

Yong Ni

List of Publications by Year in descending order

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108
papers

4,496
citations

159585

30
h-index

110387

64
g-index

108
all docs

108
docs citations

108
times ranked

6350
citing authors

#	ARTICLE	IF	CITATIONS
1	A Flexible and Highly Pressure-Insensitive Graphene-Polyurethane Sponge Based on Fractured Microstructure Design. <i>Advanced Materials</i> , 2013, 25, 6692-6698.	21.0	985
2	Mass production of bulk artificial nacre with excellent mechanical properties. <i>Nature Communications</i> , 2017, 8, 287.	12.8	293
3	Pumping through Porous Hydrophobic/Oleophilic Materials: An Alternative Technology for Oil Spill Remediation. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 3612-3616.	13.8	253
4	Ferroelectric solid solutions with morphotropic boundaries: Vanishing polarization anisotropy, adaptive, polar glass, and two-phase states. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	218
5	Wood-Inspired High-Performance Ultrathick Bulk Battery Electrodes. <i>Advanced Materials</i> , 2018, 30, e1706745.	21.0	205
6	Biomimetic Carbon Tube Aerogel Enables Super-Elasticity and Thermal Insulation. <i>CheM</i> , 2019, 5, 1871-1882.	11.7	136
7	From chessboard tweed to chessboard nanowire structure during pseudospinodal decomposition. <i>Nature Materials</i> , 2009, 8, 410-414.	27.5	113
8	Large-area graphene realizing ultrasensitive photothermal actuator with high transparency: new prototype robotic motions under infrared-light stimuli. <i>Journal of Materials Chemistry</i> , 2011, 21, 18584.	6.7	111
9	Diatomite derived hierarchical hybrid anode for high performance all-solid-state lithium metal batteries. <i>Nature Communications</i> , 2019, 10, 2482.	12.8	96
10	Discontinuous fibrous Bouligand architecture enabling formidable fracture resistance with crack orientation insensitivity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 15465-15472.	7.1	96
11	Controlled Formation of Surface Patterns in Metal Films Deposited on Elasticity-Gradient PDMS Substrates. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 5706-5714.	8.0	72
12	A Nacre-Inspired Separator Coating for Impact-Tolerant Lithium Batteries. <i>Advanced Materials</i> , 2019, 31, e1905711.	21.0	71
13	Tunable Formation of Ordered Wrinkles in Metal Films with Controlled Thickness Gradients Deposited on Soft Elastic Substrates. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 5160-5167.	8.0	69
14	Giant magnetoelectric effect in sintered multilayered composite structures. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	68
15	Nonlinear analysis of compressed elastic thin films on elastic substrates: From wrinkling to buckle-delamination. <i>International Journal of Solids and Structures</i> , 2014, 51, 3715-3726.	2.7	64
16	Phase Field Simulations of Hysteresis and Butterfly Loops in Ferroelectrics Subjected to Electro-Mechanical Coupled Loading. <i>Journal of the American Ceramic Society</i> , 2006, 89, 652-661.	3.8	62
17	Cell morphology and migration linked to substrate rigidity. <i>Soft Matter</i> , 2007, 3, 1285.	2.7	58
18	Optimization design of strong and tough nacreous nanocomposites through tuning characteristic lengths. <i>Journal of the Mechanics and Physics of Solids</i> , 2015, 81, 41-57.	4.8	54

