

Sam Bayat

List of Publications by Year in descending order

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Version: 2024-02-01

89
papers

1,557
citations

304368

22
h-index

329751

37
g-index

91
all docs

91
docs citations

91
times ranked

1500
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantitative measurement of regional lung gas volume by synchrotron radiation computed tomography. <i>Physics in Medicine and Biology</i> , 2005, 50, 1-11.	1.6	400
2	Quantitative functional lung imaging with synchrotron radiation using inhaled xenon as contrast agent. <i>Physics in Medicine and Biology</i> , 2001, 46, 3287-3299.	1.6	82
3	Methacholine and Ovalbumin Challenges Assessed by Forced Oscillations and Synchrotron Lung Imaging. <i>American Journal of Respiratory and Critical Care Medicine</i> , 2009, 180, 296-303.	2.5	73
4	Effect of tidal volume on distribution of ventilation assessed by synchrotron radiation CT in rabbit. <i>Journal of Applied Physiology</i> , 2004, 96, 1899-1908.	1.2	50
5	Individual Airway Closure Characterized In Vivo by Phase-Contrast CT Imaging in Injured Rabbit Lung*. <i>Critical Care Medicine</i> , 2019, 47, e774-e781.	0.4	41
6	Comparison of ^{99m} Tc-DTPA and urea for measuring cefepime concentrations in epithelial lining fluid. <i>European Respiratory Journal</i> , 2004, 24, 150-156.	3.1	39
7	Effect of positive end-expiratory pressure on regional ventilation distribution during bronchoconstriction in rabbit studied by synchrotron radiation imaging*. <i>Critical Care Medicine</i> , 2011, 39, 1731-1738.	0.4	36
8	Effect of Positive End-expiratory Pressure on Regional Ventilation Distribution during Mechanical Ventilation after Surfactant Depletion. <i>Anesthesiology</i> , 2013, 119, 89-100.	1.3	35
9	Deciphering the Impact of Early-Life Exposures to Highly Variable Environmental Factors on Foetal and Child Health: Design of SEPAGES Couple-Child Cohort. <i>International Journal of Environmental Research and Public Health</i> , 2019, 16, 3888.	1.2	35
10	Differences in the time course of proximal and distal airway response to inhaled histamine studied by synchrotron radiation CT. <i>Journal of Applied Physiology</i> , 2006, 100, 1964-1973.	1.2	34
11	Dynamic Mechanical Interactions Between Neighboring Airspaces Determine Cyclic Opening and Closure in Injured Lung. <i>Critical Care Medicine</i> , 2017, 45, 687-694.	0.4	33
12	Quantitative Imaging of Regional Aerosol Deposition, Lung Ventilation and Morphology by Synchrotron Radiation CT. <i>Scientific Reports</i> , 2018, 8, 3519.	1.6	33
13	In vivo imaging of bone micro-architecture in mice with 3D synchrotron radiation micro-tomography. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2005, 548, 247-252.	0.7	32
14	High-Resolution Blood-Brain Barrier Permeability and Blood Volume Imaging Using Quantitative Synchrotron Radiation Computed Tomography: Study on an F98 Rat Brain Glioma. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2005, 25, 145-153.	2.4	31
15	Simultaneous <i>in vivo</i> synchrotron radiation computed tomography of regional ventilation and blood volume in rabbit lung using combined K-edge and temporal subtraction. <i>Physics in Medicine and Biology</i> , 2008, 53, 775-791.	1.6	27
16	Paradoxical conducting airway responses and heterogeneous regional ventilation after histamine inhalation in rabbit studied by synchrotron radiation CT. <i>Journal of Applied Physiology</i> , 2009, 106, 1949-1958.	1.2	27
17	High inspired oxygen fraction impairs lung volume and ventilation heterogeneity in healthy children: a double-blind randomised controlled trial. <i>British Journal of Anaesthesia</i> , 2019, 122, 682-691.	1.5	27
18	International consensus on lung function testing during the COVID-19 pandemic and beyond. <i>ERJ Open Research</i> , 2022, 8, 00602-2021.	1.1	27

