

Mahdi Javanbakht

List of Publications by Year in descending order

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608
citing authors

#	ARTICLE	IF	CITATIONS
1	A comparative study of 1D nonlocal integral Timoshenko beam and 2D nonlocal integral elasticity theories for bending of nanoscale beams. <i>Continuum Mechanics and Thermodynamics</i> , 2023, 35, 1063-1085.	2.2	11
2	Experimental and computational study of the thermal conductivity of polymeric micro spheres/polyester thermal insulating coatings. <i>Polymer Bulletin</i> , 2023, 80, 4387-4406.	3.3	2
3	Finite element implementation based on explicit, Galerkin and Crankâ€Nicolson methods to phase field theory for thermal- and surface- induced martensitic phase transformations. <i>Continuum Mechanics and Thermodynamics</i> , 2022, 34, 935-953.	2.2	5
4	Free vibration analysis of nonlocal nanobeams: a comparison of the one-dimensional nonlocal integral Timoshenko beam theory with the two-dimensional nonlocal integral elasticity theory. <i>Mathematics and Mechanics of Solids</i> , 2022, 27, 557-577.	2.4	11
5	Thermodynamically consistent nonlocal kernel with boundary effect compensation and its application to the coupled phase field-nonlocal integral elasticity equations for modeling of martensitic transformations. <i>Mechanics of Advanced Materials and Structures</i> , 2022, 29, 5407-5422.	2.6	3
6	Finite element analysis of coupled phase-field and thermoelasticity equations at large strains for martensitic phase transformations based on implicit and explicit time discretization schemes. <i>Mechanics of Advanced Materials and Structures</i> , 2022, 29, 2531-2547.	2.6	5
7	Surface induced melting of long Al nanowires: phase field model and simulations for pressure loading and without it. <i>Nanotechnology</i> , 2022, 33, 425705.	2.6	2
8	Phase field theory for fracture at large strains including surface stresses. <i>International Journal of Engineering Science</i> , 2022, 178, 103732.	5.0	5
9	Nonlinear buckling analysis of double-layered graphene nanoribbons based on molecular mechanics. <i>Carbon Letters</i> , 2021, 31, 895-910.	5.9	7
10	The effect of a pre-existing nanovoid on martensite formation and interface propagation: a phase field study. <i>Mathematics and Mechanics of Solids</i> , 2021, 26, 90-109.	2.4	22
11	Effect of a thermodynamically consistent interface stress on thermal-induced nanovoid evolution in NiAl. <i>Mathematics and Mechanics of Solids</i> , 2021, 26, 1320-1336.	2.4	3
12	Nonlocal integral elasticity based phase field modelling and simulations of nanoscale thermal- and stress-induced martensitic transformations using a boundary effect compensation kernel. <i>Computational Materials Science</i> , 2021, 194, 110429.	3.0	9
13	Interaction of martensitic transformations and vacancy diffusion at the nanoscale under thermal loading: a phase field model and simulations. <i>Acta Mechanica</i> , 2021, 232, 4567-4582.	2.1	4
14	High pressure phase evolution under hydrostatic pressure in a single imperfect crystal due to nanovoids. <i>Materialia</i> , 2021, 20, 101199.	2.7	21
15	Phase field modeling of crack growth with double-well potential including surface effects. <i>Continuum Mechanics and Thermodynamics</i> , 2020, 32, 913-925.	2.2	19
16	Formation of stress- and thermal-induced martensitic nanostructures in a single crystal with phase-dependent elastic properties. <i>Journal of Materials Science</i> , 2020, 55, 2544-2563.	3.7	16
17	Thermal induced nanovoid evolution in the vicinity of an immobile austenite-martensite interface. <i>Computational Materials Science</i> , 2020, 172, 109339.	3.0	21
18	Nanovoid induced multivariant martensitic growth under negative pressure: Effect of misfit strain and temperature on PT threshold stress and phase evolution. <i>Mechanics of Materials</i> , 2020, 151, 103627.	3.2	19

