

# 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	Mechanical Enhancement of Graded Nanoporous Structure. Journal of Engineering Materials and Technology, Transactions of the ASME, 2022, 144, .	0.8	1
2	Mechanical properties and deformation mechanisms of amorphous nanoporous silicon nitride membranes via combined atomistic simulations and experiments. Acta Materialia, 2022, 222, 117451.	3.8	8
3	Mining structure-property linkage in nanoporous materials using an interpretative deep learning approach. Materialia, 2022, 21, 101275.	1.3	3
4	Coexistence of vitreous and crystalline phases of H <sub>2</sub> O at ambient temperature. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	3
5	Elastic and plastic deformation behavior of helium nano-bubbled single crystal copper: An atomistic simulation study. Journal of Nuclear Materials, 2021, 552, 152988.	1.3	4
6	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
7	Molecular dynamics simulations of brittle to ductile transition in failure mechanism of silicon nitride nanoporous membranes. Materials Today Communications, 2020, 25, 101657.	0.9	6
8	Mechanism of coarsening and deformation behavior of nanoporous Cu with varying relative density. Journal of Materials Research, 2020, 35, 2620-2628.	1.2	8
9	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
10	Molecular dynamics simulation of structural changes in single crystalline silicon nitride nanomembrane. Ceramics International, 2019, 45, 23070-23077.	2.3	8
11	The relaxed structure of intrinsic dislocation networks in semicoherent interfaces: predictions from anisotropic elasticity theory and comparison with atomistic simulations. Extreme Mechanics Letters, 2019, 28, 50-57.	2.0	5
12	Stress-Assisted Structural Phase Transformation Enhances Ductility in Mo/Cu Bicontinuous Intertwined Composites. ACS Applied Nano Materials, 2019, 2, 1890-1897.	2.4	9
13	Deformation mechanisms and ductility enhancement in core-shell Cu@Ni nanoporous metals. Computational Materials Science, 2018, 150, 397-404.	1.4	21
14	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
15	Molecular dynamics simulation studies on mechanical properties of standalone ligaments and networking nodes, a connection to nanoporous material. Modelling and Simulation in Materials Science and Engineering, 2018, 26, 075001.	0.8	8
16	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
17	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
18	Predicting the failure of ultrathin porous membranes in bulge tests. Thin Solid Films, 2017, 631, 152-160.	0.8	16

#	ARTICLE	IF	CITATIONS
19	Determining coherent reference states of general semicoherent interfaces. Computational Materials Science, 2016, 118, 297-308.	1.4	7
20	Precipitation strengthening in nanocomposite Cr/Cu/Cr multilayer films. Philosophical Magazine, 2015, 95, 1780-1794.	0.7	5
21	A stochastic crystal plasticity framework for deformation of micro-scale polycrystalline materials. International Journal of Plasticity, 2015, 68, 21-33.	4.1	35
22	Observation of pseudoelastic behavior in large Cu-Ni composite multilayer nanowires. Materials Research Society Symposia Proceedings, 2014, 1659, 205-212.	0.1	0
23	Multiscale modeling and simulation of deformation in nanoscale metallic multilayer systems. International Journal of Plasticity, 2014, 52, 33-50.	4.1	128
24	The effect of interfacial imperfections on plastic deformation in nanoscale metallic multilayer composites. Computational Materials Science, 2014, 86, 118-123.	1.4	10
25	Stochastic effects in plasticity in small volumes. International Journal of Plasticity, 2014, 52, 117-132.	4.1	31
26	Elevated temperature dependence of hardness in tri-metallic nano-scale metallic multilayer systems. Thin Solid Films, 2014, 571, 247-252.	0.8	15
27	Computational design of patterned interfaces using reduced order models. Scientific Reports, 2014, 4, 6231.	1.6	30
28	The mechanical response of core-shell structures for nanoporous metallic materials. Philosophical Magazine, 2013, 93, 736-748.	0.7	31
29	Precipitate strengthening in nanostructured metallic material composites. Philosophical Magazine Letters, 2012, 92, 597-607.	0.5	17
30	Deformation mechanisms in composite nano-layered metallic and nanowire structures. International Journal of Mechanical Sciences, 2010, 52, 295-302.	3.6	38
31	Deformation mechanisms and pseudoelastic behaviors in trilayer composite metal nanowires. Physical Review B, 2010, 81, .	1.1	28