Josue Sznitman

List of Publications by Year in descending order

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77 papers	2,276 citations	257101 24 h-index	243296 44 g-index
78 all docs	78 docs citations	78 times ranked	1888 citing authors

#	Article	IF	Citations
1	Airborne transmission of respiratory viruses. Science, 2021, 373, .	6.0	693
2	Respiratory Flow Phenomena and Gravitational Deposition in a Three-Dimensional Space-Filling Model of the Pulmonary Acinar Tree. Journal of Biomechanical Engineering, 2009, 131, 031010.	0.6	101
3	Respiratory microflows in the pulmonary acinus. Journal of Biomechanics, 2013, 46, 284-298.	0.9	96
4	Three-Dimensional Convective Alveolar Flow Induced by Rhythmic Breathing Motion of the Pulmonary Acinus. Journal of Biomechanical Engineering, 2007, 129, 658-665.	0.6	75
5	Particle dynamics and deposition in true-scale pulmonary acinar models. Scientific Reports, 2015, 5, 14071.	1.6	73
6	Revisiting pulmonary acinar particle transport: convection, sedimentation, diffusion, and their interplay. Journal of Applied Physiology, 2015, 118, 1375-1385.	1.2	55
7	Advanced in vitro lung-on-chip platforms for inhalation assays: From prospect to pipeline. European Journal of Pharmaceutics and Biopharmaceutics, 2019, 144, 11-17.	2.0	53
8	Targeting inhaled aerosol delivery to upper airways in children: Insight from computational fluid dynamics (CFD). PLoS ONE, 2018, 13, e0207711.	1.1	48
9	Microfluidic platforms for advanced risk assessments of nanomaterials. Nanotoxicology, 2015, 9, 381-395.	1.6	47
10	Innovative preclinical models for pulmonary drug delivery research. Expert Opinion on Drug Delivery, 2020, 17, 463-478.	2.4	45
11	Biomimetics of the pulmonary environment in vitro: A microfluidics perspective. Biomicrofluidics, 2018, 12, 042209.	1.2	43
12	Acinus-on-a-chip: A microfluidic platform for pulmonary acinar flows. Journal of Biomechanics, 2013, 46, 2817-2823.	0.9	38
13	One (sub-)acinus for all: Fate of inhaled aerosols in heterogeneous pulmonary acinar structures. European Journal of Pharmaceutical Sciences, 2018, 113, 53-63.	1.9	36
14	In situ-Like Aerosol Inhalation Exposure for Cytotoxicity Assessment Using Airway-on-Chips Platforms. Frontiers in Bioengineering and Biotechnology, 2020, 8, 91.	2.0	34
15	Multi-Environment Model Estimation for Motility Analysis of Caenorhabditis elegans. PLoS ONE, 2010, 5, e11631.	1.1	33
16	Role of Alveolar Topology on Acinar Flows and Convective Mixing. Journal of Biomechanical Engineering, 2014, 136, 061007.	0.6	32
17	Direct numerical simulation of particle laden flow in a human airway bifurcation model. International Journal of Heat and Fluid Flow, 2016, 61, 677-710.	1.1	32
18	Capturing the Onset of Bacterial Pulmonary Infection in Aciniâ€Onâ€Chips. Advanced Biology, 2019, 3, e1900026.	3.0	30