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19	Blood flow vs. venous pressure effects on filtration coefficient in oleic acid-injured lung. <i>Journal of Applied Physiology</i> , 1998, 84, 1011-1023.	1.2	25
20	Vascular reactivity to norepinephrine and acetylcholine after chronic intermittent hypoxia in mice. <i>Respiratory Physiology and Neurobiology</i> , 2003, 139, 21-32.	0.7	25
21	Correlative Nanoscale 3D Imaging of Structure and Composition in Extended Objects. <i>PLoS ONE</i> , 2012, 7, e50124.	1.1	23
22	Increased cardiac index due to terbutaline treatment aggravates capillary-alveolar macromolecular leakage in oleic acid lung injury in dogs. <i>Critical Care</i> , 2009, 13, R166.	2.5	22
23	Micrometer-resolution X-ray tomographic full-volume reconstruction of an intact post-mortem juvenile rat lung. <i>Histochemistry and Cell Biology</i> , 2021, 155, 215-226.	0.8	22
24	Multiscale pink-beam microCT imaging at the ESRF-ID17 biomedical beamline. <i>Journal of Synchrotron Radiation</i> , 2020, 27, 1347-1357.	1.0	21
25	Imaging of lung function using synchrotron radiation computed tomography: What's new?. <i>European Journal of Radiology</i> , 2008, 68, S78-S83.	1.2	18
26	Lung responses in murine models of experimental asthma: Value of house dust mite over ovalbumin sensitization. <i>Respiratory Physiology and Neurobiology</i> , 2018, 247, 43-51.	0.7	16
27	A Mouse Model for Microbeam Radiation Therapy of the Lung. <i>International Journal of Radiation Oncology Biology Physics</i> , 2021, 110, 521-525.	0.4	16
28	Variable Ventilation Is Equally Effective as Conventional Pressure Control Ventilation for Optimizing Lung Function in a Rabbit Model of ARDS. <i>Frontiers in Physiology</i> , 2019, 10, 803.	1.3	15
29	Radiation dose and image quality inK-edge subtraction computed tomography of lungin vivo. <i>Journal of Synchrotron Radiation</i> , 2014, 21, 1305-1313.	1.0	14
30	Imaging atelectrauma in Ventilator-Induced Lung Injury using 4D X-ray microscopy. <i>Scientific Reports</i> , 2021, 11, 4236.	1.6	14
31	In VivoQuantitation of Epithelial Lining Fluid in Dog Lung. <i>American Journal of Respiratory and Critical Care Medicine</i> , 1998, 158, 1715-1723.	2.5	13
32	QUANTITATIVE FUNCTIONAL IMAGING AND KINETIC STUDIES WITH HIGH-CONTRAST AGENTS USING SYNCHROTRON RADIATION COMPUTED TOMOGRAPHY. <i>Clinical and Experimental Pharmacology and Physiology</i> , 2009, 36, 95-106.	0.9	13
33	Monitoring the Capillary-Alveolar Leakage in an A.R.D.S. Model Using Broncho-Alveolar Lavage. <i>Microcirculation</i> , 2008, 15, 237-249.	1.0	11
34	Role of cellular effectors in the emergence of ventilation defects during allergic bronchoconstriction. <i>Journal of Applied Physiology</i> , 2013, 115, 1057-1064.	1.2	11
35	Validation of airway resistance models for predicting pressure loss through anatomically realistic conducting airway replicas of adults and children. <i>Journal of Biomechanics</i> , 2015, 48, 1988-1996.	0.9	11
36	Comparison between neurally-assisted, controlled, and physiologically variable ventilation in healthy rabbits. <i>British Journal of Anaesthesia</i> , 2018, 121, 918-927.	1.5	11

