

# Geoffrey Maksym

## List of Publications by Year in descending order

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69  
papers

4,670  
citations

136740

32  
h-index

123241

61  
g-index

73  
all docs

73  
docs citations

73  
times ranked

4158  
citing authors

#	ARTICLE	IF	CITATIONS
1	Scaling the Microrheology of Living Cells. <i>Physical Review Letters</i> , 2001, 87, 148102.	2.9	1,056
2	Airway smooth muscle dynamics: a common pathway of airway obstruction in asthma. <i>European Respiratory Journal</i> , 2007, 29, 834-860.	3.1	344
3	Time scale and other invariants of integrative mechanical behavior in living cells. <i>Physical Review E</i> , 2003, 68, 041914.	0.8	317
4	Technical standards for respiratory oscillometry. <i>European Respiratory Journal</i> , 2020, 55, 1900753.	3.1	311
5	Selected Contribution: Time course and heterogeneity of contractile responses in cultured human airway smooth muscle cells. <i>Journal of Applied Physiology</i> , 2001, 91, 986-994.	1.2	167
6	Mechanical properties of cultured human airway smooth muscle cells from 0.05 to 0.4 Hz. <i>Journal of Applied Physiology</i> , 2000, 89, 1619-1632.	1.2	146
7	Measurement of cell microrheology by magnetic twisting cytometry with frequency domain demodulation. <i>Journal of Applied Physiology</i> , 2001, 91, 1152-1159.	1.2	136
8	Hyperpolarized $^3\text{He}$ and $^{129}\text{Xe}$ MRI: Differences in asthma before bronchodilation. <i>Journal of Magnetic Resonance Imaging</i> , 2013, 38, 1521-1530.	1.9	134
9	Viscoelasticity of human alveolar epithelial cells subjected to stretch. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2004, 287, L1025-L1034.	1.3	132
10	Homeokinesis and short-term variability of human airway caliber. <i>Journal of Applied Physiology</i> , 2001, 91, 1131-1141.	1.2	127
11	A distributed nonlinear model of lung tissue elasticity. <i>Journal of Applied Physiology</i> , 1997, 82, 32-41.	1.2	115
12	Localized mechanical stress induces time-dependent actin cytoskeletal remodeling and stiffening in cultured airway smooth muscle cells. <i>American Journal of Physiology - Cell Physiology</i> , 2004, 287, C440-C448.	2.1	100
13	Mechanical strain increases cell stiffness through cytoskeletal filament reorganization. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2003, 285, L456-L463.	1.3	90
14	Temporal dynamics of pulmonary response to intravenous histamine in dogs: effects of dose and lung volume. <i>Journal of Applied Physiology</i> , 1994, 76, 616-626.	1.2	83
15	Lung tissue rheology and $1/f$ noise. <i>Annals of Biomedical Engineering</i> , 1994, 22, 674-681.	1.3	82
16	On the terminology for describing the length-force relationship and its changes in airway smooth muscle. <i>Journal of Applied Physiology</i> , 2004, 97, 2029-2034.	1.2	81
17	Implications of heterogeneous bead behavior on cell mechanical properties measured with magnetic twisting cytometry. <i>Journal of Magnetism and Magnetic Materials</i> , 1999, 194, 120-125.	1.0	77
18	Dynamic viscoelastic nonlinearity of lung parenchymal tissue. <i>Journal of Applied Physiology</i> , 1995, 79, 348-356.	1.2	66

