# Majid Baniassadi

## List of Publications by Year in Descending Order

| 110 | 1,395 | 21 | 31 |
|-----|-------|-----|-----|
| papers | citations | h-index | g-index |
| 119 | 1,660 | 3.6 | 4.83 |
| ext. papers | ext. citations | avg, IF | L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 110 | Mechanical properties of an epoxy-based coating reinforced with silica aerogel and ammonium polyphosphate additives. *Polymers and Polymer Composites*, **2022**, 30, 096739112110690 | 0.8 | |
| 109 | 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 | 2.6 | 1 |
| 108 | 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 | 4.9 | |
| 107 | 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 | 5.5 | 8 |
| 106 | Simulating favorable adsorption in lithium-ion batteries using a novel cellular-automaton-based method. *Physica Scripta*, **2021**, 96, 125841 | 2.6 | 0 |
| 105 | Computational analysis of vincristine loaded silk fibroin hydrogel for sustained drug delivery applications: Multiphysics modeling and experiments. *International Journal of Pharmaceutics*, **2021**, 609, 121184 | 6.5 | 4 |
| 104 | Conical coiled carbon nanotubes with highly controllable mechanical properties. *Materials Today Communications*, **2021**, 29, 102927 | 2.5 | 1 |
| 103 | Microstructural design of tunable elastoplastic two-phase random heterogeneous materials. *Materials Today Communications*, **2021**, 27, 102300 | 2.5 | |
| 102 | Development and implementation of a geometrically nonlinear beam theory model for SMA composite beams with asymmetric behavior. *Composite Structures*, **2021**, 259, 113417 | 5.3 | 0 |
| 101 | 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 | 1.3 | 1 |
| 100 | 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 | 8.4 | 10 |
| 99 | Mechanical properties improvement of shape memory polymers by designing the microstructure of multi-phase heterogeneous materials. *Computational Materials Science*, **2021**, 196, 110523 | 3.2 | 2 |
| 98 | A modified simulated annealing algorithm for hybrid statistical reconstruction of heterogeneous microstructures. *Computational Materials Science*, **2021**, 197, 110636 | 3.2 | 2 |
| 97 | A Microfabrication Method of PCL Scaffolds for Tissue Engineering by Simultaneous Two PDMS Molds Replication. *ACS Biomaterials Science and Engineering*, **2021**, 7, 4763-4778 | 5.5 | 2 |
| 96 | 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 | 4.7 | 1 |
| 95 | On the directional elastic modulus of the TPMS structures and a novel hybridization method to control anisotropy. *Materials and Design*, **2021**, 210, 110074 | 8.1 | 6 |
| 94 | Developing a beam formulation for semi-crystalline two-way shape memory polymers. *Journal of Intelligent Material Systems and Structures*, **2020**, 31, 1465-1476 | 2.3 | 2 |

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| 93 | Atomistic simulation of interfacial properties and damage mechanism in graphene nanoplatelet/epoxy composites. *Computational Materials Science*, **2020**, 184, 109888 | 3.2 | 5 |
| 92 | A framework for optimal microstructural design of random heterogeneous materials. *Computational Mechanics*, **2020**, 66, 123-139 | 4 | 4 |
| 91 | 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 | 2.3 | 8 |
| 90 | On finite bending of visco-hyperelastic materials: a novel analytical solution and FEM. *Acta Mechanica*, **2020**, 231, 3435-3450 | 2.1 | 11 |
| 89 | Design and Manufacture of a Smart Macro-Structure with Changeable Effective Stiffness. *International Journal of Applied Mechanics*, **2020**, 12, 2050001 | 2.4 | 3 |
| 88 | 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 | 0.3 | 1 |
| 87 | Numerical study of the conductive liquid metal elastomeric composites. *Materials Today Communications*, **2020**, 23, 100878 | 2.5 | 9 |
| 86 | 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 | 3.8 | 10 |
| 85 | 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 | 3.2 | 2 |
| 84 | 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 | 1.2 | 2 |
| 83 | 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 | 3.5 | 9 |
| 82 | Insights into interphase thickness characterization for graphene/epoxy nanocomposites: a molecular dynamics simulation. *Physical Chemistry Chemical Physics*, **2019**, 21, 19890-19903 | 3.6 | 20 |
| 81 | Numerical homogenization of coiled carbon nanotube reinforced shape memory polymer nanocomposites. *Smart Materials and Structures*, **2019**, 28, 035026 | 3.4 | 27 |
| 80 | Hydrogenation-controlled mechanical properties in graphene helicoids: exceptional distribution-dependent behavior. *Physical Chemistry Chemical Physics*, **2019**, 21, 12423-12433 | 3.6 | 13 |
| 79 | Computational Elucidation of Elastic Percolation Threshold in Isotropic and Anisotropic Microstructures with Voronoi Tessellation. *International Journal of Applied Mechanics*, **2019**, 11, 1950029 | 2.4 | 3 |
| 78 | 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 | 3.8 | 9 |
| 77 | Insight into Geometry-Controlled Mechanical Properties of Spiral Carbon-Based Nanostructures. *Journal of Physical Chemistry C*, **2019**, 123, 3226-3238 | 3.8 | 14 |
| 76 | 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 | 3.6 | 6 |

