible lithium ion batteries with high energy density and bidirectional deformability. Energy Storage Materials, 2022, 47, 149-157.	9.5	28
3	Feigned death induced by partial delithiation in silicon composite electrodes. Journal of Power Sources, 2021, 495, 229763.	4.0	5
4	Prelithiation design for suppressing delamination in lithium-ion battery electrodes. Applied Mathematics and Mechanics (English Edition), 2021, 42, 1703-1716.	1.9	12
5	Review on electrode-level fracture in lithium-ion batteries*. Chinese Physics B, 2020, 29, 026201.	0.7	32
6	Cohesive zone modeling for crack propagation in polycrystalline NiTi alloys using molecular dynamics. Theoretical and Applied Fracture Mechanics, 2020, 105, 102402.	2.1	47
7	Real-time measurements of electro-mechanical coupled deformation and mechanical properties of commercial graphite electrodes. Carbon, 2020, 169, 258-263.	5.4	20
8	Design of Ultrathin Current Collectors via Cyclically Plastic Yield for Fabrication of High Capacity Lithium Ion Batteries. Journal of the Electrochemical Society, 2020, 167, 110557.	1.3	2
9	On stress-induced voltage hysteresis in lithium ion batteries: Impacts of surface effects and interparticle compression. Science China Technological Sciences, 2019, 62, 1357-1364.	2.0	15
10	A Comparative Study of Cohesive Law Shapes in Analytical Modeling of Interfacial Debonding in Lithium-Ion Battery Electrodes. Journal of Applied Mechanics, Transactions ASME, 2019, 86, .	1.1	2
11	Mechanical contact in composite electrodes of lithium-ion batteries. Journal of Power Sources, 2019, 440, 227115.	4.0	15
12	Partial lithiation strategies for suppressing degradation of silicon composite electrodes. Electrochimica Acta, 2019, 295, 778-786.	2.6	23
13	A modified pulse charging method for lithium-ion batteries by considering stress evolution, charging time and capacity utilization. Frontiers of Structural and Civil Engineering, 2019, 13, 294-302.	1.2	21
14	Lithium Diffusion and Stress in a Polycrystalline Film Electrode. Acta Mechanica Solida Sinica, 2018, 31, 290-309.	1.0	5
15	Effect of fiber volume fraction on the thermal and mechanical behavior of polylactideâ€based composites incorporating bamboo fibers. Journal of Applied Polymer Science, 2018, 135, 46148.	1.3	26
16	Understanding the anisotropic strain effects on lithium diffusion in graphite anodes: A first-principles study. Physica B: Condensed Matter, 2018, 539, 66-71.	1.3	15
17	Role of polymeric binders on mechanical behavior and cracking resistance of silicon composite electrodes during electrochemical cycling. Journal of Power Sources, 2018, 387, 9-15.	4.0	55
18	Two-dimensional analysis of progressive delamination in thin film electrodes. Acta Mechanica Sinica/Lixue Xuebao, 2018, 34, 359-370.	1.5	9

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19	Two-way coupled analysis of lithium diffusion and diffusion induced finite elastoplastic bending of bilayer electrodes in lithium-ion batteries. Applied Mathematics and Mechanics (English Edition), 2018, 39, 1567-1586.	1.9	10
20	Stress-limited fast charging methods with time-varying current in lithium-ion batteries. Electrochimica Acta, 2018, 288, 144-152.	2.6	32
21	Effects of stress dependent electrochemical reaction on voltage hysteresis of lithium ion batteries. Applied Mathematics and Mechanics (English Edition), 2018, 39, 1453-1464.	1.9	10
22	In situ measurement of mechanical property and stress evolution in a composite silicon electrode. Journal of Power Sources, 2017, 366, 80-85.	4.0	51
23	Analytical Model on Lithiation-Induced Interfacial Debonding of an Active Layer From a Rigid Substrate. Journal of Applied Mechanics, Transactions ASME, 2016, 83, .	1.1	14
24	Analysis of diffusion induced elastoplastic bending of bilayer lithium-ion battery electrodes. Applied Mathematics and Mechanics (English Edition), 2016, 37, 659-670.	1.9	18
25	Selection of charge methods for lithium ion batteries by considering diffusion induced stress and charge time. Journal of Power Sources, 2016, 320, 104-110.	4.0	44
26	On stress-induced voltage hysteresis in lithium ion batteries: impacts of material property, charge rate and particle size. Journal of Materials Science, 2016, 51, 9902-9911.	1.7	29
27	Voltage hysteresis of lithium ion batteries caused by mechanical stress. Physical Chemistry Chemical Physics, 2016, 18, 4721-4727.	1.3	152
