Xi Chen

List of Publications by Year
in descending order

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453 papers	15,883 citations	17440 63 h-index	30087 103 g-index
456 all docs	456 docs citations	456 times ranked	13259 citing authors

#	Article	IF	Citations
1	Herringbone Buckling Patterns of Compressed Thin Films on Compliant Substrates. Journal of Applied Mechanics, Transactions ASME, 2004, 71, 597-603.	2.2	511
2	Degradation of tetracycline by peroxymonosulfate activated with zero-valent iron: Performance, intermediates, toxicity and mechanism. Chemical Engineering Journal, 2019, 364, 45-56.	12.7	466
3	Sorbents for the Direct Capture of CO₂ from Ambient Air. Angewandte Chemie - International Edition, 2020, 59, 6984-7006.	13.8	341
4	Numerical study on the measurement of thin film mechanical properties by means of nanoindentation. Journal of Materials Research, 2001, 16, 2974-2982.	2.6	312
5	Hydrothermal Synthesis of Nanomaterials. Journal of Nanomaterials, 2020, 2020, 1-3.	2.7	249
6	On the uniqueness of measuring elastoplastic properties from indentation: The indistinguishable mystical materials. Journal of the Mechanics and Physics of Solids, 2007, 55, 1618-1660.	4.8	237
7	All-Temperature Flexible Supercapacitors Enabled by Antifreezing and Thermally Stable Hydrogel Electrolyte. Nano Letters, 2020, 20, 1907-1914.	9.1	232
8	PVDF/Palygorskite Nanowire Composite Electrolyte for 4 V Rechargeable Lithium Batteries with High Energy Density. Nano Letters, 2018, 18, 6113-6120.	9.1	227
9	Nanoscale Fluid Transport: Size and Rate Effects. Nano Letters, 2008, 8, 2988-2992.	9.1	225
10	Stress-driven buckling patterns in spheroidal core/shell structures. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 19132-19135.	7.1	207
11	Plane-strain Bulge Test for Thin Films. Journal of Materials Research, 2005, 20, 2360-2370.	2.6	189
12	A size-dependent Kirchhoff micro-plate model based on strain gradient elasticity theory. European Journal of Mechanics, A/Solids, 2011, 30, 517-524.	3.7	175
13	Designing Flexible Lithium-Ion Batteries by Structural Engineering. ACS Energy Letters, 2019, 4, 690-701.	17.4	175
14	Buckling patterns of thin films on curved compliant substrates with applications to morphogenesis and three-dimensional micro-fabrication. Soft Matter, 2010, 6, 5667.	2.7	172
15	On the determination of residual stress and mechanical properties by indentation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 416, 139-149.	5.6	171
16	Degradation of refractory dibutyl phthalate by peroxymonosulfate activated with novel catalysts cobalt metal-organic frameworks: Mechanism, performance, and stability. Journal of Hazardous Materials, 2016, 318, 154-163.	12.4	164
17	A new approach to measure the elasticâ€“plastic properties of bulk materials using spherical indentation. Acta Materialia, 2006, 54, 23-32.	7.9	157
18	Singleâ€Atom Catalytic Materials for Advanced Battery Systems. Advanced Materials, 2020, 32, e1906548.	21.0	156

