Xiaoying Zhuang

List of Publications by Year
in descending order

242 papers	15,036 citations	16451 64 h-index	22832 112 g-index
248 all docs	248 docs citations	248 times ranked	7065 citing authors

#	Article	IF	Citations
1	An energy approach to the solution of partial differential equations in computational mechanics via machine learning: Concepts, implementation and applications. Computer Methods in Applied Mechanics and Engineering, 2020, 362, 112790.	6.6	799
2	Dualâ€horizon peridynamics. International Journal for Numerical Methods in Engineering, 2016, 108, 1451-1476.	2.8	545
3	A software framework for probabilistic sensitivity analysis for computationally expensive models. Advances in Engineering Software, 2016, 100, 19-31.	3.8	514
4	Dual-horizon peridynamics: A stable solution to varying horizons. Computer Methods in Applied Mechanics and Engineering, 2017, 318, 762-782.	6.6	502
5	Stochastic analysis of the fracture toughness of polymeric nanoparticle composites using polynomial chaos expansions. International Journal of Fracture, 2017, 206, 215-227.	2.2	315
6	Exceptional piezoelectricity, high thermal conductivity and stiffness and promising photocatalysis in two-dimensional MoSi2N4 family confirmed by first-principles. Nano Energy, 2021, 82, 105716.	16.0	303
7	An extended isogeometric thin shell analysis based on Kirchhoffâ€"Love theory. Computer Methods in Applied Mechanics and Engineering, 2015, 284, 265-291.	6.6	301
8	A Deep Collocation Method for the Bending Analysis of Kirchhoff Plate. Computers, Materials and Continua, 2019, 59, 433-456.	1.9	295
9	Fracture modeling using meshless methods and level sets in 3D: Framework and modeling. International Journal for Numerical Methods in Engineering, 2012, 92, 969-998.	2.8	292
10	Phase field modeling of quasi-static and dynamic crack propagation: COMSOL implementation and case studies. Advances in Engineering Software, 2018, 122, 31-49.	3.8	267
11	Phase field modelling of crack propagation, branching and coalescence in rocks. Theoretical and Applied Fracture Mechanics, 2018, 96, 174-192.	4.7	260
12	A phase-field modeling approach of fracture propagation in poroelastic media. Engineering Geology, 2018, 240, 189-203.	6.3	259
13	Fracture properties prediction of clay/epoxy nanocomposites with interphase zones using a phase field model. Engineering Fracture Mechanics, 2018, 188, 287-299.	4.3	249
14	Isogeometric analysis of large-deformation thin shells using RHT-splines for multiple-patch coupling. Computer Methods in Applied Mechanics and Engineering, 2017, 316, 1157-1178.	6.6	210
15	Efficient coarse graining in multiscale modeling of fracture. Theoretical and Applied Fracture Mechanics, 2014, 69, 126-143.	4.7	205
16	Phase-field modeling of fluid-driven dynamic cracking in porous media. Computer Methods in Applied Mechanics and Engineering, 2019, 350, 169-198.	6.6	202
17	Detection of material interfaces using a regularized level set method in piezoelectric structures. Inverse Problems in Science and Engineering, 2016, 24, 153-176.	1.2	196
18	A comparative study on unfilled and filled crack propagation for rock-like brittle material. Theoretical and Applied Fracture Mechanics, 2014, 72, 110-120.	4.7	194