28	Micromechanical modelling of the progressive failure in unidirectional composites reinforced with bamboo fibres. Mechanics of Materials, 2016, 94, 180-192.	1.7	22
29	Preface to special issue on nonlinear mechanics of solids. Archive of Applied Mechanics, 2015, 85, 321-321.	1.2	0
30	Time to delamination onset and critical size of patterned thin film electrodes of lithium ion batteries. Journal of Power Sources, 2015, 289, 168-183.	4.0	22
31	Diffusion of lithium ions and diffusion-induced stresses in a phase separating electrode under galvanostatic and potentiostatic operations: Phase field simulations. Mechanics of Materials, 2015, 91, 363-371.	1.7	23
32	The effect of elementary fibre variability on bamboo fibre strength. Materials & Design, 2015, 75, 136-142.	5.1	50
33	Effect of Cryogenic Cycles on Mechanical Behavior of Glass/Epoxy Composite. Polymers and Polymer Composites, 2014, 22, 135-140.	1.0	1
34	Effects of Hydrostatic Stress and Concentration-Dependent Elastic Modulus on Diffusion-Induced Stresses in Cylindrical Li-Ion Batteries. Journal of Applied Mechanics, Transactions ASME, 2014, 81, .	1.1	28
35	Reducing diffusion induced stress in planar electrodes by plastic shakedown and cyclic plasticity of current collector. Journal of Power Sources, 2014, 263, 22-28.	4.0	16
36	Effects of concentration-dependent elastic modulus on the diffusion of lithium ions and diffusion induced stress in layered battery electrodes. Journal of Power Sources, 2014, 248, 517-523.	4.0	62

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37	Analysis of wave propagation in orthotropic microtubules embedded within elastic medium by Pasternak model. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 30, 300-305.	1.5	15
38	Analysis of delamination in thin film electrodes under galvanostatic and potentiostatic operations with Li-ion diffusion from edge. Acta Mechanica Sinica/Lixue Xuebao, 2013, 29, 348-356.	1.5	15
39	Combined effect of relative humidity and temperature on dynamic viscoelastic properties and glass transition of poly(vinyl alcohol). Journal of Applied Polymer Science, 2013, 130, 3161-3167.	1.3	23
40	Phase field model of polarization evolution in a finite ferroelectric body with free surfaces. Acta Mechanica, 2013, 224, 1309-1313.	1.1	7
41	Modeling of progressive delamination in a thin film driven by diffusion-induced stresses. International Journal of Solids and Structures, 2013, 50, 2495-2507.	1.3	43
42	Role of material properties and mechanical constraint on stress-assisted diffusion in plate electrodes of lithium ion batteries. Journal Physics D: Applied Physics, 2013, 46, 105307.	1.3	69
43	Scaling Analysis of the Tensile Strength of Bamboo Fibers Using Weibull Statistics. Advances in Materials Science and Engineering, 2013, 2013, 1-6.	1.0	12
44	A new temperature-dependent modulus model of glass/epoxy composite at elevated temperatures. Journal of Composite Materials, 2013, 47, 3303-3310.	1.2	33
45	Fiber Bragg Grating Sensors for Fatigue Monitoring of Composite. Polymers and Polymer Composites, 2013, 21, 553-560.	1.0	2
46	Prediction of compressive strength of z-pinned unidirectional composite laminates. Journal of Composite Materials, 2012, 46, 383-390.	1.2	4
47	Model for temperature-dependence modulus of glass/epoxy composite. Proceedings of SPIE, 2012, , .	0.8	0
48	Diffusion Induced Stresses in Cylindrical Lithium-Ion Batteries: Analytical Solutions and Design Insights. Journal of the Electrochemical Society, 2012, 159, A2060-A2068.	1.3	68
49	Influence of physical parameters on residual stresses of polymer composites during the cure process. Proceedings of SPIE, 2012, , .	0.8	0
50	Analysis of vibrational behaviors of microtubules embedded within elastic medium by Pasternak model. Biochemical and Biophysical Research Communications, 2012, 424, 89-93.	1.0	24
51	Diffusion induced stress in layered Li-ion battery electrode plates. Journal of Power Sources, 2012, 209, 220-227.	4.0	145
52	Buckling of embedded microtubules in elastic medium. Applied Mathematics and Mechanics (English) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.9	10
53	Predictive Approach to Failure of Composite Laminates with Equivalent Constraint Model. Acta Mechanica Solida Sinica, 2010, 23, 240-247.	1.0	5
54	Modeling of Damage Evolution and Failure in Fiber-Reinforced Ductile Composites Under Thermomechanical Fatigue Loading. International Journal of Damage Mechanics, 2010, 19, 851-875.	2.4	17