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19	Self-assembled Shells Composed of Colloidal Particles:Â Fabrication and Characterization. Langmuir, 2005, 21, 2963-2970.	3.5	145
20	Buckling of single-walled carbon nanotubes upon bending: Molecular dynamics simulations and finite element method. Physical Review B, 2006, 73, .	3.2	142
21	Representative Strain of Indentation Analysis. Journal of Materials Research, 2005, 20, 2225-2234.	2.6	139
22	A Nanoâ€shield Design for Separators to Resist Dendrite Formation in Lithiumâ€Metal Batteries. Angewandte Chemie - International Edition, 2020, 59, 6561-6566.	13.8	128
23	The residual stress state due to a spherical hard-body impact. Mechanics of Materials, 2001, 33, 441-454.	3.2	125
24	A family of herringbone patterns in thin films. Scripta Materialia, 2004, 50, 797-801.	5.2	123
25	Microfabrication and mechanical properties of nanoporous gold at the nanoscale. Scripta Materialia, 2007, 56, 437-440.	5.2	123
26	Effects of Gas Molecules on Nanofluidic Behaviors. Journal of the American Chemical Society, 2007, 129, 2355-2359.	13.7	118
27	Self-Assembled Polymer Membrane Capsules Inflated by Osmotic Pressure. Journal of the American Chemical Society, 2004, 126, 14117-14122.	13.7	112
28	Mechanisms governing the high temperature erosion of thermal barrier coatings. Wear, 2004, 256, 735-746.	3.1	112
29	High strain gradient plasticity associated with wedge indentation into face-centered cubic single crystals: Geometrically necessary dislocation densities. Journal of the Mechanics and Physics of Solids, 2007, 55, 1554-1573.	4.8	112
30	Single-atom Catalytic Materials for Lean-electrolyte Ultrastable Lithiumâ€“Sulfur Batteries. Nano Letters, 2020, 20, 5522-5530.	9.1	111
31	Novel technique for measuring the mechanical properties of porous materials by nanoindentation. Journal of Materials Research, 2006, 21, 715-724.	2.6	109
32	Bioinspired, Spineâ€Like, Flexible, Rechargeable Lithiumâ€Ion Batteries with High Energy Density. Advanced Materials, 2018, 30, e1704947.	21.0	109
33	Measuring the plastic properties of bulk materials by single indentation test. Scripta Materialia, 2006, 54, 65-70.	5.2	106
34	Calciumâ€“magnesiumâ€“aluminaâ€“silicate (CMAS) delamination mechanisms in EB-PVD thermal barrier coatings. Surface and Coatings Technology, 2006, 200, 3418-3427.	4.8	104
35	Anisotropic buckling patterns in spheroidal film/substrate systems and their implications in some natural and biological systems. Journal of the Mechanics and Physics of Solids, 2009, 57, 1470-1484.	4.8	103
36	Nacreâ€Inspired Composite Electrolytes for Loadâ€Bearing Solidâ€State Lithiumâ€Metal Batteries. Advanced Materials, 2020, 32, e1905517.	21.0	100

#	Article	IF	Citations
37	Self-Assembled Triangular and Labyrinth Buckling Patterns of Thin Films on Spherical Substrates. Physical Review Letters, 2008, 100, 036102.	7.8	98
38	Micromechanics simulation of ferroelectric polarization switching. Acta Materialia, 1997, 45, 3181-3189.	7.9	97
39	Pressurized Liquid in Nanopores: A Modified Laplace-Young Equation. Nano Letters, 2009, 9, 984-988.	9.1	96
40	Effect of surface/interface stress on the plastic deformation of nanoporous materials and nanocomposites. International Journal of Plasticity, 2010, 26, 957-975.	8.8	95
41	Incineration of municipal solid waste in Malaysia: Salient issues, policies and waste-to-energy initiatives. Renewable and Sustainable Energy Reviews, 2013, 24, 181-186.	16.4	95
42	Foreign object damage in a thermal barrier system: mechanisms and simulations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 352, 221-231.	5.6	90
43	High permeability and salt rejection reverse osmosis by a zeolite nano-membrane. Physical Chemistry Chemical Physics, 2013, 15, 6817.	2.8	88
44	Unveiling the initial pyrolytic mechanisms of cellulose by DFT study. Journal of Analytical and Applied Pyrolysis, 2015, 113, 621-629.	5.5	87
45	On the application of the Kitagawaâ€“Takahashi diagram to foreign-object damage and high-cycle fatigue. Engineering Fracture Mechanics, 2002, 69, 1425-1446.	4.3	86
46	Measuring elastoplastic properties of thin films on an elastic substrate using sharp indentation. Acta Materialia, 2007, 55, 6260-6274.	7.9	86
47	Characteristics of windshield cracking upon low-speed impact: Numerical simulation based on the extended finite element method. Computational Materials Science, 2010, 48, 582-588.	3.0	84
48	A structural mechanics study of single-walled carbon nanotubes generalized from atomistic simulation. Nanotechnology, 2006, 17, 1004-1015.	2.6	83
49	Determination of uniaxial residual stress and mechanical properties by instrumented indentation. Acta Materialia, 2006, 54, 2823-2832.	7.9	83
50	Infiltration of Electrolytes in Molecular-Sized Nanopores. Physical Review Letters, 2009, 102, 184501.	7.8	82
51	Thermal vibration and apparent thermal contraction of single-walled carbon nanotubes. Journal of the Mechanics and Physics of Solids, 2006, 54, 1206-1236.	4.8	81
52	Effect of surface roughness on thermal conductivity of silicon nanowires. Journal of Applied Physics, 2010, 107, .	2.5	80
53	Lead Toxicity to the Performance, Viability, And Community Composition of Activated Sludge Microorganisms. Environmental Science & Technology, 2015, 49, 824-830.	10.0	80
54	Ultra-Thin Conductive Graphitic Carbon Nitride Assembly through van der Waals Epitaxy toward High-Energy-Density Flexible Supercapacitors. Nano Letters, 2019, 19, 4103-4111.	9.1	80