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19	The transformation sequences in the cubic \rightarrow tetragonal decomposition. <i>Acta Materialia</i> , 2007, 55, 4903-4914.	7.9	51
20	Phase field simulation of crack tip domain switching in ferroelectrics. <i>Journal Physics D: Applied Physics</i> , 2007, 40, 1175-1182.	2.8	50
21	Extremely fast-charging lithium ion battery enabled by dual-gradient structure design. <i>Science Advances</i> , 2022, 8, eabm6624.	10.3	50
22	Pseudospinodal Mode of Decomposition in Films and Formation of Chessboard-Like Nanostructure. <i>Nano Letters</i> , 2009, 9, 3275-3281.	9.1	49
23	Tunable hierarchical wrinkling: From models to applications. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	46
24	Interfacial strength-controlled energy dissipation mechanism and optimization in impact-resistant nacreous structure. <i>Materials and Design</i> , 2019, 163, 107532.	7.0	43
25	Fracture modes and hybrid toughening mechanisms in oscillated/twisted plywood structure. <i>Acta Biomaterialia</i> , 2019, 91, 284-293.	8.3	40
26	Phase field modeling of flexoelectric effects in ferroelectric epitaxial thin films. <i>Acta Mechanica</i> , 2014, 225, 1323-1333.	2.1	38
27	Prediction of elastic properties of heterogeneous materials with complex microstructures. <i>Journal of the Mechanics and Physics of Solids</i> , 2007, 55, 517-532.	4.8	37
28	The shape of telephone cord blisters. <i>Nature Communications</i> , 2017, 8, 14138.	12.8	37
29	A Family of Carbon-Based Nanocomposite Tubular Structures Created by <i>in Situ</i> Electron Beam Irradiation. <i>ACS Nano</i> , 2012, 6, 4500-4507.	14.6	34
30	Three-dimensional phase field simulation for surface roughening of heteroepitaxial films with elastic anisotropy. <i>Journal of Crystal Growth</i> , 2005, 284, 281-292.	1.5	31
31	Modeling of magnetoelectric effect in polycrystalline multiferroic laminates influenced by the orientations of applied electric/magnetic fields. <i>Journal of Applied Physics</i> , 2009, 105, .	2.5	31
32	Spontaneous wrinkle branching by gradient stiffness. <i>Physical Review E</i> , 2012, 86, 031604.	2.1	31
33	On the growth of buckle-delamination pattern in compressed anisotropic thin films. <i>Acta Materialia</i> , 2014, 69, 37-46.	7.9	31
34	Morphomechanics of bacterial biofilms undergoing anisotropic differential growth. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	31
35	Micromagnetic modeling studies on the effects of stress on magnetization reversal and dynamic hysteresis. <i>Journal of Magnetism and Magnetic Materials</i> , 2006, 301, 458-468.	2.3	30
36	Modeling kinetics of diffusion-controlled surface wrinkles. <i>Physical Review E</i> , 2011, 84, 051604.	2.1	29

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37	Interface failure modes explain non-monotonic size-dependent mechanical properties in bioinspired nanolaminates. <i>Scientific Reports</i> , 2016, 6, 23724.	3.3	29
38	Effects of particle shape and concurrent plasticity on stress generation during lithiation in particulate Li-ion battery electrodes. <i>Mechanics of Materials</i> , 2015, 91, 372-381.	3.2	28
39	Biomimetic discontinuous Bouligand structural design enables high-performance nanocomposites. <i>Matter</i> , 2022, 5, 1563-1577.	10.0	27
40	Phase field model for two-phase lithiation in an arbitrarily shaped elastoplastic electrode particle under galvanostatic and potentiostatic operations. <i>International Journal of Solids and Structures</i> , 2018, 143, 73-83.	2.7	25
41	Harnessing fold-to-wrinkle transition and hierarchical wrinkling on soft material surfaces by regulating substrate stiffness and sputtering flux. <i>Soft Matter</i> , 2018, 14, 6745-6755.	2.7	24
42	Equivalency principle for magnetoelastoelectroelastic multiferroics with arbitrary microstructure: The phase field approach. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	23
43	High-Performance Liquid Metal/Polyborosiloxane Elastomer toward Thermally Conductive Applications. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 21564-21576.	8.0	23
44	Aggregation dynamics of molecular bonds between compliant materials. <i>Soft Matter</i> , 2015, 11, 2812-2820.	2.7	22
45	Geometrical distortion leads to Griffith strength reduction in graphene membranes. <i>Extreme Mechanics Letters</i> , 2017, 14, 31-37.	4.1	22
46	Mechanism and conditions of the chessboard structure formation. <i>Acta Materialia</i> , 2008, 56, 4498-4509.	7.9	20
47	Size dependent morphologies of brittle silicon nitride thin films with combined buckling and cracking. <i>Acta Materialia</i> , 2017, 127, 220-229.	7.9	20
48	Rapid Programmable Nanodroplet Motion on a Strain-Gradient Surface. <i>Langmuir</i> , 2019, 35, 2865-2870.	3.5	19
49	Phase field approach for strain-induced magnetoelectric effect in multiferroic composites. <i>Journal of Applied Physics</i> , 2007, 102, .	2.5	18
50	Controlled Wrinkling Patterns in Periodic Thickness-Gradient Films on Polydimethylsiloxane Substrates. <i>Langmuir</i> , 2019, 35, 7146-7154.	3.5	18
51	Effects of interface sliding on the formation of telephone cord buckles. <i>Physical Review E</i> , 2013, 88, 062405.	2.1	17
52	Elastic properties of gold supracrystals: Effects of nanocrystal size, ligand length, and nanocrystallinity. <i>Journal of Chemical Physics</i> , 2016, 144, 144507.	3.0	16
53	Improved phase field model of dislocation intersections. <i>Npj Computational Materials</i> , 2018, 4, .	8.7	16
54	A Prestressing Strategy Enabled Synergistic Energy Dissipation in Impact-Resistant Nacre-Like Structures. <i>Advanced Science</i> , 2022, 9, e2104867.	11.2	16

