

# Abolfazl Alizadeh Sahraei

## List of Publications by Year in descending order

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papers

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docs citations

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times ranked

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citing authors

#	ARTICLE	IF	CITATIONS
1	3D microstructural reconstruction of heterogeneous materials from 2D cross sections: A modified phase-recovery algorithm. <i>Computational Materials Science</i> , 2016, 111, 107-115.	1.4	58
2	Insights into interphase thickness characterization for graphene/epoxy nanocomposites: a molecular dynamics simulation. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 19890-19903.	1.3	33
3	Microstructure Reconstruction and Characterization of the Porous GDLs for PEMFC Based on Fibers Orientation Distribution. <i>Fuel Cells</i> , 2018, 18, 160-172.	1.5	30
4	Contact angle hysteresis and motion behaviors of a water nano-droplet on suspended graphene under temperature gradient. <i>Physics of Fluids</i> , 2018, 30, .	1.6	30
5	Computational analysis of vincristine loaded silk fibroin hydrogel for sustained drug delivery applications: Multiphysics modeling and experiments. <i>International Journal of Pharmaceutics</i> , 2021, 609, 121184.	2.6	27
6	A modified strong-contrast expansion for estimating the effective thermal conductivity of multiphase heterogeneous materials. <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	25
7	Effect of untreated zirconium oxide nanofiller on the flexural strength and surface hardness of autopolymerized interim fixed restoration resins. <i>Journal of Esthetic and Restorative Dentistry</i> , 2017, 29, 264-269.	1.8	23
8	Insight into Geometry-Controlled Mechanical Properties of Spiral Carbon-Based Nanostructures. <i>Journal of Physical Chemistry C</i> , 2019, 123, 3226-3238.	1.5	22
9	Numerical investigation of smart auxetic three-dimensional meta-structures based on shape memory polymers via topology optimization. <i>Journal of Intelligent Material Systems and Structures</i> , 2020, 31, 1838-1852.	1.4	22
10	Multiphysics modeling and experiments on ultrasound-triggered drug delivery from silk fibroin hydrogel for Wilms tumor. <i>International Journal of Pharmaceutics</i> , 2022, 621, 121787.	2.6	22
11	Enhanced hardness and electrical properties of copper nanocomposites reinforced by functionalized MWCNTs. <i>Journal of Composite Materials</i> , 2014, 48, 3485-3497.	1.2	20
12	Efficient three-phase reconstruction of heterogeneous material from 2D cross-sections via phase-recovery algorithm. <i>Journal of Microscopy</i> , 2016, 264, 384-393.	0.8	20
13	AC and DC electrical behavior of MWCNT/epoxy nanocomposite near percolation threshold: Equivalent circuits and percolation limits. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	20
14	Improving flame-retardant, thermal, and mechanical properties of an epoxy using halogen-free fillers. <i>Science and Engineering of Composite Materials</i> , 2018, 25, 939-946.	0.6	19
15	On finite bending of visco-hyperelastic materials: a novel analytical solution and FEM. <i>Acta Mechanica</i> , 2020, 231, 3435-3450.	1.1	19
16	Fabricating and improving properties of copper matrix nanocomposites by electroless copper-coated MWCNTs. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 116, 1677-1686.	1.1	18
17	Hydrogenation-controlled mechanical properties in graphene helicoids: exceptional distribution-dependent behavior. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 12423-12433.	1.3	17
18	Monitoring the effect of sonoporation on the cells using electrochemical approach. <i>Ultrasonics Sonochemistry</i> , 2018, 41, 619-625.	3.8	16

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19	Role of Chemical Doping in Large Deformation Behavior of Spiral Carbon-Based Nanostructures: Unraveling Geometry-Dependent Chemical Doping Effects. <i>Journal of Physical Chemistry C</i> , 2019, 123, 19208-19219.	1.5	16
20	Chemical transformation and dissociation of amino acids on metal sulfide surface: Insights from DFT into the effect of surface vacancies on alanine-sphalerite system. <i>Applied Surface Science</i> , 2021, 540, 148304.	3.1	15
21	Homogenization of heterogeneous brain tissue under quasi-static loading: a visco-hyperelastic model of a 3D RVE. <i>Biomechanics and Modeling in Mechanobiology</i> , 2019, 18, 969-981.	1.4	14
22	A novel machine learning based computational framework for homogenization of heterogeneous soft materials: application to liver tissue. <i>Biomechanics and Modeling in Mechanobiology</i> , 2020, 19, 1131-1142.	1.4	12
23	Atomistic simulation of interfacial properties and damage mechanism in graphene nanoplatelet/epoxy composites. <i>Computational Materials Science</i> , 2020, 184, 109888.	1.4	12
24	Determinative factors in inhibition of aquaporin by different pharmaceuticals: Atomic scale overview by molecular dynamics simulation. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2018, 1862, 2815-2823.	1.1	11
25	How Do Surface Defects Change Local Wettability of the Hydrophilic ZnS Surface? Insights into Sphalerite Flotation from Density Functional Theory Calculations. <i>Journal of Physical Chemistry C</i> , 2021, 125, 998-1009.	1.5	11
26	An Investigation on Thermomechanical Flexural Response of Shape-Memory-Polymer Beams. <i>International Journal of Applied Mechanics</i> , 2016, 08, 1650063.	1.3	10
27	How to characterize interfacial load transfer in spiral carbon-based nanostructure-reinforced nanocomposites: is this a geometry-dependent process?. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 23880-23892.	1.3	10
28	Thermomechanical behavior of shape memory polymer beams reinforced by corrugated polymeric sections. <i>Meccanica</i> , 2017, 52, 1947-1962.	1.2	9
29	Effect of 2D Image Resolution on 3D Stochastic Reconstruction and Developing Petrophysical Trend. <i>Transport in Porous Media</i> , 2018, 125, 41-58.	1.2	9
30	Investigation on thermal stresses in FGM hyperelastic thick-walled cylinders. <i>Journal of Thermal Stresses</i> , 2018, 41, 204-221.	1.1	9
31	Optimization of Taylor spatial frame half-pins diameter for bone deformity correction: Application to femur. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2018, 232, 673-681.	1.0	9
32	A computational approach to evaluate the nonlinear and noisy DC electrical response in carbon nanotube/polymer nanocomposites near the percolation threshold. <i>Computational Materials Science</i> , 2020, 173, 109439.	1.4	9
33	A framework for optimal microstructural design of random heterogeneous materials. <i>Computational Mechanics</i> , 2020, 66, 123-139.	2.2	9
34	Insights into the Solubility of Carbon Dioxide in Grafted Mesoporous Silica for the Catalytic Synthesis of Cyclic Carbonates by Nanoconfinement. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 27019-27028.	4.0	9
35	Effects of functional group type and coverage on the interfacial strength and load transfer of graphene-polyethylene nanocomposites: a molecular dynamics simulation. <i>Applied Physics A: Materials Science and Processing</i> , 2022, 128, 1.	1.1	9
36	Investigation of the geometric property hull for infiltrated solid oxide fuel cell electrodes. <i>International Journal of Energy Research</i> , 2017, 41, 2318-2331.	2.2	8

