Majid Baniassadi

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Modeling of two-phase random composite materials by finite element, Mori–Tanaka and strong contrast methods. Composites Part B: Engineering, 2013, 45, 1117-1125.	12.0	140
2	Three-phase solid oxide fuel cell anode microstructure realization using two-point correlation functions. Acta Materialia, 2011, 59, 30-43.	7.9	82
3	3-D microstructure reconstruction of polymer nano-composite using FIB–SEM and statistical correlation function. Composites Science and Technology, 2013, 80, 47-54.	7.8	71
4	3D microstructural reconstruction of heterogeneous materials from 2D cross sections: A modified phase-recovery algorithm. Computational Materials Science, 2016, 111, 107-115.	3.0	58
5	An interfacial debonding-induced damage model for graphite nanoplatelet polymer composites. Computational Materials Science, 2015, 96, 191-199.	3.0	46
6	Modeling and homogenization of shape memory polymer nanocomposites. Composites Part B: Engineering, 2016, 91, 36-43.	12.0	46
7	Assessment of controllable shape transformation, potential applications, and tensile shape memory properties of 3D printed PETG. Journal of Materials Research and Technology, 2022, 18, 4201-4215.	5.8	42
8	Mechanical and thermal behavior of nanoclay based polymer nanocomposites using statistical homogenization approach. Composites Science and Technology, 2011, 71, 1930-1935.	7.8	41
9	Three-dimensional reconstruction and homogenization of heterogeneous materials using statistical correlation functions and FEM. Computational Materials Science, 2012, 51, 372-379.	3.0	41
10	Surface modification of severe plastically deformed ultrafine grained pure titanium by plasma electrolytic oxidation. Surface and Coatings Technology, 2017, 316, 113-121.	4.8	40
11	Heat-treatment effects on dimensional stability and mechanical properties of 3D printed continuous carbon fiber-reinforced composites. Composites Part A: Applied Science and Manufacturing, 2021, 147, 106460.	7.6	39
12	On the directional elastic modulus of the TPMS structures and a novel hybridization method to control anisotropy. Materials and Design, 2021, 210, 110074.	7.0	39
13	Shape memory performance of PETG 4D printed parts under compression in cold, warm, and hot programming. Smart Materials and Structures, 2022, 31, 085002.	3.5	39
14	New approximate solution for N-point correlation functions for heterogeneous materials. Journal of the Mechanics and Physics of Solids, 2012, 60, 104-119.	4.8	37
15	Impedance analysis for condition monitoring of single lap CNT-epoxy adhesive joint. International Journal of Adhesion and Adhesives, 2019, 88, 59-65.	2.9	37
16	3D Reconstruction of Carbon Nanotube Composite Microstructure Using Correlation Functions. Journal of Computational and Theoretical Nanoscience, 2010, 7, 1462-1468.	0.4	36
17	Microstructure reconstruction and homogenization of porous Ni-YSZ composites for temperature dependent properties. Journal of Power Sources, 2013, 235, 74-80.	7.8	36
18	Numerical homogenization of coiled carbon nanotube reinforced shape memory polymer nanocomposites. Smart Materials and Structures, 2019, 28, 035026.	3.5	35

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19	Effective thermal and mechanical properties of short carbon fiber/natural rubber composites as a function of mechanical loading. Applied Thermal Engineering, 2017, 117, 8-16.	6.0	33
20	Insights into interphase thickness characterization for graphene/epoxy nanocomposites: a molecular dynamics simulation. Physical Chemistry Chemical Physics, 2019, 21, 19890-19903.	2.8	33
21	Microstructure Reconstruction and Characterization of the Porous GDLs for PEMFC Based on Fibers Orientation Distribution. Fuel Cells, 2018, 18, 160-172.	2.4	30
22	Contact angle hysteresis and motion behaviors of a water nano-droplet on suspended graphene under temperature gradient. Physics of Fluids, 2018, 30, .	4.0	30
23	Semi-inverse Monte Carlo reconstruction of two-phase heterogeneous material using two-point functions. International Journal of Theoretical and Applied Multiscale Mechanics, 2009, 1, 134.	0.6	27
