Abbas Montazeri

List of Publications by Year
in descending order

51	1,060	471371 17	434063 31
papers	citations	h-index	g-index

51	51	51	1375
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Variation of Protein Corona Composition of Gold Nanoparticles Following Plasmonic Heating. Nano Letters, 2014, 14, 6-12.	4.5	184
2	Multiscale modeling of graphene- and nanotube-based reinforced polymer nanocomposites. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 4034-4040.	0.9	104
3	Fracture analysis of monolayer graphene sheets with double vacancy defects via MD simulation. Solid State Communications, 2011, 151, 1141-1146.	0.9	64
4	Disease-related metabolites affect proteinâ€“nanoparticle interactions. Nanoscale, 2018, 10, 7108-7115.	2.8	61
5	New aspects on the metal reinforcement by carbon nanofillers: A molecular dynamics study. Materials and Design, 2016, 91, 306-313.	3.3	54
6	Molecular dynamics study of the interfacial mechanical properties of the grapheneâ€“collagen biological nanocomposite. Computational Materials Science, 2013, 69, 29-39.	1.4	42
7	Enhanced interfacial characteristics in PLA/graphene composites through numerically-designed interface treatment. Applied Surface Science, 2020, 502, 144150.	3.1	40
8	Study the effect of viscoelastic matrix model on the stability of CNT/polymer composites by multiscale modeling. Polymer Composites, 2009, 30, 1545-1551.	2.3	26
9	Investigation of the interphase effects on the mechanical behavior of carbon nanotube polymer composites by multiscale modeling. Journal of Applied Polymer Science, 2010, 117, 361-367.	1.3	26
10	Mechanical properties of graphene oxide: The impact of functional groups. Applied Surface Science, 2020, 525, 146554.	3.1	23
11	Multiscale modeling of the effect of carbon nanotube orientation on the shear deformation properties of reinforced polymer-based composites. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 1588-1597.	0.9	22
12	On the elasto-plastic behavior of CNT-polymer nanocomposites. Composite Structures, 2017, 160, 782-791.	3.1	22
13	Temperature-based plastic deformation mechanism of Cu/Ag nanocomposites: A molecular dynamics study. Computational Materials Science, 2018, 144, 223-231.	1.4	22
14	MD-based estimates of enhanced load transfer in graphene/metal nanocomposites through Ni coating. Applied Surface Science, 2018, 457, 1072-1080.	3.1	21
15	Computational modeling of the transverse-isotropic elastic properties of single-walled carbon nanotubes. Computational Materials Science, 2010, 49, 544-551.	1.4	20
16	A novel interface-treated micromechanics approach for accurate and efficient modeling of CNT/polymer composites. Composite Structures, 2018, 201, 528-539.	3.1	20
17	Experimentally guided MD simulation to enhance the shape memory behavior of polymer-based nanocomposites: Towards elaborating the underlying mechanism. Composites Part A: Applied Science and Manufacturing, 2020, 138, 106055.	3.8	18
18	MD-based design of SiC/graphene nanocomposites towards better mechanical performance. Ceramics International, 2017, 43, 17167-17173.	2.3	17

