

Victor Barocas

List of Publications by Year in descending order

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150
papers

5,823
citations

57631

44
h-index

88477

70
g-index

151
all docs

151
docs citations

151
times ranked

4711
citing authors

#	ARTICLE	IF	CITATIONS
1	Characterizing Tissue Remodeling and Mechanical Heterogeneity in Cerebral Aneurysms. <i>Journal of Vascular Research</i> , 2022, 59, 34-42.	0.6	4
2	Experimental and Mouse-Specific Computational Models of the Fbln4SMKO Mouse to Identify Potential Biomarkers for Ascending Thoracic Aortic Aneurysm. <i>Cardiovascular Engineering and Technology</i> , 2022, 13, 558-572.	0.7	3
3	In Situ Lumbar Facet Capsular Ligament Strains Due to Joint Pressure and Residual Strain. <i>Journal of Biomechanical Engineering</i> , 2022, , .	0.6	1
4	Finite Element Modeling Using Patient-Specific Geometry to Predict Aortic Valve Insufficiency During Percutaneous Pulmonary Valve Implantation. , 2022, , .		0
5	Elucidating the signal for contact guidance contained in aligned fibrils with a microstructuralâ€œmechanical model. <i>Journal of the Royal Society Interface</i> , 2022, 19, 20210951.	1.5	1
6	The Ring-Pull Assay for Mechanical Properties of Fibrous Soft Tissues â€œ an Analysis of the Uniaxial Approximation and a Correction for Nonlinear Thick-Walled Tissues. <i>Experimental Mechanics</i> , 2021, 61, 53-66.	1.1	4
7	Vibrotactile perception in Dupuytren disease. <i>Journal of Plastic Surgery and Hand Surgery</i> , 2021, 55, 32-40.	0.4	0
8	Through-thickness regional variation in the mechanical characteristics of the lumbar facet capsular ligament. <i>Biomechanics and Modeling in Mechanobiology</i> , 2021, 20, 1445-1457.	1.4	3
9	A Hybrid Microstructural-Continuum Multiscale Approach for Modeling Hyperelastic Fibrous Soft Tissue. <i>Journal of Elasticity</i> , 2021, 145, 295-319.	0.9	3
10	Residual stress and osmotic swelling of the periodontal ligament. <i>Biomechanics and Modeling in Mechanobiology</i> , 2021, 20, 2047-2059.	1.4	2
11	Local tissue heterogeneity may modulate neuronal responses via altered axon strain fields: insights about innervated joint capsules from a computational model. <i>Biomechanics and Modeling in Mechanobiology</i> , 2021, 20, 2269-2285.	1.4	6
12	An inter-species computational analysis of vibrotactile sensitivity in Pacinian and Herbst corpuscles. <i>Royal Society Open Science</i> , 2020, 7, 191439.	1.1	4
13	An Experimental-Computational Approach to Quantify Blood Rheology in Sickle Cell Disease. <i>Biophysical Journal</i> , 2020, 119, 2307-2315.	0.2	6
14	Glomerular filtration and podocyte tensional homeostasis: importance of the minor type IV collagen network. <i>Biomechanics and Modeling in Mechanobiology</i> , 2020, 19, 2433-2442.	1.4	10
15	Asymmetric in-plane shear behavior of isolated cadaveric lumbar facet capsular ligaments: Implications for subject specific biomechanical models. <i>Journal of Biomechanics</i> , 2020, 105, 109814.	0.9	6
16	Investigation of Pathophysiological Aspects of Aortic Growth, Remodeling, and Failure Using a Discrete-Fiber Microstructural Model. <i>Journal of Biomechanical Engineering</i> , 2020, 142, .	0.6	11
17	Conceptual Framework Development for a Double-Walled Aortic Stent-Graft to Manage Blood Pressure. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2020, 14, 031005.	0.4	0
18	Multiscale model of fatigue of collagen gels. <i>Biomechanics and Modeling in Mechanobiology</i> , 2019, 18, 175-187.	1.4	11

