Avinash Parashar

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

75 papers	1,362 citations	21 h-index	34 g-index
79 ext. papers	1,744 ext. citations	3.1 avg, IF	5.95 L-index

#	Paper	IF	Citations
75	Molecular Dynamics Study of Anisotropic Shock Response in Mono- and Bicrystalline Boron Nitride Nanosheets: Implications for Shock-Resistant Solid-State Devices. *ACS Applied Nano Materials*, **2022**, 5, 2787-2800	5.6	4
74	Effect of lattice distortion and nanovoids on the shock compression behavior of (Co-Cr-Cu-Fe-Ni) high entropy alloy. *Computational Materials Science*, **2022**, 209, 111402	3.2	2
73	An atomistic approach to study the dynamic and structural response in 2D nanofiller reinforced polyethylene nanocomposites under ultra-short shock pulse loading. *Mechanics of Materials*, **2022**, 169, 104305	3.3	1
72	Deformation dynamics of h-BN reinforced polyethylene nanocomposite under shock/impact loading. *International Journal of Mechanical Sciences*, **2022**, 107379	5.5	1
71	Fracture behaviour of pristine and defective form of water submerged h-BN nanosheets. *Journal Physics D: Applied Physics*, **2021**, 54, 035306	3	3
70	Effect of BNNR on mechanical properties of polyethylene nanocomposites. *Materials Today: Proceedings*, **2021**, 47, 2875-2875	1.4	2
69	Experimental and atomistic insight on the thermal transport properties of h-BN/high density polyethylene nanocomposite. *International Journal of Heat and Mass Transfer*, **2021**, 170, 121039	4.9	6
68	Lifecycle Assessment of Thermoplastic and Thermosetting Bamboo Composites **2021**, 235-246		9
67	Effect of defects and functionalization on mechanical and fracture properties of two-dimensional nanomaterials **2021**, 543-567		
66	Enhanced Mechanical Properties of h-BN Nanosheets via Edge Passivation Using Various Radicals. *Lecture Notes in Mechanical Engineering*, **2021**, 97-103	0.4	
65	Enhancement in Mechanical Properties of Polyethylene Using h-BN Nanofiller. *Lecture Notes in Mechanical Engineering*, **2021**, 127-133	0.4	3
64	Atomistic simulations to study crack tip behaviour in multi-elemental alloys. *Engineering Fracture Mechanics*, **2021**, 243, 107536	4.2	7
63	Defect dynamics and uniaxial tensile deformation of equi and non-equi-atomic configuration of multi-elemental alloys. *Materials Chemistry and Physics*, **2021**, 266, 124549	4.4	9
62	Atomistic simulations to study the effect of helium nanobubble on the shear deformation of nickel crystal. *Journal of Nuclear Materials*, **2021**, 557, 153245	3.3	4
61	Evaluation of Interfacial Shear Strength of h-BN/PE Nanocomposites Using Molecular Dynamics. *Lecture Notes in Mechanical Engineering*, **2021**, 105-113	0.4	1
60	Fracture Toughness Enhancement of Boron Nitride Nanosheets via Crack Edge Passivation Using Various Radicals. *Lecture Notes in Mechanical Engineering*, **2021**, 111-117	0.4	0
59	Inter-granular fracture behaviour in bicrystalline boron nitride nanosheets using atomistic and continuum mechanics-based approaches. *Journal of Materials Science*, **2021**, 56, 6235-6250	4.3	3

