

# Jinxiang Xi

## List of Publications by Year in descending order

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92  
papers

2,984  
citations

159358

30  
h-index

174990

52  
g-index

94  
all docs

94  
docs citations

94  
times ranked

1341  
citing authors

#	ARTICLE	IF	CITATIONS
1	Transport and Deposition of Micro-Aerosols in Realistic and Simplified Models of the Oral Airway. <i>Annals of Biomedical Engineering</i> , 2007, 35, 560-581.	1.3	229
2	Effectiveness of Direct Lagrangian Tracking Models for Simulating Nanoparticle Deposition in the Upper Airways. <i>Aerosol Science and Technology</i> , 2007, 41, 380-397.	1.5	206
3	Effects of the laryngeal jet on nano- and microparticle transport and deposition in an approximate model of the upper tracheobronchial airways. <i>Journal of Applied Physiology</i> , 2008, 104, 1761-1777.	1.2	167
4	Numerical predictions of submicrometer aerosol deposition in the nasal cavity using a novel drift flux approach. <i>International Journal of Heat and Mass Transfer</i> , 2008, 51, 5562-5577.	2.5	154
5	Condensational Growth May Contribute to the Enhanced Deposition of Cigarette Smoke Particles in the Upper Respiratory Tract. <i>Aerosol Science and Technology</i> , 2008, 42, 579-602.	1.5	108
6	Comparison of ambient and spray aerosol deposition in a standard induction port and more realistic mouth-throat geometry. <i>Journal of Aerosol Science</i> , 2008, 39, 572-591.	1.8	103
7	Computational investigation of particle inertia effects on submicron aerosol deposition in the respiratory tract. <i>Journal of Aerosol Science</i> , 2007, 38, 111-130.	1.8	94
8	Simulation of airflow and aerosol deposition in the nasal cavity of a 5-year-old child. <i>Journal of Aerosol Science</i> , 2011, 42, 156-173.	1.8	91
9	Effects of Oral Airway Geometry Characteristics on the Diffusional Deposition of Inhaled Nanoparticles. <i>Journal of Biomechanical Engineering</i> , 2008, 130, 011008.	0.6	82
10	Breathing Resistance and Ultrafine Particle Deposition in Nasal-Laryngeal Airways of a Newborn, an Infant, a Child, and an Adult. <i>Annals of Biomedical Engineering</i> , 2012, 40, 2579-2595.	1.3	70
11	Modeling of release position and ventilation effects on olfactory aerosol drug delivery. <i>Respiratory Physiology and Neurobiology</i> , 2013, 186, 22-32.	0.7	64
12	Growth of Nasal and Laryngeal Airways in Children: Implications in Breathing and Inhaled Aerosol Dynamics. <i>Respiratory Care</i> , 2014, 59, 263-273.	0.8	63
13	Visualization and Quantification of Nasal and Olfactory Deposition in a Sectional Adult Nasal Airway Cast. <i>Pharmaceutical Research</i> , 2016, 33, 1527-1541.	1.7	63
14	Dynamic growth and deposition of hygroscopic aerosols in the nasal airway of a 5-year-old child. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2013, 29, 17-39.	1.0	60
15	Parametric study on mouth-throat geometrical factors on deposition of orally inhaled aerosols. <i>Journal of Aerosol Science</i> , 2016, 99, 94-106.	1.8	51
16	Effects of mask-wearing on the inhalability and deposition of airborne SARS-CoV-2 aerosols in human upper airway. <i>Physics of Fluids</i> , 2020, 32, 123312.	1.6	51
17	Characterization of Submicrometer Aerosol Deposition in Extrathoracic Airways during Nasal Exhalation. <i>Aerosol Science and Technology</i> , 2009, 43, 808-827.	1.5	49
18	In Vitro Evaluation of Aerosols Delivered via the Nasal Route. <i>Respiratory Care</i> , 2015, 60, 1015-1025.	0.8	49