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19	Modeling distributed forces within cell adhesions of varying size on continuous substrates. <i>Cytoskeleton</i> , 2019, 76, 571-585.	1.0	7
20	ANNUAL SPECIAL ISSUE "Biomechanical Engineering" 2018 Year in Review, <i>Journal of Biomechanical Engineering</i> , 2019, 141, .	0.6	0
21	Computational and Psychophysical Experiments on the Pacinian Corpuscle's Ability to Discriminate Complex Stimuli. <i>IEEE Transactions on Haptics</i> , 2019, 12, 635-644.	1.8	6
22	Emergent structure-dependent relaxation spectra in viscoelastic fiber networks in extension. <i>Acta Biomaterialia</i> , 2019, 87, 245-255.	4.1	19
23	Mechanical Performance of Posterior Spinal Instrumentation and Growing Rod Implants. <i>Spine</i> , 2019, 44, 1270-1278.	1.0	6
24	Image-based multi-scale mechanical analysis of strain amplification in neurons embedded in collagen gel. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2019, 22, 113-129.	0.9	8
25	Effects of Collagen Heterogeneity on Myocardial Infarct Mechanics in a Multiscale Fiber Network Model. <i>Journal of Biomechanical Engineering</i> , 2019, 141, .	0.6	10
26	Ex Vivo Mechanical Tests and Multiscale Computational Modeling Highlight the Importance of Intramural Shear Stress in Ascending Thoracic Aortic Aneurysms. <i>Journal of Biomechanical Engineering</i> , 2019, 141, .	0.6	14
27	A finite-element model of mechanosensation by a Pacinian corpuscle cluster in human skin. <i>Biomechanics and Modeling in Mechanobiology</i> , 2018, 17, 1053-1067.	1.4	14
28	Mechanics of a two-fiber model with one nested fiber network, as applied to the collagen-fibrin system. <i>Acta Biomaterialia</i> , 2018, 72, 306-315.	4.1	10
29	Dicer1 Deficiency in the Idiopathic Pulmonary Fibrosis Fibroblastic Focus Promotes Fibrosis by Suppressing MicroRNA Biogenesis. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2018, 198, 486-496.	2.5	42
30	Multiscale mechanics of the cervical facet capsular ligament, with particular emphasis on anomalous fiber realignment prior to tissue failure. <i>Biomechanics and Modeling in Mechanobiology</i> , 2018, 17, 133-145.	1.4	15
31	The role of the facet capsular ligament in providing spinal stability. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2018, 21, 712-721.	0.9	20
32	Multiscale modelling of the human lumbar facet capsular ligament: analysing spinal motion from the joint to the neurons. <i>Journal of the Royal Society Interface</i> , 2018, 15, 20180550.	1.5	6
33	Failure of the Porcine Ascending Aorta: Multidirectional Experiments and a Unifying Microstructural Model. <i>Journal of Biomechanical Engineering</i> , 2017, 139, .	0.6	43
34	Collagen Organization in Facet Capsular Ligaments Varies With Spinal Region and With Ligament Deformation. <i>Journal of Biomechanical Engineering</i> , 2017, 139, .	0.6	27
35	Cellular Microbiaxial Stretching to Measure a Single-Cell Strain Energy Density Function. <i>Journal of Biomechanical Engineering</i> , 2017, 139, .	0.6	17
36	Isotropic Failure Criteria Are Not Appropriate for Anisotropic Fibrous Biological Tissues. <i>Journal of Biomechanical Engineering</i> , 2017, 139, .	0.6	25