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55	Molecular dynamics simulation of interparticle spacing and many-body effect in gold supracrystals. <i>Nanotechnology</i> , 2016, 27, 135707.	2.6	15
56	Nacreous aramid-mica bulk materials with excellent mechanical properties and environmental stability. <i>IScience</i> , 2021, 24, 101971.	4.1	15
57	Spontaneous formation of vertically anticorrelated epitaxial islands on ultrathin substrates. <i>Applied Physics Letters</i> , 2010, 97, 261911.	3.3	14
58	Shape-dependent composition profile in epitaxial alloy quantum dots: A phase-field simulation. <i>Computational Materials Science</i> , 2010, 48, 871-874.	3.0	14
59	Self-Assembly of Islands on Spherical Substrates by Surface Instability. <i>ACS Nano</i> , 2017, 11, 2611-2617.	14.6	14
60	Moisture-triggered actuator and detector with high-performance: interface engineering of graphene oxide/ethyl cellulose. <i>Science China Materials</i> , 2018, 61, 1291-1296.	6.3	14
61	Modeling progressive interfacial debonding of a mud-crack film on elastic substrates. <i>Engineering Fracture Mechanics</i> , 2017, 177, 123-132.	4.3	13
62	Analysis of optimal crosslink density and platelet size insensitivity in graphene-based artificial nacles. <i>Nanoscale</i> , 2018, 10, 556-565.	5.6	13
63	Modeling of polar nanoregions dynamics on the dielectric response of relaxors. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	12
64	Three-dimensional phase field modeling of phase separation in strained alloys. <i>Materials Chemistry and Physics</i> , 2003, 78, 442-447.	4.0	11
65	Variations of boundary reaction rate and particle size on the diffusion-induced stress in a phase separating electrode. <i>Journal of Applied Physics</i> , 2014, 116, 143506.	2.5	11
66	Strong Crack Blunting by Hierarchical Nanotwins in Ultrafine/Nano-grained Metals. <i>Materials Research Letters</i> , 2015, 3, 190-196.	8.7	11
67	Investigation on the dependence of flash point of diesel on the reduced pressure at high altitudes. <i>Fuel</i> , 2016, 181, 836-842.	6.4	11
68	Sphere-To-Tube Transition toward Nanotube Formation: A Universal Route by Inverse Plateauâ€“Rayleigh Instability. <i>ACS Nano</i> , 2017, 11, 2928-2933.	14.6	11
69	Hierarchical wrinkles and oscillatory cracks in metal films deposited on liquid stripes. <i>Physical Review E</i> , 2019, 99, 062802.	2.1	11
70	Strain-driven instability of a single island and a hexagonal island array on solid substrates. <i>Surface Science</i> , 2004, 553, 189-197.	1.9	10
71	Phase field modeling of a glide dislocation transmission across a coherent sliding interface. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2015, 23, 035002.	2.0	10
72	Passengersâ€™ behavioral intentions towards congestion: Observational study of the entry restrictions at traffic bottleneck. <i>KSCE Journal of Civil Engineering</i> , 2017, 21, 2393-2402.	1.9	10

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73	Tuning interfacial patterns of molecular bonds via surface morphology. <i>Soft Matter</i> , 2017, 13, 5970-5976.	2.7	10
74	Real-Time Visualization of Solid-Phase Ion Migration Kinetics on Nanowire Monolayer. <i>Journal of the American Chemical Society</i> , 2020, 142, 7968-7975.	13.7	10
75	Spontaneous ordering of composition pattern in an epitaxial monolayer by subsurface dislocation array. <i>Thin Solid Films</i> , 2003, 440, 285-292.	1.8	9
76	Understanding size-dependent migration of a two-phase lithiation front coupled to stress. <i>Acta Mechanica</i> , 2019, 230, 303-317.	2.1	9
77	Stress-mediated lithiation in nanoscale phase transformation electrodes. <i>Acta Mechanica Sinica</i> , 2017, 30, 248-253.	1.9	8
78	Hierarchical crack patterns of metal films sputter deposited on soft elastic substrates. <i>Physical Review E</i> , 2019, 100, 052804.	2.1	8
79	Local-buckling-induced elastic interaction between inclusions in a free-standing film. <i>International Journal of Solids and Structures</i> , 2013, 50, 3742-3747.	2.7	7
80	Phase field model of polarization evolution in a finite ferroelectric body with free surfaces. <i>Acta Mechanica</i> , 2013, 224, 1309-1313.	2.1	7
81	Modeling of ferroelectric control of magnetic domain pattern and domain wall properties. <i>Journal of Applied Physics</i> , 2013, 113, 134102.	2.5	7
82	Role of modulus mismatch in vertically aligned nanocomposite formation during spinodal decomposition in constrained films. <i>Applied Physics Letters</i> , 2013, 103, 141903.	3.3	7
83	A coarse-grained simulation for tensile behavior of 2D Au nanocrystal superlattices. <i>Nanotechnology</i> , 2014, 25, 475704.	2.6	7
84	Effects of ridge cracking and interface sliding on morphological symmetry breaking in straight-sided blisters. <i>Journal of the Mechanics and Physics of Solids</i> , 2018, 112, 637-649.	4.8	7
85	Effect of plasticity on voltage decay studied by a stress coupled phase field reaction model. <i>Extreme Mechanics Letters</i> , 2021, 42, 101152.	4.1	7
86	Micromagnetic simulation of size effects on the properties of ferromagnetic materials. <i>Journal Physics D: Applied Physics</i> , 2006, 39, 1987-1992.	2.8	6
87	An analytical study on the morphology of buckle-delamination under large compression and boundary undulation. <i>International Journal of Solids and Structures</i> , 2020, 193-194, 557-567.	2.7	6
88	Tunable spatially dependent wrinkling morphologies on pre-curved surfaces. <i>Extreme Mechanics Letters</i> , 2022, 50, 101551.	4.1	6
89	Growth of curved crystals: competition between topological defect nucleation and boundary branching. <i>Soft Matter</i> , 2019, 15, 4391-4400.	2.7	5
90	Ramified growth of two-dimensional islands due to misfit strain. <i>Acta Materialia</i> , 2003, 51, 4161-4170.	7.9	4