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55	Quaternized Chitosan/PVA Aerogels for Reversible CO₂ Capture from Ambient Air. Industrial & Engineering Chemistry Research, 2018, 57, 4941-4948.	3.7	79
56	Particle impact on metal substrates with application to foreign object damage to aircraft engines. Journal of the Mechanics and Physics of Solids, 2002, 50, 2669-2690.	4.8	78
57	The Mechanics of Indentation Induced Lateral Cracking. Journal of the American Ceramic Society, 2005, 88, 1233-1238.	3.8	78
58	Energy absorption performance of steel tubes enhanced by a nanoporous material functionalized liquid. Applied Physics Letters, 2006, 89, 241918.	3.3	76
59	Molecular dynamics simulation on explosive boiling of liquid argon film on copper nanochannels. Applied Thermal Engineering, 2017, 113, 208-214.	6.0	74
60	A Finite Element Framework for Studying the Mechanical Response of Macromolecules: Application to the Gating of the Mechanosensitive Channel MscL. Biophysical Journal, 2006, 91, 1248-1263.	0.5	73
61	Latest Advances in Flexible Symmetric Supercapacitors: From Material Engineering to Wearable Applications. Accounts of Chemical Research, 2020, 53, 1468-1477.	15.6	72
62	Mechanical properties of nanoporous graphene membrane. Journal of Applied Physics, 2014, 115, 034303.	2.5	70
63	Narrow band gap and high mobility of lead-free perovskite single crystal Sn-doped MA₃Sb₂I₉. Journal of Materials Chemistry A, 2018, 6, 20753-20759.	10.3	67
64	Determining plastic properties of a material with residual stress by using conical indentation. International Journal of Solids and Structures, 2007, 44, 3720-3737.	2.7	66
65	Capture CO₂ from Ambient Air Using Nanoconfined Ion Hydration. Angewandte Chemie - International Edition, 2016, 55, 4026-4029.	13.8	66
66	Moisture-Driven CO2 Sorbents. Joule, 2020, 4, 1823-1837.	24.0	65
67	On the propagation and coalescence of delamination cracks in compressed coatings: with application to thermal barrier systems. Acta Materialia, 2003, 51, 2017-2030.	7.9	64
68	A simple framework of spherical indentation for measuring elastoplastic properties. Mechanics of Materials, 2009, 41, 1025-1033.	3.2	64
69	Effect of surface stress on the asymmetric yield strength of nanowires. Journal of Applied Physics, 2008, 103, 123527.	2.5	61
70	Nanostructure Engineering of Graphitic Carbon Nitride for Electrochemical Applications. ACS Nano, 2021, 15, 18777-18793.	14.6	61
71	Size-dependent pull-in instability of electrostatically actuated microbeam-based MEMS. Journal of Micromechanics and Microengineering, 2011, 21, 027001.	2.6	60
72	Simulation of the high temperature impression of thermal barrier coatings with columnar microstructure. Acta Materialia, 2004, 52, 565-571.	7.9	59

