

# Harold S Park

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

183 papers	9,362 citations	53 h-index	91 g-index
189 ext. papers	10,590 ext. citations	4.9 avg, IF	6.86 L-index

#	Paper	IF	Citations
183	A review on mechanics and mechanical properties of 2D materialsGraphene and beyond. <i>Extreme Mechanics Letters</i> , <b>2017</b> , 13, 42-77	3.9	581
182	Negative poisson's ratio in single-layer black phosphorus. <i>Nature Communications</i> , <b>2014</b> , 5, 4727	17.4	478
181	Nanomechanical resonators and their applications in biological/chemical detection: Nanomechanics principles. <i>Physics Reports</i> , <b>2011</b> , 503, 115-163	27.7	335
180	An introduction to computational nanomechanics and materials. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2004</b> , 193, 1529-1578	5.7	307
179	Molecular dynamics simulations of single-layer molybdenum disulphide (MoS <sub>2</sub> ): Stillinger-Weber parametrization, mechanical properties, and thermal conductivity. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 064307	2.5	263
178	Deformation of FCC nanowires by twinning and slip. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2006</b> , 54, 1862-1881	5	259
177	Shape memory and pseudoelasticity in metal nanowires. <i>Physical Review Letters</i> , <b>2005</b> , 95, 255504	7.4	257
176	A level-set based IGA formulation for topology optimization of flexoelectric materials. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2017</b> , 313, 239-258	5.7	208
175	Modeling inelasticity and failure in gold nanowires. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	202
174	Superplastic deformation of defect-free Au nanowires via coherent twin propagation. <i>Nano Letters</i> , <b>2011</b> , 11, 3499-502	11.5	159
173	A multi-material level set-based topology optimization of flexoelectric composites. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2018</b> , 332, 47-62	5.7	159
172	Mechanical properties of single-layer black phosphorus. <i>Journal Physics D: Applied Physics</i> , <b>2014</b> , 47, 385304	3.04	157
171	Mechanics of Crystalline Nanowires. <i>MRS Bulletin</i> , <b>2009</b> , 34, 178-183	3.2	144
170	Surface stress effects on the resonant properties of metal nanowires: The importance of finite deformation kinematics and the impact of the residual surface stress. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2008</b> , 56, 3144-3166	5	141
169	The bridging scale for two-dimensional atomistic/continuum coupling. <i>Philosophical Magazine</i> , <b>2005</b> , 85, 79-113	1.6	137
168	An introduction and tutorial on multiple-scale analysis in solids. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2004</b> , 193, 1733-1772	5.7	135
167	A surface Cauchy-Born model for nanoscale materials. <i>International Journal for Numerical Methods in Engineering</i> , <b>2006</b> , 68, 1072-1095	2.4	130

166	2006,			123
165	Bridging scale methods for nanomechanics and materials. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2006</b> , 195, 1407-1421	5.7		113
164	Elastic bending modulus of single-layer molybdenum disulfide (MoS <sub>2</sub> ): finite thickness effect. <i>Nanotechnology</i> , <b>2013</b> , 24, 435705	3.4		109
163	Surface Cauchy-Born analysis of surface stress effects on metallic nanowires. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3		108
162	Polarization and valley switching in monolayer group-IV monochalcogenides. <i>Physical Review B</i> , <b>2016</b> , 94,	3.3		107
161	Mechanical properties of MoS <sub>2</sub> /graphene heterostructures. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 033108	3.4		102
160	Surface piezoelectricity: Size effects in nanostructures and the emergence of piezoelectricity in non-piezoelectric materials. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 104305	2.5		100
159	A continuum model for the mechanical behavior of nanowires including surface and surface-induced initial stresses. <i>International Journal of Solids and Structures</i> , <b>2011</b> , 48, 2154-2163	3.1		95
158	Stress-Induced Martensitic Phase Transformation in Intermetallic Nickel Aluminum Nanowires. <i>Nano Letters</i> , <b>2006</b> , 6, 958-962	11.5		92
157	Negative Poisson's Ratio in Single-Layer Graphene Ribbons. <i>Nano Letters</i> , <b>2016</b> , 16, 2657-62	11.5		90
156	A NURBS-based inverse analysis for reconstruction of nonlinear deformations of thin shell structures. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2018</b> , 331, 427-455	5.7		88
155	Atomistic simulations of tension-induced large deformation and stretchability in graphene kirigami. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3		87
154	Three-dimensional bridging scale analysis of dynamic fracture. <i>Journal of Computational Physics</i> , <b>2005</b> , 207, 588-609	4.1		84
153	The importance of edge effects on the intrinsic loss mechanisms of graphene nanoresonators. <i>Nano Letters</i> , <b>2009</b> , 9, 969-74	11.5		83
152	How graphene slides: measurement and theory of strain-dependent frictional forces between graphene and SiO <sub>2</sub> . <i>Nano Letters</i> , <b>2013</b> , 13, 2605-10	11.5		82
151	On the thermomechanical deformation of silver shape memory nanowires. <i>Acta Materialia</i> , <b>2006</b> , 54, 2645-2654	8.4		79
150	Intrinsic Negative Poisson's Ratio for Single-Layer Graphene. <i>Nano Letters</i> , <b>2016</b> , 16, 5286-90	11.5		77
149	A dynamic finite element method for inhomogeneous deformation and electromechanical instability of dielectric elastomer transducers. <i>International Journal of Solids and Structures</i> , <b>2012</b> , 49, 2187-2194	3.1		75