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37	Image-based multiscale mechanical modeling shows the importance of structural heterogeneity in the human lumbar facet capsular ligament. <i>Biomechanics and Modeling in Mechanobiology</i> , 2017, 16, 1425-1438.	1.4	26
38	Computational Parametric Analysis of the Mechanical Response of Structurally Varying Pacinian Corpuscles. <i>Journal of Biomechanical Engineering</i> , 2017, 139, .	0.6	7
39	Tissue loading and microstructure regulate the deformation of embedded nerve fibres: predictions from single-scale and multiscale simulations. <i>Journal of the Royal Society Interface</i> , 2017, 14, 20170326.	1.5	24
40	Micropipette aspiration of the Pacinian corpuscle. <i>Journal of Biomechanics</i> , 2017, 63, 104-109.	0.9	7
41	PC028 The Effect of Rigid Stent Grafts on the Propagation of Pressures in Aortic Dissection: A Lumped-Parameter Mathematical Model of Flow Through the Descending Thoracic Aorta. <i>Journal of Vascular Surgery</i> , 2017, 65, 147S-148S.	0.6	0
42	Biomechanics of human parietal pleura in uniaxial extension. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 75, 330-335.	1.5	10
43	Fiber-Network Modeling in Biomechanics: Theoretical and Analytical Approaches. <i>Studies in Mechanobiology, Tissue Engineering and Biomaterials</i> , 2017, , 271-307.	0.7	2
44	Computer simulation of lumbar flexion shows shear of the facet capsular ligament. <i>Spine Journal</i> , 2017, 17, 109-119.	0.6	17
45	Planar biaxial extension of the lumbar facet capsular ligament reveals significant in-plane shear forces. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 65, 127-136.	1.5	23
46	ANNUAL SPECIAL ISSUE "Biomechanical Engineering: Year in Review". <i>Journal of Biomechanical Engineering</i> , 2017, 139, .	0.6	0
47	A Paradigm for Materials Design for Surgical Simulators, With Specific Application to the Pleura and Needle Decompression1. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2016, 10, .	0.4	2
48	Cell-matrix interaction during strain-dependent remodelling of simulated collagen networks. <i>Interface Focus</i> , 2016, 6, 20150069.	1.5	19
49	Swelling of Collagen-Hyaluronic Acid Co-Gels: An In Vitro Residual Stress Model. <i>Annals of Biomedical Engineering</i> , 2016, 44, 2984-2993.	1.3	53
50	Multi-scale Modeling of the Cardiovascular System: Disease Development, Progression, and Clinical Intervention. <i>Annals of Biomedical Engineering</i> , 2016, 44, 2642-2660.	1.3	50
51	A nonlinear anisotropic inverse method for computational dissection of inhomogeneous planar tissues. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2016, 19, 1630-1646.	0.9	10
52	A multiphysics model of the Pacinian corpuscle. <i>Integrative Biology (United Kingdom)</i> , 2016, 8, 1111-1125.	0.6	19
53	A computational model of flow and species transport in the mesangium. <i>American Journal of Physiology - Renal Physiology</i> , 2016, 310, F222-F229.	1.3	3
54	Effect of Fiber Crimp on the Elasticity of Random Fiber Networks With and Without Embedding Matrices. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2016, 83, 0410081-410087.	1.1	35

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55	Softening in random networks of non-identical beams. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 87, 38-50.	2.3	40
56	Automatic Segmentation of Mechanically Inhomogeneous Tissues Based on Deformation Gradient Jump. <i>IEEE Transactions on Medical Imaging</i> , 2016, 35, 29-41.	5.4	6
57	Multiscale Mechanical Model of the Pacinian Corpuscle Shows Depth and Anisotropy Contribute to the Receptor's Characteristic Response to Indentation. <i>PLoS Computational Biology</i> , 2015, 11, e1004370.	1.5	24
58	Crack Propagation Versus Fiber Alignment in Collagen Gels: Experiments and Multiscale Simulation. <i>Journal of Biomechanical Engineering</i> , 2015, 137, 121002.	0.6	8
59	Effect of Supercoiling on the Mechanical and Permeability Properties of Model Collagen IV Networks. <i>Annals of Biomedical Engineering</i> , 2015, 43, 1695-1705.	1.3	5
60	Marker-Free Tracking of Facet Capsule Motion Using Polarization-Sensitive Optical Coherence Tomography. <i>Annals of Biomedical Engineering</i> , 2015, 43, 2953-2966.	1.3	7
61	Combining Displacement Field and Grip Force Information to Determine Mechanical Properties of Planar Tissue With Complicated Geometry. <i>Journal of Biomechanical Engineering</i> , 2014, 136, .	0.6	12
62	Vascular biomechanical properties in mice with smooth muscle specific deletion of Ndst1. <i>Molecular and Cellular Biochemistry</i> , 2014, 385, 225-238.	1.4	5
63	Quantification of continuous in vivo flexion-extension kinematics and intervertebral strains. <i>European Spine Journal</i> , 2014, 23, 754-761.	1.0	12
64	Microscale Fiber Network Alignment Affects Macroscale Failure Behavior in Simulated Collagen Tissue Analogs. <i>Journal of Biomechanical Engineering</i> , 2013, 135, 021026.	0.6	37
65	A Multiscale Approach to Modeling the Passive Mechanical Contribution of Cells in Tissues. <i>Journal of Biomechanical Engineering</i> , 2013, 135, 71007.	0.6	30
66	Mechanical response of wild-type and Alport murine lens capsules during osmotic swelling. <i>Experimental Eye Research</i> , 2013, 113, 87-91.	1.2	15
67	Cross-linked fiber network embedded in an elastic matrix. <i>Soft Matter</i> , 2013, 9, 6398.	1.2	44
68	A Coupled Fiber-Matrix Model Demonstrates Highly Inhomogeneous Microstructural Interactions in Soft Tissues Under Tensile Load. <i>Journal of Biomechanical Engineering</i> , 2013, 135, 011008.	0.6	43
69	Multiscale Model Predicts Tissue-Level Failure From Collagen Fiber-Level Damage. <i>Journal of Biomechanical Engineering</i> , 2012, 134, 091005.	0.6	43
70	Mechanical Behavior of Collagen-Fibrin Co-Gels Reflects Transition From Series to Parallel Interactions With Increasing Collagen Content. <i>Journal of Biomechanical Engineering</i> , 2012, 134, 011004.	0.6	86
71	A Model of Strain-Dependent Glomerular Basement Membrane Maintenance and Its Potential Ramifications in Health and Disease. <i>Journal of Biomechanical Engineering</i> , 2012, 134, 081006.	0.6	10
72	Mechanics of a Fiber Network Within a Non-Fibrillar Matrix: Model and Comparison with Collagen-Agarose Co-gels. <i>Annals of Biomedical Engineering</i> , 2012, 40, 2111-2121.	1.3	61