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37	Formation of homogenous copper film on MWCNTs by an efficient electroless deposition process. <i>Science and Engineering of Composite Materials</i> , 2017, 24, 345-352.	0.6	7
38	Synergistic effect of carbon nanotubes and copper particles in an epoxy-based nanocomposite using electroless copper deposited carbon nanotubes: Part I " Mechanical properties. <i>Journal of Composite Materials</i> , 2016, 50, 1909-1920.	1.2	6
39	Developing a beam formulation for semi-crystalline two-way shape memory polymers. <i>Journal of Intelligent Material Systems and Structures</i> , 2020, 31, 1465-1476.	1.4	6
40	Electronic simulations of alanine and water coadsorption over Defect-free and Sulfur-depleted sphalerite surfaces. <i>Applied Surface Science</i> , 2022, 576, 151899.	3.1	6
41	Design and Manufacture of a Smart Macro-Structure with Changeable Effective Stiffness. <i>International Journal of Applied Mechanics</i> , 2020, 12, 2050001.	1.3	5
42	A New Statistical Descriptor for the Physical Characterization and 3D Reconstruction of Heterogeneous Materials. <i>Transport in Porous Media</i> , 2022, 142, 23-40.	1.2	5
43	A modified simulated annealing algorithm for hybrid statistical reconstruction of heterogeneous microstructures. <i>Computational Materials Science</i> , 2021, 197, 110636.	1.4	5
44	Qualitative Equivalence Between Electrical Percolation Threshold and Effective Thermal Conductivity in Polymer/Carbon Nanocomposites. <i>Journal of Engineering Materials and Technology</i> , <i>Transactions of the ASME</i> , 2012, 134, .	0.8	2
45	Improving mechanical properties of near-net-shape aluminum/MWCNT nanocomposites fabricated by plasma spray forming using electroless copper coating of MWCNT. <i>Journal of Composite Materials</i> , 2015, 49, 131-139.	1.2	2
46	Micromechanical Modeling of the Effective Mechanical Behavior of Cerebral Cortex Tissue. <i>Iranian Journal of Science and Technology - Transactions of Mechanical Engineering</i> , 2020, 44, 273-285.	0.8	2
47	A Microfabrication Method of PCL Scaffolds for Tissue Engineering by Simultaneous Two PDMS Molds Replication. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 4763-4778.	2.6	2
48	Refining anticipation of degraded bone microstructures during osteoporosis based on statistical homogenized reconstruction method via quality of connection function. <i>International Journal of Computational Materials Science and Engineering</i> , 2020, 09, 2050023.	0.5	2
49	Prediction of bone microstructures degradation during osteoporosis with fuzzy cellular automata algorithm. <i>Mathematics and Mechanics of Solids</i> , 0, , 108128652210885.	1.5	2
50	Statistical prediction of bone microstructure degradation to study patient dependency in osteoporosis. <i>Mathematics and Mechanics of Solids</i> , 0, , 108128652210987.	1.5	2
51	Decisive structural elements in water and ion permeation through mechanosensitive channels of large conductance: insights from molecular dynamics simulation. <i>RSC Advances</i> , 2022, 12, 17803-17816.	1.7	2
52	Transient swelling of cylindrical hydrogels under coupled extension-torsion: Analytical and 3D FEM solutions. <i>Journal of Intelligent Material Systems and Structures</i> , 2023, 34, 415-424.	1.4	2
53	Predicting the hardness of carbon nanotube reinforced copper matrix nanocomposites using two adaptive fuzzy inference system identifiers. <i>Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering</i> , 2015, 229, 192-203.	1.4	1
54	Computational modeling of degradation process on the mechanical performance of Poly-lactic acid /Magnesium composite. <i>Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications</i> , 2021, 235, 3-18.	0.7	1

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55	Mechanical properties of an epoxy-based coating reinforced with silica aerogel and ammonium polyphosphate additives. <i>Polymers and Polymer Composites</i> , 2022, 30, 096739112110690.	1.0	1