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91	Strain-mediated patterning of surface nanostructure by the subsurface island array. <i>Journal of Crystal Growth</i> , 2004, 269, 262-269.	1.5	4
92	Controllable buckling of an elastic disc with actuation strain. <i>Europhysics Letters</i> , 2010, 92, 16003.	2.0	4
93	Stress anisotropy controlled morphological evolution in core-shell nanowires. <i>Extreme Mechanics Letters</i> , 2016, 8, 160-166.	4.1	4
94	Transition from Deceleration to Acceleration of Lithiation Front Movement in Hollow Phase Transformation Electrodes. <i>Journal of the Electrochemical Society</i> , 2017, 164, A3371-A3379.	2.9	4
95	Ring-shaped buckles in metal films induced by evaporation of micro-scaled silicone oil droplets. <i>Thin Solid Films</i> , 2018, 651, 131-137.	1.8	4
96	Phase-field simulation of the coupled evolutions of grain and twin boundaries in nanotwinned polycrystals. <i>Applied Mathematics and Mechanics (English Edition)</i> , 2018, 39, 1789-1804.	3.6	4
97	Localization of wrinkle patterns by crack-tip induced plasticity: Experiments and simulations. <i>International Journal of Solids and Structures</i> , 2019, 178-179, 108-119.	2.7	4
98	Interaction between capped tetrahedral gold nanocrystals: dependence on effective softness. <i>Soft Matter</i> , 2019, 15, 8392-8401.	2.7	4
99	Growth modes of quasicrystals involving intermediate phases and a multistep behavior studied by phase field crystal model. <i>Physical Review Materials</i> , 2020, 4, .	2.4	4
100	Giant anhysteretic response of ferroelectric solid solutions with morphotropic boundaries: the role of polar anisotropy. <i>Acta Mechanica Solida Sinica</i> , 2012, 25, 429-440.	1.9	3
101	Tunable mosaic structures in van der Waals layered materials. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 25428-25436.	2.8	3
102	Ordered ring-shaped cracks induced by indentation in metal films on soft elastic substrates. <i>Physical Review E</i> , 2020, 102, 022801.	2.1	2
103	Impact of ridge cracking on the morphology of buckle-delamination. <i>International Journal of Non-Linear Mechanics</i> , 2020, 126, 103561.	2.6	2
104	Alternative transmission mode and long stacking fault formation during a dissociated screw dislocation across a coherent sliding interface. <i>Journal Physics D: Applied Physics</i> , 2015, 48, 395301.	2.8	1
105	Size-dependent assembly of ligated gold nanocrystals in two dimensions. <i>Journal of Physics Condensed Matter</i> , 2016, 28, 445201.	1.8	1
106	Elastic interaction between inclusions and tunable periodicity of superlattice structure in nanowires. <i>Applied Mathematics and Mechanics (English Edition)</i> , 2020, 41, 1461-1478.	3.6	1
107	High rate capability composite particles with root-inspired hierarchical channel structure. <i>Journal of Power Sources</i> , 2021, 494, 229777.	7.8	1
108	Thermodynamics and Kinetics of the Nanocheckerboard Formation. , 2013, , 193-202.		0