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19	The effect of weak interlayer on the failure pattern of rock mass around tunnel â€" Scaled model tests and numerical analysis. Tunnelling and Underground Space Technology, 2013, 35, 207-218.	6.2	193
20	Deep autoencoder based energy method for the bending, vibration, and buckling analysis of Kirchhoff plates with transfer learning. European Journal of Mechanics, A/Solids, 2021, 87, 104225.	3.7	188
21	Uncertainty quantification for multiscale modeling of polymer nanocomposites with correlated parameters. Composites Part B: Engineering, 2015, 68, 446-464.	12.0	187
22	A Nonlocal Operator Method for Partial Differential Equations with Application to Electromagnetic Waveguide Problem. Computers, Materials and Continua, 2019, 59, 31-55.	1.9	179
23	Phase field modeling of brittle compressive-shear fractures in rock-like materials: A new driving force and a hybrid formulation. Computer Methods in Applied Mechanics and Engineering, 2019, 355, 729-752.	6.6	172
24	Firstâ€Principles Multiscale Modeling of Mechanical Properties in Graphene/Borophene Heterostructures Empowered by Machineâ€Learning Interatomic Potentials. Advanced Materials, 2021, 33, e2102807.	21.0	171
25	Sensitivity and uncertainty analysis for flexoelectric nanostructures. Computer Methods in Applied Mechanics and Engineering, 2018, 337, 95-109.	6.6	159
26	Cracking elements: A self-propagating Strong Discontinuity embedded Approach for quasi-brittle fracture. Finite Elements in Analysis and Design, 2018, 144, 84-100.	3.2	155
27	A unified framework for stochastic predictions of mechanical properties of polymeric nanocomposites. Computational Materials Science, 2015, 96, 520-535.	3.0	142
28	A nonlocal operator method for solving partial differential equations. Computer Methods in Applied Mechanics and Engineering, 2020, 358, 112621.	6.6	139
29	Stochastic predictions of interfacial characteristic of polymeric nanocomposites (PNCs). Composites Part B: Engineering, 2014, 59, 80-95.	12.0	132
30	A NURBS-based inverse analysis for reconstruction of nonlinear deformations of thin shell structures. Computer Methods in Applied Mechanics and Engineering, 2018, 331, 427-455.	6.6	127
31	Outstanding strength, optical characteristics and thermal conductivity of graphene-like BC3 and BC6N semiconductors. Carbon, 2019, 149, 733-742.	10.3	126
32	Machine-learning interatomic potentials enable first-principles multiscale modeling of lattice thermal conductivity in graphene/borophene heterostructures. Materials Horizons, 2020, 7, 2359-2367.	12.2	124
33	Stochastic predictions of bulk properties of amorphous polyethylene based on molecular dynamics simulations. Mechanics of Materials, 2014, 68, 70-84.	3.2	118
34	Cracking elements method for dynamic brittle fracture. Theoretical and Applied Fracture Mechanics, 2019, 102, 1-9.	4.7	117
35	An efficient optimization approach for designing machine learning models based on genetic algorithm. Neural Computing and Applications, 2021, 33, 1923-1933.	5.6	116
36	A deep energy method for finite deformation hyperelasticity. European Journal of Mechanics, A/Solids, 2020, 80, 103874.	3.7	115

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37	Three-dimensional mesoscale computational modeling of soil-rock mixtures with concave particles. Engineering Geology, 2020, 277, 105802.	6.3	110
38	Accelerating first-principles estimation of thermal conductivity by machine-learning interatomic potentials: A MTP/ShengBTE solution. Computer Physics Communications, 2021, 258, 107583.	7.5	108
39	On the hydraulic fracturing in naturally-layered porous media using the phase field method. Engineering Geology, 2020, 266, 105306.	6.3	107
40	Boron–graphdiyne: a superstretchable semiconductor with low thermal conductivity and ultrahigh capacity for Li, Na and Ca ion storage. Journal of Materials Chemistry A, 2018, 6, 11022-11036.	10.3	104
41	Accurate fracture modelling using meshless methods, the visibility criterion and level sets: Formulation and 2D modelling. International Journal for Numerical Methods in Engineering, 2011, 86, 249-268.	2.8	97
42	Exploring phononic properties of two-dimensional materials using machine learning interatomic potentials. Applied Materials Today, 2020, 20, 100685.	4.3	96
43	Load transfer of graphene/carbon nanotube/polyethylene hybrid nanocomposite by molecular dynamics simulation. Composites Part B: Engineering, 2014, 63, 27-33.	12.0	95
44	Uncertainties propagation in metamodel-based probabilistic optimization of CNT/polymer composite structure using stochastic multi-scale modeling. Computational Materials Science, 2014, 85, 295-305.	3.0	94
45	Topology optimization of flexoelectric structures. Journal of the Mechanics and Physics of Solids, 2017, 105, 217-234.	4.8	93
46	Effects of geometries on three-dimensional slope stability. Canadian Geotechnical Journal, 2013, 50, 233-249.	2.8	91
47	Uncertainty quantification of the fracture properties of polymeric nanocomposites based on phase field modeling. Composite Structures, 2015, 133, 1177-1190.	5.8	90
48	An isogeometric symmetric Galerkin boundary element method for two-dimensional crack problems. Computer Methods in Applied Mechanics and Engineering, 2016, 306, 252-275.	6.6	90
49	A Phantom-Node Method with Edge-Based Strain Smoothing for Linear Elastic Fracture Mechanics. Journal of Applied Mathematics, 2013, 2013, 1-12.	0.9	86
50	Integration of three dimensional discontinuous deformation analysis (DDA) with binocular photogrammetry for stability analysis of tunnels in blocky rockmass. Tunnelling and Underground Space Technology, 2016, 51, 30-40.	6.2	86
51	A higher order nonlocal operator method for solving partial differential equations. Computer Methods in Applied Mechanics and Engineering, 2020, 367, 113132.	6.6	84
52	Application of two-dimensional materials as anodes for rechargeable metal-ion batteries: A comprehensive perspective from density functional theory simulations. Energy Storage Materials, 2021, 35, 203-282.	18.0	84
53	A new partition of unity finite element free from the linear dependence problem and possessing the delta property. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 1036-1043.	6.6	83
54	A GENERALIZED AND EFFICIENT METHOD FOR FINITE COVER GENERATION IN THE NUMERICAL MANIFOLD METHOD. International Journal of Computational Methods, 2013, 10, 1350028.	1.3	82