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| 75 | 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 | 2.9 | |
| 74 | 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 | 2.3 | 20 |
| 73 | 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 | 3.8 | 10 |
| 72 | 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 | 4.4 | 12 |
| 71 | Impedance analysis for condition monitoring of single lap CNT-epoxy adhesive joint. *International Journal of Adhesion and Adhesives*, **2019**, 88, 59-65 | 3.4 | 19 |
| 70 | 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 | 3.2 | 4 |
| 69 | Optimal combining of microstructures using statistical correlation functions. *International Journal of Solids and Structures*, **2019**, 160, 177-186 | 3.1 | 4 |
| 68 | Microstructure Reconstruction and Characterization of the Porous GDLs for PEMFC Based on Fibers Orientation Distribution. *Fuel Cells*, **2018**, 18, 160-172 | 2.9 | 19 |
| 67 | Effect of 2D Image Resolution on 3D Stochastic Reconstruction and Developing Petrophysical Trend. *Transport in Porous Media*, **2018**, 125, 41-58 | 3.1 | 5 |
| 66 | Contact angle hysteresis and motion behaviors of a water nano-droplet on suspended graphene under temperature gradient. *Physics of Fluids*, **2018**, 30, 052101 | 4.4 | 25 |
| 65 | AC and DC electrical behavior of MWCNT/epoxy nanocomposite near percolation threshold: Equivalent circuits and percolation limits. *Journal of Applied Physics*, **2018**, 123, 105109 | 2.5 | 13 |
| 64 | Improving flame-retardant, thermal, and mechanical properties of an epoxy using halogen-free fillers. *Science and Engineering of Composite Materials*, **2018**, 25, 939-946 | 1.5 | 10 |
| 63 | 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 | 1.3 | 3 |
| 62 | 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 | 2.4 | 4 |
| 61 | Monitoring the effect of sonoporation on the cells using electrochemical approach. *Ultrasonics Sonochemistry*, **2018**, 41, 619-625 | 8.9 | 10 |
| 60 | Investigation on thermal stresses in FGM hyperelastic thick-walled cylinders. *Journal of Thermal Stresses*, **2018**, 41, 204-221 | 2.2 | 7 |
| 59 | Ultrasound assisted electrochemical distinction of normal and cancerous cells. *Sensors and Actuators B: Chemical*, **2018**, 255, 1-7 | 8.5 | 9 |
| 58 | 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 | 4 | 7 |

