

# Yaling Liu

## List of Publications by Year in descending order

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123  
papers

4,307  
citations

94433

37  
h-index

114465

63  
g-index

129  
all docs

129  
docs citations

129  
times ranked

5953  
citing authors

#	ARTICLE	IF	CITATIONS
1	Rheology of red blood cell aggregation by computer simulation. <i>Journal of Computational Physics</i> , 2006, 220, 139-154.	3.8	248
2	Immersed finite element method and its applications to biological systems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 195, 1722-1749.	6.6	240
3	The shape of things to come: importance of design in nanotechnology for drug delivery. <i>Therapeutic Delivery</i> , 2012, 3, 181-194.	2.2	209
4	Dielectrophoretic Assembly of Nanowires. <i>Journal of Physical Chemistry B</i> , 2006, 110, 14098-14106.	2.6	168
5	The influence of size, shape and vessel geometry on nanoparticle distribution. <i>Microfluidics and Nanofluidics</i> , 2013, 14, 77-87.	2.2	166
6	Modeling Particle Shape-Dependent Dynamics in Nanomedicine. <i>Journal of Nanoscience and Nanotechnology</i> , 2011, 11, 919-928.	0.9	165
7	Influence of red blood cells on nanoparticle targeted delivery in microcirculation. <i>Soft Matter</i> , 2012, 8, 1934-1946.	2.7	165
8	Shape-specific polymeric nanomedicine: emerging opportunities and challenges. <i>Experimental Biology and Medicine</i> , 2011, 236, 20-29.	2.4	130
9	Coupling of Navier-Stokes equations with protein molecular dynamics and its application to hemodynamics. <i>International Journal for Numerical Methods in Fluids</i> , 2004, 46, 1237-1252.	1.6	128
10	Capture, isolation and release of cancer cells with aptamer-functionalized glass bead array. <i>Lab on A Chip</i> , 2012, 12, 4693.	6.0	108
11	A novel label-free amperometric immunosensor for carcinoembryonic antigen based on redox membrane. <i>Biosensors and Bioelectronics</i> , 2011, 26, 3068-3071.	10.1	98
12	Amperometric glucose biosensor based on a triangular silver nanoprisms/chitosan composite film as immobilization matrix. <i>Biosensors and Bioelectronics</i> , 2010, 26, 1098-1103.	10.1	96
13	Computational Modeling of Nanoparticle Targeted Drug Delivery. <i>Reviews in Nanoscience and Nanotechnology</i> , 2012, 1, 66-83.	0.4	87
14	Velocity Effect on Aptamer-Based Circulating Tumor Cell Isolation in Microfluidic Devices. <i>Journal of Physical Chemistry B</i> , 2011, 115, 13891-13896.	2.6	82
15	Biodegradable nanoparticles mimicking platelet binding as a targeted and controlled drug delivery system. <i>International Journal of Pharmaceutics</i> , 2012, 423, 516-524.	5.2	81
16	Effects of nanopillar array diameter and spacing on cancer cell capture and cell behaviors. <i>Nanoscale</i> , 2014, 6, 12482-12489.	5.6	76
17	Ultrasensitive protein detection using lithographically defined Si multi-nanowire field effect transistors. <i>Lab on A Chip</i> , 2011, 11, 1952.	6.0	68
18	Optical Coherence Tomography Detects Necrotic Regions and Volumetrically Quantifies Multicellular Tumor Spheroids. <i>Cancer Research</i> , 2017, 77, 6011-6020.	0.9	68