58	Effect of Hexagonal Boron Nitride Nanoplatelet on Crystal Nucleation, Mechanical Behavior, and Thermal Stability of High-Density Polyethylene-Based Nanocomposites. *Macromolecular Materials and Engineering*, **2020**, 305, 2000248	3.9	11
57	Effect of Crack on the Tensile Strength of a Bicrystal Zr - A MD Based Evaluation. *Materials Science Forum*, **2020**, 978, 487-491	0.4	1
56	Sequential multiscale model to study crack tip behavior in bi-crystalline graphene. *Journal of Applied Physics*, **2020**, 127, 225103	2.5	2
55	Characterization of 2D Nanomaterials for Energy Storage. *Lecture Notes in Mechanical Engineering*, **2020**, 221-226	0.4	10
54	Surface Modification Techniques for the Preparation of Different Novel Biofibers for Composites **2020**, 1-34		19
53	Mechanical and fracture behaviour of hydroxyl functionalized h-BN nanosheets. *Journal of Materials Science*, **2020**, 55, 3228-3242	4.3	14
52	Inter-granular fracture toughness of bi-crystalline graphene nanosheets. *Diamond and Related Materials*, **2020**, 102, 107667	3.5	13
51	A Comparison between Σ Asymmetrical Tilt Grain Boundary Energies in Niobium Obtained Analytically and through Molecular Dynamics Based Simulations. *Materials Science Forum*, **2020**, 998, 179-184	0.4	0
50	Atomistic simulations to study point defect dynamics in bi-crystalline niobium. *Materials Chemistry and Physics*, **2020**, 255, 123628	4.4	1
49	Mechanical strength of a nanoporous bicrystalline h-BN nanomembrane in a water submerged state. *Physical Chemistry Chemical Physics*, **2020**, 22, 20453-20465	3.6	11
48	A review on thermo-mechanical properties of bi-crystalline and polycrystalline 2D nanomaterials. *Critical Reviews in Solid State and Materials Sciences*, **2020**, 45, 134-170	10.1	26
47	Role of Chemical Adatoms in Fracture Mechanics of Graphene Nanolayer. *Materials Today: Proceedings*, **2019**, 11, 920-924	1.4	14
46	Effect of symmetrical tilt grain boundary on dislocation nucleation and growth in Niobium bi-crystal. *Materials Today: Proceedings*, **2019**, 11, 925-928	1.4	
45	Effect of Nb precipitate on defect formation and migration energies in bi-crystalline Zr. *Materials Chemistry and Physics*, **2019**, 235, 121729	4.4	4
44	Atomistic simulations to study the effect of grain boundaries and hydrogen functionalization on the fracture toughness of bi-crystalline h-BN nanosheets. *Physical Chemistry Chemical Physics*, **2019**, 21, 13116-13125	3.6	16
43	Mechanical and fracture behavior of water submerged graphene. *Journal of Applied Physics*, **2019**, 125, 215107	2.5	19
42	Atomistic simulations to study the effect of Nb precipitate on fracture properties of bi-crystalline Zr. *Journal Physics D: Applied Physics*, **2019**, 52, 355304	3	3
41	Defect formation dynamics in dry and water submerged graphene nanosheets. *Materials Research Express*, **2019**, 6, 075063	1.7	11

40	Enhanced thermal transport across a bi-crystalline graphene-polymer interface: an atomistic approach. *Physical Chemistry Chemical Physics*, **2019**, 21, 6229-6237	3.6	49
39	Experimental and Computational Studies to Analyze the Effect of h-BN Nanosheets on Mechanical Behavior of h-BN/Polyethylene Nanocomposites. *Journal of Physical Chemistry C*, **2019**, 123, 20059-20070	3.8	51
38	Molecular dynamics-based simulations to study crack tip interaction with symmetrical and asymmetrical tilt grain boundaries in Zr. *Journal of Nuclear Materials*, **2019**, 526, 151739	3.3	9
37	Atomistic simulations to study the effect of water molecules on the mechanical behavior of functionalized and non-functionalized boron nitride nanosheets. *Computational Materials Science*, **2019**, 169, 109092	3.2	18
36	Atomistic simulations to study crack tip behaviour in single crystal of bcc niobium and hcp zirconium. *Current Applied Physics*, **2019**, 19, 37-43	2.6	25
35	Effect of symmetrical and asymmetrical tilt grain boundaries on the tensile deformation of zirconium bicrystals: a MD-based study. *Journal of Materials Science*, **2019**, 54, 3082-3095	4.3	14
34	Effect of grain boundaries on the interfacial behaviour of graphene-polyethylene nanocomposite. *Applied Surface Science*, **2019**, 470, 1085-1092	6.7	49
33	A molecular dynamics based study to estimate the point defects formation energies in graphene containing STW defects. *Materials Research Express*, **2019**, 6, 015606	1.7	26
32	Effect of topological defects on mechanical properties of graphene sheets: a molecular dynamics study. *Materials Today: Proceedings*, **2018**, 5, 6780-6788	1.4	4
31	Molecular dynamics based simulations to study the fracture strength of monolayer graphene oxide. *Nanotechnology*, **2018**, 29, 115706	3.4	44
30	Displacement thresholds and knock-on cross sections for hydrogenated h-BN monolayers. *Computational Materials Science*, **2018**, 142, 82-88	3.2	6
29	Reactive force field based atomistic simulations to study fracture toughness of bicrystalline graphene functionalised with oxide groups. *Diamond and Related Materials*, **2018**, 88, 193-203	3.5	23
28	Molecular dynamics based simulations to study failure morphology of hydroxyl and epoxide functionalised graphene. *Computational Materials Science*, **2018**, 143, 15-26	3.2	47
27	Effect of symmetric and asymmetric tilt grain boundaries on the tensile behaviour of bcc-Niobium. *Computational Materials Science*, **2018**, 143, 126-132	3.2	16
26	Atomistic modeling of graphene/hexagonal boron nitride polymer nanocomposites: a review. *Wiley Interdisciplinary Reviews: Computational Molecular Science*, **2018**, 8, e1346	7.9	63
25	Structural and chemical insights into thermal transport for strained functionalised graphene: a molecular dynamics study. *Materials Research Express*, **2018**, 5, 115605	1.7	29
24	Effect of symmetrical and asymmetrical tilt grain boundaries on radiation-induced defects in zirconium. *Journal Physics D: Applied Physics*, **2018**, 51, 265301	3	10
23	Effect of geometrical defects and functionalization on the interfacial strength of h-BN/polyethylene based nanocomposite. *Polymer*, **2018**, 146, 82-90	3.9	20