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55	Preface to Special Issue on Nonlinear Behaviors of Materials. Mechanics of Advanced Materials and Structures, 2009, 16, 503-503.	1.5	0
56	Modeling of Progressive Failure in Ductile Matrix Composites Including Local Matrix Yielding. Mechanics of Advanced Materials and Structures, 2009, 16, 522-535.	1.5	14
57	A three-phase cylindrical shear-lag model for carbon nanotube composites. Acta Mechanica, 2008, 196, 33-54.	1.1	27
58	Characterization of microstructure in stitched unidirectional composite laminates. Composites Part A: Applied Science and Manufacturing, 2008, 39, 815-824.	3.8	24
59	Performance of the fiber Bragg grating sensors at cryogenic temperatures. , 2008, , .		2
60	Theoretical and experimental characteristics on residual stresses of advanced polymer composites. , 2008, , .		1
61	Wave propagation in orthotropic microtubules. Journal of Applied Physics, 2007, 101, 084702.	1.1	43
62	Structural health monitoring of composite wind blades by fiber bragg grating. , 2007, , .		7
63	A predictive approach to the in-plane mechanical properties of stitched composite laminates. Acta Mechanica Solida Sinica, 2007, 20, 130-140.	1.0	13
64	A non-contact proximity sensor with low frequency electromagnetic field. Sensors and Actuators A: Physical, 2007, 135, 162-168.	2.0	8
65	A steady line heat source in a decagonal quasicrystalline half-space. Mechanics Research Communications, 2005, 32, 420-428.	1.0	9
66	Two circular inclusions with inhomogeneously imperfect interfaces in plane elasticity. International Journal of Solids and Structures, 2005, 42, 2601-2623.	1.3	12
67	Electromechanical Interaction Behaviors of Piezoelectric Sensor and Actuator on Elastic Substrate. Journal of Intelligent Material Systems and Structures, 2005, 16, 589-595.	1.4	5
68	EFFECT OF MAGNETIC FIELD ON PROPERTIES OF MR FLUIDS. International Journal of Modern Physics B, 2005, 19, 597-601.	1.0	34
69	A sub-layer model for a thick piezoelectric patch bonded on elastic substrate. Acta Mechanica, 2004, 170, 163.	1.1	5
70	A coupled electromechanical analysis of a piezoelectric layer bonded to an elastic substrate: Part I, development of governing equations. International Journal of Solids and Structures, 2003, 40, 6781-6797.	1.3	26
71	A coupled electromechanical analysis of a piezoelectric layer bonded to an elastic substrate: Part II, numerical solution and applications. International Journal of Solids and Structures, 2003, 40, 6799-6812.	1.3	9
72	An Energy-Based Statistical Model for Multiple Fractures in Composite Laminates. International Journal for Multiscale Computational Engineering, 2003, 1, 327-348.	0.8	2

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73	Analysis and design of a cylindrical magneto-rheological fluid brake. Journal of Materials Processing Technology, 2002, 129, 559-562.	3.1	176
74	Cyclically thermomechanical plasticity analysis for a broken fiber in ductile matrix composites using shear lag model. Composites Science and Technology, 2002, 62, 641-654.	3.8	13
75	Delaminations induced by constrained transverse cracking in symmetric composite laminates. International Journal of Solids and Structures, 1999, 36, 813-846.	1.3	59
76	Stiffness degradation induced by multilayer intralaminar cracking in composite laminates. Composites Part A: Applied Science and Manufacturing, 1999, 30, 683-706.	3.8	60
77	Application of the laminate plate theory to the analysis of symmetric laminates containing a cracked mid-layer. Computational Materials Science, 1998, 13, 195-210.	1.4	12
78	Strain energy release rate associated with local delamination in cracked composite laminates. Composites, 1994, 25, 851-862.	0.9	47
79	Effects of matrix cracking and hygrothermal stresses on the strain energy release rate for edge delamination in composite laminates. Composites, 1994, 25, 27-35.	0.9	23
80	In-situ damage evolution and micro/macro transition for laminated composites. Composites Science and Technology, 1993, 47, 107-118.	3.8	72
81	Analysis of multiple matrix cracking in [Â±Î¸m/90n]s composite laminates. Part 1: In-plane stiffness properties. Composites, 1992, 23, 291-298.	0.9	144
82	Analysis of multiple matrix cracking in [Â±Î¸m/90n]s composite laminates. Part 2: Development of transverse ply cracks. Composites, 1992, 23, 299-304.	0.9	85