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73	Mechanical changes in the rat right ventricle with decellularization. <i>Journal of Biomechanics</i> , 2012, 45, 842-849.	0.9	50
74	Increased iris-lens contact following spontaneous blinking: Mathematical modeling. <i>Journal of Biomechanics</i> , 2012, 45, 2293-2296.	0.9	18
75	Mechanics and kinematics of soft tissue under indentation are determined by the degree of initial collagen fiber alignment. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012, 13, 25-35.	1.5	23
76	Microstructural and mechanical differences between digested collagen-fibrin co-gels and pure collagen and fibrin gels. <i>Acta Biomaterialia</i> , 2012, 8, 4031-4042.	4.1	49
77	Telescopic time-scale bridging for modeling dispersion in rapidly oscillating flows. <i>AIChE Journal</i> , 2012, 58, 1987-1997.	1.8	0
78	Simulated remodeling of loaded collagen networks via strain-dependent enzymatic degradation and constant-rate fiber growth. <i>Mechanics of Materials</i> , 2012, 44, 72-82.	1.7	49
79	Anterior-posterior asymmetry in iris mechanics measured by indentation. <i>Experimental Eye Research</i> , 2011, 93, 475-481.	1.2	30
80	COMPUTATIONAL SIMULATION OF ALTITUDE CHANGE-INDUCED INTRAOCULAR PRESSURE ALTERATION IN PATIENTS WITH INTRAVITREAL GAS BUBBLES. <i>Retina</i> , 2011, 31, 1656-1663.	1.0	14
81	Contribution of Saccadic Motion to Intravitreal Drug Transport: Theoretical Analysis. <i>Pharmaceutical Research</i> , 2011, 28, 1049-1064.	1.7	31
82	Initial Fiber Alignment Pattern Alters Extracellular Matrix Synthesis in Fibroblast-Populated Fibrin Gel Cruciforms and Correlates with Predicted Tension. <i>Annals of Biomedical Engineering</i> , 2011, 39, 714-729.	1.3	70
83	Mechanical and Structural Contribution of Non-Fibrillar Matrix in Uniaxial Tension: A Collagen-Agarose Co-Gel Model. <i>Annals of Biomedical Engineering</i> , 2011, 39, 1891-1903.	1.3	59
84	Collagen-agarose gels as a model for collagen-matrix interaction in soft tissues subjected to indentation. <i>Journal of Biomedical Materials Research - Part A</i> , 2011, 99A, 507-515.	2.1	37
85	Identification of Regional Mechanical Anisotropy in Soft Tissue Analogs. <i>Journal of Biomechanical Engineering</i> , 2011, 133, 091011.	0.6	47
86	Pigment Dispersion Syndrome Patients Do Not Have Larger-than-normal Irides. <i>Journal of Glaucoma</i> , 2010, 19, 493-496.	0.8	6
87	Freeze-Thaw Induced Biomechanical Changes in Arteries: Role of Collagen Matrix and Smooth Muscle Cells. <i>Annals of Biomedical Engineering</i> , 2010, 38, 694-706.	1.3	54
88	Generalized Anisotropic Inverse Mechanics for Soft Tissues. <i>Journal of Biomechanical Engineering</i> , 2010, 132, 081006.	0.6	26
89	Pericellular Conditions Regulate Extent of Cell-Mediated Compaction of Collagen Gels. <i>Biophysical Journal</i> , 2010, 99, 19-28.	0.2	60
90	Quantification of iris concavity. <i>Journal of Ophthalmic and Vision Research</i> , 2010, 5, 211-2.	0.7	5