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19	Electrostatic Charge Effects on Pharmaceutical Aerosol Deposition in Human Nasal Laryngeal Airways. <i>Pharmaceutics</i> , 2014, 6, 26-35.	2.0	48
20	Hood Nebulization: Effects of Head Direction and Breathing Mode on Particle Inhalability and Deposition in a 7-Month-Old Infant Model. <i>Journal of Aerosol Medicine and Pulmonary Drug Delivery</i> , 2014, 27, 209-218.	0.7	43
21	Improving intranasal delivery of neurological nanomedicine to the olfactory region using magnetophoretic guidance of microsphere carriers. <i>International Journal of Nanomedicine</i> , 2015, 10, 1211.	3.3	43
22	Evaluation of a Drift Flux Model for Simulating Submicrometer Aerosol Dynamics in Human Upper Tracheobronchial Airways. <i>Annals of Biomedical Engineering</i> , 2008, 36, 1714-1734.	1.3	42
23	Aerosol Deposition in a Nasopharyngolaryngeal Replica of a 5-Year-Old Child. <i>Aerosol Science and Technology</i> , 2013, 47, 275-282.	1.5	40
24	Electrophoretic Particle Guidance Significantly Enhances Olfactory Drug Delivery: A Feasibility Study. <i>PLoS ONE</i> , 2014, 9, e86593.	1.1	39
25	Computational modeling of aerosol transport, dispersion, and deposition in rhythmically expanding and contracting terminal alveoli. <i>Journal of Aerosol Science</i> , 2017, 112, 19-33.	1.8	36
26	Nasal Deposition in Infants and Children. <i>Journal of Aerosol Medicine and Pulmonary Drug Delivery</i> , 2014, 27, 110-116.	0.7	35
27	Effects of nostril orientation on airflow dynamics, heat exchange, and particle depositions in human noses. <i>European Journal of Mechanics, B/Fluids</i> , 2016, 55, 215-228.	1.2	35
28	Effects of glottis motion on airflow and energy expenditure in a human upper airway model. <i>European Journal of Mechanics, B/Fluids</i> , 2018, 72, 23-37.	1.2	35
29	Modeling the pharyngeal anatomical effects on breathing resistance and aerodynamically generated sound. <i>Medical and Biological Engineering and Computing</i> , 2014, 52, 567-577.	1.6	32
30	Nasal and Olfactory Deposition with Normal and Bidirectional Intranasal Delivery Techniques: In Vitro Tests and Numerical Simulations. <i>Journal of Aerosol Medicine and Pulmonary Drug Delivery</i> , 2017, 30, 118-131.	0.7	32
31	Hygroscopic aerosol deposition in the human upper respiratory tract under various thermo-humidity conditions. <i>Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering</i> , 2013, 48, 1790-1805.	0.9	31
32	Modeling of inertial deposition in scaled models of rat and human nasal airways: Towards in vitro regional dosimetry in small animals. <i>Journal of Aerosol Science</i> , 2016, 99, 78-93.	1.8	31
33	Nasal dilation effects on olfactory deposition in unilateral and bi-directional deliveries: In vitro tests and numerical modeling. <i>European Journal of Pharmaceutical Sciences</i> , 2018, 118, 113-123.	1.9	31
34	Anatomical Details of the Rabbit Nasal Passages and Their Implications in Breathing, Air Conditioning, and Olfaction. <i>Anatomical Record</i> , 2016, 299, 853-868.	0.8	30
35	CFD Modeling and Image Analysis of Exhaled Aerosols due to a Growing Bronchial Tumor: towards Non-Invasive Diagnosis and Treatment of Respiratory Obstructive Diseases. <i>Theranostics</i> , 2015, 5, 443-455.	4.6	28
36	SARS COV-2 virus-laden droplets coughed from deep lungs: Numerical quantification in a single-path whole respiratory tract geometry. <i>Physics of Fluids</i> , 2021, 33, 023306.	1.6	26

