Chunyu Li

List of Publications by Year
in descending order

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70 papers	8,364 citations	101384 36 h-index	102304 66 g-index
71 all docs	71 docs citations	71 times ranked	6646 citing authors

#	Article	IF	Citations
1	Nanocomposites in context. Composites Science and Technology, 2005, 65, 491-516.	3.8	1,452
2	A structural mechanics approach for the analysis of carbon nanotubes. International Journal of Solids and Structures, 2003, 40, 2487-2499.	1.3	1,210
3	Sensors and actuators based on carbon nanotubes and their composites: A review. Composites Science and Technology, 2008, 68, 1227-1249.	3.8	845
4	Dominant role of tunneling resistance in the electrical conductivity of carbon nanotubeâ€“based composites. Applied Physics Letters, 2007, 91, .	1.5	597
5	Single-walled carbon nanotubes as ultrahigh frequency nanomechanical resonators. Physical Review B, 2003, 68, .	1.1	274
6	Molecular dynamics predictions of thermal and mechanical properties of thermoset polymer EPON862/DETDA. Polymer, 2011, 52, 2920-2928.	1.8	244
7	Vibrational behaviors of multiwalled-carbon-nanotube-based nanomechanical resonators. Applied Physics Letters, 2004, 84, 121-123.	1.5	233
8	Molecular simulations of crosslinking process of thermosetting polymers. Polymer, 2010, 51, 6058-6070.	1.8	222
9	Mass detection using carbon nanotube-based nanomechanical resonators. Applied Physics Letters, 2004, 84, 5246-5248.	1.5	194
10	Effect of nanotube waviness on the electrical conductivity of carbon nanotube-based composites. Composites Science and Technology, 2008, 68, 1445-1452.	3.8	192
11	Molecular scale simulations on thermoset polymers: A review. Journal of Polymer Science, Part B: Polymer Physics, 2015, 53, 103-122.	2.4	179
12	Modeling of damage sensing in fiber composites using carbon nanotube networks. Composites Science and Technology, 2008, 68, 3373-3379.	3.8	163
13	Multiscale modeling of compressive behavior of carbon nanotube/polymer composites. Composites Science and Technology, 2006, 66, 2409-2414.	3.8	157
14	Antiplane Crack Problem in Functionally Graded Piezoelectric Materials. Journal of Applied Mechanics, Transactions ASME, 2002, 69, 481-488.	1.1	156
15	Large-scale nanoshaping of ultrasmooth 3D crystalline metallic structures. Science, 2014, 346, 1352-1356.	6.0	153
16	Modeling of elastic buckling of carbon nanotubes by molecular structural mechanics approach. Mechanics of Materials, 2004, 36, 1047-1055.	1.7	151
17	Molecular dynamics simulations and experimental studies of the thermomechanical response of an epoxy thermoset polymer. Polymer, 2012, 53, 4222-4230.	1.8	131
18	Atomistic simulations on multilayer graphene reinforced epoxy composites. Composites Part A: Applied Science and Manufacturing, 2012, 43, 1293-1300.	3.8	116

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19	Multiscale Modeling of Carbon Nanotube Reinforced Polymer Composites. Journal of Nanoscience and Nanotechnology, 2003, 3, 423-430.	0.9	115
20	Elastic properties of single-walled carbon nanotubes in transverse directions. Physical Review B, 2004, 69, .	1.1	96
21	A hyper-viscoelastic constitutive model for polyurea. Materials Letters, 2009, 63, 877-880.	1.3	91
22	Continuum percolation of nanocomposites with fillers of arbitrary shapes. Applied Physics Letters, 2007, 90, 174108.	1.5	77
23	Yoffeâ€“type moving crack in a functionally graded piezoelectric material. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2002, 458, 381-399.	1.0	66
24	Dynamic behavior of a cylindrical crack in a functionally graded interlayer under torsional loading. International Journal of Solids and Structures, 2001, 38, 7473-7485.	1.3	60
25	Axial and radial thermal expansions of single-walled carbon nanotubes. Physical Review B, 2005, 71, .	1.1	60
26	Material property prediction of thermoset polymers by molecular dynamics simulations. Acta Mechanica, 2014, 225, 1187-1196.	1.1	58
27	Prediction of the chemical and thermal shrinkage in a thermoset polymer. Composites Part A: Applied Science and Manufacturing, 2014, 66, 35-43.	3.8	57
28	Cohesive energy density and solubility parameter evolution during the curing of thermoset. Polymer, 2018, 135, 162-170.	1.8	50
29	Dynamic stress intensity factor of a cylindrical interface crack with a functionally graded interlayer. Mechanics of Materials, 2001, 33, 325-333.	1.7	46
30	Failure of carbon nanotube/polymer composites and the effect of nanotube waviness. Composites Part A: Applied Science and Manufacturing, 2009, 40, 1580-1586.	3.8	46
31	Hotspot formation due to shock-induced pore collapse in 1,3,5,7-tetranitro-1,3,5,7-tetrazoctane (HMX): Role of pore shape and shock strength in collapse mechanism and temperature. Journal of Applied Physics, 2020, 127, .	1.1	44
32	Effects of water on epoxy cure kinetics and glass transition temperature utilizing molecular dynamics simulations. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 1150-1159.	2.4	43
33	Electrical anisotropy in multiscale nanotube/fiber hybrid composites. Applied Physics Letters, 2009, 95, 073111.	1.5	41
34	Elastic wave velocities in single-walled carbon nanotubes. Physical Review B, 2006, 73, .	1.1	40
35	A direct electrifying algorithm for backbone identification. Journal of Physics A: Mathematical and Theoretical, 2007, 40, 14679-14686.	0.7	40
36	Free volume evolution in the process of epoxy curing and its effect on mechanical properties. Polymer, 2016, 97, 456-464.	1.8	38

