

Mohammad Tafazzoli-Shadpour

List of Publications by Year
in descending order

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Version: 2024-02-01

80
papers

1,907
citations

331670
21
h-index

289244
40
g-index

80
all docs

80
docs citations

80
times ranked

3113
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrically conductive gold nanoparticle-chitosan thermosensitive hydrogels for cardiac tissue engineering. <i>Materials Science and Engineering C</i> , 2016, 63, 131-141.	7.3	253
2	Quantification of Alterations in Structure and Function of Elastin in the Arterial Media. <i>Hypertension</i> , 1998, 32, 170-175.	2.7	207
3	Enhanced mechanical properties of thermosensitive chitosan hydrogel by silk fibers for cartilage tissue engineering. <i>Materials Science and Engineering C</i> , 2013, 33, 4786-4794.	7.3	197
4	Effects of cyclic stretch on proliferation of mesenchymal stem cells and their differentiation to smooth muscle cells. <i>Biochemical and Biophysical Research Communications</i> , 2009, 388, 601-605.	2.1	96
5	Atomic force microscope-based single cell force spectroscopy of breast cancer cell lines: An approach for evaluating cellular invasion. <i>Journal of Biomechanics</i> , 2014, 47, 3373-3379.	2.1	75
6	Mechanical Characterization and Constitutive Modeling of Human Trachea: Age and Gender Dependency. <i>Materials</i> , 2016, 9, 456.	2.9	66
7	Regulation of Endothelial Cell Adherence and Elastic Modulus by Substrate Stiffness. <i>Cell Communication and Adhesion</i> , 2015, 22, 79-89.	1.0	52
8	Quantification of effects of cancer on elastic properties of breast tissue by Atomic Force Microscopy. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 60, 234-242.	3.1	42
9	Analysis of wall shear stress in stented coronary artery using 3D computational fluid dynamics modeling. <i>Journal of Materials Processing Technology</i> , 2008, 197, 174-181.	6.3	34
10	The effects of stenosis severity on the hemodynamic parameters—assessment of the correlation between stress phase angle and wall shear stress. <i>Journal of Biomechanics</i> , 2011, 44, 2614-2626.	2.1	33
11	Effects of Cyclic Stretch Waveform on Endothelial Cell Morphology Using Fractal Analysis. <i>Artificial Organs</i> , 2010, 34, 481-490.	1.9	32
12	Intermittent Hydrostatic Pressure Enhances Growth Factor-Induced Chondroinduction of Human Adipose-Derived Mesenchymal Stem Cells. <i>Artificial Organs</i> , 2012, 36, 1065-1071.	1.9	30
13	The Synergistic Effects of Shear Stress and Cyclic Hydrostatic Pressure Modulate Chondrogenic Induction of Human Mesenchymal Stem Cells. <i>International Journal of Artificial Organs</i> , 2015, 38, 557-564.	1.4	30
14	Substrate topography interacts with substrate stiffness and culture time to regulate mechanical properties and smooth muscle differentiation of mesenchymal stem cells. <i>Colloids and Surfaces B: Biointerfaces</i> , 2019, 173, 194-201.	5.0	28
15	Effect of uniaxial stretch on morphology and cytoskeleton of human mesenchymal stem cells: static vs. dynamic loading. <i>Biomedizinische Technik</i> , 2011, 56, 259-265.	0.8	27
16	Progressive changes of elastic moduli of arterial wall and atherosclerotic plaque components during plaque development in human coronary arteries. <i>Medical and Biological Engineering and Computing</i> , 2019, 57, 731-740.	2.8	27
17	Evaluation of Mechanical Properties of Human Mesenchymal Stem Cells During Differentiation to Smooth Muscle Cells. <i>Annals of Biomedical Engineering</i> , 2014, 42, 1373-1380.	2.5	26
18	Mechanical characterization of human mesenchymal stem cells subjected to cyclic uniaxial strain and TGF- β 1. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2015, 43, 18-25.	3.1	26