#	Article	IF	Citations
19	Nanomechanics analysis of perfect and defected graphene sheets via a novel atomic-scale finite element method. Superlattices and Microstructures, 2016, 94, 1-12.	1.4	16
20	Nanotribological behavior analysis of graphene/metal nanocomposites via MD simulations: New concepts and underlying mechanisms. Journal of Physics and Chemistry of Solids, 2018, 115, 49-58.	1.9	16
21	MD-based design of bilayer graphene-hBN heterostructures: An insight into enhanced thermal transport. International Journal of Heat and Mass Transfer, 2020, 150, 119282.	2.5	16
22	An insight into the temperature-dependent sintering mechanisms of metal nanoparticles through MD-based microstructural analysis. Powder Technology, 2021, 386, 30-39.	2.1	16
23	Evolution in aluminum applications by numerically-designed high strength boron-nitride/Al nanocomposites. Computational Materials Science, 2020, 171, 109227.	1.4	15
24	Geometrical aspects of nanofillers influence the tribological performance of Al-based nanocomposites. Wear, 2020, 444-445, 203117.	1.5	15
25	A molecular dynamics investigation of buckling behaviour of hydrogenated graphene. Molecular Simulation, 2015, 41, 1212-1218.	0.9	14
26	Metal-matrix nanocomposites under compressive loading: Towards an understanding of how twinning formation can enhance their plastic deformation. Scientific Reports, 2020, 10, 9745.	1.6	14
27	Mechanical properties are affected by coalescence mechanisms during sintering of metal powders: Case study of Al-Cu nanoparticles by molecular dynamics simulation. Powder Technology, 2022, 405, 117567.	2.1	14
28	Modeling the buckling behavior of carbon nanotubes under simultaneous combination of compressive and torsional loads. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 46, 139-148.	1.3	13
29	Comparison of continuum-based and atomistic-based modeling of axial buckling of carbon nanotubes subject to hydrostatic pressure. Computational Materials Science, 2013, 79, 619-626.	1.4	13
30	MD-based characterization of plastic deformation in Cu/Ag nanocomposites via dislocation extraction analysis: Effects of nanosized surface porosities and voids. Computational Materials Science, 2018, 152, 381-392.	1.4	13
31	Thermal transport engineering in single layered graphene sheets via MD simulations: On the effect of nickel coating. International Journal of Thermal Sciences, 2019, 138, 416-424.	2.6	11
32	Protein corona impact on nanoparticle-cell interactions: toward an energy-based model of endocytosis. Journal of Physics Condensed Matter, 2020, 32, 115101.	0.7	11
33	A novel MD-based procedure to obtain the interphase Youngâ€™s modulus in nanocomposites. Computational Materials Science, 2016, 113, 104-111.	1.4	10
34	Molecular dynamics study of a new mechanism for ripple formation on graphene nanoribbons at very low temperatures based on H2 physisorption. Solid State Communications, 2013, 159, 84-87.	0.9	8
35	Nanoscale deflection detection of a cantilever-based biosensor using MOSFET structure: A theoretical analysis. Superlattices and Microstructures, 2016, 98, 116-120.	1.4	7
36	Molecular Dynamics Modeling of Buckling Behavior of Hydrogenated Graphyne. Nano, 2015, 10, 1550105.	0.5	6

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37	Heat transport in 2D van der Waals heterostructures: An analytical modeling approach. International Journal of Thermal Sciences, 2020, 150, 106237.	2.6	6
38	Rotational Molding of Polyamide-12 Nanocomposites: Modeling of the Viscoelastic Behavior. International Journal of Material Forming, 2021, 14, 143-152.	0.9	6
39	Investigating the Effect of Carbon Nanotube Defects on the Column and Shell Buckling of Carbon Nanotube-Polymer Composites Using Multiscale Modeling. International Journal for Multiscale Computational Engineering, 2009, 7, 431-444.	0.8	6
40	Atomistic insights into the toughening role of surface-treated boron nitride nanosheets in PLA-based nanocomposites. European Polymer Journal, 2022, 168, 111071.	2.6	6
41	Assessment of dominant factors affecting the fracture toughness of polymer/clay nanocomposites using finite element method. Journal of Reinforced Plastics and Composites, 2017, 36, 1545-1553.	1.6	5
42	Telescopic oscillations of double-walled carbon nanotubes in the presence of an inner semi-infinite tube. International Journal of Mechanical Sciences, 2017, 121, 187-198.	3.6	3
43	Enhancing multi-functional capabilities of boron nitride nanosheets through defect engineering. Journal of Materials Science, 2020, 55, 12995-13007.	1.7	3
44	Tailoring adhesion characteristics of poly(L-lactic acid)/graphene nanocomposites by end-grafted polymer chains: An atomic-level study. European Polymer Journal, 2021, 148, 110351.	2.6	3
45	Engineering the shape memory parameters of graphene/polymer nanocomposites through atomistic simulations: On the effect of nanofiller surface treatment. Smart Materials and Structures, 2022, 31, 025010.	1.8	3
46	FEM analysis of metal matrix nanocomposites reinforced with off-line atomistically-informed equivalent nanofillers. Computational Materials Science, 2017, 129, 89-97.	1.4	2
47	MD-based computational design of new engineered Ni-based nanocatalysts: An in-depth study of the underlying mechanism. European Physical Journal Plus, 2018, 133, 1.	1.2	1
48	Theoretical Modeling of CNTâ€“Polymer Interactions. , 2018, , 347-383.		1
49	An MD-based systematic study on the mechanical characteristics of a novel hybrid CNT/graphene drug carrier. Journal of Molecular Modeling, 2020, 26, 241.	0.8	1
50	Optimization of growth medium position for improved operation of Quartz Tuning Fork biosensor. , 2016, , .		0
51	Determination of the optimal location of samples on quartz tuning fork-based biosensors: a computational study. Biomedical Physics and Engineering Express, 2021, 7, 065024.	0.6	0