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55	An improved meshless Shepard and least squares method possessing the delta property and requiring no singular weight function. Computational Mechanics, 2014, 53, 343-357.	4.0	78
56	A meshless sub-region radial point interpolation method for accurate calculation of crack tip fields. Theoretical and Applied Fracture Mechanics, 2014, 69, 118-125.	4.7	78
57	Optimal fiber content and distribution in fiber-reinforced solids using a reliability and NURBS based sequential optimization approach. Structural and Multidisciplinary Optimization, 2015, 51, 99-112.	3.5	76
58	Predictions of J integral and tensile strength of clay/epoxy nanocomposites material using phase field model. Composites Part B: Engineering, 2016, 93, 97-114.	12.0	75
59	A multi-shell cover algorithm for contact detection in the three dimensional discontinuous deformation analysis. Theoretical and Applied Fracture Mechanics, 2014, 72, 136-149.	4.7	74
60	Topology optimization of piezoelectric nanostructures. Journal of the Mechanics and Physics of Solids, 2016, 94, 316-335.	4.8	73
61	Nanoporous C_3N_4, C_3N_5 and C_3N_6 nanosheets; novel strong semiconductors with low thermal conductivities and appealing optical/electronic properties. Carbon, 2020, 167, 40-50.	10.3	72
62	Inverse design of quantum spin hall-based phononic topological insulators. Journal of the Mechanics and Physics of Solids, 2019, 125, 550-571.	4.8	70
63	Harnessing multi-layered soil to design seismic metamaterials with ultralow frequency band gaps. Materials and Design, 2019, 175, 107813.	7.0	68
64	Intrinsic bending flexoelectric constants in two-dimensional materials. Physical Review B, 2019, 99, .	3.2	68
65	Three-dimensional slope stability analysis using independent cover based numerical manifold and vector method. Engineering Geology, 2017, 225, 83-95.	6.3	65
66	A new peridynamic formulation with shear deformation for elastic solid. Journal of Micromechanics and Molecular Physics, 2016, 01, 1650009.	1.2	62
67	Orientation Dependent Thermal Conductance in Single-Layer MoS_2. Scientific Reports, 2013, 3, 2209.	3.3	60
68	A Virtual Element Method for 2D linear elastic fracture analysis. Computer Methods in Applied Mechanics and Engineering, 2018, 340, 366-395.	6.6	59
69	Numerical manifold method for vibration analysis of Kirchhoff's plates of arbitrary geometry. Applied Mathematical Modelling, 2019, 66, 695-727.	4.2	59
70	A micropolar peridynamic model with non-uniform horizon for static damage of solids considering different nonlocal enhancements. Theoretical and Applied Fracture Mechanics, 2021, 113, 102930.	4.7	59
71	On the crack opening and energy dissipation in a continuum based disconnected crack model. Finite Elements in Analysis and Design, 2020, 170, 103333.	3.2	58
72	Unified continuum/discontinuum modeling framework for slope stability assessment. Engineering Geology, 2014, 179, 90-101.	6.3	57