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19	Immersed electrokinetic finite element method. <i>International Journal for Numerical Methods in Engineering</i> , 2007, 71, 379-405.	2.8	65
20	Non-affinity factors modulating vascular targeting of nano- and microcarriers. <i>Advanced Drug Delivery Reviews</i> , 2016, 99, 97-112.	13.7	65
21	Ultrasensitive platinum nanocubes enhanced amperometric glucose biosensor based on chitosan and nafion film. <i>Sensors and Actuators B: Chemical</i> , 2012, 163, 115-120.	7.8	60
22	Enhanced Cell Adhesion and Alignment on Micro-Wavy Patterned Surfaces. <i>PLoS ONE</i> , 2014, 9, e104502.	2.5	58
23	Shear induced alignment of short nanofibers in 3D printed polymer composites. <i>Nanotechnology</i> , 2016, 27, 495302.	2.6	57
24	Acoustic patterning for 3D embedded electrically conductive wire in stereolithography. <i>Journal of Micromechanics and Microengineering</i> , 2017, 27, 045016.	2.6	57
25	Multiscale Modeling in the Clinic: Drug Design and Development. <i>Annals of Biomedical Engineering</i> , 2016, 44, 2591-2610.	2.5	50
26	An ascorbic acid amperometric sensor using over-oxidized polypyrrole and palladium nanoparticles composites. <i>Biosensors and Bioelectronics</i> , 2012, 38, 100-106.	10.1	49
27	Highly efficient and selective isolation of rare tumor cells using a microfluidic chip with wavy-herringbone micro-patterned surfaces. <i>Analyst, The</i> , 2016, 141, 2228-2237.	3.5	47
28	Magnetic particles assisted capture and release of rare circulating tumor cells using wavy-herringbone structured microfluidic devices. <i>Lab on A Chip</i> , 2017, 17, 3291-3299.	6.0	47
29	A Cellular Model of Shear-Induced Hemolysis. <i>Artificial Organs</i> , 2017, 41, E80-E91.	1.9	46
30	Computational modeling of magnetic nanoparticle targeting to stent surface under high gradient field. <i>Computational Mechanics</i> , 2014, 53, 403-412.	4.0	45
31	Characterization of Nanoparticle Dispersion in Red Blood Cell Suspension by the Lattice Boltzmann-Immersed Boundary Method. <i>Nanomaterials</i> , 2016, 6, 30.	4.1	44
32	Facile Tumor Spheroids Formation in Large Quantity with Controllable Size and High Uniformity. <i>Scientific Reports</i> , 2018, 8, 6837.	3.3	44
33	Short fiber reinforced 3d printed ceramic composite with shear induced alignment. <i>Ceramics International</i> , 2017, 43, 11766-11772.	4.8	42
34	Characterization of vascular permeability using a biomimetic microfluidic blood vessel model. <i>Biomicrofluidics</i> , 2017, 11, 024102.	2.4	41
35	Manipulation of nanoparticles and biomolecules by electric field and surface tension. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 2156-2172.	6.6	40
36	Computer simulation of biomolecule-biomaterial interactions at surfaces and interfaces. <i>Biomedical Materials (Bristol)</i> , 2015, 10, 032001.	3.3	40

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37	Size-Specific Concentration of DNA to a Nanostructured Tip Using Dielectrophoresis and Capillary Action. <i>Journal of Physical Chemistry B</i> , 2009, 113, 10849-10858.	2.6	39
38	Fluid Flow-Assisted Dielectrophoretic Assembly of Nanowires. <i>Langmuir</i> , 2007, 23, 11932-11940.	3.5	38
39	Numerical Simulation of Particle Transport and Deposition in the Pulmonary Vasculature. <i>Journal of Biomechanical Engineering</i> , 2014, 136, 121010.	1.3	37
40	A rapid and highly sensitive portable chemiluminescent immunosensor of carcinoembryonic antigen based on immunomagnetic separation in human serum. <i>Analytica Chimica Acta</i> , 2013, 766, 94-99.	5.4	36
41	Biomimetic channel modeling local vascular dynamics of pro-inflammatory endothelial changes. <i>Biomicrofluidics</i> , 2016, 10, 014101.	2.4	36
42	Label-free detection of rare circulating tumor cells by image analysis and machine learning. <i>Scientific Reports</i> , 2020, 10, 12226.	3.3	35
43	Characterization of nanoparticle delivery in microcirculation using a microfluidic device. <i>Microvascular Research</i> , 2014, 94, 17-27.	2.5	34
44	Mechanical response of cardiovascular stents under vascular dynamic bending. <i>BioMedical Engineering OnLine</i> , 2016, 15, 21.	2.7	33
45	Coupled particulate and continuum model for nanoparticle targeted delivery. <i>Computers and Structures</i> , 2013, 122, 128-134.	4.4	32
46	Multiscale modeling of hemolysis during microfiltration. <i>Microfluidics and Nanofluidics</i> , 2020, 24, 1.	2.2	31
47	Cyclic voltammetry studies of TiO <sub>2</sub> nanotube arrays electrode: Conductivity and reactivity in the presence of H <sup>+</sup> and aqueous redox systems. <i>Electrochimica Acta</i> , 2011, 56, 6498-6502.	5.2	30
48	Nanostructured Architectures by Assembling Polysaccharide-Coated BSA Nanoparticles for Biomedical Application. <i>Advanced Healthcare Materials</i> , 2015, 4, 927-937.	7.6	30
49	Rapid detection of <i>Mycobacterium tuberculosis</i> cells by using microtip-based immunoassay. <i>Analytical and Bioanalytical Chemistry</i> , 2009, 393, 1593-1600.	3.7	24
50	Coarse-Grained Molecular Dynamics Simulation of DNA Translocation in Chemically Modified Nanopores. <i>Journal of Physical Chemistry B</i> , 2011, 115, 6138-6148.	2.6	22
51	The shape effect on polymer nanoparticle transport in a blood vessel. <i>RSC Advances</i> , 2018, 8, 8089-8100.	3.6	22
52	Numerical simulation of cell squeezing through a micropore by the immersed boundary method. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2018, 232, 502-514.	2.1	21
53	Microfluidic device for expedited tumor growth towards drug evaluation. <i>Lab on A Chip</i> , 2019, 19, 1458-1470.	6.0	21
54	Characterization of DNA-Nanopore Interactions by Molecular Dynamics. <i>American Journal of Biomedical Sciences</i> , 0, , 344-351.	0.2	21