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19	Effects of Mechanical and Chemical Stimuli on Differentiation of Human Adipose-Derived Stem Cells into Endothelial Cells. International Journal of Artificial Organs, 2013, 36, 663-673.	1.4	25
20	Modulating cancer cell mechanics and actin cytoskeleton structure by chemical and mechanical stimulations. Journal of Biomedical Materials Research - Part A, 2019, 107, 1569-1581.	4.0	25
21	Fabrication of Chitosan Silk-based Tracheal Scaffold Using Freeze-Casting Method. Iranian Biomedical Journal, 2017, 21, 228-239.	0.7	24
22	Viscoelastic Properties of Human Tracheal Tissues. Journal of Biomechanical Engineering, 2017, 139, .	1.3	23
23	Cytoskeletal remodeling induced by substrate rigidity regulates rheological behaviors in endothelial cells. Journal of Biomedical Materials Research - Part A, 2019, 107, 71-80.	4.0	23
24	Evaluation of Biaxial Mechanical Properties of Aortic Media Based on the Lamellar Microstructure. Materials, 2015, 8, 302-316.	2.9	22
25	Alteration of human umbilical vein endothelial cell gene expression in different biomechanical environments. Cell Biology International, 2014, 38, 577-581.	3.0	20
26	Influence of Cyclic Stretch on Mechanical Properties of Endothelial Cells. Experimental Mechanics, 2013, 53, 1291-1298.	2.0	19
27	Verification of the mechanostat theory in mandible remodeling after tooth extraction: Animal study and numerical modeling. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 20, 354-362.	3.1	19
28	Behavioral remodeling of normal and cancerous epithelial cell lines with differing invasion potential induced by substrate elastic modulus. Cell Adhesion and Migration, 2018, 12, 1-17.	2.7	19
29	<p>An AFM-Based Nanomechanical Study of Ovarian Tissues with Pathological Conditions</p>. International Journal of Nanomedicine, 2020, Volume 15, 4333-4350.	6.7	19
30	Coupling of shear"circumferential stress pulses investigation through stress phase angle in FSI models of stenotic artery using experimental data. Medical and Biological Engineering and Computing, 2017, 55, 1147-1162.	2.8	18
31	The functional cross talk between cancer cells and cancer associated fibroblasts from a cancer mechanics perspective. Biochimica Et Biophysica Acta - Molecular Cell Research, 2021, 1868, 119103.	4.1	17
32	Comparing the effect of equiaxial cyclic mechanical stimulation on GATA4 expression in adipose"derived and bone marrow"derived mesenchymal stem cells. Cell Biology International, 2014, 38, 219-227.	3.0	16
33	Characterizing the effect of substrate stiffness on the extravasation potential of breast cancer cells using a 3D microfluidic model. Biotechnology and Bioengineering, 2021, 118, 823-835.	3.3	16
34	Characterization of mechanical properties of lamellar structure of the aortic wall: Effect of aging. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 65, 20-28.	3.1	15
35	Model of cholera dissemination using geographic information systems and fuzzy clustering means: Case study, Chabahr, Iran. Public Health, 2012, 126, 881-887.	2.9	14
36	Analysis of arterial wall remodeling in hypertension based on lamellar modeling. Journal of the American Society of Hypertension, 2015, 9, 735-744.	2.3	14