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73	Prediction of C_7N_6 and C_9N_4: stable and strong porous carbon-nitride nanosheets with attractive electronic and optical properties. Journal of Materials Chemistry C, 2019, 7, 10908-10917.	5.5	57
74	A Coupled Thermo-Hydro-Mechanical Model of Jointed Hard Rock for Compressed Air Energy Storage. Mathematical Problems in Engineering, 2014, 2014, 1-11.	1.1	55
75	Intelligent on-demand design of phononic metamaterials. Nanophotonics, 2022, 11, 439-460.	6.0	55
76	Optimization of fiber distribution in fiber reinforced composite by using NURBS functions. Computational Materials Science, 2014, 83, 463-473.	3.0	54
77	Dynamic flexoelectric effect on piezoelectric nanostructures. European Journal of Mechanics, A/Solids, 2018, 71, 404-409.	3.7	54
78	Modeling Kapitza resistance of two-phase composite material. Composite Structures, 2016, 152, 939-946.	5.8	53
79	A continuous/discontinuous deformation analysis (CDDA) method based on deformable blocks for fracture modeling. Frontiers of Structural and Civil Engineering, 2013, 7, 369-378.	2.9	52
80	An adaptive three-dimensional RHT-splines formulation in linear elasto-statics and elasto-dynamics. Computational Mechanics, 2014, 53, 369-385.	4.0	52
81	Fracture toughness of polymeric particle nanocomposites: Evaluation of models performance using Bayesian method. Composites Science and Technology, 2016, 126, 122-129.	7.8	52
82	A large deformation isogeometric approach for flexoelectricity and soft materials. Computer Methods in Applied Mechanics and Engineering, 2018, 341, 718-739.	6.6	51
83	Stability analysis of shotcrete supported crown of NATM tunnels with discontinuity layout optimization. International Journal for Numerical and Analytical Methods in Geomechanics, 2018, 42, 1199-1216.	3.3	50
84	Phase field modeling and computer implementation: A review. Engineering Fracture Mechanics, 2022, 262, 108234.	4.3	50
85	HIGH ROCK SLOPE STABILITY ANALYSIS USING THE ENRICHED MESHLESS SHEPARD AND LEAST SQUARES METHOD. International Journal of Computational Methods, 2011, 08, 209-228.	1.3	49
86	Adaptive phase field simulation of quasi-static crack propagation in rocks. Underground Space (China), 2018, 3, 190-205.	7.5	47
87	First-principles investigation of mechanical, electronic and optical properties of H-, F- and Cl-diamane. Applied Surface Science, 2020, 528, 147035.	6.1	47
88	Phase field method for quasi-static hydro-fracture in porous media under stress boundary condition considering the effect of initial stress field. Theoretical and Applied Fracture Mechanics, 2020, 107, 102523.	4.7	47
89	Tunnel stability assessment by 3D DDA-key block analysis. Tunnelling and Underground Space Technology, 2018, 71, 210-214.	6.2	46
90	Tunable topological bandgaps and frequencies in a pre-stressed soft phononic crystal. Journal of Applied Physics, 2019, 125, .	2.5	46

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91	As_2S_3, As_2Se_3 and As_2Te_3 nanosheets: superstretchable semiconductors with anisotropic carrier mobilities and optical properties. Journal of Materials Chemistry C, 2020, 8, 2400-2410.	5.5	45
92	Stochastic deep collocation method based on neural architecture search and transfer learning for heterogeneous porous media. Engineering With Computers, 2022, 38, 5173-5198.	6.1	45
93	Computational modeling of fracture in encapsulation-based self-healing concrete using cohesive elements. Composite Structures, 2018, 196, 63-75.	5.8	43
94	Broadband Rayleigh wave attenuation by gradient metamaterials. International Journal of Mechanical Sciences, 2021, 205, 106592.	6.7	43
95	Inverse design of topological metaplates for flexural waves with machine learning. Materials and Design, 2021, 199, 109390.	7.0	42
96	Stochastic integrated machine learning based multiscale approach for the prediction of the thermal conductivity in carbon nanotube reinforced polymeric composites. Composites Science and Technology, 2022, 224, 109425.	7.8	42
97	Reproducing kernel triangular B-spline-based FEM for solving PDEs. Computer Methods in Applied Mechanics and Engineering, 2013, 267, 342-358.	6.6	41
98	The generation of piezoelectricity and flexoelectricity in graphene by breaking the materials symmetries. Nanotechnology, 2018, 29, 225702.	2.6	41
99	Multiscale modeling of material failure: Theory and computational methods. Advances in Applied Mechanics, 2019, 52, 1-103.	2.3	41
100	N-, B-, P-, Al-, As-, and Ga-graphdiyne/graphyne lattices: first-principles investigation of mechanical, optical and electronic properties. Journal of Materials Chemistry C, 2019, 7, 3025-3036.	5.5	41
101	NURBS-based formulation for nonlinear electro-gradient elasticity in semiconductors. Computer Methods in Applied Mechanics and Engineering, 2019, 346, 1074-1095.	6.6	41
102	Three-dimensional topology optimization of auxetic metamaterial using isogeometric analysis and model order reduction. Computer Methods in Applied Mechanics and Engineering, 2020, 371, 113306.	6.6	40
103	An Experimental and Numerical Study on the Influence of Filling Materials on Double-Crack Propagation. Rock Mechanics and Rock Engineering, 2020, 53, 5571-5591.	5.4	40
104	Computational Modeling of Flexoelectricityâ€"A Review. Energies, 2020, 13, 1326.	3.1	40
105	A coarse-grained model for the elastic properties of cross linked short carbon nanotube/polymer composites. Composites Part B: Engineering, 2016, 95, 404-411.	12.0	39
106	High thermal conductivity in semiconducting Janus and non-Janus diamanes. Carbon, 2020, 167, 51-61.	10.3	39
107	Phase field modeling of hydraulic fracture propagation in transversely isotropic poroelastic media. Acta Geotechnica, 2020, 15, 2599-2618.	5.7	39
108	Stochastic multiscale modeling of heat conductivity of Polymeric clay nanocomposites. Mechanics of Materials, 2020, 142, 103280.	3.2	38

