Amnaya P Awasthi

List of Publications by Year
in descending order

25 papers	694 citations	623574 14 h-index	610775 24 g-index
26 all docs	26 docs citations	26 times ranked	696 citing authors

#	Article	IF	Citations
1	Modeling of grapheneâ€“polymer interfacial mechanical behavior using molecular dynamics. Modelling and Simulation in Materials Science and Engineering, 2009, 17, 015002.	0.8	195
2	In search of amorphization-resistant boron carbide. Scripta Materialia, 2016, 123, 158-162.	2.6	64
3	Propagation of solitary waves in 2D granular media: A numerical study. Mechanics of Materials, 2012, 54, 100-112.	1.7	43
4	Wave propagation in elasto-plastic granular systems. Granular Matter, 2013, 15, 747-758.	1.1	41
5	High-pressure deformation and amorphization in boron carbide. Journal of Applied Physics, 2019, 125, .	1.1	39
6	Characterization of wave propagation in elastic and elastoplastic granular chains. Physical Review E, 2014, 89, 012204.	0.8	38
7	Deformation behavior and amorphization in icosahedral boron-rich ceramics. Progress in Materials Science, 2020, 112, 100664.	16.0	34
8	Shocked ceramics melt: An atomistic analysis of thermodynamic behavior of boron carbide. Physical Review B, 2020, 101, .	1.1	30
9	Plane wave propagation in 2D and 3D monodisperse periodic granular media. Granular Matter, 2014, 16, 141-150.	1.1	28
10	Wave propagation in random granular chains. Physical Review E, 2012, 85, 031308.	0.8	26
11	Evaluating boron-carbide constituents with simulated Raman spectra. Scripta Materialia, 2017, 138, 32-34.	2.6	23
12	Effects of weak disorder on stress-wave anisotropy in centered square nonlinear granular crystals. Physical Review E, 2012, 86, 031305.	0.8	22
13	Crystallographic and spectral equivalence of boron-carbide polymorphs. Scripta Materialia, 2016, 122, 82-85.	2.6	22
14	Propagation and dissipation of elasto-plastic stress waves in two dimensional ordered granular media. Journal of the Mechanics and Physics of Solids, 2018, 120, 117-131.	2.3	18
15	High-amplitude elastic solitary wave propagation in 1-D granular chains with preconditioned beads: Experiments and theoretical analysis. Journal of the Mechanics and Physics of Solids, 2014, 72, 161-173.	2.3	15
16	Wave propagation in 2D random granular media. Physica D: Nonlinear Phenomena, 2014, 266, 42-48.	1.3	14
17	Family of plane solitary waves in dimer granular crystals. Physical Review E, 2014, 90, 032209.	0.8	10
18	Impact response of granular layers. Granular Matter, 2015, 17, 21-31.	1.1	9

#	Article	IF	Citations
19	Nanoscale mechanical tailoring of interfaces using self-assembled monolayers. Mechanics of Materials, 2016, 98, 71-80.	1.7	6
20	Shock response of single-crystal boron carbide along orientations with the highest and lowest elastic moduli. Physical Review B, 2021, 104, .	1.1	6
21	Intrinsic hardness of boron carbide: Influence of polymorphism and stoichiometry. Journal of the American Ceramic Society, 2020, 103, 7127-7134.	1.9	5
22	Effects of interface roughness on cohesive strength of self-assembled monolayers. Applied Surface Science, 2017, 397, 192-198.	3.1	2
23	Intrinsic hardness of covalent crystals: a unified multiparametric framework. Journal of Materials Science, 2021, 56, 11711-11722.	1.7	2
24	Shockwaves in Jammed Ductile Granular Media. Journal of Applied Mechanics, Transactions ASME, 2022, 89, .	1.1	2
25	Multi-scale model of effects of roughness on the cohesive strength of self-assembled monolayers. International Journal of Fracture, 2017, 208, 131-143.	1.1	0