Kristin M Myers

List of Publications by Year
in descending order

73 papers	2,490 citations	236925 25 h-index	223800 46 g-index
75 all docs	75 docs citations	75 times ranked	2093 citing authors

#	Article	IF	Citations
1	Biomechanics of the Human Posterior Sclera: Age- and Glaucoma-Related Changes Measured Using Inflation Testing. , 2012, 53, 1714.		286
2	PVDF/Palygorskite Nanowire Composite Electrolyte for 4 V Rechargeable Lithium Batteries with High Energy Density. Nano Letters, 2018, 18, 6113-6120.	9.1	227
3	Mechanical and biochemical properties of human cervical tissue. Acta Biomaterialia, 2008, 4, 104-116.	8.3	178
4	The mechanical role of the cervix in pregnancy. Journal of Biomechanics, 2015, 48, 1511-1523.	2.1	169
5	Changes in the biochemical constituents and morphologic appearance of the human cervical stroma during pregnancy. European Journal of Obstetrics, Gynecology and Reproductive Biology, 2009, 144, S82-S89.	1.1	121
6	Quantitative Evaluation of Collagen Crosslinks and Corresponding Tensile Mechanical Properties in Mouse Cervical Tissue during Normal Pregnancy. PLoS ONE, 2014, 9, e112391.	2.5	102
7	Nacreâ€Inspired Composite Electrolytes for Loadâ€Bearing Solidâ€State Lithiumâ€Metal Batteries. Advanced Materials, 2020, 32, e1905517.	21.0	100
8	A new paradigm for the role of smooth muscle cells in the human cervix. American Journal of Obstetrics and Gynecology, 2016, 215, 478.e1-478.e11.	1.3	83
9	Thermally stable, nano-porous and eco-friendly sodium alginate/attapulgite separator for lithium-ion batteries. Energy Storage Materials, 2019, 22, 48-56.	18.0	79
10	A Study of the Anisotropy and Tension/Compression Behavior of Human Cervical Tissue. Journal of Biomechanical Engineering, 2010, 132, 021003.	1.3	77
11	Investigating the mechanical function of the cervix during pregnancy using finite element models derived from high-resolution 3D MRI. Computer Methods in Biomechanics and Biomedical Engineering, 2016, 19, 404-417.	1.6	69
12	The inflation response of the posterior bovine sclera. Acta Biomaterialia, 2010, 6, 4327-4335.	8.3	67
13	The in vitro inflation response of mouse sclera. Experimental Eye Research, 2010, 91, 866-875.	2.6	67
14	Collagen Fiber Orientation and Dispersion in the Upper Cervix of Non-Pregnant and Pregnant Women. PLoS ONE, 2016, 11, e0166709.	2.5	67
15	Steroid Hormones Are Key Modulators of Tissue Mechanical Function via Regulation of Collagen and Elastic Fibers. Endocrinology, 2017, 158, 950-962.	2.8	63
16	Analyzing three-dimensional ultrastructure of human cervical tissue using optical coherence tomography. Biomedical Optics Express, 2015, 6, 1090.	2.9	51
17	A systematic evaluation of collagen cross-links in the human cervix. American Journal of Obstetrics and Gynecology, 2015, 212, 321.e1-321.e8.	1.3	47
18	A continuous fiber distribution material model for human cervical tissue. Journal of Biomechanics, 2015, 48, 1533-1540.	2.1	46