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109	Nonlocal operator method for dynamic brittle fracture based on an explicit phase field model. European Journal of Mechanics, A/Solids, 2021, 90, 104380.	3.7	38
110	A 3D computational homogenization model for porous material and parameters identification. Computational Materials Science, 2015, 96, 536-548.	3.0	37
111	A surrogate model for computational homogenization of elastostatics at finite strain using highâ€dimensional model representationâ€based neural network. International Journal for Numerical Methods in Engineering, 2020, 121, 4811-4842.	2.8	37
112	On error control in the element-free Galerkin method. Engineering Analysis With Boundary Elements, 2012, 36, 351-360.	3.7	36
113	Numerical model for the characterization of Maxwell-Wagner relaxation in piezoelectric and flexoelectric composite material. Computers and Structures, 2018, 208, 75-91.	4.4	35
114	A new and simple locking-free triangular thick plate element using independent shear degrees of freedom. Finite Elements in Analysis and Design, 2013, 75, 1-7.	3.2	34
115	Computational model generation and RVE design of self-healing concrete. Frontiers of Structural and Civil Engineering, 2015, 9, 383-396.	2.9	33
116	Quantitative assessment of engineering geological suitability for multilayer Urban Underground Space. Tunnelling and Underground Space Technology, 2016, 59, 65-76.	6.2	33
117	Silicon diphosphide (SiP2) and silicon diarsenide (SiAs2): Novel stable 2D semiconductors with high carrier mobilities, promising for water splitting photocatalysts. Materials Today Energy, 2020, 16, 100377.	4.7	33
118	Machine-learning-driven on-demand design of phononic beams. Science China: Physics, Mechanics and Astronomy, 2022, 65, 1.	5.1	33
119	A softening-healing law for self-healing quasi-brittle materials: Analyzing with strong discontinuity embedded approach. Engineering Fracture Mechanics, 2018, 192, 290-306.	4.3	32
120	Two-Dimensional SiP, SiAs, GeP and GeAs as Promising Candidates for Photocatalytic Applications. Coatings, 2019, 9, 522.	2.6	32
121	Efficient machine-learning based interatomic potentialsfor exploring thermal conductivity in two-dimensional materials. JPhys Materials, 2020, 3, 02LT02.	4.2	32
122	Estimation of fracture trace length distributions using probability weighted moments and L-moments. Engineering Geology, 2014, 168, 69-85.	6.3	31
123	Dual-support smoothed particle hydrodynamics in solid: variational principle and implicit formulation. Engineering Analysis With Boundary Elements, 2019, 108, 15-29.	3.7	31
124	Nonlocal operator method with numerical integration for gradient solid. Computers and Structures, 2020, 233, 106235.	4.4	31
125	Analysis of three-dimensional potential problems in non-homogeneous media with physics-informed deep collocation method using material transfer learning and sensitivity analysis. Engineering With Computers, 2022, 38, 5423-5444.	6.1	31
126	A nonlinear semi-concurrent multiscale method for fractures. International Journal of Impact Engineering, 2016, 87, 65-82.	5.0	30