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37	Volumetric but Not Time Capnography Detects Ventilation/Perfusion Mismatch in Injured Rabbit Lung. <i>Frontiers in Physiology</i> , 2018, 9, 1805.	1.3	11
38	Functional lung imaging with synchrotron radiation: Methods and preclinical applications. <i>Physica Medica</i> , 2020, 79, 22-35.	0.4	11
39	Fluid replacement and respiratory function. <i>European Journal of Anaesthesiology</i> , 2016, 33, 34-41.	0.7	10
40	Regional Behavior of Airspaces During Positive Pressure Reduction Assessed by Synchrotron Radiation Computed Tomography. <i>Frontiers in Physiology</i> , 2019, 10, 719.	1.3	10
41	Comparison of pleural and esophageal pressure in supine and prone positions in a porcine model of acute respiratory distress syndrome. <i>Journal of Applied Physiology</i> , 2020, 128, 1617-1625.	1.2	10
42	Acute cigarette smoke inhalation blunts lung responsiveness to methacholine and allergen in rabbit: differentiation of central and peripheral effects. <i>American Journal of Physiology - Lung Cellular and Molecular Physiology</i> , 2010, 299, L242-L251.	1.3	9
43	Pressure-regulated volume control vs. volume control ventilation in healthy and injured rabbit lung. <i>European Journal of Anaesthesiology</i> , 2016, 33, 767-775.	0.7	9
44	Synchrotron Imaging Shows Effect of Ventilator Settings on Intrabreath Cyclic Changes in Pulmonary Blood Volume. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2017, 57, 459-467.	1.4	9
45	In vivo measurement of lung capillary-alveolar macromolecule permeability by saturation bronchoalveolar lavage. <i>Critical Care Medicine</i> , 2000, 28, 2937-2942.	0.4	8
46	CT Density Distribution Analysis in Patients with Cystic Fibrosis. <i>Academic Radiology</i> , 2015, 22, 179-185.	1.3	8
47	Acute hemorrhagic shock decreases airway resistance in anesthetized rat. <i>Journal of Applied Physiology</i> , 2011, 111, 458-464.	1.2	7
48	The Effect of Positive End-Expiratory Pressure on Lung Micromechanics Assessed by Synchrotron Radiation Computed Tomography in an Animal Model of ARDS. <i>Journal of Clinical Medicine</i> , 2019, 8, 1117.	1.0	7
49	Imaging Regional Lung Structure and Function in Small Animals Using Synchrotron Radiation Phase-Contrast and K-Edge Subtraction Computed Tomography. <i>Frontiers in Physiology</i> , 2022, 13, 825433.	1.3	7
50	Effect of surfactant on regional lung function in an experimental model of respiratory distress syndrome in rabbit. <i>Journal of Applied Physiology</i> , 2015, 119, 290-298.	1.2	6
51	Physiologically variable ventilation reduces regional lung inflammation in a pediatric model of acute respiratory distress syndrome. <i>Respiratory Research</i> , 2020, 21, 288.	1.4	6
52	Fractal analysis reveals functional unit of ventilation in the lung. <i>Journal of Physiology</i> , 2021, 599, 5121-5132.	1.3	6
53	Lung tissue biomechanics imaged with synchrotron phase contrast microtomography in live rats. <i>Scientific Reports</i> , 2022, 12, 5056.	1.6	6
54	Differences in the pattern of bronchoconstriction induced by intravenous and inhaled methacholine in rabbit. <i>Respiratory Physiology and Neurobiology</i> , 2013, 189, 465-472.	0.7	5