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37	Nasally inhaled therapeutics and vaccination for COVID-19: Developments and challenges. <i>MedComm</i> , 2021, 2, 569-586.	3.1	26
38	Computational analysis of a flapping uvula on aerodynamics and pharyngeal wall collapsibility in sleep apnea. <i>Journal of Biomechanics</i> , 2019, 94, 88-98.	0.9	25
39	Effect of Laryngopharyngeal Anatomy on Expiratory Airflow and Submicrometer Particle Deposition in Human Extrathoracic Airways. <i>Open Journal of Fluid Dynamics</i> , 2013, 03, 286-301.	0.3	24
40	Diagnosing obstructive respiratory diseases using exhaled aerosol fingerprints: A feasibility study. <i>Journal of Aerosol Science</i> , 2013, 64, 24-36.	1.8	23
41	Understanding the mechanisms underlying pulsating aerosol delivery to the maxillary sinus: In vitro tests and computational simulations. <i>International Journal of Pharmaceutics</i> , 2017, 520, 254-266.	2.6	22
42	Numerical study of dynamic glottis and tidal breathing on respiratory sounds in a human upper airway model. <i>Sleep and Breathing</i> , 2018, 22, 463-479.	0.9	22
43	Radiation Dosimetry of Inhaled Radioactive Aerosols: CFPD and MCNP Transport Simulations of Radionuclides in the Lung. <i>Scientific Reports</i> , 2019, 9, 17450.	1.6	22
44	Correlating exhaled aerosol images to small airway obstructive diseases: A study with dynamic mode decomposition and machine learning. <i>PLoS ONE</i> , 2019, 14, e0211413.	1.1	21
45	Visualization of local deposition of nebulized aerosols in a human upper respiratory tract model. <i>Journal of Visualization</i> , 2018, 21, 225-237.	1.1	20
46	Exhaled Aerosol Pattern Discloses Lung Structural Abnormality: A Sensitivity Study Using Computational Modeling and Fractal Analysis. <i>PLoS ONE</i> , 2014, 9, e104682.	1.1	20
47	Detecting Lung Diseases from Exhaled Aerosols: Non-Invasive Lung Diagnosis Using Fractal Analysis and SVM Classification. <i>PLoS ONE</i> , 2015, 10, e0139511.	1.1	20
48	Numerical optimization of targeted delivery of charged nanoparticles to the ostiomeatal complex for treatment of rhinosinusitis. <i>International Journal of Nanomedicine</i> , 2015, 10, 4847.	3.3	18
49	Simulation study of electric-guided delivery of 0.4 $\mu$ m monodisperse and polydisperse aerosols to the ostiomeatal complex. <i>Computers in Biology and Medicine</i> , 2016, 72, 1-12.	3.9	17
50	Design and Testing of Electric-Guided Delivery of Charged Particles to the Olfactory Region: Experimental and Numerical Studies. <i>Current Drug Delivery</i> , 2016, 13, 265-274.	0.8	17
51	Optimization of magnetophoretic-guided drug delivery to the olfactory region in a human nose model. <i>Biomechanics and Modeling in Mechanobiology</i> , 2016, 15, 877-891.	1.4	16
52	Sensitivity Analysis and Uncertainty Quantification in Pulmonary Drug Delivery of Orally Inhaled Pharmaceuticals. <i>Journal of Pharmaceutical Sciences</i> , 2017, 106, 3303-3315.	1.6	16
53	Nanoparticle Deposition in Rhythmically Moving Acinar Models with Inter-alveolar Septal Apertures. <i>Nanomaterials</i> , 2019, 9, 1126.	1.9	16
54	A new approach to estimate ultrafine particle respiratory deposition. <i>Inhalation Toxicology</i> , 2019, 31, 35-43.	0.8	15

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55	Variability in oropharyngeal airflow and aerosol deposition due to changing tongue positions. <i>Journal of Drug Delivery Science and Technology</i> , 2019, 49, 674-682.	1.4	15
56	Effect of MDI Actuation Timing on Inhalation Dosimetry in a Human Respiratory Tract Model. <i>Pharmaceuticals</i> , 2022, 15, 61.	1.7	15
57	Estimation of the deposition of ultrafine 3D printing particles in human tracheobronchial airways. <i>Journal of Aerosol Science</i> , 2020, 149, 105605.	1.8	14
58	Inspiratory leakage flow fraction for surgical masks with varying gaps and filter materials. <i>Physics of Fluids</i> , 2022, 34, .	1.6	14
59	Liquid Film Translocation Significantly Enhances Nasal Spray Delivery to Olfactory Region: A Numerical Simulation Study. <i>Pharmaceutics</i> , 2021, 13, 903.	2.0	12
60	Effects of the facial interface on inhalation and deposition of micrometer particles in calm air in a child airway model. <i>Inhalation Toxicology</i> , 2014, 26, 492-505.	0.8	11
61	Multi-resolution classification of exhaled aerosol images to detect obstructive lung diseases in small airways. <i>Computers in Biology and Medicine</i> , 2017, 87, 57-69.	3.9	11
62	Deposition of bolus and continuously inhaled aerosols in rhythmically moving terminal alveoli. <i>Journal of Computational Multiphase Flows</i> , 2018, 10, 178-193.	0.8	11
63	Alveolar size effects on nanoparticle deposition in rhythmically expanding-contracting terminal alveolar models. <i>Computers in Biology and Medicine</i> , 2020, 121, 103791.	3.9	10
64	Micrometer aerosol deposition in normal and emphysematous subacinar models. <i>Respiratory Physiology and Neurobiology</i> , 2021, 283, 103556.	0.7	10
65	Airflow and Particle Deposition in Acinar Models with Inter-alveolar Septal Walls and Different Alveolar Numbers. <i>Computational and Mathematical Methods in Medicine</i> , 2018, 2018, 1-18.	0.7	9
66	The application of statistical shape modeling for lung morphology in aerosol inhalation dosimetry. <i>Journal of Aerosol Science</i> , 2021, 151, 105623.	1.8	9
67	Leveraging statistical shape modeling in computational respiratory dynamics: Nanomedicine delivery in remodeled airways. <i>Computer Methods and Programs in Biomedicine</i> , 2021, 204, 106079.	2.6	9
68	Modeling and Simulations of Olfactory Drug Delivery with Passive and Active Controls of Nasally Inhaled Pharmaceutical Aerosols. <i>Journal of Visualized Experiments</i> , 2016, . .	0.2	8
69	Rotordynamics of Turbine Labyrinth Seals with Rotor Axial Shifting. <i>International Journal of Rotating Machinery</i> , 2006, 2006, 1-11.	0.8	7
70	Evaluation of Impulse Oscillometry in Respiratory Airway Casts with Varying Obstruction Phenotypes, Locations, and Complexities. <i>Journal of Respiration</i> , 2022, 2, 44-58.	0.4	7
71	Inhalation dosimetry of nasally inhaled respiratory aerosols in the human respiratory tract with locally remodeled conducting lungs. <i>Inhalation Toxicology</i> , 2021, 33, 143-159.	0.8	6
72	Development and Challenges of Nasal Spray Vaccines for Short-term COVID-19 Protection. <i>Current Pharmaceutical Biotechnology</i> , 2022, 23, 1671-1677.	0.9	6