148	Origin of size dependency in coherent-twin-propagation-mediated tensile deformation of noble metal nanowires. <i>Nano Letters</i> , <b>2013</b> , 13, 5112-6	11.5	74
147	Topology optimization of flexoelectric structures. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2017</b> , 105, 217-234	5	71
146	Auxetic nanomaterials: Recent progress and future development. <i>Applied Physics Reviews</i> , <b>2016</b> , 3, 041101	11.3	71
145	A Stillinger-Weber potential for single-layered black phosphorus, and the importance of cross-pucker interactions for a negative Poisson's ratio and edge stress-induced bending. <i>Nanoscale</i> , <b>2015</b> , 7, 6059-68	7.7	69
144	Viscoelastic effects on electromechanical instabilities in dielectric elastomers. <i>Soft Matter</i> , <b>2013</b> , 9, 10313	10.42	67
143	Surface stress effects on the resonant properties of silicon nanowires. <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 123504	2.5	66
142	Accelerated Search and Design of Stretchable Graphene Kirigami Using Machine Learning. <i>Physical Review Letters</i> , <b>2018</b> , 121, 255304	7.4	66
141	Kirigami actuators. <i>Soft Matter</i> , <b>2017</b> , 13, 9087-9092	3.6	63
140	A Surface Cauchy-Born model for silicon nanostructures. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2008</b> , 197, 3249-3260	5.7	63
139	Surface stress effects on the bending properties of fcc metal nanowires. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	62
138	Topology optimization of piezoelectric nanostructures. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2016</b> , 94, 316-335	5	61
137	MoS <sub>2</sub> nanoresonators: intrinsically better than graphene?. <i>Nanoscale</i> , <b>2014</b> , 6, 3618-25	7.7	59
136	Mechanical properties of carbon nanotube reinforced polymer nanocomposites: A coarse-grained model. <i>Composites Part B: Engineering</i> , <b>2015</b> , 80, 92-100	10	55
135	A review on the flexural mode of graphene: lattice dynamics, thermal conduction, thermal expansion, elasticity and nanomechanical resonance. <i>Journal of Physics Condensed Matter</i> , <b>2015</b> , 27, 083001	1.8	55
134	A phonon heat bath approach for the atomistic and multiscale simulation of solids. <i>International Journal for Numerical Methods in Engineering</i> , <b>2007</b> , 70, 351-378	2.4	55
133	Highly stretchable MoS <sub>2</sub> kirigami. <i>Nanoscale</i> , <b>2016</b> , 8, 458-63	7.7	54
132	Analytic study of strain engineering of the electronic bandgap in single-layer black phosphorus. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	54
131	Quantifying the size-dependent effect of the residual surface stress on the resonant frequencies of silicon nanowires if finite deformation kinematics are considered. <i>Nanotechnology</i> , <b>2009</b> , 20, 115701	3.4	54