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37	Mechanical Characterization of the Lamellar Structure of Human Abdominal Aorta in the Development of Atherosclerosis: An Atomic Force Microscopy Study. Cardiovascular Engineering and Technology, 2019, 10, 181-192.	1.6	14
38	Finite element simulation of human trachea: Normal vs. surgically treated and scaffold implanted cases. International Journal of Solids and Structures, 2020, 190, 35-46.	2.7	13
39	Investigation of the Mechanical Properties of the Human Tracheal Cartilage. Tanaffos, 2017, 16, 107-114.	0.5	13
40	Radiation therapy affects the mechanical behavior of human umbilical vein endothelial cells. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 85, 188-193.	3.1	12
41	Cyclic Stretch Effects on Adipose-Derived Stem Cell Stiffness, Morphology and Smooth Muscle Cell Gene Expression. Tissue Engineering and Regenerative Medicine, 2017, 14, 279-286.	3.7	11
42	Contribution of atherosclerotic plaque location and severity to the near-wall hemodynamics of the carotid bifurcation: an experimental study and FSI modeling. Biomechanics and Modeling in Mechanobiology, 2021, 20, 1069-1085.	2.8	11
43	Time dependency of morphological remodeling of endothelial cells in response to substrate stiffness. BioImpacts, 2017, 7, 41-47.	1.5	11
44	EFFECTS OF SHORT-TERM CYCLIC HYDROSTATIC PRESSURE ON INITIATING AND ENHANCING THE EXPRESSION OF CHONDROGENIC GENES IN HUMAN ADIPOSE-DERIVED MESENCHYMAL STEM CELLS. Journal of Mechanics in Medicine and Biology, 2014, 14, 1450054.	0.7	10
45	Epidermal growth factor receptor targeting alters gene expression and restores the adhesion function of cancerous cells as measured by single cell force spectroscopy. Molecular and Cellular Biochemistry, 2016, 423, 129-139.	3.1	10
46	Stepwise morphological changes and cytoskeletal reorganization of human mesenchymal stem cells treated by short-time cyclic uniaxial stretch. In Vitro Cellular and Developmental Biology - Animal, 2017, 53, 547-553.	1.5	10
47	Morphology and contractile gene expression of adipose-derived mesenchymal stem cells in response to short-term cyclic uniaxial strain and TGF- β 1. Biomedizinische Technik, 2018, 63, 317-326.	0.8	10
48	Correlation of the cell mechanical behavior and quantified cytoskeletal parameters in normal and cancerous breast cell lines. Biorheology, 2019, 56, 207-219.	0.4	10
49	Topological remodeling of cultured endothelial cells by characterized cyclic strains. MCB Molecular and Cellular Biomechanics, 2007, 4, 189-99.	0.7	10
50	BIOMECHANICAL ANALYSIS OF WALL REMODELING IN ELASTIC ARTERIES WITH APPLICATION OF FLUID-SOLID INTERACTION METHODS. Journal of Mechanics in Medicine and Biology, 2007, 07, 433-447.	0.7	8
51	Residual stress distribution in a lamellar model of the arterial wall. Journal of Medical Engineering and Technology, 2010, 34, 422-428.	1.4	8
52	Effects of uniaxial cyclic stretch loading on morphology of adipose derived stem cells. Tissue Engineering and Regenerative Medicine, 2016, 13, 396-402.	3.7	8
53	Stress phase angle regulates differentiation of human adipose-derived stem cells toward endothelial phenotype. Progress in Biomaterials, 2018, 7, 121-131.	4.5	8
54	Mechanics of actin filaments in cancer onset and progress. International Review of Cell and Molecular Biology, 2020, 355, 205-243.	3.2	8

