Chunyu Li

List of Publications by Year in Descending Order

68 papers	7,098 citations	32 h-index	71 g-index
71 ext. papers	7,710 ext. citations	4.7 avg, IF	6.29 L-index

#	Paper	IF	Citations
68	A Hotspot's Better Half: Non-Equilibrium Intra-Molecular Strain in Shock Physics. *Journal of Physical Chemistry Letters*, **2021**, 12, 2756-2762	6.4	7
67	Chemistry Under Shock Conditions. *Annual Review of Materials Research*, **2021**, 51, 101-130	12.8	5
66	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, 055902	2.5	1
65	Novel Mode of Noncrystallographic Branching in the Initial Stages of Polymer Fibril Growth. *Physical Review Letters*, **2020**, 125, 247801	7.4	0
64	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, 175902	2.5	20
63	Mechanically induced amorphization of small molecule organic crystals. *Modelling and Simulation in Materials Science and Engineering*, **2019**, 27, 074005	2	3
62	Prediction of PEKK properties related to crystallization by molecular dynamics simulations with a united-atom model. *Polymer*, **2019**, 174, 25-32	3.9	14
61	Coarse-grained molecular dynamics modeling of reaction-induced phase separation. *Polymer*, **2018**, 149, 30-38	3.9	2
60	Cohesive energy density and solubility parameter evolution during the curing of thermoset. *Polymer*, **2018**, 135, 162-170	3.9	32
59	Crystalline and pseudo-crystalline phases of polyacrylonitrile from molecular dynamics: Implications for carbon fiber precursors. *Polymer*, **2018**, 155, 13-26	3.9	12
58	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	2	11
57	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	2.6	27
56	Molecular modeling of the microstructure evolution during carbon fiber processing. *Journal of Chemical Physics*, **2017**, 147, 224705	3.9	13
55	Free volume evolution in the process of epoxy curing and its effect on mechanical properties. *Polymer*, **2016**, 97, 456-464	3.9	22
54	A continuum mechanics model of multi-buckling in graphene substrate systems with randomly distributed debonding. *International Journal of Solids and Structures*, **2016**, 97-98, 510-519	3.1	8
53	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	3.9	24
52	Molecular scale simulations on thermoset polymers: A review. *Journal of Polymer Science, Part B: Polymer Physics*, **2015**, 53, 103-122	2.6	121

51	Material property prediction of thermoset polymers by molecular dynamics simulations. *Acta Mechanica*, **2014**, 225, 1187-1196	2.1	46
50	Engineering curvature in graphene ribbons using ultrathin polymer films. *Nano Letters*, **2014**, 14, 7085-9	11.5	9
49	Prediction of the chemical and thermal shrinkage in a thermoset polymer. *Composites Part A: Applied Science and Manufacturing*, **2014**, 66, 35-43	8.4	40
48	Nanolithography. Large-scale nanoshaping of ultrasmooth 3D crystalline metallic structures. *Science*, **2014**, 346, 1352-6	33.3	113
47	Molecular dynamics simulations on cyclic deformation of an epoxy thermoset. *Polymer*, **2013**, 54, 881-890	3.9	24
46	Atomistic simulations on multilayer graphene reinforced epoxy composites. *Composites Part A: Applied Science and Manufacturing*, **2012**, 43, 1293-1300	8.4	87
45	Molecular dynamics simulations and experimental studies of the thermomechanical response of an epoxy thermoset polymer. *Polymer*, **2012**, 53, 4222-4230	3.9	104
44	Effect of Thickness on the Thermo-Mechanical Response of Free-Standing Thermoset Nanofilms from Molecular Dynamics. *Macromolecules*, **2011**, 44, 9448-9454	5.5	29
43	Molecular dynamics predictions of thermal and mechanical properties of thermoset polymer EPON862/DETDA. *Polymer*, **2011**, 52, 2920-2928	3.9	191
42	Molecular simulations of crosslinking process of thermosetting polymers. *Polymer*, **2010**, 51, 6058-6070	3.9	170
41	Carbon-Nanotube-Based Composites and Damage Sensing **2010**, 159-281		2
40	Electrical conductivities of composites with aligned carbon nanotubes. *Journal of Nanoscience and Nanotechnology*, **2009**, 9, 2518-24	1.3	26
39	A hyper-viscoelastic constitutive model for polyurea. *Materials Letters*, **2009**, 63, 877-880	3.3	75
38	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	1.1	11
37	Failure of carbon nanotube/polymer composites and the effect of nanotube waviness. *Composites Part A: Applied Science and Manufacturing*, **2009**, 40, 1580-1586	8.4	39
36	Electrical anisotropy in multiscale nanotube/fiber hybrid composites. *Applied Physics Letters*, **2009**, 95, 073111	3.4	41
35	Sensors and actuators based on carbon nanotubes and their composites: A review. *Composites Science and Technology*, **2008**, 68, 1227-1249	8.6	750
34	Effect of nanotube waviness on the electrical conductivity of carbon nanotube-based composites. *Composites Science and Technology*, **2008**, 68, 1445-1452	8.6	171