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55	Nanoparticle transport and delivery in a heterogeneous pulmonary vasculature. <i>Journal of Biomechanics</i> , 2017, 50, 240-247.	2.1	20
56	Coarse-Grained Modeling of Pore Dynamics on the Red Blood Cell Membrane under Large Deformations. <i>Biophysical Journal</i> , 2020, 119, 471-482.	0.5	20
57	Prediction of mechanical hemolysis in medical devices via a Lagrangian strain-based multiscale model. <i>Artificial Organs</i> , 2020, 44, E348-E368.	1.9	20
58	Applications and Techniques for Fast Machine Learning in Science. <i>Frontiers in Big Data</i> , 2022, 5, 787421.	2.9	20
59	Modeling Nanoparticle Targeting to a Vascular Surface in Shear Flow Through Diffusive Particle Dynamics. <i>Nanoscale Research Letters</i> , 2015, 10, 942.	5.7	19
60	Synthesis of PSS-capped triangular silver nanoplates with tunable SPR. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2011, 380, 257-260.	4.7	17
61	Small molecule therapeutics to destabilize the ACE2-RBD complex: A molecular dynamics study. <i>Biophysical Journal</i> , 2021, 120, 2793-2804.	0.5	17
62	Triangular Au-Ag Nanoframes with Tunable Surface Plasmon Resonance Signal from Visible to Near-Infrared Region. <i>Plasmonics</i> , 2011, 6, 241-244.	3.4	16
63	A high sensitivity MEA probe for measuring real time rat brain glucose flux. <i>Biosensors and Bioelectronics</i> , 2014, 55, 66-71.	10.1	15
64	Fabrication of circular microfluidic channels through grayscale dual-projection lithography. <i>Microfluidics and Nanofluidics</i> , 2017, 21, 1.	2.2	15
65	Biomarker Binding on an Antibody-Functionalized Biosensor Surface: The Influence of Surface Properties, Electric Field, and Coating Density. <i>Journal of Physical Chemistry C</i> , 2014, 118, 14586-14594.	3.1	14
66	Generation of Customizable Micro-wavy Pattern through Grayscale Direct Image Lithography. <i>Scientific Reports</i> , 2016, 6, 21621.	3.3	14
67	Geometry design of herringbone structures for cancer cell capture in a microfluidic device. <i>Microfluidics and Nanofluidics</i> , 2016, 20, 1.	2.2	14
68	Modeling thermal inkjet and cell printing process using modified pseudopotential and thermal lattice Boltzmann methods. <i>Physical Review E</i> , 2018, 97, 033105.	2.1	13
69	From cell spheroids to vascularized cancer organoids: Microfluidic tumor-on-a-chip models for preclinical drug evaluations. <i>Biomicrofluidics</i> , 2021, 15, 061503.	2.4	13
70	Cyclic Strain Enhances Cellular Uptake of Nanoparticles. <i>Journal of Nanomaterials</i> , 2015, 2015, 1-8.	2.7	12
71	Biomimetic microfluidic platform for the quantification of transient endothelial monolayer permeability and therapeutic transport under mimicked cancerous conditions. <i>Biomicrofluidics</i> , 2018, 12, 014101.	2.4	12
72	Finite Element Analysis of the Implantation Process of Overlapping Stents. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2017, 11, 0210101-210109.	0.7	11