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91	A dissolution-diffusion model for the TAXUS [®] drug-eluting stent with surface burst estimated from continuum percolation. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2009, 90B, 267-274.	1.6	12
92	Image-based multiscale structural models of fibrous engineered tissues. , 2009, 2009, 4270-2.		6
93	Image-based multiscale modeling predicts tissue-level and network-level fiber reorganization in stretched cell-compacted collagen gels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 17675-17680.	3.3	135
94	Posterior chamber volume does not change significantly during dilation. <i>British Journal of Ophthalmology</i> , 2009, 93, 1514-1517.	2.1	4
95	Planar Biaxial Mechanical Behavior of Bioartificial Tissues Possessing Prescribed Fiber Alignment. <i>Journal of Biomechanical Engineering</i> , 2009, 131, 081006.	0.6	41
96	The Modulus of Fibroblast-Populated Collagen Gels is not Determined by Final Collagen and Cell Concentration: Experiments and an Inclusion-Based Model. <i>Journal of Biomechanical Engineering</i> , 2009, 131, 101014.	0.6	31
97	Image-based biomechanics of collagen-based tissue equivalents. <i>IEEE Engineering in Medicine and Biology Magazine</i> , 2009, 28, 10-18.	1.1	48
98	Comparison of 2D fiber network orientation measurement methods. <i>Journal of Biomedical Materials Research - Part A</i> , 2009, 88A, 322-331.	2.1	105
99	A closed-form structural model of planar fibrous tissue mechanics. <i>Journal of Biomechanics</i> , 2009, 42, 1424-1428.	0.9	54
100	Multiscale computation for bioartificial soft tissues with complex geometries. <i>Engineering With Computers</i> , 2009, 25, 87-95.	3.5	13
101	Ex vivo porcine iris stiffening due to drug stimulation. <i>Experimental Eye Research</i> , 2009, 89, 456-461.	1.2	35
102	Computer Modeling of Drug Delivery to the Posterior Eye: Effect of Active Transport and Loss to Choroidal Blood Flow. <i>Pharmaceutical Research</i> , 2008, 25, 2685-2696.	1.7	68
103	Three-dimensional simulation of anisotropic cell-driven collagen gel compaction. <i>Biomechanics and Modeling in Mechanobiology</i> , 2008, 7, 53-62.	1.4	27
104	Simulation of flow around a thin, flexible obstruction by means of a deforming grid overlapping a fixed grid. <i>International Journal for Numerical Methods in Fluids</i> , 2008, 56, 723-738.	0.9	3
105	Computational predictions of the tensile properties of electrospun fibre meshes: Effect of fibre diameter and fibre orientation. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2008, 1, 326-335.	1.5	122
106	Permeability calculations in three-dimensional isotropic and oriented fiber networks. <i>Physics of Fluids</i> , 2008, 20, 123601.	1.6	85
107	Protein-Salt-Water Solution Phase Diagram Determination by a Combined Experimental-Computational Scheme. <i>Crystal Growth and Design</i> , 2008, 8, 4208-4214.	1.4	5
108	Functional Tissue-Engineered Valves from Cell-Remodeled Fibrin with Commissural Alignment of Cell-Produced Collagen. <i>Tissue Engineering - Part A</i> , 2008, 14, 83-95.	1.6	108

