

LukÃ¡Å¡ HornÃ½

List of Publications by Year in descending order

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45
papers

417
citations

687220

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h-index

794469

19
g-index

50
all docs

50
docs citations

50
times ranked

438
citing authors

#	ARTICLE	IF	CITATIONS
1	Axial prestretch and circumferential distensibility in biomechanics of abdominal aorta. <i>Biomechanics and Modeling in Mechanobiology</i> , 2014, 13, 783-799.	1.4	67
2	Correlations between age, prestrain, diameter and atherosclerosis in the male abdominal aorta. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 2128-2132.	1.5	33
3	The release kinetics, antimicrobial activity and cytocompatibility of differently prepared collagen/hydroxyapatite/vancomycin layers: Microstructure vs. nanostructure. <i>European Journal of Pharmaceutical Sciences</i> , 2017, 100, 219-229.	1.9	32
4	Age-related changes in longitudinal prestress in human abdominal aorta. <i>Archive of Applied Mechanics</i> , 2013, 83, 875-888.	1.2	29
5	Analysis of axial prestretch in the abdominal aorta with reference to post mortem interval and degree of atherosclerosis. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 33, 93-98.	1.5	25
6	A comparison of age-related changes in axial prestretch in human carotid arteries and in human abdominal aorta. <i>Biomechanics and Modeling in Mechanobiology</i> , 2017, 16, 375-383.	1.4	25
7	The Sustainable Release of Vancomycin and Its Degradation Products From Nanostructured Collagen/Hydroxyapatite Composite Layers. <i>Journal of Pharmaceutical Sciences</i> , 2016, 105, 1288-1294.	1.6	22
8	Limiting extensibility constitutive model with distributed fibre orientations and ageing of abdominal aorta. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 38, 39-51.	1.5	18
9	Evaluation of collagen/hydroxyapatite electrospun layers loaded with vancomycin, gentamicin and their combination: Comparison of release kinetics, antimicrobial activity and cytocompatibility. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2019, 140, 50-59.	2.0	18
10	Age-related distribution of longitudinal pre-strain in abdominal aorta with emphasis on forensic application. <i>Forensic Science International</i> , 2012, 214, 18-22.	1.3	17
11	Constitutive modeling of human saphenous veins at overloading pressures. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2015, 45, 101-108.	1.5	15
12	Vancomycin-Loaded Collagen/Hydroxyapatite Layers Electrospun on 3D Printed Titanium Implants Prevent Bone Destruction Associated with <i>S. epidermidis</i> Infection and Enhance Osseointegration. <i>Biomedicines</i> , 2021, 9, 531.	1.4	15
13	Limit point instability in pressurization of anisotropic finitely extensible hyperelastic thin-walled tube. <i>International Journal of Non-Linear Mechanics</i> , 2015, 77, 107-114.	1.4	14
14	How does axial prestretching change the mechanical response of nonlinearly elastic incompressible thin-walled tubes. <i>International Journal of Mechanical Sciences</i> , 2016, 106, 95-106.	3.6	11
15	Age estimation based on a combined arteriosclerotic index. <i>International Journal of Legal Medicine</i> , 2012, 126, 321-326.	1.2	9
16	Effect of Polyvinyl Alcohol Concentration on the Mechanical Properties of Collagen/Polyvinyl Alcohol Blends. <i>Applied Mechanics and Materials</i> , 0, 732, 161-164.	0.2	5
17	Rifampin-Releasing Triple-Layer Cross-Linked Fresh Water Fish Collagen Sponges as Wound Dressings. <i>BioMed Research International</i> , 2020, 2020, 1-13.	0.9	5
18	Inversion point and internal volume of pressurized nonlinearly elastic tube. <i>International Journal of Non-Linear Mechanics</i> , 2020, 125, 103530.	1.4	5