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73	Bi-layer blood vessel mimicking microfluidic platform for antitumor drug screening based on co-culturing 3D tumor spheroids and endothelial layers. <i>Biomicrofluidics</i> , 2019, 13, 044108.	2.4	11
74	Electrokinetic effects on detection time of nanowire biosensor. <i>Applied Physics Letters</i> , 2012, 100, 153502.	3.3	10
75	Interfacial thermal conductance and thermal accommodation coefficient of evaporating thin liquid films: A molecular dynamics study. <i>Computational Materials Science</i> , 2014, 87, 260-266.	3.0	10
76	A novel method to directionally stabilize enzymes together with redox mediators by electrodeposition. <i>Biosensors and Bioelectronics</i> , 2014, 51, 244-248.	10.1	10
77	Characterization of nanoparticle binding dynamics in microcirculation using an adhesion probability function. <i>Microvascular Research</i> , 2016, 108, 41-47.	2.5	10
78	A mesoscale model of DNA interaction with functionalized nanopore. <i>Applied Physics Letters</i> , 2009, 95, 223701.	3.3	9
79	The Configuration of Copolymer Ligands on Nanoparticles Affects Adhesion and Uptake. <i>Langmuir</i> , 2016, 32, 10136-10143.	3.5	9
80	A numerical study on drug delivery via multiscale synergy of cellular hitchhiking onto red blood cells. <i>Nanoscale</i> , 2021, 13, 17359-17372.	5.6	9
81	Machine Learning-Driven Multiobjective Optimization: An Opportunity of Microfluidic Platforms Applied in Cancer Research. <i>Cells</i> , 2022, 11, 905.	4.1	9
82	Silicon-Based Novel Bio-Sensing Platforms at the Micro and Nano Scale. <i>ECS Transactions</i> , 2009, 16, 25-45.	0.5	7
83	The Effect of Film Microtexture and Magnetic Field on Transparency of Fe <sub>3</sub> O <sub>4</sub> -PDMS Nanocomposite Films. <i>IEEE Photonics Technology Letters</i> , 2014, 26, 2181-2184.	2.5	7
84	Three-dimensional printing of large objects with high resolution by scanning lithography. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 105, 4147-4157.	3.0	7
85	Quantitative absorption imaging of red blood cells to determine physical and mechanical properties. <i>RSC Advances</i> , 2020, 10, 38923-38936.	3.6	7
86	Mechanical Properties of Nanoworm Assembled by DNA and Nanoparticle Conjugates. <i>Journal of Nanoscience and Nanotechnology</i> , 2016, 16, 5447-5456.	0.9	6
87	Label-free sorting of soft microparticles using a bioinspired synthetic cilia array. <i>Biomicrofluidics</i> , 2018, 12, 042206.	2.4	6
88	A Facile Way to Fabricate Transparent Superhydrophobic Surfaces. <i>Journal of Nanoscience and Nanotechnology</i> , 2018, 18, 5082-5087.	0.9	6
89	Numerical simulation of intracellular drug delivery via rapid squeezing. <i>Biomicrofluidics</i> , 2021, 15, 044102.	2.4	6
90	Biospecies Capture and Detection at Low Concentration. <i>Micro and Nanosystems</i> , 2012, 4, 254-272.	0.6	6

