Josue Sznitman

List of Publications by Year in descending order

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	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
2	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
3	Micro-particle entrapment dynamics in microfluidic pulmonary capillary networks. Journal of Biomechanics, 2022, 137, 111082.	0.9	2
4	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
5	Revisiting Airflow and Aerosol Transport Phenomena in the Deep Lungs with Microfluidics. Chemical Reviews, 2022, 122, 7182-7204.	23.0	17
6	Shear thinning effect on liquid foam distribution in heterogeneously constricted in vitro airway models. Journal of Biomechanics, 2022, , 111131.	0.9	1
7	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
8	In silico methods to model dose deposition. , 2021, , 167-195.		3
9	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
10	Focused targeting of inhaled magnetic aerosols in reconstructed in vitro airway models. Journal of Biomechanics, 2021, 118, 110279.	0.9	5
11	Circulating Wnt Ligands Activate the Wnt Signaling Pathway in Mature Erythrocytes. Arteriosclerosis, Thrombosis, and Vascular Biology, 2021, 41, e243-e264.	1.1	5
12	Towards homogenization of liquid plug distribution in reconstructed 3D upper airways of the preterm infant. Journal of Biomechanics, 2021, 122, 110458.	0.9	2
13	Airborne transmission of respiratory viruses. Science, 2021, 373, .	6.0	693
14	Advanced human-relevant in vitro pulmonary platforms for respiratory therapeutics. Advanced Drug Delivery Reviews, 2021, 176, 113901.	6.6	27
15	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
16	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
17	Ventilation-induced jet suggests biotrauma in reconstructed airways of the intubated neonate. Journal of the Royal Society Interface, 2020, 17, 20190516.	1.5	11
18	In silico optimization of targeted aerosol delivery in upper airways via Inhaled Volume Tracking. Clinical Biomechanics, 2020, 80, 105138.	0.5	6

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19	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
20	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
21	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
22	Targeting functionalized nanoparticles to activated endothelial cells under high wall shear stress. Bioengineering and Translational Medicine, 2020, 5, e10151.	3.9	9
23	Innovative preclinical models for pulmonary drug delivery research. Expert Opinion on Drug Delivery, 2020, 17, 463-478.	2.4	45
24	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
25	Capturing the Onset of Bacterial Pulmonary Infection in Aciniâ€Onâ€Chips. Advanced Biology, 2019, 3, e1900026.	3.0	30
26	In silico approaches to respiratory nasal flows: A review. Journal of Biomechanics, 2019, 97, 109434.	0.9	23
27	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
28	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
29	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
30	Revisiting high-frequency oscillatory ventilation in vitro and in silico in neonatal conductive airways. Clinical Biomechanics, 2019, 66, 50-59.	0.5	11
31	Preface: Clinical relevance of respiratory mechanics and flows. Clinical Biomechanics, 2019, 66, 1.	0.5	0
32	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
33	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
34	Particle sizing of pharmaceutical aerosols via direct imaging of particle settling velocities. European Journal of Pharmaceutical Sciences, 2018, 113, 152-158.	1.9	4
35	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
36	Targeting inhaled aerosol delivery to upper airways in children: Insight from computational fluid dynamics (CFD). PLoS ONE, 2018, 13, e0207711.	1.1	48