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19	Anatomical variability in the upper tracheobronchial tree: sex-based differences and implications for personalized inhalation therapies. Journal of Applied Physiology, 2021, 130, 678-707.	1.2	29
20	Red blood cell dynamics in biomimetic microfluidic networks of pulmonary alveolar capillaries. Biomicrofluidics, 2017, 11, 014103.	1.2	28
21	Advanced human-relevant in vitro pulmonary platforms for respiratory therapeutics. Advanced Drug Delivery Reviews, 2021, 176, 113901.	6.6	27
22	Microfluidic shear stress-regulated surfactant secretion in alveolar epithelial type II cells in vitro. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2014, 306, L672-L683.	1.3	26
23	The role of anisotropic expansion for pulmonary acinar aerosol deposition. Journal of Biomechanics, 2016, 49, 3543-3548.	0.9	26
24	Aerosols in healthy and emphysematous in silico pulmonary acinar rat models. Journal of Biomechanics, 2016, 49, 2213-2220.	0.9	26
25	Targeted Drug Delivery to Upper Airways Using a Pulsed Aerosol Bolus and Inhaled Volume Tracking Method. Flow, Turbulence and Combustion, 2019, 102, 73-87.	1.4	24
26	Correlation of spirometry and symptom scores in childhood asthma and the usefulness of curvature assessment in expiratory flow-volume curves. Respiratory Care, 2007, 52, 1744-52.	0.8	24
27	Mapping low-Reynolds-number microcavity flows using microfluidic screening devices. Microfluidics and Nanofluidics, 2013, 15, 491-500.	1.0	23
28	In silico approaches to respiratory nasal flows: A review. Journal of Biomechanics, 2019, 97, 109434.	0.9	23
29	Multiscale in silico lung modeling strategies for aerosol inhalation therapy and drug delivery. Current Opinion in Biomedical Engineering, 2019, 11, 130-136.	1.8	23
30	Streamline crossing: An essential mechanism for aerosol dispersion in the pulmonary acinus. Journal of Biomechanics, 2017, 50, 222-227.	0.9	22
31	Augmenting regional and targeted delivery in the pulmonary acinus using magnetic particles. International Journal of Nanomedicine, 2016, Volume 11, 3385-3395.	3.3	21
32	Computational Models of Inhalation Therapy in Early Childhood: Therapeutic Aerosols in the Developing Acinus. Journal of Aerosol Medicine and Pulmonary Drug Delivery, 2016, 29, 288-298.	0.7	19
33	Advancing human in vitro pulmonary disease models in preclinical research: opportunities for lung-on-chips. Expert Opinion on Drug Delivery, 2020, 17, 621-625.	2.4	19
34	In Silico Optimization of Fiber-Shaped Aerosols in Inhalation Therapy for Augmented Targeting and Deposition across the Respiratory Tract. Pharmaceutics, 2020, 12, 230.	2.0	18
35	Targeting inhaled fibers to the pulmonary acinus: Opportunities for augmented delivery from in silico simulations. European Journal of Pharmaceutical Sciences, 2019, 137, 105003.	1.9	17
36	Active pulmonary targeting against tuberculosis (TB) via triple-encapsulation of Q203, bedaquiline and superparamagnetic iron oxides (SPIOs) in nanoparticle aggregates. Drug Delivery, 2019, 26, 1039-1048.	2.5	17

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37	Revisiting Airflow and Aerosol Transport Phenomena in the Deep Lungs with Microfluidics. Chemical Reviews, 2022, 122, 7182-7204.	23.0	17
38	Convective gas transport in the pulmonary acinus: Comparing roles of convective and diffusive lengths. Journal of Biomechanics, 2009, 42, 789-792.	0.9	16
39	The role of respiratory flow asynchrony on convective mixing in the pulmonary acinus. Fluid Dynamics Research, 2014, 46, 041407.	0.6	16
40	Locomotion Through Complex Fluids: An Experimental View. Biological and Medical Physics Series, 2015, , 245-281.	0.3	16
41	Respiratory Physiology on a Chip. Scientifica, 2012, 2012, 1-12.	0.6	15
42	Unsteady diffusional screening in 3D pulmonary acinar structures: from infancy to adulthood. Journal of Biomechanics, 2016, 49, 2193-2200.	0.9	15
43	A Microfluidic Model of Biomimetically Breathing Pulmonary Acinar Airways. Journal of Visualized Experiments, 2016, , .	0.2	15
44	Human Multi-Compartment Airways-on-Chip Platform for Emulating Respiratory Airborne Transmission: From Nose to Pulmonary Acini. Frontiers in Physiology, 2022, 13, 853317.	1.3	15
45	Biomimetics of fetal alveolar flow phenomena using microfluidics. Biomicrofluidics, 2015, 9, 014120.	1.2	13
46	Acoustic streaming flows in a cavity: An illustration of small-scale inviscid flow. Physica D: Nonlinear Phenomena, 2008, 237, 2240-2246.	1.3	11
47	Microfluidic Chip for Siteâ€Specific Neuropharmacological Treatment and Activity Probing of 3D Neuronal â€œOptonetâ€•Cultures. Advanced Healthcare Materials, 2015, 4, 1478-1483.	3.9	11
48	Revisiting high-frequency oscillatory ventilation in vitro and in silico in neonatal conductive airways. Clinical Biomechanics, 2019, 66, 50-59.	0.5	11
49	Ventilation-induced jet suggests biotrauma in reconstructed airways of the intubated neonate. Journal of the Royal Society Interface, 2020, 17, 20190516.	1.5	11
50	Model-Independent Phenotyping of C. elegans Locomotion Using Scale-Invariant Feature Transform. PLoS ONE, 2015, 10, e0122326.	1.1	10
51	Dendritic tree extraction from noisy maximum intensity projection images in C. elegans. BioMedical Engineering OnLine, 2014, 13, 74.	1.3	9
52	Transport of ellipsoid fibers in oscillatory shear flows: Implications for aerosol deposition in deep airways. European Journal of Pharmaceutical Sciences, 2018, 113, 145-151.	1.9	9
53	Targeting functionalized nanoparticles to activated endothelial cells under high wall shear stress. Bioengineering and Translational Medicine, 2020, 5, e10151.	3.9	9
54	PerfuPulâ€”A Versatile Perfusable Platform to Assess Permeability and Barrier Function of Air Exposed Pulmonary Epithelia. Frontiers in Bioengineering and Biotechnology, 2021, 9, 743236.	2.0	9