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73	A reformulated flexoelectric theory for isotropic dielectrics. Journal Physics D: Applied Physics, 2015, 48, 465502.	2.8	59
74	Accordion-like stretchable Li-ion batteries with high energy density. Energy Storage Materials, 2019, 17, 136-142.	18.0	57
75	Foreign object damage on the leading edge of a thin blade. Mechanics of Materials, 2005, 37, 447-457.	3.2	56
76	Mechanical relaxation of localized residual stresses associated with foreign object damage. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 349, 48-58.	5.6	55
77	Economic analysis of a new class of vanadium redox-flow battery for medium- and large-scale energy storage in commercial applications with renewable energy. Applied Thermal Engineering, 2017, 114, 802-814.	6.0	55
78	Limit analysis-based approach to determine the material plastic properties with conical indentation. Journal of Materials Research, 2006, 21, 947-957.	2.6	54
79	Effect of wall roughness on fluid transport resistance in nanopores. Journal of Chemical Physics, 2011, 135, 144703.	3.0	53
80	Sulfate radical-induced degradation of Acid Orange 7 by a new magnetic composite catalyzed peroxymonosulfate oxidation process. Journal of Hazardous Materials, 2014, 279, 476-484.	12.4	53
81	Highâ€Energyâ€Density Foldable Battery Enabled by Zigzagâ€Like Design. Advanced Energy Materials, 2019, 9, 1802998.	19.5	53
82	Can indentation technique measure unique elastoplastic properties?. Journal of Materials Research, 2009, 24, 784-800.	2.6	52
83	Quasi-static energy absorption of hollow microlattice structures. Composites Part B: Engineering, 2014, 67, 39-49.	12.0	52
84	Pressure-driven water infiltration into carbon nanotube: The effect of applied charges. Applied Physics Letters, 2008, 92, 101927.	3.3	51
85	Determining engineering stressâ€“strain curve directly from the loadâ€“depth curve of spherical indentation test. Journal of Materials Research, 2010, 25, 2297-2307.	2.6	51
86	Nanoscale Fluid Mechanics and Energy Conversion. Applied Mechanics Reviews, 2014, 66, .	10.1	51
87	Analysis of water drop erosion on turbine blades based on a nonlinear liquidâ€“solid impact model. International Journal of Impact Engineering, 2009, 36, 1156-1171.	5.0	50
88	Dynamic modeling and simulation of shell gasifier in IGCC. Fuel Processing Technology, 2011, 92, 1418-1425.	7.2	50
89	Strain sensing of carbon nanotubes: Numerical analysis of the vibrational frequency of deformed single-wall carbon nanotubes. Physical Review B, 2005, 72, .	3.2	49
90	Mechanical properties of porous and fully dense low-Î¤ dielectric thin films measured by means of nanoindentation and the plane-strain bulge test technique. Journal of Materials Research, 2006, 21, 386-395.	2.6	49

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91	The effects of chirality and boundary conditions on the mechanical properties of single-walled carbon nanotubes. International Journal of Solids and Structures, 2007, 44, 5447-5465.	2.7	48
92	Liquid drop impact on solid surface with application to water drop erosion on turbine blades, Part I: Nonlinear wave model and solution of one-dimensional impact. International Journal of Mechanical Sciences, 2008, 50, 1526-1542.	6.7	47
93	In-situ measurements of mechanical and volume change of LiCoO2 lithium-ion batteries during repeated chargeâ€“discharge cycling by using digital image correlation. Measurement: Journal of the International Measurement Confederation, 2016, 94, 759-770.	5.0	47
94	Influence of anions on liquid infiltration and defiltration in a zeolite Y. Physical Review E, 2008, 78, 031408.	2.1	46
95	Energy analysis of size-dependent elastic properties of ZnO nanofilms using atomistic simulations. Physical Review B, 2007, 76, .	3.2	45
96	Investigation into the loosening mechanism of bolt in curvic coupling subjected to transverse loading. Engineering Failure Analysis, 2013, 32, 360-373.	4.0	45
97	Liquid drop impact on solid surface with application to water drop erosion on turbine blades, Part II: Axisymmetric solution and erosion analysis. International Journal of Mechanical Sciences, 2008, 50, 1543-1558.	6.7	44
98	Gating Mechanisms of Mechanosensitive Channels of Large Conductance, I: A Continuum Mechanics-Based Hierarchical Framework. Biophysical Journal, 2008, 95, 563-580.	0.5	44
99	Helical coil buckling mechanism for a stiff nanowire on an elastomeric substrate. Journal of the Mechanics and Physics of Solids, 2016, 95, 25-43.	4.8	44
100	Effects of superheat and internal heat exchanger on thermo-economic performance of organic Rankine cycle based on fluid type and heat sources. Energy, 2018, 159, 482-495.	8.8	44
101	Mechanisms of water infiltration into conical hydrophobic nanopores. Physical Chemistry Chemical Physics, 2009, 11, 6520.	2.8	43
102	Experimental and macroscopic investigation of dynamic crack patterns in PVB laminated glass sheets subject to light-weight impact. Engineering Failure Analysis, 2011, 18, 1605-1612.	4.0	43
103	Mitigating impact/blast energy via a novel nanofluidic energy capture mechanism. Journal of the Mechanics and Physics of Solids, 2014, 62, 194-208.	4.8	43
104	Dynamic energy absorption characteristics of hollow microlattice structures. Mechanics of Materials, 2014, 77, 1-13.	3.2	43
105	Understanding flocculation mechanism of graphene oxide for organic dyes from water: Experimental and molecular dynamics simulation. AIP Advances, 2015, 5, .	1.3	42
106	Influence of ultrasonic irradiation on the microstructure of Cu/Al2O3, CeO2 nanocomposite thin films during electrocodeposition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 447, 209-216.	5.6	40
107	Effective viscosity of glycerin in a nanoporous silica gel. Journal of Applied Physics, 2008, 104, .	2.5	40
108	Mechanical self-assembly fabrication of gears. Soft Matter, 2009, 5, 3469.	2.7	40