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127	Kinetic analysis of polyhedral block system using an improved potential-based penalty function approach for explicit discontinuous deformation analysis. Applied Mathematical Modelling, 2020, 82, 314-335.	4.2	30
128	Exploring thermal expansion of carbon-based nanosheets by machine-learning interatomic potentials. Carbon, 2022, 186, 501-508.	10.3	30
129	Multiscale modelling of hydro-mechanical couplings in quasi-brittle materials. International Journal of Fracture, 2017, 204, 1-27.	2.2	29
130	Multilevel Monte Carlo method for topology optimization of flexoelectric composites with uncertain material properties. Engineering Analysis With Boundary Elements, 2022, 134, 412-418.	3.7	29
131	A double-phase field model for multiple failures in composites. Composite Structures, 2022, 293, 115730.	5.8	28
132	Atomic layer deposition of core-shell structured V2O5@CNT sponge as cathode for potassium ion batteries. Journal of Materiomics, 2019, 5, 344-349.	5.7	27
133	Isogeometric analysis for explicit elastodynamics using a dual-basis diagonal mass formulation. Computer Methods in Applied Mechanics and Engineering, 2019, 346, 574-591.	6.6	27
134	Isogeometric symmetric Galerkin boundary element method for three-dimensional elasticity problems. Computer Methods in Applied Mechanics and Engineering, 2017, 323, 132-150.	6.6	26
135	Molecular Dynamics Study of an Amorphous Polyethylene/Silica Interface with Shear Tests. Materials, 2018, 11, 929.	2.9	26
136	An isogeometric analysis to identify the full flexoelectric complex material properties based on electrical impedance curve. Computers and Structures, 2019, 214, 1-14.	4.4	26
137	Propagation and attenuation of Rayleigh and pseudo surface waves in viscoelastic metamaterials. Journal of Applied Physics, 2021, 129, .	2.5	26
138	A first-principles and machine-learning investigation on the electronic, photocatalytic, mechanical and heat conduction properties of nanoporous C_5N monolayers. Nanoscale, 2022, 14, 4324-4333.	5.6	26
139	High flexoelectric constants in Janus transition-metal dichalcogenides. Physical Review Materials, 2019, 3, .	2.4	25
140	Sensitivity analysis for the mechanics of tendons and ligaments: Investigation on the effects of collagen structural properties via a multiscale modeling approach. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3209.	2.1	24
141	A cover€based contact detection approach for irregular convex polygons in discontinuous deformation analysis. International Journal for Numerical and Analytical Methods in Geomechanics, 2021, 45, 208-233.	3.3	24
142	High tensile strength and thermal conductivity in BeO monolayer: A first-principles study. FlatChem, 2021, 28, 100257.	5.6	24
143	A combined first-principles and machine-learning investigation on the stability, electronic, optical, and mechanical properties of novel C6N7-based nanoporous carbon nitrides. Carbon, 2022, 194, 230-239.	10.3	24
144	Estimation of the fracture diameter distributions using the maximum entropy principle. International Journal of Rock Mechanics and Minings Sciences, 2014, 72, 127-137.	5.8	23

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145	Phase field modelling of progressive failure in composites combined with cohesive element with an explicit scheme. Composite Structures, 2021, 262, 113353.	5.8	23
146	Nonlocal operator method for the Cahn-Hilliard phase field model. Communications in Nonlinear Science and Numerical Simulation, 2021, 96, 105687.	3.3	23
147	A nonlocal operator method for finite deformation higher-order gradient elasticity. Computer Methods in Applied Mechanics and Engineering, 2021, 384, 113963.	6.6	23
148	Computational Machine Learning Representation for the Flexoelectricity Effect in Truncated Pyramid Structures. Computers, Materials and Continua, 2019, 59, 79-87.	1.9	23
149	Uncertainty Quantification for Mechanical Properties of Polyethylene Based on Fully Atomistic Model. Materials, 2019, 12, 3613.	2.9	22
150	Interface Characterization Between Polyethylene/ Silica in Engineered Cementitious Composites by Molecular Dynamics Simulation. Molecules, 2019, 24, 1497.	3.8	22
151	Phase field approach for simulating failure of viscoelastic elastomers. European Journal of Mechanics, A/Solids, 2021, 85, 104092.	3.7	22
152	Mechanical, optical, and thermoelectric properties of semiconducting <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>ZnIn</mml:mi><mml:mn>2</mml:mn></mml <mml:math		