#	ARTICLE	IF	CITATIONS
19	Defective Fibrillar Collagen Organization by Fibroblasts Contributes to Airway Remodeling in Asthma. American Journal of Respiratory and Critical Care Medicine, 2019, 200, 431-443.	2.5	66
20	Clinical significance and applications of oscillometry. European Respiratory Review, 2022, 31, 210208.	3.0	64
21	Regional pulmonary response to a methacholine challenge using hyperpolarized <sup>3</sup> He magnetic resonance imaging. Respirology, 2012, 17, 1237-1246.	1.3	56
22	Temporal complexity in clinical manifestations of lung disease. Journal of Applied Physiology, 2011, 110, 1723-1731.	1.2	55
23	Development and characterization of a 3D multicell microtissue culture model of airway smooth muscle. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2013, 304, L4-L16.	1.3	53
24	Characterization of the Flexcell <sup>®</sup> , Uniflex <sup>®</sup> , cyclic strain culture system with U937 macrophage-like cells. Biomaterials, 2006, 27, 226-233.	5.7	49
25	Force heterogeneity in a two-dimensional network model of lung tissue elasticity. Journal of Applied Physiology, 1998, 85, 1223-1229.	1.2	46
26	Airway resistance variability and response to bronchodilator in children with asthma. European Respiratory Journal, 2007, 30, 260-268.	3.1	43
27	Airway smooth muscle cell tone amplifies contractile function in the presence of chronic cyclic strain. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2008, 295, L479-L488.	1.3	41
28	Role of ERK MAP kinases in responses of cultured human airway smooth muscle cells to IL-1 $\beta$ . American Journal of Physiology - Lung Cellular and Molecular Physiology, 1999, 277, L943-L951.	1.3	39
29	Oscillometry and pulmonary MRI measurements of ventilation heterogeneity in obstructive lung disease: relationship to quality of life and disease control. Journal of Applied Physiology, 2018, 125, 73-85.	1.2	39
30	Nonparametric Block-Structured Modeling of Lung Tissue Strip Mechanics. Annals of Biomedical Engineering, 1998, 26, 242-252.	1.3	38
31	Airway smooth muscle tone modulates mechanically induced cytoskeletal stiffening and remodeling. Journal of Applied Physiology, 2005, 99, 634-641.	1.2	37
32	Effects of airway tree asymmetry on the emergence and spatial persistence of ventilation defects. Journal of Applied Physiology, 2014, 117, 353-362.	1.2	35
33	Airway contractility and remodeling: Links to asthma symptoms. Pulmonary Pharmacology and Therapeutics, 2013, 26, 3-12.	1.1	34
34	Beneficial and harmful effects of oscillatory mechanical strain on airway smooth muscle. Canadian Journal of Physiology and Pharmacology, 2005, 83, 913-922.	0.7	32
35	Cyclic biaxial strain affects U937 macrophage-like morphology and enzymatic activities. Journal of Biomedical Materials Research - Part A, 2006, 76A, 52-62.	2.1	32
36	Oscillometry and pulmonary magnetic resonance imaging in asthma and COPD. Physiological Reports, 2019, 7, e13955.	0.7	30