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109	Mechanical modeling of a wrinkled fingertip immersed in water. Acta Biomaterialia, 2010, 6, 1487-1496.	8.3	40
110	Mechanism study of deformation and mass transfer for binary droplet collisions with particle method. Physics of Fluids, 2009, 21, .	4.0	39
111	Harvesting energy from low-grade heat based on nanofluids. Nano Energy, 2012, 1, 805-811.	16.0	39
112	Electrospun Polyaniline Nanofiber Networks toward Highâ€Performance Flexible Supercapacitors. Advanced Materials Technologies, 2019, 4, 1900564.	5.8	39
113	Development of a Transferable Reactive Force Field of P/H Systems: Application to the Chemical and Mechanical Properties of Phosphorene. Journal of Physical Chemistry A, 2017, 121, 6135-6149.	2.5	38
114	The effect of the displacement increment on the axial compressive buckling behaviours of single-walled carbon nanotubes. Nanotechnology, 2006, 17, 3844-3855.	2.6	37
115	Determining mechanical properties of thin films from the loading curve of nanoindentation testing. Thin Solid Films, 2008, 516, 7571-7580.	1.8	37
116	Water infiltration behaviours in carbon nanotubes under quasi-static and dynamic loading conditions. Molecular Simulation, 2008, 34, 1267-1274.	2.0	37
117	Experimental Study on Energy Dissipation of Electrolytes in Nanopores. Langmuir, 2009, 25, 12687-12696.	3.5	37
118	Capture CO₂ from Ambient Air Using Nanoconfined Ion Hydration. Angewandte Chemie, 2016, 128, 4094-4097.	2.0	37
119	The Mechanical Properties of Electroplated Cu Thin Films Measured by means of the Bulge Test Technique. Materials Research Society Symposia Proceedings, 2001, 695, 1.	0.1	36
120	Effect of Electric Field on Liquid Infiltration into Hydrophobic Nanopores. Langmuir, 2011, 27, 6349-6357.	3.5	36
121	The Effect of Moisture on the Hydrolysis of Basic Salts. Chemistry - A European Journal, 2016, 22, 18326-18330.	3.3	36
122	Energy efficiency of mobile soft robots. Soft Matter, 2017, 13, 8223-8233.	2.7	36
123	Porous insulating matrix for lithium metal anode with long cycling stability and high power. Energy Storage Materials, 2019, 17, 31-37.	18.0	36
124	A numerical study of stir mixing of liquids with particle method. Chemical Engineering Science, 2009, 64, 341-350.	3.8	35
125	Hydrothermal preparation and photocatalytic performance of N, S-doped nanometer TiO2 under sunshine irradiation. Powder Technology, 2013, 237, 616-622.	4.2	35
126	Mechanism of glucose conversion in supercritical water by DFT study. Journal of Analytical and Applied Pyrolysis, 2016, 119, 199-207.	5.5	35