33	Modeling of damage sensing in fiber composites using carbon nanotube networks. *Composites Science and Technology*, **2008**, 68, 3373-3379	8.6	147
32	Theoretical studies on the charge-induced failure of single-walled carbon nanotubes. *Carbon*, **2007**, 45, 922-930	10.4	30
31	Continuum percolation of nanocomposites with fillers of arbitrary shapes. *Applied Physics Letters*, **2007**, 90, 174108	3.4	71
30	A direct electrifying algorithm for backbone identification. *Journal of Physics A: Mathematical and Theoretical*, **2007**, 40, 14679-14686	2	36
29	Dominant role of tunneling resistance in the electrical conductivity of carbon nanotube-based composites. *Applied Physics Letters*, **2007**, 91, 223114	3.4	518
28	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	1.3	5
27	Charge-induced strains in single-walled carbon nanotubes. *Nanotechnology*, **2006**, 17, 4624-8	3.4	27
26	Modeling of Carbon Nanotubes and Their Composites **2006**, 55-65		5
25	Electrostatic charge distribution on single-walled carbon nanotubes. *Applied Physics Letters*, **2006**, 89, 063103	3.4	24
24	Elastic wave velocities in single-walled carbon nanotubes. *Physical Review B*, **2006**, 73,	3.3	34
23	Multiscale modeling of compressive behavior of carbon nanotube/polymer composites. *Composites Science and Technology*, **2006**, 66, 2409-2414	8.6	141
22	Atomistic Modeling of Carbon Nanotube-based Mechanical Sensors. *Journal of Intelligent Material Systems and Structures*, **2006**, 17, 247-254	2.3	29
21	Static and dynamic properties of single-walled boron nitride nanotubes. *Journal of Nanoscience and Nanotechnology*, **2006**, 6, 54-60	1.3	2
20	Quantized molecular structural mechanics modeling for studying the specific heat of single-walled carbon nanotubes. *Physical Review B*, **2005**, 71,	3.3	23
19	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	5.3	25
18	Nanocomposites in context. *Composites Science and Technology*, **2005**, 65, 491-516	8.6	1273
17	Axial and radial thermal expansions of single-walled carbon nanotubes. *Physical Review B*, **2005**, 71,	3.3	53
16	Modeling of carbon nanotube clamping in tensile tests. *Composites Science and Technology*, **2005**, 65, 2407-2415	8.6	19

15	Modeling of elastic buckling of carbon nanotubes by molecular structural mechanics approach. *Mechanics of Materials*, **2004**, 36, 1047-1055	3.3	138
14	Elastic properties of single-walled carbon nanotubes in transverse directions. *Physical Review B*, **2004**, 69,	3.3	87
13	Mass detection using carbon nanotube-based nanomechanical resonators. *Applied Physics Letters*, **2004**, 84, 5246-5248	3.4	177
12	Vibrational behaviors of multiwalled-carbon-nanotube-based nanomechanical resonators. *Applied Physics Letters*, **2004**, 84, 121-123	3.4	212
11	Multiscale modeling of carbon nanotube reinforced polymer composites. *Journal of Nanoscience and Nanotechnology*, **2003**, 3, 423-30	1.3	99
10	A structural mechanics approach for the analysis of carbon nanotubes. *International Journal of Solids and Structures*, **2003**, 40, 2487-2499	3.1	1050
9	Single-walled carbon nanotubes as ultrahigh frequency nanomechanical resonators. *Physical Review B*, **2003**, 68,	3.3	238
8	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	2.3	22
7	Antiplane Crack Problem in Functionally Graded Piezoelectric Materials. *Journal of Applied Mechanics, Transactions ASME*, **2002**, 69, 481-488	2.7	146
6	Yoffe-type moving crack in a functionally graded piezoelectric material. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2002**, 458, 381-399	2.4	59
5	Dynamic stress intensity factor of a cylindrical interface crack with a functionally graded interlayer. *Mechanics of Materials*, **2001**, 33, 325-333	3.3	45
4	Dynamic behavior of a cylindrical crack in a functionally graded interlayer under torsional loading. *International Journal of Solids and Structures*, **2001**, 38, 7473-7485	3.1	54
3	Multiple isoparametric finite element method for nonhomogeneous media. *Mechanics Research Communications*, **2000**, 27, 137-142	2.2	23
2	Stress intensity factors for functionally graded solid cylinders. *Engineering Fracture Mechanics*, **1999**, 63, 735-749	4.2	26
1	Internally circumferentially cracked cylinders with functionally graded material properties. *International Journal of Pressure Vessels and Piping*, **1998**, 75, 499-507	2.4	10