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37	Epithelial-interleukin-1 inhibits collagen formation by airway fibroblasts: Implications for asthma. <i>Scientific Reports</i> , 2020, 10, 8721.	1.6	28
38	Early detection of changes in lung mechanics with oscillometry following bariatric surgery in severe obesity. <i>Applied Physiology, Nutrition and Metabolism</i> , 2016, 41, 538-547.	0.9	27
39	Modelling resistance and reactance with heterogeneous airway narrowing in mild to severe asthma. <i>Canadian Journal of Physiology and Pharmacology</i> , 2015, 93, 207-214.	0.7	25
40	Hyperpolarized <sup>3</sup> He magnetic resonance imaging ventilation defects in asthma: relationship to airway mechanics. <i>Physiological Reports</i> , 2016, 4, e12761.	0.7	22
41	Modeling stochastic and spatial heterogeneity in a human airway tree to determine variation in respiratory system resistance. <i>Journal of Applied Physiology</i> , 2012, 112, 167-175.	1.2	20
42	Differential effects of uniaxial and biaxial strain on U937 macrophage-like cell morphology: Influence of extracellular matrix type proteins. <i>Journal of Biomedical Materials Research - Part A</i> , 2007, 81A, 971-981.	2.1	19
43	Stress and strain in the contractile and cytoskeletal filaments of airway smooth muscle. <i>Pulmonary Pharmacology and Therapeutics</i> , 2009, 22, 407-416.	1.1	18
44	Mechanical Determinants of Airways Hyperresponsiveness. <i>Critical Reviews in Biomedical Engineering</i> , 2011, 39, 281-296.	0.5	17
45	The functional response of U937 macrophage-like cells is modulated by extracellular matrix proteins and mechanical strain. <i>Biochemistry and Cell Biology</i> , 2006, 84, 763-773.	0.9	16
46	Reactance and elastance as measures of small airways response to bronchodilator in asthma. <i>Journal of Applied Physiology</i> , 2019, 127, 1772-1781.	1.2	15
47	Nonparametric block-structured modeling of rat lung mechanics. <i>Annals of Biomedical Engineering</i> , 1997, 25, 1000-1008.	1.3	14
48	A Study of Artifacts and Their Removal During Forced Oscillation of the Respiratory System. <i>Annals of Biomedical Engineering</i> , 2013, 41, 990-1002.	1.3	11
49	Time-Varying Respiratory Mechanics as a Novel Mechanism Behind Frequency Dependence of Impedance: A Modeling Approach. <i>IEEE Transactions on Biomedical Engineering</i> , 2019, 66, 2433-2446.	2.5	9
50	Proteomic analysis of rat proximal tubule cells following stretch-induced apoptosis in an in vitro model of kidney obstruction. <i>Journal of Proteomics</i> , 2014, 100, 125-135.	1.2	8
51	Improvement in upright and supine lung mechanics with bariatric surgery affects bronchodilator responsiveness and sleep quality. <i>Journal of Applied Physiology</i> , 2018, 125, 1305-1314.	1.2	8
52	Oscillatory Mechanics in Asthma: Emphasis on Airway Variability and Heterogeneity. <i>Critical Reviews in Biomedical Engineering</i> , 2015, 43, 97-130.	0.5	7
53	Technical standards for respiratory oscillometry: test loads for calibration and verification. <i>European Respiratory Journal</i> , 2020, 56, 2003369.	3.1	7
54	Extract and component-specific sensitization patterns in Canadian moderate-to-severe preschool asthmatics. <i>Allergy: European Journal of Allergy and Clinical Immunology</i> , 2019, 74, 2519-2521.	2.7	6

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55	Determination of Glottic Opening Fluctuation by a New Method Based on Nasopharyngoscopy. Chinese Journal of Physiology, 2013, 56, 52-57.	0.4	6
56	Nonparametric block-structured modeling of rat lung mechanics. Annals of Biomedical Engineering, 1997, 25, 1000-8.	1.3	6
57	Chronic oscillatory strain induces MLCK associated rapid recovery from acute stretch in airway smooth muscle cells. Journal of Applied Physiology, 2011, 111, 955-963.	1.2	5
58	Validation and optimization of a membrane system for carbon dioxide removal in anesthesia circuits under realistic patient scenarios. Journal of Membrane Science, 2020, 601, 117887.	4.1	4
59	A resonance-mode piezoelectric device for measurement of respiratory mechanics. Journal of Biomedical Science and Engineering, 2013, 06, 1062-1071.	0.2	4
60	Tracking Respiratory Mechanics With Oscillometry: Introduction of Time-Varying Error. IEEE Sensors Journal, 2019, 19, 311-321.	2.4	2
61	Standardized Pulmonary Function Testing. , 2019, , 5-23.		1
62	Oscillometry for Lung Function Testing. , 2019, , 25-47.		1
63	Mechanics of Airway Smooth Muscle Cells and the Response to Stretch. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2010, , 261-293.	0.7	0
64	Elastance Derived From Airway Reactance Can Discriminate Asthma From Healthy Controls. , 2012, , .		0
65	Lack Of Effect Of IL-22 On Human Airway Smooth Muscle Contractility In Vitro. , 2012, , .		0
66	Characterization Of Allergen Sensitization Patterns In Canadian Preschool Children With Severe Wheezing. Journal of Allergy and Clinical Immunology, 2019, 143, AB297.	1.5	0
67	DEVELOPMENT OF A COMBINATION FORCED OSCILLATION - SPIROMETER DEVICE. Proceedings of the Canadian Engineering Education Association (CEEA), 0, , .	0.2	0
68	Assessing the accuracy of oscillometry in tracking the mean values and the temporal changes in impedance of children. , 2015, , .		0
69	Temporal variations of oscillometric reactance in COPD and ILD. , 2015, , .		0