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37	Effect of Thickness on the Thermo-Mechanical Response of Free-Standing Thermoset Nanofilms from Molecular Dynamics. Macromolecules, 2011, 44, 9448-9454.	2.2	36
38	Evolution of network topology of bifunctional epoxy thermosets during cure and its relationship to thermo-mechanical properties: A molecular dynamics study. Polymer, 2015, 75, 151-160.	1.8	35
39	Atomistic Modeling of Carbon Nanotube-based Mechanical Sensors. Journal of Intelligent Material Systems and Structures, 2006, 17, 247-254.	1.4	34
40	Theoretical studies on the charge-induced failure of single-walled carbon nanotubes. Carbon, 2007, 45, 922-930.	5.4	34
41	Molecular dynamics simulations on cyclic deformation of an epoxy thermoset. Polymer, 2013, 54, 881-890.	1.8	30
42	A Hotspotâ€™s Better Half: Non-Equilibrium Intra-Molecular Strain in Shock Physics. Journal of Physical Chemistry Letters, 2021, 12, 2756-2762.	2.1	30
43	Charge-induced strains in single-walled carbon nanotubes. Nanotechnology, 2006, 17, 4624-4628.	1.3	29
44	Electrical Conductivities of Composites with Aligned Carbon Nanotubes. Journal of Nanoscience and Nanotechnology, 2009, 9, 2518-2524.	0.9	27
45	Stress intensity factors for functionally graded solid cylinders. Engineering Fracture Mechanics, 1999, 63, 735-749.	2.0	26
46	Multiple isoparametric finite element method for nonhomogeneous media. Mechanics Research Communications, 2000, 27, 137-142.	1.0	26
47	Modeling of heat capacities of multi-walled carbon nanotubes by molecular structural mechanics. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 409, 140-144.	2.6	26
48	Quantized molecular structural mechanics modeling for studying the specific heat of single-walled carbon nanotubes. Physical Review B, 2005, 71, .	1.1	26
49	Electrostatic charge distribution on single-walled carbon nanotubes. Applied Physics Letters, 2006, 89, 063103.	1.5	25
50	Chemistry Under Shock Conditions. Annual Review of Materials Research, 2021, 51, 101-130.	4.3	25
51	Dynamic Fracture Analysis for a Penny-Shaped Crack in an FGM Interlayer between Dissimilar Half Spaces. Mathematics and Mechanics of Solids, 2002, 7, 149-163.	1.5	24
52	Prediction of PEKK properties related to crystallization by molecular dynamics simulations with a united-atom model. Polymer, 2019, 174, 25-32.	1.8	23
53	Molecular modeling of the microstructure evolution during carbon fiber processing. Journal of Chemical Physics, 2017, 147, 224705.	1.2	21
54	Uncertainties in the predictions of thermo-physical properties of thermoplastic polymers via molecular dynamics. Modelling and Simulation in Materials Science and Engineering, 2018, 26, 065007.	0.8	21

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55	Modeling of carbon nanotube clamping in tensile tests. Composites Science and Technology, 2005, 65, 2407-2415.	3.8	20
56	Crystalline and pseudo-crystalline phases of polyacrylonitrile from molecular dynamics: Implications for carbon fiber precursors. Polymer, 2018, 155, 13-26.	1.8	17
57	PRECISE DETERMINATION OF BACKBONE STRUCTURE AND CONDUCTIVITY OF 3D PERCOLATION NETWORKS BY THE DIRECT ELECTRIFYING ALGORITHM. International Journal of Modern Physics C, 2009, 20, 423-433.	0.8	15
58	Synthesis and Characterization of Polystyrene-Poly(arylene ether sulfone)-Polystyrene Triblock Copolymer for Proton Exchange Membrane Applications. Journal of Nanoscience and Nanotechnology, 2006, 6, 3594-3598.	0.9	11
59	Internally circumferentially cracked cylinders with functionally graded material properties. International Journal of Pressure Vessels and Piping, 1998, 75, 499-507.	1.2	10
60	Engineering Curvature in Graphene Ribbons Using Ultrathin Polymer Films. Nano Letters, 2014, 14, 7085-7089.	4.5	10
61	Coarse-grained molecular dynamics modeling of reaction-induced phase separation. Polymer, 2018, 149, 30-38.	1.8	9
62	A continuum mechanics model of multi-buckling in graphene â€“ substrate systems with randomly distributed debonding. International Journal of Solids and Structures, 2016, 97-98, 510-519.	1.3	8
63	Mechanically induced amorphization of small molecule organic crystals. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 074005.	0.8	7
64	Modeling of Carbon Nanotubes and Their Composites. , 2006, , 55-65.		6
65	Shock-induced hotspot formation in amorphous and crystalline 1,3,5,7-tetranitro-1,3,5,7-tetrazoctane (HMX): A molecular dynamics comparative study. Journal of Applied Physics, 2021, 130, .	1.1	5
66	Novel Mode of Noncrystallographic Branching in the Initial Stages of Polymer Fibril Growth. Physical Review Letters, 2020, 125, 247801.	2.9	4
67	Static and dynamic properties of single-walled boron nitride nanotubes. Journal of Nanoscience and Nanotechnology, 2006, 6, 54-60.	0.9	4
68	Carbon-Nanotube-Based Composites and Damage Sensing. , 2010, , 159-281.		3
69	Anisotropic Elastic Properties of Carbon Nanotubes. , 2004, , .		0
70	Simulations of Carbon Nanotubes as Nanoresonators and Nanosensors. , 2005, , .		0