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127	Foreign object damage and fatigue crack threshold: Cracking outside shallow indents. International Journal of Fracture, 2001, 107, 31-51.	2.2	34
128	Plastic deformation in nanoscale gold single crystals and open-celled nanoporous gold. Modelling and Simulation in Materials Science and Engineering, 2007, 15, S181-S192.	2.0	34
129	A conceptual thermal actuation system driven by interface tension of nanofluids. Energy and Environmental Science, 2011, 4, 3632.	30.8	34
130	On the anisotropic deformation of AZ31 Mg alloy under compression. Materials & Design, 2011, 32, 5004-5009.	5.1	34
131	Flow Transition Behavior of the Wetting Flow Between the Film Flow and Rivulet Flow on an Inclined Wall. Journal of Fluids Engineering, Transactions of the ASME, 2011, 133, .	1.5	34
132	A bibliometric review on carbon cycling research during 1993â€“2013. Environmental Earth Sciences, 2015, 74, 6065-6075.	2.7	34
133	Ballistic performance of UHMWPE fabrics/EAMS hybrid panel. Journal of Materials Science, 2018, 53, 7357-7371.	3.7	34
134	Engineering interfacial adhesion for high-performance lithium metal anode. Nano Energy, 2020, 67, 104242.	16.0	34
135	Mechanisms of nanoindentation on single-walled carbon nanotubes: The effect of nanotube length. Journal of Materials Research, 2006, 21, 1048-1070.	2.6	33
136	On radial crack and half-penny crack induced by Vickers indentation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2008, 464, 2967-2984.	2.1	33
137	Modeling and simulation of curled dry leaves. Soft Matter, 2011, 7, 10794.	2.7	32
138	Automotive windshield â€" pedestrian head impact: Energy absorption capability of interlayer material. International Journal of Automotive Technology, 2011, 12, 687-695.	1.4	32
139	Effects of intrinsic strain on the structural stability and mechanical properties of phosphorene nanotubes. Nanotechnology, 2016, 27, 215701.	2.6	32
140	Folding to Curved Surfaces: A Generalized Design Method and Mechanics of Origami-based Cylindrical Structures. Scientific Reports, 2016, 6, 33312.	3.3	32
141	Highly efficient reduction of O2-containing CO2 via chemical looping based on perovskite nanocomposites. Nano Energy, 2020, 78, 105320.	16.0	32
142	Plane-strain bulge test for nanocrystalline copper thin films. Scripta Materialia, 2007, 57, 541-544.	5.2	31
143	Size dependence and orientation dependence of elastic properties of ZnO nanofilms. International Journal of Solids and Structures, 2008, 45, 1730-1753.	2.7	31
144	Liquid flow-induced energy harvesting in carbon nanotubes: a molecular dynamics study. Physical Chemistry Chemical Physics, 2013, 15, 1164-1168.	2.8	31

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145	A multilayer structure shear lag model applied in the tensile fracture characteristics of supersonic plasma sprayed thermal barrier coating systems based on digital image correlation. Surface and Coatings Technology, 2018, 350, 211-226.	4.8	31
146	Youngâ€™s modulus measurements of SiC coatings on spherical particles by using nanoindentation. Journal of Nuclear Materials, 2009, 393, 22-29.	2.7	30
147	Elastic buckling of gradient thin films on compliant substrates. Philosophical Magazine Letters, 2010, 90, 423-433.	1.2	30
148	Electrical-Driven Transport of Endohedral Fullerene Encapsulating a Single Water Molecule. Physical Review Letters, 2013, 110, 156103.	7.8	30
149	Mechanical properties of phosphorene nanoribbons and oxides. Journal of Applied Physics, 2015, 118, .	2.5	30
150	A novel slithering locomotion mechanism for a snake-like soft robot. Journal of the Mechanics and Physics of Solids, 2017, 99, 304-320.	4.8	30
151	Infiltration behaviour of water in a carbon nanotube under external pressure. Philosophical Magazine Letters, 2008, 88, 371-378.	1.2	29
152	Thermally Responsive Fluid Behaviors in Hydrophobic Nanopores. Langmuir, 2009, 25, 11862-11868.	3.5	29
153	Effects of ion concentration on thermally-chargeable double-layer supercapacitors. Nanotechnology, 2013, 24, 465401.	2.6	29
154	Quasi-static crush behavior of hollow microtruss filled with NMF liquid. Composite Structures, 2014, 115, 29-40.	5.8	29
155	Evolution of thermal stress in a coating/substrate system during the cooling process of fabrication. Mechanics of Materials, 2014, 74, 26-40.	3.2	29
156	Effects of low-temperature plasma treatment on wettability of glass surface: Molecular dynamic simulation and experimental study. Applied Surface Science, 2020, 503, 144257.	6.1	29
157	A carbon-doped anatase TiO2-Based flexible silicon anode with high-performance and stability for flexible lithium-ion battery. Journal of Power Sources, 2020, 466, 228339.	7.8	29
158	Buckling behavior of single-walled carbon nanotubes and a targeted molecular mechanics approach. Physical Review B, 2006, 74, .	3.2	28
159	Superelasticity and reversible energy absorption of polyurethane cellular structures with sand filler. Composite Structures, 2015, 131, 966-974.	5.8	28
160	Thermal effect on the dynamic infiltration of water into single-walled carbon nanotubes. Physical Review E, 2009, 80, 061206.	2.1	27
161	Pull-in instability analysis of electrostatically actuated microplate with rectangular shape. International Journal of Precision Engineering and Manufacturing, 2011, 12, 1085-1094.	2.2	27
162	Temperature dependence of fluid transport in nanopores. Journal of Chemical Physics, 2012, 136, 184701.	3.0	27