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19	Mechanics of cervical remodelling: insights from rodent models of pregnancy. Interface Focus, 2019, 9, 20190026.	3.0	46
20	Measuring the compressive viscoelastic mechanical properties of human cervical tissue using indentation. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 34, 18-26.	3.1	42
21	Material properties of mouse cervical tissue in normal gestation. Acta Biomaterialia, 2016, 36, 195-209.	8.3	41
22	Biomechanics of the human uterus. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2017, 9, e1388.	6.6	38
23	The presence and distribution of elastin in the posterior and retrobulbar regions of the mouse eye. Experimental Eye Research, 2010, 90, 210-215.	2.6	34
24	A Parameterized Ultrasound-Based Finite Element Analysis of the Mechanical Environment of Pregnancy. Journal of Biomechanical Engineering, 2017, 139, .	1.3	32
25	Interstitial growth and remodeling of biological tissues: Tissue composition as state variables. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 29, 544-556.	3.1	31
26	Cervical alterations in pregnancy. Best Practice and Research in Clinical Obstetrics and Gynaecology, 2018, 52, 88-102.	2.8	29
27	Characterization of the collagen microstructural organization of human cervical tissue. Reproduction, 2018, 156, 71-79.	2.6	28
28	Cervical Collagen Network Remodeling in Normal Pregnancy and Disrupted Parturition in Antxr2 Deficient Mice. Journal of Biomechanical Engineering, 2014, 136, 021017.	1.3	24
29	Anisotropic Material Characterization of Human Cervix Tissue Based on Indentation and Inverse Finite Element Analysis. Journal of Biomechanical Engineering, 2019, 141, .	1.3	21
30	Direct Measurement of the Permeability of Human Cervical Tissue. Journal of Biomechanical Engineering, 2013, 135, 021024.	1.3	20
31	The mechanical response of the mouse cervix to tensile cyclic loading in term and preterm pregnancy. Acta Biomaterialia, 2018, 78, 308-319.	8.3	19
32	Anisotropic Mechanical Properties of the Human Uterus Measured by Spherical Indentation. Annals of Biomedical Engineering, 2021, 49, 1923-1942.	2.5	18
33	Magnetic resonance imaging of three-dimensional cervical anatomy in the second and third trimester. European Journal of Obstetrics, Gynecology and Reproductive Biology, 2009, 144, S65-S69.	1.1	16
34	Mechanical and Biochemical Effects of Progesterone on Engineered Cervical Tissue. Tissue Engineering - Part A, 2018, 24, 1765-1774.	3.1	15
35	Computer modeling tools to understand the causes of preterm birth. Seminars in Perinatology, 2017, 41, 485-492.	2.5	13
36	Prevention of preterm birth: Novel interventions for the cervix. Seminars in Perinatology, 2017, 41, 505-510.	2.5	13

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37	Novel regulatory roles of small leucine-rich proteoglycans in remodeling of the uterine cervix in pregnancy. Matrix Biology, 2022, 105, 53-71.	3.6	13
38	Extracellular Matrix Rigidity Modulates Human Cervical Smooth Muscle Contractilityâ€"New Insights into Premature Cervical Failure and Spontaneous Preterm Birth. Reproductive Sciences, 2021, 28, 237-251.	2.5	12
39	An automated 3D registration method for optical coherence tomography volumes. , 2014, 2014, 3873-6.		11
40	Three-dimensional collagen fiber mapping and tractography of human uterine tissue using OCT. Biomedical Optics Express, 2020, 11, 5518.	2.9	11
41	Longitudinal ultrasonic dimensions and parametric solid models of the gravid uterus and cervix. PLoS ONE, 2021, 16, e0242118.	2.5	10
42	Topical Corneal Cross-Linking Solution Delivered Via Corneal Reservoir in Dutch-Belted Rabbits. Translational Vision Science and Technology, 2020, 9, 20.	2.2	5
43	The biomechanics of cervical funneling: The effect of stroma properties, anatomic geometry and pelvic forces on funnel formation. American Journal of Obstetrics and Gynecology, 2004, 191, S17.	1.3	4
44	109: Human cervical smooth muscle stretch increases pro-inflammatory cytokine secretion. American Journal of Obstetrics and Gynecology, 2017, 216, S77-S78.	1.3	4
45	The Non-pregnant and Pregnant Human Cervix: a Systematic Proteomic Analysis. Reproductive Sciences, 2022, 29, 1542-1559.	2.5	4
46	The biomechanics of cerclage placement: The effect of cerclage position and stress relaxation on cervical stress. American Journal of Obstetrics and Gynecology, 2005, 193, S21.	1.3	3
47	Bioengineering in women's health: part I. Interface Focus, 2019, 9, 20190042.	3.0	3
48	Mechanical Response of Mouse Cervices Lacking Decorin and Biglycan During Pregnancy. Journal of Biomechanical Engineering, 2022, 144, .	1.3	3
49	746: The affect of parity on the distribution of collagen crosslinks in the human cervix. American Journal of Obstetrics and Gynecology, 2014, 210, S366-S367.	1.3	2
50	745: The first systematic evaluation of collagen crosslinks in the human cervix. American Journal of Obstetrics and Gynecology, 2014, 210, S365-S366.	1.3	2
51	201: Human cervical smooth muscle stretch increases matrix metalloproteinase secretion: a new mechanism to explain premature cervical remodeling. American Journal of Obstetrics and Gynecology, 2016, 214, S122.	1.3	2
52	557: Progesterone decreases human cervical smooth muscle cell contractility. American Journal of Obstetrics and Gynecology, 2019, 220, S372.	1.3	2
53	Bioengineering in women's health, volume 2: pregnancyâ€"from implantation to parturition. Interface Focus, 2019, 9, 20190081.	3.0	2
54	The connection between uterine contractions and cervical dilation: The biomechanics of cervical deformation. American Journal of Obstetrics and Gynecology, 2005, 193, S55.	1.3	1