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109	Accommodation-induced changes in iris curvature. <i>Experimental Eye Research</i> , 2008, 86, 220-225.	1.2	33
110	Microstructure-Based, Multiscale Modeling for the Mechanical Behavior of Hydrated Fiber Networks. <i>Multiscale Modeling and Simulation</i> , 2008, 7, 22-43.	0.6	18
111	Concentration control for protein crystallization via a continuously-fed crystallization chamber. <i>Lab on A Chip</i> , 2008, 8, 1398.	3.1	2
112	Sustained transscleral drug delivery. <i>Expert Opinion on Drug Delivery</i> , 2008, 5, 1-10.	2.4	26
113	Functional Tissue-Engineered Valves from Cell-Remodeled Fibrin with Commissural Alignment of Cell-Produced Collagen. <i>Tissue Engineering</i> , 2008, 14, 83-95.	4.9	6
114	Multiscale, Structure-Based Modeling for the Elastic Mechanical Behavior of Arterial Walls. <i>Journal of Biomechanical Engineering</i> , 2007, 129, 611-618.	0.6	101
115	Deterministic Material-Based Averaging Theory Model of Collagen Gel Micromechanics. <i>Journal of Biomechanical Engineering</i> , 2007, 129, 137-147.	0.6	85
116	Volume-averaging theory for the study of the mechanics of collagen networks. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2007, 196, 2981-2990.	3.4	161
117	Using Channel Depth To Isolate and Control Flow in a Micro Free-Flow Electrophoresis Device. <i>Analytical Chemistry</i> , 2006, 78, 5369-5374.	3.2	81
118	Biomechanical and Microstructural Characteristics of a Collagen Film-Based Corneal Stroma Equivalent. <i>Tissue Engineering</i> , 2006, 12, 1565-1575.	4.9	83
119	Effects of Freezing and Cryopreservation on the Mechanical Properties of Arteries. <i>Annals of Biomedical Engineering</i> , 2006, 34, 823-832.	1.3	124
120	Assessment of Wall Shear Stress Changes in Arteries and Veins of Arteriovenous Polytetrafluoroethylene Grafts Using Magnetic Resonance Imaging. <i>CardioVascular and Interventional Radiology</i> , 2006, 29, 624-629.	0.9	36
121	Affine Versus Non-Affine Fibril Kinematics in Collagen Networks: Theoretical Studies of Network Behavior. <i>Journal of Biomechanical Engineering</i> , 2006, 128, 259-270.	0.6	189
122	Modeling and Characterization of a Valved Glaucoma Drainage Device With Implications for Enhanced Therapeutic Efficacy. <i>IEEE Transactions on Biomedical Engineering</i> , 2005, 52, 948-951.	2.5	26
123	A Cryoinjury Model Using Engineered Tissue Equivalents for Cryosurgical Applications. <i>Annals of Biomedical Engineering</i> , 2005, 33, 972-982.	1.3	24
124	Uniaxial and biaxial mechanical behavior of human amnion. <i>Journal of Materials Research</i> , 2005, 20, 2902-2909.	1.2	57
125	Application of the lag-after-pulsed-separation (LAPS) flow meter to different protein solutions. <i>Analyst</i> , 2005, 130, 171.	1.7	4
126	Uniaxial and Biaxial Mechanical Behavior of Human Amnion. <i>Materials Research Society Symposia Proceedings</i> , 2004, 844, 1.	0.1	1