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163	The catalytic effect of H₂O on the hydrolysis of CO₃^{2â^'}in hydrated clusters and its implication in the humidity driven CO₂air capture. Physical Chemistry Chemical Physics, 2017, 19, 27435-27441.	2.8	27
164	Bioinspired, Treeâ€Rootâ€Like Interfacial Designs for Structural Batteries with Enhanced Mechanical Properties. Advanced Energy Materials, 2021, 11, 2100997.	19.5	27
165	Photocatalytic reduction of CO₂by halide perovskites: recent advances and future perspectives. Materials Advances, 2021, 2, 7187-7209.	5.4	27
166	New sharp indentation method of measuring the elasticâ€“plastic properties of compliant and soft materials using the substrate effect. Journal of Materials Research, 2006, 21, 3134-3151.	2.6	26
167	Gating Mechanisms of Mechanosensitive Channels of Large Conductance, II: Systematic Study of Conformational Transitions. Biophysical Journal, 2008, 95, 581-596.	0.5	26
168	Buckling patterns of thin films on compliant substrates: the effect of plasticity. Journal Physics D: Applied Physics, 2011, 44, 045401.	2.8	26
169	MOLECULAR CHARACTERISTICS OF DISSOCIATED WATER WITH MEMORY EFFECT FROM METHANE HYDRATES. International Journal of Modern Physics B, 2014, 28, 1450062.	2.0	26
170	Quantitative evaluation of adhesion quality of surface coating by using pulse laser-induced ultrasonic waves. Surface and Coatings Technology, 2016, 286, 231-238.	4.8	26
171	Thermal conductivity of armchair black phosphorus nanotubes: a molecular dynamics study. Nanotechnology, 2016, 27, 155703.	2.6	26
172	Architectures of soft robotic locomotion enabled by simple mechanical principles. Soft Matter, 2017, 13, 4441-4456.	2.7	26
173	Filtration performance of the granular bed filter used for industrial flue gas purification: A review of simulation and experiment. Separation and Purification Technology, 2020, 251, 117318.	7.9	26
174	Structure and Properties of Electrocodeposited Cu-Al2O3 Nanocomposite Thin Films. Journal of Engineering Materials and Technology, Transactions of the ASME, 2005, 127, 451-456.	1.4	25
175	Correlation between the flow stress and the nominal indentation hardness of soft metals. Scripta Materialia, 2008, 59, 518-521.	5.2	25
176	Nanomechanics Modeling and Simulation of Carbon Nanotubes. Journal of Engineering Mechanics - ASCE, 2008, 134, 211-216.	2.9	25
177	Effect of inner gas pressure on the elastoplastic behavior of porous materials: A second-order moment micromechanics model. International Journal of Plasticity, 2009, 25, 1231-1252.	8.8	25
178	Indentation induced lateral crack in ceramics with surface hardening. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 507, 226-235.	5.6	25
179	Measuring mechanical properties of micro- and nano-fibers embedded in an elastic substrate: Theoretical framework and experiment. Composites Part B: Engineering, 2010, 41, 33-41.	12.0	25
180	A flexoelectric theory with rotation gradient effects for elastic dielectrics. Modelling and Simulation in Materials Science and Engineering, 2016, 24, 015009.	2.0	25

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181	Humidity effect on ion behaviors of moisture-driven CO2 sorbents. Journal of Chemical Physics, 2018, 149, 164708.	3.0	25
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