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91	Dopamine detection using a patch-clamp system on a planar microelectrode array electrodeposited by polypyrrole/graphene nanocomposites. <i>Science China Technological Sciences</i> , 2014, 57, 288-292.	4.0	5
92	Performance Analysis of a Functionally Graded Thermoelectric Element with Temperature-Dependent Material Properties. <i>Journal of Electronic Materials</i> , 2019, 48, 5542-5554.	2.2	5
93	Binding kinetics of liposome conjugated E-selectin and P-selectin glycoprotein ligand-1 measured with atomic force microscopy. <i>Colloids and Surfaces B: Biointerfaces</i> , 2021, 207, 112002.	5.0	5
94	Respiratory droplet resuspension near surfaces: Modeling and analysis. <i>Journal of Applied Physics</i> , 2021, 130, 024702.	2.5	4
95	Organ-on-Chip Devices Toward Applications in Drug Development and Screening. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2018, 12, .	0.7	3
96	Integration of Hierarchical Micro-/Nanostructures in a Microfluidic Chip for Efficient and Selective Isolation of Rare Tumor Cells. <i>Micromachines</i> , 2019, 10, 698.	2.9	3
97	Longitudinal Morphological and Physiological Monitoring of Three-dimensional Tumor Spheroids Using Optical Coherence Tomography. <i>Journal of Visualized Experiments</i> , 2019, , .	0.3	3
98	Adhesion Dynamics of Functional Nanoparticles for Targeted Drug Delivery. <i>IFMBE Proceedings</i> , 2009, , 121-122.	0.3	3
99	Direct concentration of circulating DNA by using a nanostructured tip. <i>Proceedings of SPIE</i> , 2008, , .	0.8	2
100	Biosensors of ZnO nanotetrapods and HEMT for detecting uric acid. , 2012, , .		2
101	Ion Diffusion and DNA Stretching in an Open Nanofluidic System. <i>Journal of Nanotechnology in Engineering and Medicine</i> , 2011, 2, .	0.8	1
102	Antibody-coated nanoparticles are promising molecular probes for microscopic analysis of cell behavior. <i>Nanomedicine</i> , 2016, 11, 2383-2386.	3.3	1
103	Tissue-Light Interaction During Monitoring of Thermal Lesion Using Quantum Dot Mediated Fluorescence Thermometry. , 2009, , .		1
104	Hybrid Fiber Fabrication Using an AC Electric Field and Capillary Action. , 2007, , .		1
105	A Mesoscale Model for Molecular Interaction in Functionalized Nanopores. , 2008, , .		1
106	Acoustic Patterning for 3D Embedded Electrically Conductive Wire in Stereolithography. <i>Journal of Micromechanics and Microengineering</i> , 2017, 27, .	2.6	1
107	Review: Rod-Shaped Nanoparticle Assembly Using an Electric Field. , 2007, , .		0
108	Modeling adhesion dynamics of nanoparticles: The effect of flow rates and ligand density. , 2009, , .		0

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109	Characterization of nanoparticle distribution in microcirculation: The influence of blood cells and vascular geometry. , 2012, , .		0
110	Micro-patterned surface for efficient capturing of circulating tumor cells. , 2012, , .		0
111	Assemble single stranded DNA and gold nanoparticle complexes onto the surface of RBC. , 2012, , .		0
112	A multiphase model for Nanoparticle delivery in microcirculation. , 2012, , .		0
113	Ultrasound Mediated Enhancement of Nanoparticle Uptake in PC-3 Cancer Cells. , 2013, , .		0
114	Testing, Measurement, and Characterization of Nanomaterials. Journal of Nanomaterials, 2015, 2015, 1-1.	2.7	0
115	Nanoscale Biological Materials. Journal of Nanomaterials, 2016, 2016, 1-2.	2.7	0
116	10.1063/5.0059165.1. , 2021, , .		0
117	10.1063/5.0059165.2. , 2021, , .		0
118	Ion Diffusion Upon Concentrations in Open Nanofluidic Channels. , 2007, , .		0
119	Modeling Adhesion of Micro/Nanoparticles Under Shear Flow for Nanomedicine Application. , 2009, , .		0
120	A Coupled Particle-Continuum Model of Nanoparticle Targeted Delivery Under Vascular Flow With Experimental Validation. , 2010, , .		0
121	Characterization of Nanoparticle Distribution in Microcirculation Through a Microfluidics Device. , 2011, , .		0
122	A Hybrid Particle-Cell Model for Nanoparticle Targeted Delivery in Microcirculation. , 2011, , .		0
123	Cell Adhesion on a Wavy Surface. , 2013, , .		0