22	Tailoring the failure morphology of 2D bicrystalline graphene oxide. *Journal of Applied Physics*, **2018**, 124, 015102	2.5	39
21	Enhancement of fracture toughness of graphene via crack bridging with stone-thrower-wales defects. *Diamond and Related Materials*, **2017**, 74, 90-99	3.5	24
20	Molecular dynamics based study of an irradiated single crystal of niobium. *Computational Materials Science*, **2017**, 131, 48-54	3.2	14
19	Fracture toughness enhancement of h-BN monolayers via hydrogen passivation of a crack edge. *Nanotechnology*, **2017**, 28, 165702	3.4	21
18	The effect of STW defects on the mechanical properties and fracture toughness of pristine and hydrogenated graphene. *Physical Chemistry Chemical Physics*, **2017**, 19, 16023-16037	3.6	47
17	Dislocation assisted crack healing in h-BN nanosheets. *Physical Chemistry Chemical Physics*, **2017**, 19, 21739-21747	3.6	15
16	Effect of Point and Line Defects on Mechanical and Thermal Properties of Graphene: A Review. *Critical Reviews in Solid State and Materials Sciences*, **2016**, 41, 47-71	10.1	90
15	Anisotropic compressive response of Stone□Thrower□Wales defects in graphene: A molecular dynamics study. *Materials Research Express*, **2016**, 3, 095015	1.7	9
14	Atomistic modeling of BN nanofillers for mechanical and thermal properties: a review. *Nanoscale*, **2016**, 8, 22-49	7.7	61
13	Optimised cut-off function for Tersoff-like potentials for a BN nanosheet: a molecular dynamics study. *Nanotechnology*, **2016**, 27, 085706	3.4	44
12	Molecular dynamics study on the mechanical response and failure behaviour of graphene: performance enhancement via 5□□5 defects. *RSC Advances*, **2016**, 6, 26361-26373	3.7	19
11	Effect of non-bonded interactions on failure morphology of a defective graphene sheet. *Materials Research Express*, **2016**, 3, 045009	1.7	7
10	Tersoff potential with improved accuracy for simulating graphene in molecular dynamics environment. *Materials Research Express*, **2016**, 3, 035011	1.7	49
9	Effects of Different Hydrogenation Regimes on Mechanical Properties of h-BN: A Reactive Force Field Study. *Journal of Physical Chemistry C*, **2016**, 120, 21932-21938	3.8	32
8	Effect of van der Waals interaction on the mode I fracture characteristics of graphene sheet. *Solid State Communications*, **2013**, 173, 56-60	1.6	7
7	Multiscale Model to Study of Fracture Toughening in Graphene/Polymer Nanocomposite. *International Journal of Fracture*, **2013**, 179, 221-228	2.3	14
6	Finite Element Analysis to Study the Effect of Dimensional and Geometrical Parameters on the Stability of Graphene Sheets. *Journal of Computational and Theoretical Nanoscience*, **2013**, 10, 292-298	0.3	8
5	Multiscale model to investigate the effect of graphene on the fracture characteristics of graphene/polymer nanocomposites. *Nanoscale Research Letters*, **2012**, 7, 595	5	14

4	Representative volume element to estimate buckling behavior of graphene/polymer nanocomposite. *Nanoscale Research Letters*, **2012**, 7, 515	5	59
3	Study of Mode I Fracture of Graphene Sheets Using Atomistic Based Finite Element Modeling and Virtual Crack Closure Technique. *International Journal of Fracture*, **2012**, 176, 119-126	2.3	9
2	Adhesively bonded composite tubular joints: Review. *International Journal of Adhesion and Adhesives*, **2012**, 38, 58-68	3.4	36
1	Polymer-based nanocomposites for impact loading: A review. *Mechanics of Advanced Materials and Structures*,1-26	1.8	8