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73	Ventilation Modulation and Nanoparticle Deposition in Respiratory and Olfactory Regions of Rabbit Nose. <i>Animals</i> , 2019, 9, 1107.	1.0	5
74	Deciphering Exhaled Aerosol Fingerprints for Early Diagnosis and Personalized Therapeutics of Obstructive Respiratory Diseases in Small Airways. <i>Journal of Nanotheranostics</i> , 2021, 2, 94-117.	1.7	5
75	Effects of Improved Near-Wall Modeling on Micro-Particle Deposition in Oral Airway Geometries. , 2007, , .		5
76	Rotordynamics of Impeller Eye Seals with Wear-Damaged Teeth in Centrifugal Compressors. <i>Tribology Transactions</i> , 2006, 49, 328-337.	1.1	4
77	Molecular Binding Contributes to Concentration Dependent Acrolein Deposition in Rat Upper Airways: CFD and Molecular Dynamics Analyses. <i>International Journal of Molecular Sciences</i> , 2018, 19, 997.	1.8	4
78	Olfactory Drug Aerosol Delivery with Acoustic Radiation. <i>Biomedicines</i> , 2022, 10, 1347.	1.4	4
79	Seal-Inlet Disturbance Boundary Condition Correlations for Rotordynamics Models, Part 2: Assessment. <i>Tribology Transactions</i> , 2006, 49, 584-591.	1.1	3
80	Extracting signature responses from respiratory flows: Low-dimensional analyses on Direct Numerical Simulation-predicted wakes of a flapping uvula. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2020, 36, e3406.	1.0	3
81	A comparison of CFPD, compartment, and uniform distribution models for radiation dosimetry of radionuclides in the lung. <i>Journal of Radiological Protection</i> , 2021, 41, .	0.6	3
82	Lower Inspiratory Breathing Depth Enhances Pulmonary Delivery Efficiency of ProAir Sprays. <i>Pharmaceuticals</i> , 2022, 15, 706.	1.7	3
83	Count- and mass-based dosimetry of MDI spray droplets with polydisperse and monodisperse size distributions. <i>International Journal of Pharmaceutics</i> , 2022, 623, 121920.	2.6	3
84	Seal-Inlet Disturbance Boundary Condition Correlations for Rotordynamics Models, Part 1: Correlation Development. <i>Tribology Transactions</i> , 2006, 49, 574-583.	1.1	2
85	Septal destruction enhances chaotic mixing and increases cellular doses of nanoparticles in emphysematous acinus. <i>Nano Express</i> , 2021, 2, 010015.	1.2	2
86	Reconciling Oxygen and Aerosol Delivery with a Hood on In Vitro Infant and Paediatric Models. <i>Pharmaceutics</i> , 2022, 14, 91.	2.0	2
87	Influence of Rotor Axial Thermal Growth on Rotordynamic Forces of High-Low Labyrinth Seals in Steam Turbines. , 2005, , 113.		0
88	Curvature Law of the Wall for Swirling Axial Flows in Rotating Machinery. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2007, 129, 169-178.	0.8	0
89	Reducing Scale Deposition by Surface Modification and Magnetic Water Treatment. , 2009, , .		0
90	The Study of Calcium Carbonate Scaling on Low Energy Surfaces. , 2010, , .		0

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91	Curvature Law of the Wall for Swirling Axial Flows. , 2005, , .		0
92	Influence of Teeth Damage on Rotordynamic Instability of Impeller Eye Seals in Centrifugal Compressors. , 2005, , .		0