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55	The swelling behavior of the mouse cervix: Changing kinetics with osmolarity and the role of hyaluronan in pregnancy. Acta Biomaterialia, 2021, 135, 414-424.	8.3	1
56	The Biomechanical Response of Normal and Glaucoma Human Sclera. , 2010, , .		1
57	Time-Dependent Indentation Response of Human Cervical Tissue. , 2012, , .		1
58	The Scleral Inflation Response of Mouse Eyes to Increases in Pressure. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 87-92.	0.5	1
59	The effect of uterine volume, uterine pressure and maternal position on cervical stress: The biomechanics of common static loads. American Journal of Obstetrics and Gynecology, 2005, 193, S112.	1.3	0
60	The biomechanics of cervical anatomy: The effect of cervical length and orientation on cervical stress. American Journal of Obstetrics and Gynecology, 2005, 193, S112.	1.3	0
61	Modeling the Inflation Response of C57BL/6 Mouse Sclera. , 2011, , .		0
62	Anthrax Toxin Receptor 2 Knock-Out and Wild Type Mouse Cervix Exhibit Time-Dependent Mechanical Properties. , 2012, , .		0
63	Direct Measurement of Human Cervical Tissue Permeability. , 2012, , .		0
64	581: Does nifedipine tocolyze human cervical smooth muscle cells at the internal os?. American Journal of Obstetrics and Gynecology, 2015, 212, S290.	1.3	0
65	816: Nonpregnant women with previous premature cervical remodeling have weaker cervical collagen crosslink maturity ratios. American Journal of Obstetrics and Gynecology, 2015, 212, S393.	1.3	0
66	Dispersion analysis of collagen fiber networks in cervical tissue using optical coherence tomography (Conference Presentation). , 2016, , .		0
67	The Bulge Inflation Response of Bovine Sclera. , 2009, , .		0
68	The Inflation Response of Mouse Sclera: Age Effects on the Mechanical Properties of Scleral Tissue. , 2010, , .		0
69	Cervical Collagen Network Remodeling in Normal and Disrupted Parturition Mouse Models. , 2013, , .		0
70	Inverse Finite Element Analysis of the Indentation Response of Human Cervical Tissue. , 2013, , .		0
71	A full-thickness uterus visualization using axial registration of OCT image volumes. , 2021, , .		0
72	Quantitative three-dimensional visualization of the human uterus collagen fiber architecture using SD-OCT imaging. , 2020, , .		0

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73	Human Cervix Imaging and Analysis with Optical Coherence Tomography. , 2021, , .		0