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37	Biomimetics of the pulmonary environment in vitro: A microfluidics perspective. Biomicrofluidics, 2018, 12, 042209.	1.2	43
38	Preface to Special Topic: Bio-Transport Processes and Drug Delivery in Physiological Micro-Devices. Biomicrofluidics, 2018, 12, 042101.	1.2	0
39	Red blood cell dynamics in biomimetic microfluidic networks of pulmonary alveolar capillaries. Biomicrofluidics, 2017, 11, 014103.	1.2	28
40	Streamline crossing: An essential mechanism for aerosol dispersion in the pulmonary acinus. Journal of Biomechanics, 2017, 50, 222-227.	0.9	22
41	Red blood cell (RBC) suspensions in confined microflows: Pressure-flow relationship. Medical Engineering and Physics, 2017, 48, 49-54.	0.8	5
42	A novel aerodynamic sizing method for pharmaceutical aerosols using image-based analysis of settling velocities. Inhalation, 2017, 11, 21-25.	0.0	1
43	Augmenting regional and targeted delivery in the pulmonary acinus using magnetic particles. International Journal of Nanomedicine, 2016, Volume 11, 3385-3395.	3.3	21
44	Unsteady diffusional screening in 3D pulmonary acinar structures: from infancy to adulthood. Journal of Biomechanics, 2016, 49, 2193-2200.	0.9	15
45	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
46	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
47	Relevance and challenges of computational fluid dynamics in the biomedical sciences. Journal of Biomechanics, 2016, 49, 2101.	0.9	5
48	The role of anisotropic expansion for pulmonary acinar aerosol deposition. Journal of Biomechanics, 2016, 49, 3543-3548.	0.9	26
49	A Microfluidic Model of Biomimetically Breathing Pulmonary Acinar Airways. Journal of Visualized Experiments, 2016, , .	0.2	15
50	Aerosols in healthy and emphysematous in silico pulmonary acinar rat models. Journal of Biomechanics, 2016, 49, 2213-2220.	0.9	26
51	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
52	Particle dynamics and deposition in true-scale pulmonary acinar models. Scientific Reports, 2015, 5, 14071.	1.6	73
53	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
54	Model-Independent Phenotyping of C. elegans Locomotion Using Scale-Invariant Feature Transform. PLoS ONE, 2015, 10, e0122326.	1.1	10

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55	Revisiting pulmonary acinar particle transport: convection, sedimentation, diffusion, and their interplay. Journal of Applied Physiology, 2015, 118, 1375-1385.	1.2	55
56	Locomotion Through Complex Fluids: An Experimental View. Biological and Medical Physics Series, 2015, , 245-281.	0.3	16
57	Biomimetics of fetal alveolar flow phenomena using microfluidics. Biomicrofluidics, 2015, 9, 014120.	1.2	13
58	Microfluidic platforms for advanced risk assessments of nanomaterials. Nanotoxicology, 2015, 9, 381-395.	1.6	47
59	Microfluidic in Vitro Platforms of Pulmonary Alveolar Physiology. IFMBE Proceedings, 2015, , 777-780.	0.2	3
60	Caenorhabditis Elegans Segmentation Using Texture-Based Models for Motility Phenotyping. IEEE Transactions on Biomedical Engineering, 2014, 61, 2278-2289.	2.5	6
61	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
62	Role of Alveolar Topology on Acinar Flows and Convective Mixing. Journal of Biomechanical Engineering, 2014, 136, 061007.	0.6	32
63	Dendritic tree extraction from noisy maximum intensity projection images in C. elegans. BioMedical Engineering OnLine, 2014, 13, 74.	1.3	9
64	The role of respiratory flow asynchrony on convective mixing in the pulmonary acinus. Fluid Dynamics Research, 2014, 46, 041407.	0.6	16
65	Mapping low-Reynolds-number microcavity flows using microfluidic screening devices. Microfluidics and Nanofluidics, 2013, 15, 491-500.	1.0	23
66	Acinus-on-a-chip: A microfluidic platform for pulmonary acinar flows. Journal of Biomechanics, 2013, 46, 2817-2823.	0.9	38
67	Respiratory microflows in the pulmonary acinus. Journal of Biomechanics, 2013, 46, 284-298.	0.9	96
68	Respiratory Physiology on a Chip. Scientifica, 2012, 2012, 1-12.	0.6	15
69	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
70	Visualization of nematode Caenorhabditis elegans swimming in a liquid drop. Journal of Visualization, 2012, 15, 277-279.	1.1	4
71	Visualization of low Reynolds boundary-driven cavity flows in thin liquid shells. Journal of Visualization, 2010, 13, 49-60.	1.1	1
72	Multi-Environment Model Estimation for Motility Analysis of Caenorhabditis elegans. PLoS ONE, 2010, 5, e11631.	1.1	33

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73	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
74	Convective gas transport in the pulmonary acinus: Comparing roles of convective and diffusive lengths. Journal of Biomechanics, 2009, 42, 789-792.	0.9	16
75	Acoustic streaming flows in a cavity: An illustration of small-scale inviscid flow. Physica D: Nonlinear Phenomena, 2008, 237, 2240-2246.	1.3	11
76	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
77	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