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19	Nanovoid induced martensitic growth under uniaxial stress: Effect of misfit strain, temperature and nanovoid size on PT threshold stress and nanostructure in NiAl. Computational Materials Science, 2020, 184, 109928.	3.0	17
20	Explicit nonlinear finite element approach to the Lagrangian-based coupled phase field and elasticity equations for nanoscale thermal- and stress-induced martensitic transformations. Continuum Mechanics and Thermodynamics, 2020, , 1.	2.2	9
21	Phase field approach for void dynamics with interface stresses at the nanoscale. International Journal of Engineering Science, 2020, 154, 103279.	5.0	22
22	On the phase field modeling of crack growth and analytical treatment on the parameters. Continuum Mechanics and Thermodynamics, 2020, 32, 589-606.	2.2	25
23	Investigating the effect of elastic anisotropy on martensitic phase transformations at the nanoscale. Computational Materials Science, 2019, 167, 168-182.	3.0	23
24	Finite element buckling analysis of double-layered graphene nanoribbons. Materials Research Express, 2019, 6, 055023.	1.6	7
25	Phase field approach for nanoscale interactions between crack propagation and phase transformation. Nanoscale, 2019, 11, 22243-22247.	5.6	43
26	Mathematical Modeling of Batch Adsorption Kinetics of Lead Ions on Modified Natural Zeolite from Aqueous Media. Theoretical Foundations of Chemical Engineering, 2019, 53, 1057-1066.	0.7	10
27	Glass transition temperature of PMMA/modified alumina nanocomposite: molecular dynamic study. Materials Research Express, 2019, 6, 035309.	1.6	14
28	Nanoscale mechanisms for high-pressure mechanochemistry: a phase field study. Journal of Materials Science, 2018, 53, 13343-13363.	3.7	38
29	Phase field-elasticity analysis of austenite \rightarrow martensite phase transformation at the nanoscale: Finite element modeling. Computational Materials Science, 2018, 154, 41-52.	3.0	31
30	Thermodynamically consistent and scale-dependent phase field approach for crack propagation allowing for surface stresses. International Journal of Plasticity, 2018, 111, 1-35.	8.8	67
31	Synthesis of zeolite/magnetite nanocomposite and a fast experimental determination of its specific surface area. Protection of Metals and Physical Chemistry of Surfaces, 2017, 53, 693-702.	1.1	14
32	Phase field simulations of plastic strain-induced phase transformations under high pressure and large shear. Physical Review B, 2016, 94, .	3.2	76
33	A novel magnetic chitosan/clinoptilolite/magnetite nanocomposite for highly efficient removal of Pb(II) ions from aqueous solution. Powder Technology, 2016, 302, 372-383.	4.2	92
34	Phase field approach to dislocation evolution at large strains: Computational aspects. International Journal of Solids and Structures, 2016, 82, 95-110.	2.7	22
35	Martensitic phase transformations in shape memory alloy: phase field modeling with surface tension effect. Computational Materials Science, 2016, 115, 137-144.	3.0	36
36	Interaction between phase transformations and dislocations at the nanoscale. Part 2: Phase field simulation examples. Journal of the Mechanics and Physics of Solids, 2015, 82, 164-185.	4.8	78

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37	Thermodynamically consistent phase field approach to dislocation evolution at small and large strains. Journal of the Mechanics and Physics of Solids, 2015, 82, 345-366.	4.8	38
38	Interaction between phase transformations and dislocations at the nanoscale. Part 1. General phase field approach. Journal of the Mechanics and Physics of Solids, 2015, 82, 287-319.	4.8	83
39	Phase transformations in nanograin materials under high pressure and plastic shear: nanoscale mechanisms. Nanoscale, 2014, 6, 162-166.	5.6	104
40	Phase field approach to interaction of phase transformation and dislocation evolution. Applied Physics Letters, 2013, 102, .	3.3	55
41	Advanced phase-field approach to dislocation evolution. Physical Review B, 2012, 86, .	3.2	68
42	Surface-Induced Phase Transformations: Multiple Scale and Mechanics Effects and Morphological Transitions. Physical Review Letters, 2011, 107, 175701.	7.8	79
43	Phase-field approach to martensitic phase transformations: Effect of martensite interface energy. International Journal of Materials Research, 2011, 102, 652-665.	0.3	58
44	Surface Tension and Energy in Multivariant Martensitic Transformations: Phase-Field Theory, Simulations, and Model of Coherent Interface. Physical Review Letters, 2010, 105, 165701.	7.8	117
45	Coupled phase field and nonlocal integral elasticity analysis of stress-induced martensitic transformations at the nanoscale: boundary effects, limitations and contradictions. Continuum Mechanics and Thermodynamics, 0, , 1.	2.2	4
46	Local vs. nonlocal integral elasticity-based phase field models including surface tension and simulations of single and two variant martensitic transformations and twinning. Engineering With Computers, 0, , 1.	6.1	1