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163	First-principles investigation of electronic, optical, mechanical and heat transport properties of pentadiamond: A comparison with diamond. Carbon Trends, 2021, 3, 100036.	3.0	16
164	Topological surface wave metamaterials for robust vibration attenuation and energy harvesting. Mechanics of Advanced Materials and Structures, 2022, 29, 4759-4767.	2.6	16
165	Non-Hermitian skin effect in a phononic beam based on piezoelectric feedback control. Applied Physics Letters, 2022, 121, .	3.3	16
166	Implementation of GTN Model in Dual-horizon Peridynamics. Procedia Engineering, 2017, 197, 224-232.	1.2	15
167	Aspects of the use of orthogonal basis functions in the elementâ€free Galerkin method. International Journal for Numerical Methods in Engineering, 2010, 81, 366-380.	2.8	14
168	Dual-Support Smoothed Particle Hydrodynamics for Elastic Mechanics. International Journal of Computational Methods, 2017, 14, 1750039.	1.3	14
169	Effective Properties of Composites with Periodic Random Packing of Ellipsoids. Materials, 2017, 10, 112.	2.9	14
170	Phase Field Characterization of Rock Fractures in Brazilian Splitting Test Specimens Containing Voids and Inclusions. International Journal of Geomechanics, 2021, 21, .	2.7	14
171	Mechanical, thermal transport, electronic and photocatalytic properties of penta-PdPS, -PdPSe and -PdPTe monolayers explored by first-principles calculations. Journal of Materials Chemistry C, 2021, 10, 329-336.	5.5	14
172	Characterizing Flexoelectricity in Composite Material Using the Element-Free Galerkin Method. Energies, 2019, 12, 271.	3.1	13
173	Exploring tensile piezoelectricity and bending flexoelectricity of diamane monolayers by machine learning. Carbon, 2021, 185, 558-567.	10.3	13
174	Centroid sliding pyramid method for removability and stability analysis of fractured hard rock. Acta Geotechnica, 2017, 12, 627-644.	5.7	12
175	Simulating the damage extent of unreinforced brick masonry buildings under boulder impact using three-dimensional discontinuous deformation analysis (3-D DDA). Engineering Failure Analysis, 2018, 93, 122-143.	4.0	12
176	The Construction of Equivalent Particle Element Models for Conditioned Sandy Pebble. Applied Sciences (Switzerland), 2019, 9, 1137.	2.5	12
177	Polytopal composite finite elements for modeling concrete fracture based on nonlocal damage models. Computational Mechanics, 2020, 66, 1257-1274.	4.0	12
178	Inverse design of reconfigurable piezoelectric topological phononic plates. Materials and Design, 2022, 219, 110760.	7.0	12
179	On the seismic stability analysis of reinforced rock slope and optimization of prestressed cables. Frontiers of Structural and Civil Engineering, 2012, 6, 132.	2.9	11
180	Fracture Properties of Grapheneâ€Coated Silicon for Photovoltaics. Advanced Theory and Simulations, 2018, 1, 1800097.	2.8	11

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181	Modeling hydraulic cracks and inclusion interaction using XFEM. Underground Space (China), 2018, 3, 218-228.	7.5	11
182	Micromechanical study of loading rate effects between a hole and a crack. Underground Space (China), 2019, 4, 22-30.	7.5	10
183	A staggered explicit-implicit isogeometric formulation for large deformation flexoelectricity. Engineering Analysis With Boundary Elements, 2021, 122, 1-12.	3.7	10
184	Outstanding thermal conductivity and mechanical properties in the direct gap semiconducting penta-NiN2 monolayer confirmed by first-principles. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 140, 115221.	2.7	10
185	A NURBS-based inverse analysis of swelling induced morphing of thin stimuli-responsive polymer gels. Computer Methods in Applied Mechanics and Engineering, 2022, 397, 115049.	6.6	10
186	Fracture model for the prediction of the electrical percolation threshold in CNTs/Polymer composites. Frontiers of Structural and Civil Engineering, 2018, 12, 125-136.	2.9	9
187	Exploration of mechanical, thermal conductivity and electromechanical properties of graphene nanoribbon springs. Nanoscale Advances, 2020, 2, 3394-3403.	4.6	9
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