130	An extended finite element/level set method to study surface effects on the mechanical behavior and properties of nanomaterials. <i>International Journal for Numerical Methods in Engineering</i> , <b>2010</b> , 84, 1466-1489	2.4	53
129	Molecular dynamics simulations of stretched gold nanowires: the relative utility of different semiempirical potentials. <i>Journal of Chemical Physics</i> , <b>2007</b> , 126, 144707	3.9	53
128	Size Dependence of the Plasmon Ruler Equation for Two-Dimensional Metal Nanosphere Arrays. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 15915-15926	3.8	50
127	Multiscale computational understanding and growth of 2D materials: a review. <i>Npj Computational Materials</i> , <b>2020</b> , 6,	10.9	49
126	Surface stress effects on the critical buckling strains of silicon nanowires. <i>Computational Materials Science</i> , <b>2012</b> , 51, 396-401	3.2	49
125	Tensile fracture behavior of short carbon nanotube reinforced polymer composites: A coarse-grained model. <i>Composite Structures</i> , <b>2015</b> , 134, 981-988	5.3	48
124	A Gaussian treatment for the friction issue of Lennard-Jones potential in layered materials: Application to friction between graphene, MoS <sub>2</sub> , and black phosphorus. <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 124304	2.5	46
123	Surface effects on shape and topology optimization of nanostructures. <i>Computational Mechanics</i> , <b>2015</b> , 56, 97-112	4	46
122	On the importance of surface elastic contributions to the flexural rigidity of nanowires. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2012</b> , 60, 2064-2083	5	46
121	A temperature equation for coupled atomistic/continuum simulations. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2004</b> , 193, 1713-1732	5.7	46
120	Intrinsic bending flexoelectric constants in two-dimensional materials. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	45
119	Resonant tunneling in graphene pseudomagnetic quantum dots. <i>Nano Letters</i> , <b>2013</b> , 13, 2692-7	11.5	45
118	Pseudomagnetic fields in graphene nanobubbles of constrained geometry: A molecular dynamics study. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	44
117	Surface effects on the piezoelectricity of ZnO nanowires. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2013</b> , 61, 385-397	5	44
116	The coupled effects of geometry and surface orientation on the mechanical properties of metal nanowires. <i>Nanotechnology</i> , <b>2007</b> , 18, 305704	3.4	44
115	Geometric effects on the inelastic deformation of metal nanowires. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 181916	3.4	44
114	Inverse design of quantum spin hall-based phononic topological insulators. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2019</b> , 125, 550-571	5	44
113	Multilayer friction and attachment effects on energy dissipation in graphene nanoresonators. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 101918	3.4	41