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| 57 | 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 | | 3 |
| 56 | 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 | 1.7 | 7 |
| 55 | Formation of homogenous copper film on MWCNTs by an efficient electroless deposition process. *Science and Engineering of Composite Materials*, **2017**, 24, 345-352 | 1.5 | 6 |
| 54 | 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 | 2.2 | 6 |
| 53 | Geometric Modeling of Infiltrated Solid Oxide Fuel Cell Electrodes with Directional Backbones. *Fuel Cells*, **2017**, 17, 67-74 | 2.9 | 2 |
| 52 | Surface modification of severe plastically deformed ultrafine grained pure titanium by plasma electrolytic oxidation. *Surface and Coatings Technology*, **2017**, 316, 113-121 | 4.4 | 27 |
| 51 | 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 | 5.8 | 27 |
| 50 | Effect of nanofiller geometry on the energy absorption capability of coiled carbon nanotube composite material. *Composites Science and Technology*, **2017**, 153, 222-231 | 8.6 | 21 |
| 49 | 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 | 2.4 | 5 |
| 48 | Investigation of the geometric property hull for infiltrated solid oxide fuel cell electrodes. *International Journal of Energy Research*, **2017**, 41, 2318-2331 | 4.5 | 3 |
| 47 | Investigation of the property hull for solid oxide fuel cell microstructures. *Computational Materials Science*, **2017**, 127, 1-7 | 3.2 | 4 |
| 46 | Elastic percolation of composite structures with regular tessellations of microstructure. *Composite Structures*, **2017**, 161, 513-521 | 5.3 | 2 |
| 45 | 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 | 4.4 | 21 |
| 44 | Thermomechanical behavior of shape memory polymer beams reinforced by corrugated polymeric sections. *Meccanica*, **2017**, 52, 1947-1962 | 2.1 | 7 |
| 43 | Developing a finite element beam theory for nanocomposite shape memory polymers with application to sustained release of drugs. *Scientia Iranica*, **2017**, 24, 249-259 | 1.5 | 12 |
| 42 | Free Vibration Analysis of Rotating Functionally Graded Annular Disc of Variable Thickness Using Generalized Differential Quadrature Method. *Scientia Iranica*, **2017**, 0-0 | 1.5 | 2 |
| 41 | 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 | 2.7 | 6 |
| 40 | An Investigation on Thermomechanical Flexural Response of Shape-Memory-Polymer Beams. *International Journal of Applied Mechanics*, **2016**, 08, 1650063 | 2.4 | 8 |

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| 39 | Optimization of solid oxide fuel cell cathodes using two-point correlation functions. *Computational Materials Science*, **2016**, 123, 268-276 | 3.2 | 17 |
| 38 | Modeling and homogenization of shape memory polymer nanocomposites. *Composites Part B: Engineering*, **2016**, 91, 36-43 | 10 | 39 |
| 37 | 3D microstructural reconstruction of heterogeneous materials from 2D cross sections: A modified phase-recovery algorithm. *Computational Materials Science*, **2016**, 111, 107-115 | 3.2 | 46 |
| 36 | Elastic Percolation in Nanocomposites with Impenetrable Ellipsoidal Inclusion (Comprehensive Study of Geometry and Interphase Thickness). *International Journal of Applied Mechanics*, **2016**, 08, 1650055 | 2.4 | 2 |
| 35 | Efficient three-phase reconstruction of heterogeneous material from 2D cross-sections via phase-recovery algorithm. *Journal of Microscopy*, **2016**, 264, 384-393 | 1.9 | 18 |
| 34 | **2016**, | | 28 |
| 33 | 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 | 6.7 | 12 |
| 32 | Electrical Percolation in Nanocomposites with Impenetrable Ellipsoidal Inclusion (Comprehensive Study of Tunneling, Geometry, Anisotropy and Mixing). *Journal of Computational and Theoretical Nanoscience*, **2015**, 12, 1010-1016 | 0.3 | 3 |
| 31 | 3D reconstruction of carbon nanotube networks from neutron scattering experiments. *Nanotechnology*, **2015**, 26, 385704 | 3.4 | 16 |
| 30 | An interfacial debonding-induced damage model for graphite nanoplatelet polymer composites. *Computational Materials Science*, **2015**, 96, 191-199 | 3.2 | 37 |
| 29 | Geometric Modeling of Infiltrated Solid Oxide Fuel Cell Electrodes for Performance Optimization **2015**, 11, 428-433 | | 1 |
| 28 | 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 | 0.3 | 4 |
| 27 | An optimum approximation of n-point correlation functions of random heterogeneous material systems. *Journal of Chemical Physics*, **2014**, 140, 074905 | 3.9 | 13 |
| 26 | Three-Dimensional Reconstruction and Microstructure Modeling of Porosity-Graded Cathode Using Focused Ion Beam and Homogenization Techniques. *Fuel Cells*, **2014**, 14, 91-95 | 2.9 | 14 |
| 25 | Microstructure reconstruction and homogenization of porous Ni-YSZ composites for temperature dependent properties. *Journal of Power Sources*, **2013**, 235, 74-80 | 8.9 | 33 |
| 24 | 3-D microstructure reconstruction of polymer nano-composite using FIB-SEM and statistical correlation function. *Composites Science and Technology*, **2013**, 80, 47-54 | 8.6 | 62 |
| 23 | Modeling of two-phase random composite materials by finite element, Mori-Tanaka and strong contrast methods. *Composites Part B: Engineering*, **2013**, 45, 1117-1125 | 10 | 114 |
| 22 | Composition of two-point correlation functions of subcomposites in heterogeneous materials. *Mechanics of Materials*, **2012**, 51, 88-96 | 3.3 | 12 |