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55	Zero expiratory pressure and low oxygen concentration promote heterogeneity of regional ventilation and lung densities. <i>Acta Anaesthesiologica Scandinavica</i> , 2016, 60, 958-968.	0.7	5
56	Change in capnogram waveform is associated with bronchodilator response and asthma control in children. <i>Pediatric Pulmonology</i> , 2019, 54, 698-705.	1.0	5
57	Synchrotron X-Ray-Based Functional and Anatomical Lung Imaging Techniques. <i>Fundamental Biomedical Technologies</i> , 2018, , 151-167.	0.2	5
58	Ventilation heterogeneity: small length scales, big challenges. <i>Journal of Applied Physiology</i> , 2012, 113, 851-852.	1.2	4
59	Respiratory Effects of Sarafotoxins from the Venom of Different <i>Atractaspis</i> Genus Snake Species. <i>Toxins</i> , 2016, 8, 215.	1.5	4
60	Holographic laser Doppler imaging of pulsatile blood flow. <i>Journal of Biomedical Optics</i> , 2015, 20, 1.	1.4	3
61	Effect of PEEP and I:E ratio on cerebral oxygenation in ARDS: an experimental study in anesthetized rabbit. <i>BMC Anesthesiology</i> , 2019, 19, 110.	0.7	3
62	Effect of nasal airway nonlinearities on oscillometric resistance measurements in infants. <i>Journal of Applied Physiology</i> , 2020, 129, 591-598.	1.2	3
63	Regional lung viscoelastic properties in supine and prone position in a porcine model of acute respiratory distress syndrome. <i>Journal of Applied Physiology</i> , 2021, 131, 15-25.	1.2	3
64	The water consumption behaviors of the students of Inonu University and influencing factors, Turkey. <i>European Journal of Public Health</i> , 2017, 27, .	0.1	2
65	European Respiratory Society International Congress 2021: Highlights from the Respiratory clinical care and physiology assembly. <i>ERJ Open Research</i> , 0, , 00710-2021.	1.1	2
66	Synchrotron Radiation Computed Tomography Station at the ESRF Biomedical Beamline. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	1
67	Airway Response To Inhaled Allergen Assessed By High-Resolution Synchrotron Imaging And Forced Oscillation Technique In Sensitized Brown Norway Rat. , 2010, , .		1
68	Reversing Cholinergic Bronchoconstriction by Common Inotropic Agents. <i>Anesthesia and Analgesia</i> , 2019, 129, 745-752.	1.1	1
69	Dynamic In Vivo Synchrotron Phase-Contrast X-Ray Lung Microscopy. , 2020, , .		1
70	Effects of metformin on autoimmune immunoglobins and interferon α in patients with early diagnosed pemphigus vulgaris: a prospective clinical trial. <i>Clinical and Experimental Dermatology</i> , 2022, 47, 110-113.	0.6	1
71	3D histopathology speckle phase contrast imaging: from synchrotron to conventional sources. , 2019, , .		1
72	Experimental and clinical measurement of pulmonary edema. , 1998, , 161-229.		1

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73	Within-breath dynamics of atelectrauma during mechanical ventilation studied by in vivo 4D microscopy in injured rabbit lung. , 2020, , .		1
74	LPS-induced Lung Inflammation Is Modulated By Chronic Iron Overload: Role Of Proinflammatory Cytokines. , 2010, , .		0
75	High-resolution In-vivo Synchrotron Imaging Of Lung Structure And Regional Ventilation In Rat Using The K-edge Subtraction Technique. , 2010, , .		0
76	In-Vivo Synchrotron Imaging Of Regional Ventilation And Blood Volume After Methacholine Provocation In Rabbit. , 2012, , .		0
77	Feasibility Of K-Edge Subtraction (KES) Synchrotron Imaging For The Measurement Of Regional Aerosol Deposition, Lung Ventilation And Airway Morphology In Rabbit. , 2012, , .		0
78	0897. Mechanisms of pulmonary inflation during lung injury assessed by synchrotron radiation computed tomography. Intensive Care Medicine Experimental, 2014, 2, .	0.9	0
79	Alveolar deflation dynamics before and after lung injury assessed by synchrotron radiation computed tomography. Intensive Care Medicine Experimental, 2015, 3, .	0.9	0
80	X-ray Tomographic In Situ Imaging of an Entire Post Mortem Juvenile Rat Lung at Microscopical Resolution. , 2020, , .		0
81	RÃ1e des accÃ©lÃ©rateurs de particules dans la lutte contre le SARS-CoV-2. , 2021, , 4-9.	0.1	0
82	Nasal High Flow at 25 L/min or Expiratory Resistive Load Do Not Improve Regional Lung Function in Patients With COPD: A Functional CT Imaging Study. Frontiers in Physiology, 2021, 12, 683316.	1.3	0
83	Regional distribution of lung inflammation in a multiple-hit model of ARDS assessed by micro-PET-CT imaging in juvenile rabbits. , 2019, , .		0
84	Benefits of physiological variable ventilation during asthma exacerbations: a randomised experimental study. , 2019, , .		0
85	Comparison of low-dose CT image registration-based "Parametric Response Maps" with global lung function and diffusion capacity in COPD patients. , 2020, , .		0
86	Feasibility and reproducibility of oscillometry for measuring respiratory function in young children: the SEPAGES cohort. , 2020, , .		0
87	Comparison of low-dose CT image registration-based metrics of regional ventilation distribution with global lung function and diffusion capacity in COPD patients. , 2020, , .		0
88	A novel approach for automated alveolar morphometry using synchrotron X-ray microtomography in intact rat lung. , 2020, , .		0
89	Associations between oscillometry parameters and respiratory outcomes in young children: the SEPAGES cohort. , 2020, , .		0