112	The influence of mechanical strain on the optical properties of spherical gold nanoparticles. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2010</b> , 58, 330-345	5	40
111	Non-reflecting boundary conditions for atomistic, continuum and coupled atomistic/continuum simulations. <i>International Journal for Numerical Methods in Engineering</i> , <b>2005</b> , 64, 237-259	2.4	40
110	Utilizing mechanical strain to mitigate the intrinsic loss mechanisms in oscillating metal nanowires. <i>Physical Review Letters</i> , <b>2008</b> , 101, 215502	7.4	39
109	Negative Poisson's ratio in graphene oxide. <i>Nanoscale</i> , <b>2017</b> , 9, 4007-4012	7.7	38
108	Stable nanobridge formation in <110> gold nanowires under tensile deformation. <i>Scripta Materialia</i> , <b>2006</b> , 54, 1127-1132	5.6	38
107	Piezoelectric constants for ZnO calculated using classical polarizable core-shell potentials. <i>Nanotechnology</i> , <b>2010</b> , 21, 445707	3.4	36
106	A multiscale, finite deformation formulation for surface stress effects on the coupled thermomechanical behavior of nanomaterials. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2008</b> , 197, 3337-3350	5.7	35
105	Machine learning-based design of porous graphene with low thermal conductivity. <i>Carbon</i> , <b>2020</b> , 157, 262-269	10.4	35
104	Mechanical properties of copper octet-truss nanolattices. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2017</b> , 101, 133-149	5	34
103	Coarse-grained model of the J-integral of carbon nanotube reinforced polymer composites. <i>Carbon</i> , <b>2016</b> , 96, 1084-1092	10.4	33
102	Electromechanical instability on dielectric polymer surface: Modeling and experiment. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2013</b> , 260, 40-49	5.7	33
101	Enhancing the mass sensitivity of graphene nanoresonators via nonlinear oscillations: the effective strain mechanism. <i>Nanotechnology</i> , <b>2012</b> , 23, 475501	3.4	32
100	Conductance signatures of electron confinement induced by strained nanobubbles in graphene. <i>Nanoscale</i> , <b>2015</b> , 7, 15300-9	7.7	31
99	Nanomechanics of slip avalanches in amorphous plasticity. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2018</b> , 114, 158-171	5	29
98	Fermi-Pasta-Ulam physics with nanomechanical graphene resonators: intrinsic relaxation and thermalization from flexural mode coupling. <i>Physical Review Letters</i> , <b>2014</b> , 112, 145503	7.4	29
97	Moving particle finite element method. <i>International Journal for Numerical Methods in Engineering</i> , <b>2002</b> , 53, 1937-1958	2.4	29
96	Tunable topological bandgaps and frequencies in a pre-stressed soft phononic crystal. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 095106	2.5	28
95	Strain-rate and temperature-driven transition in the shear transformation zone for two-dimensional amorphous solids. <i>Physical Review E</i> , <b>2013</b> , 88, 042404	2.4	28

94	Beat phenomena in metal nanowires, and their implications for resonance-based elastic property measurements. <i>Nanoscale</i> , <b>2012</b> , 4, 6779-85	7.7	28
93	A surface stacking fault energy approach to predicting defect nucleation in surface-dominated nanostructures. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2013</b> , 61, 1915-1934	5	27
92	Multiscale boundary conditions in crystalline solids: Theory and application to nanoindentation. <i>International Journal of Solids and Structures</i> , <b>2006</b> , 43, 6359-6379	3.1	27
91	Strain-rate and temperature dependence of yield stress of amorphous solids via a self-learning metabasin escape algorithm. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2014</b> , 68, 239-250	5	26
90	Intrinsic energy dissipation in CVD-grown graphene nanoresonators. <i>Nanoscale</i> , <b>2012</b> , 4, 3460-5	7.7	26
89	On the utility of vacancies and tensile strain-induced quality factor enhancement for mass sensing using graphene monolayers. <i>Nanotechnology</i> , <b>2010</b> , 21, 105710	3.4	26
88	A NURBS-based inverse analysis of thermal expansion induced morphing of thin shells. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2019</b> , 350, 480-510	5.7	25
87	A molecular simulation analysis of producing monatomic carbon chains by stretching ultranarrow graphene nanoribbons. <i>Nanotechnology</i> , <b>2010</b> , 21, 265702	3.4	25
86	Self-learning metabasin escape algorithm for supercooled liquids. <i>Physical Review E</i> , <b>2012</b> , 86, 016710	2.4	25
85	Characterizing the elasticity of hollow metal nanowires. <i>Nanotechnology</i> , <b>2007</b> , 18, 115707	3.4	25
84	Mechanical strain effects on black phosphorus nanoresonators. <i>Nanoscale</i> , <b>2016</b> , 8, 901-5	7.7	24
83	Implementation aspects of the bridging scale method and application to intersonic crack propagation. <i>International Journal for Numerical Methods in Engineering</i> , <b>2007</b> , 71, 583-605	2.4	24
82	Defecting controllability of bombarding graphene with different energetic atoms via reactive force field model. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 054313	2.5	23
81	Two-dimensional square buckled Rashba lead chalcogenides. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	22
80	The Temperature-Dependent Viscoelastic Behavior of Dielectric Elastomers. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2015</b> , 82,	2.7	22
79	Atomistic study of the buckling of gold nanowires. <i>Acta Materialia</i> , <b>2011</b> , 59, 3883-3894	8.4	22
78	A perspective on auxetic nanomaterials. <i>Nano Convergence</i> , <b>2017</b> , 4, 10	9.2	21
77	Atomistic Simulation of the Rate-Dependent Ductile-to-Brittle Failure Transition in Bicrystalline Metal Nanowires. <i>Nano Letters</i> , <b>2018</b> , 18, 1296-1304	11.5	21