24	Effect of nanofiller geometry on the energy absorption capability of coiled carbon nanotube composite material. Composites Science and Technology, 2017, 153, 222-231.	7.8	27
25	Computational analysis of vincristine loaded silk fibroin hydrogel for sustained drug delivery applications: Multiphysics modeling and experiments. International Journal of Pharmaceutics, 2021, 609, 121184.	5.2	27
26	Application of full set of two point correlation functions from a pair of 2D cut sections for 3D porous media reconstruction. Journal of Petroleum Science and Engineering, 2017, 149, 789-800.	4.2	26
27	Influence of bone microstructure distribution on developed mechanical energy for bone remodeling using a statistical reconstruction method. Mathematics and Mechanics of Solids, 2019, 24, 3027-3041.	2.4	26
28	Statistical continuum theory for the effective conductivity of carbon nanotubes filled polymer composites. Thermochimica Acta, 2011, 520, 33-37.	2.7	25
29	A modified strong-contrast expansion for estimating the effective thermal conductivity of multiphase heterogeneous materials. Journal of Applied Physics, 2012, 112, .	2.5	25
30	Microstructure, property and processing relation in gradient porous cathode of solid oxide fuel cells using statistical continuum mechanics. Journal of Power Sources, 2011, 196, 6325-6331.	7.8	22
31	Insight into Geometry-Controlled Mechanical Properties of Spiral Carbon-Based Nanostructures. Journal of Physical Chemistry C, 2019, 123, 3226-3238.	3.1	22
32	Numerical investigation of smart auxetic three-dimensional meta-structures based on shape memory polymers via topology optimization. Journal of Intelligent Material Systems and Structures, 2020, 31, 1838-1852.	2.5	22
33	Optimization of solid oxide fuel cell cathodes using two-point correlation functions. Computational Materials Science, 2016, 123, 268-276.	3.0	21
34	Efficient threeâ€phase reconstruction of heterogeneous material from 2D crossâ€sections via phaseâ€recovery algorithm. Journal of Microscopy, 2016, 264, 384-393.	1.8	20
35	AC and DC electrical behavior of MWCNT/epoxy nanocomposite near percolation threshold: Equivalent circuits and percolation limits. Journal of Applied Physics, 2018, 123, .	2.5	20
36	The effectiveness of different thresholding techniques in segmenting micro CT images of porous carbonates to estimate porosity. Journal of Petroleum Science and Engineering, 2019, 177, 518-527.	4.2	20

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37	Using SAXS approach to estimate thermal conductivity of polystyrene/zirconia nanocomposite by exploiting strong contrast technique. Acta Materialia, 2011, 59, 2742-2748.	7.9	19
38	Improving flame-retardant, thermal, and mechanical properties of an epoxy using halogen-free fillers. Science and Engineering of Composite Materials, 2018, 25, 939-946.	1.4	19
39	On finite bending of visco-hyperelastic materials: a novel analytical solution and FEM. Acta Mechanica, 2020, 231, 3435-3450.	2.1	19
40	A comparison of viscoplastic intermediate approaches for deformation texture evolution in face-centered cubic polycrystals. Acta Materialia, 2009, 57, 2496-2508.	7.9	18
41	Incorporation of electron tunnelling phenomenon into 3D Monte Carlo simulation of electrical percolation in graphite nanoplatelet composites. Journal Physics D: Applied Physics, 2011, 44, 455306.	2.8	18
42	3D reconstruction of carbon nanotube networks from neutron scattering experiments. Nanotechnology, 2015, 26, 385704.	2.6	17
43	Hydrogenation-controlled mechanical properties in graphene helicoids: exceptional distribution-dependent behavior. Physical Chemistry Chemical Physics, 2019, 21, 12423-12433.	2.8	17
44	Composition of two-point correlation functions of subcomposites in heterogeneous materials. Mechanics of Materials, 2012, 51, 88-96.	3.2	16
45	An optimum approximation of n-point correlation functions of random heterogeneous material systems. Journal of Chemical Physics, 2014, 140, 074905.	3.0	16
46	Threeâ€Dimensional Reconstruction and Microstructure Modeling of Porosityâ€Graded Cathode Using Focused Ion Beam and Homogenization Techniques. Fuel Cells, 2014, 14, 91-95.	2.4	16
47	Monitoring the effect of sonoporation on the cells using electrochemical approach. Ultrasonics Sonochemistry, 2018, 41, 619-625.	8.2	16