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55	A comparison of Newtonian and non-Newtonian pulsatile blood rheology in carotid bifurcation through fluid–solid interaction hemodynamic assessment based on experimental data. <i>Physics of Fluids</i> , 2022, 34, .	4.0	8
56	Mechanical vulnerability of lower second premolar utilising visco-elastic dynamic stress analysis. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2009, 12, 553-561.	1.6	7
57	Quantifying effects of cyclic stretch on cell–collagen substrate adhesiveness of vascular endothelial cells. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2018, 232, 531-541.	1.8	7
58	Effects of substrate mechanics on angiogenic capacity and nitric oxide release in human endothelial cells. <i>Annals of the New York Academy of Sciences</i> , 2020, 1470, 31-43.	3.8	7
59	Comparative analysis of effects of cyclic uniaxial and equiaxial stretches on gene expression of human umbilical vein endothelial cells. <i>Cell Biology International</i> , 2015, 39, 741-749.	3.0	6
60	Altered mechanical properties of actin fibers due to breast cancer invasion: parameter identification based on micropipette aspiration and multiscale tensegrity modeling. <i>Medical and Biological Engineering and Computing</i> , 2021, 59, 547-560.	2.8	6
61	The microenvironment and cytoskeletal remodeling in tumor cell invasion. <i>International Review of Cell and Molecular Biology</i> , 2020, 356, 257-289.	3.2	6
62	Coupled fluid-wall modelling of steady flow in stenotic carotid arteries. <i>Journal of Medical Engineering and Technology</i> , 2009, 33, 544-550.	1.4	5
63	DYNAMIC STRESS DISTRIBUTION IN A MODEL OF IMPLANTED MANDIBLE: NUMERICAL ANALYSIS OF VISCOELASTIC BONE. <i>Journal of Mechanics in Medicine and Biology</i> , 2015, 15, 1550050.	0.7	5
64	Stress analysis of fracture of atherosclerotic plaques: crack propagation modeling. <i>Medical and Biological Engineering and Computing</i> , 2017, 55, 1389-1400.	2.8	5
65	Chemical inhibitor anticancer drugs regulate mechanical properties and cytoskeletal structure of non-invasive and invasive breast cancer cell lines: Study of effects of Letrozole, Exemestane, and Everolimus. <i>Biochemical and Biophysical Research Communications</i> , 2021, 565, 14-20.	2.1	5
66	Effects of chemically EGFR targeting on non-targeted physical cell behaviors in 2D and 3D microfluidic cultures of invasive and non-invasive breast cancer cell lines. <i>Biochemical and Biophysical Research Communications</i> , 2022, 622, 1-7.	2.1	5
67	Evaluation of elastic properties of breast cancer stem-like/tumor initiating cells using Atomic Force Microscopy. , 2014, , .		4
68	The effects of short-term uniaxial strain on the mechanical properties of mesenchymal stem cells upon TGF- β 1 stimulation. <i>In Vitro Cellular and Developmental Biology - Animal</i> , 2018, 54, 677-686.	1.5	4
69	Nonlinear viscoelastic properties of human dentin under uniaxial tension. <i>Dental Materials</i> , 2021, 37, e59-e68.	3.5	4
70	The Influence of Cyclic and Uniform Shear Stresses Concurrent with Cyclic Stretch on the Gene Expression of Human Umbilical Vein Endothelial Cells. <i>Journal of Biomaterials and Tissue Engineering</i> , 2013, 3, 673-678.	0.1	3
71	Morphological Changes of Mesenchymal Stem Cells by Cyclic Stretch. , 2008, , .		2
72	Structurally Motivated Models of the Arterial Wall Tissue. <i>Journal of Multiscale Modeling</i> , 2013, 05, 1330002.	1.1	1

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73	Cancer Mutation Alters Mechanical Stiffness of Epithelial Cadherin Domains: A Molecular Dynamics Study. Journal of Computational and Theoretical Nanoscience, 2014, 11, 2228-2236.	0.4	1
74	EFFECTS OF SUBSTRATE DEFORMABILITY ON CELL BEHAVIORS: ELASTIC MODULUS VERSUS THICKNESS. Journal of Mechanics in Medicine and Biology, 2017, 17, 1750088.	0.7	1
75	Effect of equiaxial cyclic strain on cardiomyogenic induction in mesenchymal stem cells. Progress in Biomaterials, 2018, 7, 279-288.	4.5	1
76	Restoring elastic properties of breast cancer cells by EGFR targeting: Atomic force microscopy measurement. , 2016, , .		0
77	Viscoelastic behavior of human tracheal cartilage. , 2016, , .		0
78	Design and fabrication of a new chitosan based wound dressing in combination with carboxylated Polyethylene glycol. , 2018, , .		0
79	Effect of Cyclic Stretch on the Visco-Elastic Deformation of Endothelial Cells in Micropipette Aspiration Experiment. IFMBE Proceedings, 2010, , 1087-1090.	0.3	0
80	Effect of Tensile Strain and Shear Stress on the Differentiation of Human Mesenchymal Stem Cells into Endothelial Cells. , 2012, , .		0