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55	Fate of inhaled aerosols under the influence of glottal motion in a realistic in silico human tracheobronchial tree model. European Journal of Pharmaceutical Sciences, 2022, 173, 106172.	1.9	8
56	Ventilationâ€induced epithelial injury drives biological onset of lung trauma in vitro and is mitigated with prophylactic antiâ€inflammatory therapeutics. Bioengineering and Translational Medicine, 2022, 7, .	3.9	7
57	Caenorhabditis Elegans Segmentation Using Texture-Based Models for Motility Phenotyping. IEEE Transactions on Biomedical Engineering, 2014, 61, 2278-2289.	2.5	6
58	In silico optimization of targeted aerosol delivery in upper airways via Inhaled Volume Tracking. Clinical Biomechanics, 2020, 80, 105138.	0.5	6
59	Relevance and challenges of computational fluid dynamics in the biomedical sciences. Journal of Biomechanics, 2016, 49, 2101.	0.9	5
60	Red blood cell (RBC) suspensions in confined microflows: Pressure-flow relationship. Medical Engineering and Physics, 2017, 48, 49-54.	0.8	5
61	Focused targeting of inhaled magnetic aerosols in reconstructed in vitro airway models. Journal of Biomechanics, 2021, 118, 110279.	0.9	5
62	Circulating Wnt Ligands Activate the Wnt Signaling Pathway in Mature Erythrocytes. Arteriosclerosis, Thrombosis, and Vascular Biology, 2021, 41, e243-e264.	1.1	5
63	Visualization of nematode Caenorhabditis elegans swimming in a liquid drop. Journal of Visualization, 2012, 15, 277-279.	1.1	4
64	Particle sizing of pharmaceutical aerosols via direct imaging of particle settling velocities. European Journal of Pharmaceutical Sciences, 2018, 113, 152-158.	1.9	4
65	In silico methods to model dose deposition. , 2021, , 167-195.		3
66	Microfluidic in Vitro Platforms of Pulmonary Alveolar Physiology. IFMBE Proceedings, 2015, , 777-780.	0.2	3
67	Towards homogenization of liquid plug distribution in reconstructed 3D upper airways of the preterm infant. Journal of Biomechanics, 2021, 122, 110458.	0.9	2
68	Micro-particle entrapment dynamics in microfluidic pulmonary capillary networks. Journal of Biomechanics, 2022, 137, 111082.	0.9	2
69	Visualization of low Reynolds boundary-driven cavity flows in thin liquid shells. Journal of Visualization, 2010, 13, 49-60.	1.1	1
70	Mathematical Behavior of MEFV Curves in Childhood Asthma and the Role of Curvature in Quantifying Flow Obstruction. ISRN Pulmonology, 2012, 2012, 1-13.	0.3	1
71	Nicotine in E-Cigarettes Dysregulates Pulmonary Inflammation and MMP-12 Expression without Effecting Respiratory Syncytial Virus Virulence. Journal of Respiration, 2021, 1, 60-73.	0.4	1
72	Editorial: Innovative In Vitro Models for Pulmonary Physiology and Drug Delivery in Health and Disease. Frontiers in Bioengineering and Biotechnology, 2021, 9, 788682.	2.0	1

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73	A novel aerodynamic sizing method for pharmaceutical aerosols using image-based analysis of settling velocities. Inhalation, 2017, 11, 21-25.	0.0	1
74	Shear thinning effect on liquid foam distribution in heterogeneously constricted in vitro airway models. Journal of Biomechanics, 2022, , 111131.	0.9	1
75	Drug Screening: Microfluidic Chip for Site-Specific Neuropharmacological Treatment and Activity Probing of 3D Neuronal â€œOptonetâ€•Cultures (Adv. Healthcare Mater. 10/2015). Advanced Healthcare Materials, 2015, 4, 1477-1477.	3.9	0
76	Preface to Special Topic: Bio-Transport Processes and Drug Delivery in Physiological Micro-Devices. Biomicrofluidics, 2018, 12, 042101.	1.2	0
77	Preface: Clinical relevance of respiratory mechanics and flows. Clinical Biomechanics, 2019, 66, 1.	0.5	0