48	Role of Chemical Doping in Large Deformation Behavior of Spiral Carbon-Based Nanostructures: Unraveling Geometry-Dependent Chemical Doping Effects. Journal of Physical Chemistry C, 2019, 123, 19208-19219.	3.1	16
49	Developing a finite element beam theory for nanocomposite shape memory polymers with application to sustained release of drugs. Scientia Iranica, 2017, 24, 249-259.	0.4	16
50	Designing an optimal 3D microstructure for three-phase solid oxide fuel cell anodes with maximal active triple phase boundary length (TPBL). International Journal of Hydrogen Energy, 2015, 40, 15585-15596.	7.1	15
51	Homogenization of heterogeneous brain tissue under quasi-static loading: a visco-hyperelastic model of a 3D RVE. Biomechanics and Modeling in Mechanobiology, 2019, 18, 969-981.	2.8	14
52	Evaluating the Effect of Mechanical Loading on the Electrical Percolation Threshold of Carbon Nanotube Reinforced Polymers: A 3D Monte-Carlo Study. Journal of Computational and Theoretical Nanoscience, 2011, 8, 2087-2099.	0.4	13
53	A novel numerical model for the prediction of patient-dependent bone density loss in microgravity based on micro-CT images. Continuum Mechanics and Thermodynamics, 2020, 32, 927-943.	2.2	13
54	A novel machine learning based computational framework for homogenization of heterogeneous soft materials: application to liver tissue. Biomechanics and Modeling in Mechanobiology, 2020, 19, 1131-1142.	2.8	12

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55	Atomistic simulation of interfacial properties and damage mechanism in graphene nanoplatelet/epoxy composites. Computational Materials Science, 2020, 184, 109888.	3.0	12
56	Determinative factors in inhibition of aquaporin by different pharmaceuticals: Atomic scale overview by molecular dynamics simulation. Biochimica Et Biophysica Acta - General Subjects, 2018, 1862, 2815-2823.	2.4	11
57	Numerical study of the conductive liquid metal elastomeric composites. Materials Today Communications, 2020, 23, 100878.	1.9	11
58	An Investigation on Thermomechanical Flexural Response of Shape-Memory-Polymer Beams. International Journal of Applied Mechanics, 2016, 08, 1650063.	2.2	10
59	Ultrasound assisted electrochemical distinction of normal and cancerous cells. Sensors and Actuators B: Chemical, 2018, 255, 1-7.	7.8	10
60	How to characterize interfacial load transfer in spiral carbon-based nanostructure-reinforced nanocomposites: is this a geometry-dependent process?. Physical Chemistry Chemical Physics, 2019, 21, 23880-23892.	2.8	10
61	Thermomechanical behavior of shape memory polymer beams reinforced by corrugated polymeric sections. Meccanica, 2017, 52, 1947-1962.	2.0	9
62	Effect of 2D Image Resolution on 3D Stochastic Reconstruction and Developing Petrophysical Trend. Transport in Porous Media, 2018, 125, 41-58.	2.6	9
63	Investigation on thermal stresses in FGM hyperelastic thick-walled cylinders. Journal of Thermal Stresses, 2018, 41, 204-221.	2.0	9
64	Optimization of Taylor spatial frame half-pins diameter for bone deformity correction: Application to femur. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2018, 232, 673-681.	1.8	9
65	A computational approach to evaluate the nonlinear and noisy DC electrical response in carbon nanotube/polymer nanocomposites near the percolation threshold. Computational Materials Science, 2020, 173, 109439.	3.0	9
66	A framework for optimal microstructural design of random heterogeneous materials. Computational Mechanics, 2020, 66, 123-139.	4.0	9
67	Mechanical properties improvement of shape memory polymers by designing the microstructure of multi-phase heterogeneous materials. Computational Materials Science, 2021, 196, 110523.	3.0	9
68	Effects of functional group type and coverage on the interfacial strength and load transfer of graphene-polyethylene nanocomposites: a molecular dynamics simulation. Applied Physics A: Materials Science and Processing, 2022, 128, 1.	2.3	9
69	Investigation of the geometric property hull for infiltrated solid oxide fuel cell electrodes. International Journal of Energy Research, 2017, 41, 2318-2331.	4.5	8
