

Niaz Abdolrahim

List of Publications by Year in descending order

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31
papers

549
citations

759055

12
h-index

642610

23
g-index

32
all docs

32
docs citations

32
times ranked

528
citing authors

#	ARTICLE	IF	CITATIONS
1	Multiscale modeling and simulation of deformation in nanoscale metallic multilayer systems. International Journal of Plasticity, 2014, 52, 33-50.	4.1	128
2	Deformation mechanisms in composite nano-layered metallic and nanowire structures. International Journal of Mechanical Sciences, 2010, 52, 295-302.	3.6	38
3	A stochastic crystal plasticity framework for deformation of micro-scale polycrystalline materials. International Journal of Plasticity, 2015, 68, 21-33.	4.1	35
4	The mechanical response of core-shell structures for nanoporous metallic materials. Philosophical Magazine, 2013, 93, 736-748.	0.7	31
5	Stochastic effects in plasticity in small volumes. International Journal of Plasticity, 2014, 52, 117-132.	4.1	31
6	Computational design of patterned interfaces using reduced order models. Scientific Reports, 2014, 4, 6231.	1.6	30
7	Deformation mechanisms and pseudoelastic behaviors in trilayer composite metal nanowires. Physical Review B, 2010, 81, .	1.1	28
8	Atomistic simulations of shock compression of single crystal and core-shell Cu@Ni nanoporous metals. Journal of Applied Physics, 2019, 126, 015901.	1.1	27
9	Deformation mechanisms and ductility enhancement in core-shell Cu@Ni nanoporous metals. Computational Materials Science, 2018, 150, 397-404.	1.4	21
10	Precipitate strengthening in nanostructured metallic material composites. Philosophical Magazine Letters, 2012, 92, 597-607.	0.5	17
11	Predicting the failure of ultrathin porous membranes in bulge tests. Thin Solid Films, 2017, 631, 152-160.	0.8	16
12	Elevated temperature dependence of hardness in tri-metallic nano-scale metallic multilayer systems. Thin Solid Films, 2014, 571, 247-252.	0.8	15
13	Molecular dynamics study of self-diffusion in the core of a screw dislocation in face centered cubic crystals. Scripta Materialia, 2017, 133, 101-104.	2.6	13
14	Atomistic simulations of the strengthening effect of high-density bubble formation in helium irradiated single crystalline copper. Materialia, 2018, 1, 139-149.	1.3	12
15	A modified scaling law for stiffness of nanoporous materials based on gyroid cell model. International Journal of Mechanical Sciences, 2020, 166, 105223.	3.6	11
16	The effect of interfacial imperfections on plastic deformation in nanoscale metallic multilayer composites. Computational Materials Science, 2014, 86, 118-123.	1.4	10
17	Mechanism of intrinsic diffusion in the core of screw dislocations in FCC metals – A molecular dynamics study. Computational Materials Science, 2018, 144, 50-55.	1.4	9
18	Stress-Assisted Structural Phase Transformation Enhances Ductility in Mo/Cu Bicontinuous Intertwined Composites. ACS Applied Nano Materials, 2019, 2, 1890-1897.	2.4	9

#	ARTICLE	IF	CITATIONS
19	Molecular dynamics simulation studies on mechanical properties of standalone ligaments and networking nodes, a connection to nanoporous material. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2018, 26, 075001.	0.8	8
20	Molecular dynamics simulation of structural changes in single crystalline silicon nitride nanomembrane. <i>Ceramics International</i> , 2019, 45, 23070-23077.	2.3	8
21	Mechanism of coarsening and deformation behavior of nanoporous Cu with varying relative density. <i>Journal of Materials Research</i> , 2020, 35, 2620-2628.	1.2	8
22	Mechanical properties and deformation mechanisms of amorphous nanoporous silicon nitride membranes via combined atomistic simulations and experiments. <i>Acta Materialia</i> , 2022, 222, 117451.	3.8	8
23	Determining coherent reference states of general semicoherent interfaces. <i>Computational Materials Science</i> , 2016, 118, 297-308.	1.4	7
24	Molecular dynamics simulations of brittle to ductile transition in failure mechanism of silicon nitride nanoporous membranes. <i>Materials Today Communications</i> , 2020, 25, 101657.	0.9	6
25	Precipitation strengthening in nanocomposite Cr/Cu/Cr multilayer films. <i>Philosophical Magazine</i> , 2015, 95, 1780-1794.	0.7	5
26	The relaxed structure of intrinsic dislocation networks in semicoherent interfaces: predictions from anisotropic elasticity theory and comparison with atomistic simulations. <i>Extreme Mechanics Letters</i> , 2019, 28, 50-57.	2.0	5
27	Elastic and plastic deformation behavior of helium nano-bubbled single crystal copper: An atomistic simulation study. <i>Journal of Nuclear Materials</i> , 2021, 552, 152988.	1.3	4
28	Mining structure-property linkage in nanoporous materials using an interpretative deep learning approach. <i>Materialia</i> , 2022, 21, 101275.	1.3	3
29	Coexistence of vitreous and crystalline phases of H ₂ O at ambient temperature. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	3.3	3
30	Mechanical Enhancement of Graded Nanoporous Structure. <i>Journal of Engineering Materials and Technology</i> , <i>Transactions of the ASME</i> , 2022, 144, .	0.8	1
31	Observation of pseudoelastic behavior in large Cu-Ni composite multilayer nanowires. <i>Materials Research Society Symposia Proceedings</i> , 2014, 1659, 205-212.	0.1	0