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| 21 | New approximate solution for N-point correlation functions for heterogeneous materials. *Journal of the Mechanics and Physics of Solids*, **2012**, 60, 104-119 | 5 | 33 |
| 20 | Three-dimensional reconstruction and homogenization of heterogeneous materials using statistical correlation functions and FEM. *Computational Materials Science*, **2012**, 51, 372-379 | 3.2 | 37 |
| 19 | 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, | 1.8 | 2 |
| 18 | A modified strong-contrast expansion for estimating the effective thermal conductivity of multiphase heterogeneous materials. *Journal of Applied Physics*, **2012**, 112, 114318 | 2.5 | 20 |
| 17 | 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 | 3 | 15 |
| 16 | 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 | 0.3 | 12 |
| 15 | Mechanical and thermal behavior of nanoclay based polymer nanocomposites using statistical homogenization approach. *Composites Science and Technology*, **2011**, 71, 1930-1935 | 8.6 | 35 |
| 14 | Three-phase solid oxide fuel cell anode microstructure realization using two-point correlation functions. *Acta Materialia*, **2011**, 59, 30-43 | 8.4 | 66 |
| 13 | Using SAXS approach to estimate thermal conductivity of polystyrene/zirconia nanocomposite by exploiting strong contrast technique. *Acta Materialia*, **2011**, 59, 2742-2748 | 8.4 | 17 |
| 12 | 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 | 8.9 | 21 |
| 11 | Statistical continuum theory for the effective conductivity of carbon nanotubes filled polymer composites. *Thermochimica Acta*, **2011**, 520, 33-37 | 2.9 | 22 |
| 10 | Modeling of Biologically Inspired Adhesive Pads Using Monte Carlo Analysis. *Journal of Adhesion Science and Technology*, **2010**, 24, 1207-1220 | 2 | 1 |
| 9 | 3D Reconstruction of Carbon Nanotube Composite Microstructure Using Correlation Functions. *Journal of Computational and Theoretical Nanoscience*, **2010**, 7, 1462-1468 | 0.3 | 35 |
| 8 | A novel semi-inverse solution method for elastoplastic torsion of heat treated rods. *Meccanica*, **2010**, 45, 375-392 | 2.1 | 6 |
| 7 | A comparison of viscoplastic intermediate approaches for deformation texture evolution in face-centered cubic polycrystals. *Acta Materialia*, **2009**, 57, 2496-2508 | 8.4 | 15 |
| 6 | 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 | 25 |
| 5 | Application of the Strong Contrast Technique to Thermoelastic Characterization of Nanocomposites905-910 | | |
| 4 | A New Statistical Descriptor for the Physical Characterization and 3D Reconstruction of Heterogeneous Materials. *Transport in Porous Media*,1 | 3.1 | 3 |

| 3 | Hydrostatic Tube Cyclic Extrusion Compression as a Novel Severe Plastic Deformation Method for Fabricating Long Nanostructured Tubes. *Metals and Materials International*,1 | 2.4 | 1 |
| 2 | Prediction of bone microstructures degradation during osteoporosis with fuzzy cellular automata algorithm. *Mathematics and Mechanics of Solids*,108128652210885 | 2.3 | 2 |
| 1 | Statistical prediction of bone microstructure degradation to study patient dependency in osteoporosis. *Mathematics and Mechanics of Solids*,108128652210987 | 2.3 | 2 |