70	Formation of homogenous copper film on MWCNTs by an efficient electroless deposition process. Science and Engineering of Composite Materials, 2017, 24, 345-352.	1.4	7
71	Temperature and stress distribution in hollow annular disk of uniform thickness with quadratic temperature-dependent thermal conductivity. Journal of Thermal Stresses, 2017, 40, 828-845.	2.0	7
72	3D-Printable Unit Cell Design for Cubic and Orthotropic Porous Microstructures Using Topology Optimization Based on Optimality Criteria Algorithm. International Journal of Applied Mechanics, 2018, 10, 1850060.	2.2	7

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73	Exceptional behavior of anatase TiO2 nanotubes in axial loading: A molecular dynamics study of the effect of surface wrinkles. Computational Materials Science, 2019, 158, 307-314.	3.0	7
74	Hydrostatic Tube Cyclic Extrusion Compression as a Novel Severe Plastic Deformation Method for Fabricating Long Nanostructured Tubes. Metals and Materials International, 2022, 28, 1725-1740.	3.4	7
75	A novel semi-inverse solution method for elastoplastic torsion of heat treated rods. Meccanica, 2010, 45, 375-392.	2.0	6
76	Evaluating the Effect of Mechanical Loading on the Effective Thermal Conductivity of CNT/Polymer Nanocomposites. Journal of Computational and Theoretical Nanoscience, 2014, 11, 1738-1744.	0.4	6
77	Electrical Percolation in Nanocomposites with Impenetrable Ellipsoidal Inclusion (Comprehensive) Tj ETQq1 1 Nanoscience, 2015, 12, 1010-1016.).784314 rg 0.4	BT /Overlock 6
78	Synergistic effect of carbon nanotubes and copper particles in an epoxy-based nanocomposite using electroless copper deposited carbon nanotubes: Part I – Mechanical properties. Journal of Composite Materials, 2016, 50, 1909-1920.	2.4	6
79	Application of Elastic-Damage-Heal Model for Self-Healing Concrete Thick-Walled Cylinders Through Thermodynamics of Irreversible Processes. International Journal of Applied Mechanics, 2017, 09, 1750082.	2.2	6
80	Investigation of the property hull for solid oxide fuel cell microstructures. Computational Materials Science, 2017, 127, 1-7.	3.0	6
81	Influence of the liver vascular distribution on its overall mechanical behavior: A first approach to multiscale fluid-structure homogenization. Journal of Cellular Immunotherapy, 2018, 4, 35-37.	0.6	6
82	Developing a beam formulation for semi-crystalline two-way shape memory polymers. Journal of Intelligent Material Systems and Structures, 2020, 31, 1465-1476.	2.5	6
83	Geometric Modeling of Infiltrated Solid Oxide Fuel Cell Electrodes for Performance Optimization. , 2015, 11, 428-433.		5
84	Large deformation and stability analysis of functionally graded pressure vessels: An analytical and numerical study. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2018, 232, 3300-3314.	2.1	5
85	Design and Manufacture of a Smart Macro-Structure with Changeable Effective Stiffness. International Journal of Applied Mechanics, 2020, 12, 2050001.	2.2	5
86	A New Statistical Descriptor for the Physical Characterization and 3D Reconstruction of Heterogeneous Materials. Transport in Porous Media, 2022, 142, 23-40.	2.6	5
87	A modified simulated annealing algorithm for hybrid statistical reconstruction of heterogeneous microstructures. Computational Materials Science, 2021, 197, 110636.	3.0	5
88	Free Vibration Analysis of Rotating Functionally Graded Annular Disc of Variable Thickness Using Generalized Differential Quadrature Method. Scientia Iranica, 2017, .	0.4	5
89	Optimal combining of microstructures using statistical correlation functions. International Journal of Solids and Structures, 2019, 160, 177-186.	2.7	4
90	Development and implementation of a geometrically nonlinear beam theory model for SMA composite beams with asymmetric behavior. Composite Structures, 2021, 259, 113417.	5.8	4

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91	Simulating favorable adsorption in lithium-ion batteries using a novel cellular-automaton-based method. Physica Scripta, 2021, 96, 125841.	2.5	4
92	Computational Elucidation of Elastic Percolation Threshold in Isotropic and Anisotropic Microstructures with Voronoi Tessellation. International Journal of Applied Mechanics, 2019, 11, 1950029.	2.2	3