76	On the effective plate thickness of monolayer graphene from flexural wave propagation. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 054324	2.5	21
75	Topologically protected interface phonons in two-dimensional nanomaterials: hexagonal boron nitride and silicon carbide. <i>Nanoscale</i> , <b>2018</b> , 10, 13913-13923	7.7	20
74	Negative Thermal Expansion of Ultrathin Metal Nanowires: A Computational Study. <i>Nano Letters</i> , <b>2017</b> , 17, 5113-5118	11.5	20
73	Graphene kirigami as a platform for stretchable and tunable quantum dot arrays. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	19
72	Atomistic simulations of electric field effects on the Young's modulus of metal nanowires. <i>Nanotechnology</i> , <b>2014</b> , 25, 455704	3.4	19
71	The Influence of shearing and rotary inertia on the resonant properties of gold nanowires. <i>Journal of Applied Physics</i> , <b>2010</b> , 108, 104312	2.5	18
70	Graphene Origami with Highly Tunable Coefficient of Thermal Expansion. <i>ACS Nano</i> , <b>2020</b> , 14, 8969-8974	16.7	17
69	Strain effects on the SERS enhancements for spherical silver nanoparticles. <i>Nanotechnology</i> , <b>2010</b> , 21, 365704	3.4	17
68	Computational modeling of electro-elasto-capillary phenomena in dielectric elastomers. <i>International Journal of Solids and Structures</i> , <b>2016</b> , 87, 236-244	3.1	17
67	Density functional theory calculation of edge stresses in monolayer MoS <sub>2</sub> . <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 163508	2.5	16
66	Electrostatically Driven Creep in Viscoelastic Dielectric Elastomers. <i>Journal of Applied Mechanics, Transactions ASME</i> , <b>2014</b> , 81,	2.7	16
65	High flexoelectric constants in Janus transition-metal dichalcogenides. <i>Physical Review Materials</i> , <b>2019</b> , 3,	3.2	16
64	Atomistic modeling at experimental strain rates and timescales. <i>Journal Physics D: Applied Physics</i> , <b>2016</b> , 49, 493002	3	15
63	Surface-Stress-Driven Lattice Contraction Effects on the Extinction Spectra of Ultrasmall Silver Nanowires. <i>Journal of Physical Chemistry C</i> , <b>2010</b> , 114, 8741-8748	3.8	15
62	A new multiscale formulation for the electromechanical behavior of nanomaterials. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2011</b> , 200, 2447-2457	5.7	15
61	Size-Dependent Validity Bounds on the Universal Plasmon Ruler for Metal Nanostructure Dimers. <i>Journal of Physical Chemistry C</i> , <b>2012</b> , 116, 18944-18951	3.8	14
60	Forward and inverse design of kirigami via supervised autoencoder. <i>Physical Review Research</i> , <b>2020</b> , 2,	3.9	14
59	Sheet-like formation during the mechanical unfolding of prion protein. <i>Journal of Chemical Physics</i> , <b>2015</b> , 143, 125101	3.9	13