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127	Thin-domain modeling of mass transport in microchannels, with application to diffusive mixing. <i>Journal of Applied Physics</i> , 2004, 95, 6435-6443.	1.1	3
128	Mechanical and Cellular Changes During Compaction of a Collagen-Sponge-Based Corneal Stromal Equivalent. <i>Annals of Biomedical Engineering</i> , 2004, 32, 274-283.	1.3	50
129	Lag-after-pulsed-separation microfluidic flowmeter for biomacromolecular solutions. <i>Sensors and Actuators B: Chemical</i> , 2004, 99, 25-29.	4.0	12
130	Microstructural Mechanics of Collagen Gels in Confined Compression: Poroelasticity, Viscoelasticity, and Collapse. <i>Journal of Biomechanical Engineering</i> , 2004, 126, 152-166.	0.6	132
131	Active Iris Mechanics and Pupillary Block: Steady-State Analysis and Comparison with Anatomical Risk Factors. <i>Annals of Biomedical Engineering</i> , 2004, 32, 1276-1285.	1.3	38
132	Computer simulation of convective and diffusive transport of controlled-release drugs in the vitreous humor. <i>Pharmaceutical Research</i> , 2003, 20, 96-102.	1.7	104
133	Coupled lubrication and Stokes flow finite elements. <i>International Journal for Numerical Methods in Fluids</i> , 2003, 43, 129-146.	0.9	6
134	Temporal Variations in Cell Migration and Traction during Fibroblast-Mediated Gel Compaction. <i>Biophysical Journal</i> , 2003, 84, 4102-4114.	0.2	100
135	Confined Compression of a Tissue-Equivalent: Collagen Fibril and Cell Alignment in Response to Anisotropic Strain. <i>Journal of Biomechanical Engineering</i> , 2002, 124, 568-575.	0.6	81
136	Intrinsic kinetics for rapid decomposition of methane in an aerosol flow reactor. <i>International Journal of Hydrogen Energy</i> , 2002, 27, 377-386.	3.8	55
137	A Boussinesq Model of Natural Convection in the Human Eye and the Formation of Krukenberg's Spindle. <i>Annals of Biomedical Engineering</i> , 2002, 30, 392-401.	1.3	94
138	Computational evaluation of the role of accommodation in pigmentary glaucoma. <i>Investigative Ophthalmology and Visual Science</i> , 2002, 43, 700-8.	3.3	24
139	Coupled Macroscopic and Microscopic Scale Modeling of Fibrillar Tissues and Tissue Equivalents. <i>Journal of Biomechanical Engineering</i> , 2001, 123, 362-369.	0.6	59
140	Modeling Passive Mechanical Interaction Between Aqueous Humor and Iris. <i>Journal of Biomechanical Engineering</i> , 2001, 123, 540-547.	0.6	97
141	Permeability and diffusion in vitreous humor: implications for drug delivery. <i>Pharmaceutical Research</i> , 2000, 17, 664-669.	1.7	120
142	Adaptive Finite Element Analysis of the Anisotropic Biphasic Theory of Tissue-Equivalent Mechanics. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2000, 3, 215-229.	0.9	5
143	Mechanism Governing Microparticle Morphology during Precipitation by a Compressed Antisolvent: Atomization vs Nucleation and Growth. <i>Journal of Physical Chemistry B</i> , 2000, 104, 2725-2735.	1.2	133
144	Mechanical characterization of the bovine iris. <i>Journal of Biomechanics</i> , 1999, 32, 999-1003.	0.9	55

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145	Measurement of foam modulus via a vane rheometer. <i>Journal of Rheology</i> , 1998, 42, 871-889.	1.3	39
146	Engineered Alignment in Media Equivalents: Magnetic Prealignment and Mandrel Compaction. <i>Journal of Biomechanical Engineering</i> , 1998, 120, 660-666.	0.6	159
147	An Anisotropic Biphasic Theory of Tissue-Equivalent Mechanics: The Interplay Among Cell Traction, Fibrillar Network Deformation, Fibril Alignment, and Cell Contact Guidance. <i>Journal of Biomechanical Engineering</i> , 1997, 119, 137-145.	0.6	303
148	A Finite Element Solution for the Anisotropic Biphasic Theory of Tissue-Equivalent Mechanics: The Effect of Contact Guidance on Isometric Cell Traction Measurement. <i>Journal of Biomechanical Engineering</i> , 1997, 119, 261-268.	0.6	50
149	Rheology of reconstituted type I collagen gel in confined compression. <i>Journal of Rheology</i> , 1997, 41, 971-993.	1.3	162
150	The Fibroblast-Populated Collagen Microsphere Assay of Cell Traction Force—Part 2: Measurement of the Cell Traction Parameter. <i>Journal of Biomechanical Engineering</i> , 1995, 117, 161-170.	0.6	157