93	Numerical Investigation of Axonal Damage for Regular and Irregular Axonal Distributions. Frontiers in Mechanical Engineering, 2021, 7, .	1.8	3
94	Conical coiled carbon nanotubes with highly controllable mechanical properties. Materials Today Communications, 2021, 29, 102927.	1.9	3
95	Insights into thermal characteristics of spiral carbon-based nanomaterials: From heat transport mechanisms to tunable thermal diode behavior. International Journal of Heat and Mass Transfer, 2022, 189, 122719.	4.8	3
96	Qualitative Equivalence Between Electrical Percolation Threshold and Effective Thermal Conductivity in Polymer/Carbon Nanocomposites. Journal of Engineering Materials and Technology, Transactions of the ASME, 2012, 134, .	1.4	2
97	Elastic Percolation in Nanocomposites with Impenetrable Ellipsoidal Inclusion (Comprehensive Study) Tj ETQq1 1	0,784314 2.2	• rgBT /Over
98	Geometric Modeling of Infiltrated Solid Oxide Fuel Cell Electrodes with Directional Backbones. Fuel Cells, 2017, 17, 67-74.	2.4	2
99	Elastic percolation of composite structures with regular tessellations of microstructure. Composite Structures, 2017, 161, 513-521.	5.8	2
100	Micromechanical Modeling of the Effective Mechanical Behavior of Cerebral Cortex Tissue. Iranian Journal of Science and Technology - Transactions of Mechanical Engineering, 2020, 44, 273-285.	1.3	2
101	Design and Shape Optimization of a Biodegradable Polymeric Stent for Curved Arteries Using FEM. Frontiers in Mechanical Engineering, 2021, 7, .	1.8	2
102	A Microfabrication Method of PCL Scaffolds for Tissue Engineering by Simultaneous Two PDMS Molds Replication. ACS Biomaterials Science and Engineering, 2021, 7, 4763-4778.	5.2	2
103	Anatase TiO2 nanotubes as Li-ion battery anodes: A molecular dynamics study of Li-ion adsorption on anatase nanotubes. Sustainable Energy Technologies and Assessments, 2021, 47, 101438.	2.7	2
104	Refining anticipation of degraded bone microstructures during osteoporosis based on statistical homogenized reconstruction method via quality of connection function. International Journal of Computational Materials Science and Engineering, 2020, 09, 2050023.	0.7	2
105	Prediction of bone microstructures degradation during osteoporosis with fuzzy cellular automata algorithm. Mathematics and Mechanics of Solids, 0, , 108128652210885.	2.4	2
106	Statistical prediction of bone microstructure degradation to study patient dependency in osteoporosis. Mathematics and Mechanics of Solids, 0, , 108128652210987.	2.4	2
107	Decisive structural elements in water and ion permeation through mechanosensitive channels of large conductance: insights from molecular dynamics simulation. RSC Advances, 2022, 12, 17803-17816.	3.6	2
108	Transient swelling of cylindrical hydrogels under coupled extension-torsion: Analytical and 3D FEM solutions. Journal of Intelligent Material Systems and Structures, 2023, 34, 415-424.	2.5	2

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109	Modeling of Biologically Inspired Adhesive Pads Using Monte Carlo Analysis. Journal of Adhesion Science and Technology, 2010, 24, 1207-1220.	2.6	1
110	Developing a Coupled Statistical and Monte Carlo Approach for Geometric Modeling and Optimizing of Infiltrated Solid Oxide Fuel Cell Electrode. Fuel Cells, 2019, 19, 112-124.	2.4	1
111	Computational modeling of degradation process on the mechanical performance of Poly-lactic acid /Magnesium composite. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 2021, 235, 3-18.	1.1	1
112	Analytical Solution of Governing Equations of Triple Coupled Physics of Structural Mechanics, Diffusion, and Heat Transfer. Scientia Iranica, 2018, .	0.4	1
113	Mechanical properties of an epoxy-based coating reinforced with silica aerogel and ammonium polyphosphate additives. Polymers and Polymer Composites, 2022, 30, 096739112110690.	1.9	1
114	Effect of Mechanical Deformation on Electrical Percolation of CNT Polymer Composites. , 2009, , .		0
115	Microstructural design of tunable elastoplastic two-phase random heterogeneous materials. Materials Today Communications, 2021, 27, 102300.	1.9	0
116	Numerical Simulation of Synthetic Microstructured Fibrillar Adhesive Pads. , 2009, , .		0