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19	Age related constitutive laws and stress distribution in human main coronary arteries with reference to residual strain. <i>Bio-Medical Materials and Engineering</i> , 2002, 12, 121-34.	0.4	5
20	Fixation of distal fibular fractures: A biomechanical study of plate fixation techniques. <i>Acta of Bioengineering and Biomechanics</i> , 2017, 19, 33-39.	0.2	5
21	A human pericardium biopolymeric scaffold for autologous heart valve tissue engineering: cellular and extracellular matrix structure and biomechanical properties in comparison with a normal aortic heart valve. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2018, 29, 599-634.	1.9	4
22	A New Approach to Heart Valve Tissue Engineering Based on Modifying Autologous Human Pericardium by 3D Cellular Mechanotransduction. <i>Journal of Biomaterials and Tissue Engineering</i> , 2017, 7, 527-543.	0.0	4
23	Correlation between age, location, orientation, loading velocity and delamination strength in the human aorta. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022, 133, 105340.	1.5	4
24	Constitutive Modelling and Histology of <i>Vena saphena&/i>. <i>Applied Mechanics and Materials</i> , 0, 486, 249-254.	0.2	3
25	Collagen structures in pericardium and aortic heart valves and their significance for tissue engineering. , 2013, , .		3
26	Effect of axial prestretch and adipose tissue on the inflation-extension behavior of the human abdominal aorta. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2020, 23, 81-91.	0.9	3
27	Surface Treatment of Acetabular Cups with a Direct Deposition of a Composite Nanostructured Layer Using a High Electrostatic Field. <i>Molecules</i> , 2020, 25, 1173.	1.7	3
28	Ex Vivo Coronary Stent Implantation Evaluated with Digital Image Correlation. <i>Experimental Mechanics</i> , 2012, 52, 1555-1558.	1.1	2
29	Inflation Tests of Vena Saphena Mangna for Different Loading Rates. <i>IFMBE Proceedings</i> , 2014, , 1041-1044.	0.2	1
30	Strain energy function for arterial walls based on limiting fiber extensibility. <i>IFMBE Proceedings</i> , 2009, , 1910-1913.	0.2	1
31	Inflation-Extension Test of Silicon Rubber-Nitinol Composite Tube. <i>IFMBE Proceedings</i> , 2011, , 1027-1030.	0.2	1
32	The Cellular and Extracellular Matrix Structure of Human Pericardium for Heart Valve Tissue Engineering. , 2012, , .		1
33	Site-Specific Mechanical Properties of Aortic Bifurcation. <i>IFMBE Proceedings</i> , 2014, , 939-942.	0.2	1
34	Pressure Pulse Wave Velocity and Axial Prestretch in Arteries. <i>IFMBE Proceedings</i> , 2019, , 665-669.	0.2	1
35	Electrospun Collagen Variability Characterized by Tensile Testing. <i>IFMBE Proceedings</i> , 2020, , 1231-1238.	0.2	1
36	Evaluation of Wear of Milling Cutters for Drilling of Nail Holes Used for Osteosynthesis of Long Bones of Lower Limbs. <i>Strojnický Casopis</i> , 2019, 69, 69-74.	0.3	1

#	ARTICLE	IF	CITATIONS
37	Inflation-extension behaviour of 3D printed elastomer tubes and their constitutive description. <i>Bioprinting</i> , 2022, 25, e00192.	2.9	1
38	Mechanical Response of the Cross-Linked Pericardial Tissue. <i>Applied Mechanics and Materials</i> , 2013, 486, 255-258.	0.2	0
39	Preservation of tangent modulus of pericardial tissue during cold storage. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2013, 16, 318-319.	0.9	0
40	In vitro Coronary Stent Implantation: Vessel Wall-Stent Interaction. <i>IFMBE Proceedings</i> , 2011, , 795-798.	0.2	0
41	In Situ Longitudinal Pretension in Human Aorta. <i>IFMBE Proceedings</i> , 2011, , 430-433.	0.2	0
42	A New Approach to Heart Valve Tissue Engineering Based on the Modification of Human Pericardial Tissue. , 2012, , .		0
43	The sustainable release of Vancomycin and its degradation products from micro and nano structured collagen/hydroxyapatite composite layers. <i>Frontiers in Bioengineering and Biotechnology</i> , 0, 4, .	2.0	0
44	Pressurization of Axially Prestretched Tube: Consequences for Arterial Mechanics. <i>IFMBE Proceedings</i> , 2020, , 569-576.	0.2	0
45	MECHANICAL AND STRUCTURAL PROPERTIES OF COLLAGEN NANOFIBROUS LAYERS UNDER SIMULATED BODY CONDITIONS. <i>Acta Polytechnica CTU Proceedings</i> , 0, 25, 73-78.	0.3	0