

# Kai-Rong Qin

## List of Publications by Year in descending order

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83  
papers

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citations

471509

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552781

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g-index

86  
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86  
docs citations

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times ranked

1308  
citing authors

#	ARTICLE	IF	CITATIONS
1	PIM Kinases and Their Relevance to the PI3K/AKT/mTOR Pathway in the Regulation of Ovarian Cancer. <i>Biomolecules</i> , 2018, 8, 7.	4.0	57
2	High-purity weight-bearing magnesium screw: Translational application in the healing of femoral neck fracture. <i>Biomaterials</i> , 2020, 238, 119829.	11.4	57
3	The Role of Microfluidics for Organ on Chip Simulations. <i>Bioengineering</i> , 2017, 4, 39.	3.5	56
4	High-Throughput Microfluidic Device for LAMP Analysis of Airborne Bacteria. <i>ACS Sensors</i> , 2016, 1, 958-962.	7.8	43
5	Numerical analysis of wall shear stress in ascending aorta before tearing in type A aortic dissection. <i>Computers in Biology and Medicine</i> , 2017, 89, 236-247.	7.0	41
6	A multi-component parallel-plate flow chamber system for studying the effect of exercise-induced wall shear stress on endothelial cells. <i>BioMedical Engineering OnLine</i> , 2016, 15, 154.	2.7	30
7	Laser-Induced Graphene-Based Non-Enzymatic Sensor for Detection of Hydrogen Peroxide. <i>Electroanalysis</i> , 2019, 31, 1334-1341.	2.9	30
8	Acute effect of cycling intervention on carotid arterial hemodynamics: basketball athletes versus sedentary controls. <i>BioMedical Engineering OnLine</i> , 2015, 14, S17.	2.7	28
9	ROS and NO Dynamics in Endothelial Cells Exposed to Exercise-Induced Wall Shear Stress. <i>Cellular and Molecular Bioengineering</i> , 2019, 12, 107-120.	2.1	26
10	Rapid Capture and Analysis of Airborne Staphylococcus aureus in the Hospital Using a Microfluidic Chip. <i>Micromachines</i> , 2016, 7, 169.	2.9	23
11	Transport of Dynamic Biochemical Signals in Steady Flow in a Shallow Y-Shaped Microfluidic Channel: Effect of Transverse Diffusion and Longitudinal Dispersion. <i>Journal of Biomechanical Engineering</i> , 2013, 135, 121011.	1.3	22
12	Retrospective Long-Term Follow-Up Survival Analysis of the Management of Osteonecrosis of the Femoral Head With Pedicled Vascularized Iliac Bone Graft Transfer. <i>Journal of Arthroplasty</i> , 2019, 34, 1585-1592.	3.1	22
13	An exploratory study of articular cartilage and subchondral bone reconstruction with bone marrow mesenchymal stem cells combined with porous tantalum/Bio-Gide collagen membrane in osteonecrosis of the femoral head. <i>Materials Science and Engineering C</i> , 2019, 99, 1123-1132.	7.3	22
14	A Novel Tissue-Based Liver-Kidney-on-a-Chip Can Mimic Liver Tropism of Extracellular Vesicles Derived from Breast Cancer Cells. <i>Biotechnology Journal</i> , 2020, 15, 1900107.	3.5	22
15	A Microfluidic Micropipette Aspiration Device to Study Single-Cell Mechanics Inspired by the Principle of Wheatstone Bridge. <i>Micromachines</i> , 2019, 10, 131.	2.9	21
16	Modeling of $\text{TRPV}_4$ -mediated calcium signaling in vascular endothelial cells induced by fluid shear stress and ATP. <i>Biomechanics and Modeling in Mechanobiology</i> , 2015, 14, 979-993.	2.8	20
17	A microfluidic device with spatiotemporal wall shear stress and ATP signals to investigate the intracellular calcium dynamics in vascular endothelial cells. <i>Biomechanics and Modeling in Mechanobiology</i> , 2019, 18, 189-202.	2.8	18
18	LncRNA NORAD promotes bone marrow stem cell differentiation and proliferation by targeting miR-26a-5p in steroid-induced osteonecrosis of the femoral head. <i>Stem Cell Research and Therapy</i> , 2021, 12, 18.	5.5	18

