Abbas Montazeri

List of Publications by Year
in descending order

51 papers	1,060 citations	471371 17 h-index	434063 31 g-index
51 all docs	51 docs citations	51 times ranked	1375 citing authors

#	Article	IF	Citations
1	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
2	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
3	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
4	Rotational Molding of Polyamide-12 Nanocomposites: Modeling of the Viscoelastic Behavior. International Journal of Material Forming, 2021, 14, 143-152.	0.9	6
5	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
6	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
7	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
8	Enhanced interfacial characteristics in PLA/graphene composites through numerically-designed interface treatment. Applied Surface Science, 2020, 502, 144150.	3.1	40
9	Evolution in aluminum applications by numerically-designed high strength boron-nitride/Al nanocomposites. Computational Materials Science, 2020, 171, 109227.	1.4	15
10	Geometrical aspects of nanofillers influence the tribological performance of Al-based nanocomposites. Wear, 2020, 444-445, 203117.	1.5	15
11	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
12	Heat transport in 2D van der Waals heterostructures: An analytical modeling approach. International Journal of Thermal Sciences, 2020, 150, 106237.	2.6	6
13	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
14	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
15	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
16	Enhancing multi-functional capabilities of boron nitride nanosheets through defect engineering. Journal of Materials Science, 2020, 55, 12995-13007.	1.7	3
17	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
18	Mechanical properties of graphene oxide: The impact of functional groups. Applied Surface Science, 2020, 525, 146554.	3.1	23

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19	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
20	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
21	Temperature-based plastic deformation mechanism of Cu/Ag nanocomposites: A molecular dynamics study. Computational Materials Science, 2018, 144, 223-231.	1.4	22
22	Disease-related metabolites affect protein–nanoparticle interactions. Nanoscale, 2018, 10, 7108-7115.	2.8	61
23	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
24	A novel interface-treated micromechanics approach for accurate and efficient modeling of CNT/polymer composites. Composite Structures, 2018, 201, 528-539.	3.1	20
25	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
26	MD-based estimates of enhanced load transfer in graphene/metal nanocomposites through Ni coating. Applied Surface Science, 2018, 457, 1072-1080.	3.1	21
27	Theoretical Modeling of CNT–Polymer Interactions. , 2018, , 347-383.		1
28	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
29	FEM analysis of metal matrix nanocomposites reinforced with off-line atomistically-informed equivalent nanofillers. Computational Materials Science, 2017, 129, 89-97.	1.4	2
30	MD-based design of SiC/graphene nanocomposites towards better mechanical performance. Ceramics International, 2017, 43, 17167-17173.	2.3	17
31	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
32	On the elasto-plastic behavior of CNT-polymer nanocomposites. Composite Structures, 2017, 160, 782-791.	3.1	22
33	Optimization of growth medium position for improved operation of Quartz Tuning Fork biosensor. , 2016, , .		0
34	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
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	A novel MD-based procedure to obtain the interphase Young's modulus in nanocomposites. Computational Materials Science, 2016, 113, 104-111.	1.4	10

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37	New aspects on the metal reinforcement by carbon nanofillers: A molecular dynamics study. Materials and Design, 2016, 91, 306-313.	3.3	54
38	A molecular dynamics investigation of buckling behaviour of hydrogenated graphene. Molecular Simulation, 2015, 41, 1212-1218.	0.9	14
39	Molecular Dynamics Modeling of Buckling Behavior of Hydrogenated Graphyne. Nano, 2015, 10, 1550105.	0.5	6
40	Variation of Protein Corona Composition of Gold Nanoparticles Following Plasmonic Heating. Nano Letters, 2014, 14, 6-12.	4.5	184
41	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
42	Molecular dynamics study of the interfacial mechanical properties of the graphene–collagen biological nanocomposite. Computational Materials Science, 2013, 69, 29-39.	1.4	42
43	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
44	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
45	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
46	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
47	Fracture analysis of monolayer graphene sheets with double vacancy defects via MD simulation. Solid State Communications, 2011, 151, 1141-1146.	0.9	64
48	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
49	Computational modeling of the transverse-isotropic elastic properties of single-walled carbon nanotubes. Computational Materials Science, 2010, 49, 544-551.	1.4	20
50	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
51	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