58	Strain sensing through the resonant properties of deformed metal nanowires. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 013516	2.5	13
57	Strain-induced gauge and Rashba fields in ferroelectric Rashba lead chalcogenide PbX monolayers (X=S, Se, Te). <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	13
56	A staggered explicit/implicit finite element formulation for electroactive polymers. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2018</b> , 337, 150-164	5.7	12
55	The molecular mechanism of conformational changes of the triplet prion fibrils for pH. <i>RSC Advances</i> , <b>2015</b> , 5, 49263-49269	3.7	12
54	A finite element formulation for nanoscale resonant mass sensing using the surface Cauchy-Born model. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2008</b> , 197, 3324-3336	5.7	12
53	Electro-elastocapillary Rayleigh-plateau instability in dielectric elastomer films. <i>Soft Matter</i> , <b>2017</b> , 13, 4305-4310	3.6	11
52	Cofilin reduces the mechanical properties of actin filaments: approach with coarse-grained methods. <i>Physical Chemistry Chemical Physics</i> , <b>2015</b> , 17, 8148-58	3.6	11
51	Negative In-Plane Poisson's Ratio for Single Layer Black Phosphorus: An Atomistic Simulation Study. <i>Physica Status Solidi (B): Basic Research</i> , <b>2017</b> , 254, 1700285	1.3	11
50	Surface shear-transformation zones in amorphous solids. <i>Physical Review E</i> , <b>2014</b> , 90, 012311	2.4	11
49	The effect of structural heterogeneity on the conformation and stability of ABA mixtures. <i>RSC Advances</i> , <b>2016</b> , 6, 52236-52247	3.7	11
48	Adsorbate migration effects on continuous and discontinuous temperature-dependent transitions in the quality factors of graphene nanoresonators. <i>Nanotechnology</i> , <b>2014</b> , 25, 025501	3.4	10
47	A Computational Framework for Design and Optimization of Flexoelectric Materials. <i>International Journal of Computational Methods</i> , <b>2020</b> , 17, 1850097	1.1	10
46	Bridging the gap between experimental measurements and atomistic predictions of the elastic properties of silicon nanowires using multiscale modeling. <i>Finite Elements in Analysis and Design</i> , <b>2012</b> , 49, 3-12	2.2	9
45	A methodology for modeling surface effects on stiff and soft solids. <i>Computational Mechanics</i> , <b>2018</b> , 61, 687-697	4	8
44	Interlayer breathing and shear modes in few-layer black phosphorus. <i>Journal of Physics Condensed Matter</i> , <b>2016</b> , 28, 165401	1.8	8
43	Strain engineering enhancement of surface plasmon polariton propagation lengths for gold nanowires. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 041909	3.4	8
42	Superplastic Creep of Metal Nanowires from Rate-Dependent Plasticity Transition. <i>ACS Nano</i> , <b>2018</b> , 12, 4984-4992	16.7	7
41	Polar surface effects on the thermal conductivity of ZnO nanowires: a shell-like surface reconstruction-induced preserving mechanism. <i>Nanoscale</i> , <b>2013</b> , 5, 11035-43	7.7	7

40	The role of binding site on the mechanical unfolding mechanism of ubiquitin. <i>Scientific Reports</i> , <b>2015</b> , 5, 8757	4.9	7
39	Size Dependence of the Nonlinear Elastic Softening of Nanoscale Graphene Monolayers under Plane-Strain Bulge Tests: A Molecular Dynamics Study. <i>Journal of Nanomaterials</i> , <b>2011</b> , 2011, 1-6	3.2	7
38	The effects of free edge interaction-induced knotting on the buckling of monolayer graphene. <i>International Journal of Solids and Structures</i> , <b>2016</b> , 100-101, 446-455	3.1	7
37	Metal nanoplates: Smaller is weaker due to failure by elastic instability. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	6
36	A harmonic transition state theory model for defect initiation in crystals. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2013</b> , 21, 025010	2	6
35	Three-Dimensional Isogeometric Analysis of Flexoelectricity with MATLAB Implementation. <i>Computers, Materials and Continua</i> , <b>2020</b> , 65, 1157-1179	3.9	6
34	Topologically switchable behavior induced by an elastic instability in a phononic waveguide. <i>Journal of Applied Physics</i> , <b>2020</b> , 127, 245109	2.5	5
33	The Effect of Planar Defects on the Optical Properties of Silver Nanostructures. <i>Journal of Physical Chemistry C</i> , <b>2013</b> , 117, 13738-13746	3.8	5
32	A multiscale finite element method for the dynamic analysis of surface-dominated nanomaterials. <i>International Journal for Numerical Methods in Engineering</i> , <b>2010</b> , 83, 1237-1254	2.4	5
31	Surface composition effects on martensitic phase transformations in nickel aluminium nanowires. <i>Philosophical Magazine</i> , <b>2007</b> , 87, 2159-2168	1.6	5
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