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19	Reconfigurable, graphene-coated, chalcogenide nanowires with a sub-10-nm enantioselective sorting capability. <i>Microsystems and Nanoengineering</i> , 2018, 4, 7.	7.0	17
20	Doxorubicin Induces ER Calcium Release via Src in Rat Ovarian Follicles. <i>Toxicological Sciences</i> , 2019, 168, 171-178.	3.1	17
21	Combined Treatment with an Anticoagulant and a Vasodilator Prevents Steroid-Associated Osteonecrosis of Rabbit Femoral Heads by Improving Hypercoagulability. <i>BioMed Research International</i> , 2017, 2017, 1-10.	1.9	16
22	A Y-Shaped Microfluidic Device to Study the Combined Effect of Wall Shear Stress and ATP Signals on Intracellular Calcium Dynamics in Vascular Endothelial Cells. <i>Micromachines</i> , 2016, 7, 213.	2.9	15
23	Microfluidic-based single cell trapping using a combination of stagnation point flow and physical barrier. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2016, 32, 422-429.	3.4	15
24	A Capillary-Evaporation Micropump for Real-Time Sweat Rate Monitoring with an Electrochemical Sensor. <i>Micromachines</i> , 2019, 10, 457.	2.9	15
25	A mathematical model for ATP-mediated calcium dynamics in vascular endothelial cells induced by fluid shear stress. <i>Applied Mathematics and Mechanics (English Edition)</i> , 2008, 29, 1291-1298.	3.6	14
26	Basic fibroblast growth factor and agarose gel promote the ability of immune privilege of allogeneic cartilage transplantation in rats. <i>Journal of Orthopaedic Translation</i> , 2020, 22, 73-80.	3.9	13
27	Effects of 8-week swimming training on carotid arterial stiffness and hemodynamics in young overweight adults. <i>BioMedical Engineering OnLine</i> , 2016, 15, 151.	2.7	12
28	Visualizing the spatiotemporal map of Rac activation in bovine aortic endothelial cells under laminar and disturbed flows. <i>PLoS ONE</i> , 2017, 12, e0189088.	2.5	12
29	Dynamic modeling for flow-activated chloride-selective membrane current in vascular endothelial cells. <i>Biomechanics and Modeling in Mechanobiology</i> , 2011, 10, 743-754.	2.8	11
30	Proper mechanical stress promotes femoral head recovery from steroid-induced osteonecrosis in rats through the OPG/RANK/RANKL system. <i>BMC Musculoskeletal Disorders</i> , 2020, 21, 281.	1.9	11
31	Modeling of progesterone-induced intracellular calcium signaling in human spermatozoa. <i>Journal of Theoretical Biology</i> , 2014, 351, 58-66.	1.7	10
32	A theoretical computerized study for the electrical conductivity of arterial pulsatile blood flow by an elastic tube model. <i>Medical Engineering and Physics</i> , 2016, 38, 1439-1448.	1.7	10
33	Doxorubicin-induced toxicity to 3D-cultured rat ovarian follicles on a microfluidic chip. <i>Toxicology in Vitro</i> , 2020, 62, 104677.	2.4	10
34	Precise generation of dynamic biochemical signals by controlling the programmable pump in a Y-shaped microfluidic chip with a "christmas tree" inlet. <i>Electrophoresis</i> , 2020, 41, 883-890.	2.4	10
35	Efficient Boolean Modeling of Gene Regulatory Networks via Random Forest Based Feature Selection and Best-Fit Extension. , 2018, , .		9
36	Transmission of dynamic biochemical signals in the shallow microfluidic channel: nonlinear modulation of the pulsatile flow. <i>Microfluidics and Nanofluidics</i> , 2018, 22, 1.	2.2	9

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37	Regulation of insulin resistance and glucose metabolism by interaction of PIM kinases and insulin receptor substrates. Archives of Physiology and Biochemistry, 2020, 126, 129-138.	2.1	9
38	Separation of micro and sub-micro diamagnetic particles in dual ferrofluid streams based on negative magnetophoresis. Electrophoresis, 2020, 41, 909-916.	2.4	9
39	Effects of the arterial radius and the center-line velocity on the conductivity and electrical impedance of pulsatile flow in the human common carotid artery. Medical and Biological Engineering and Computing, 2019, 57, 441-451.	2.8	8
40	Carotid Arterial Stiffness and Hemodynamic Responses to Acute Cycling Intervention at Different Times during 12-Week Supervised Exercise Training Period. BioMed Research International, 2018, 2018, 1-11.	1.9	7
41	Mathematical Modeling Reveals the Role of Hypoxia in the Promotion of Human Mesenchymal Stem Cell Long-Term Expansion. Stem Cells International, 2018, 2018, 1-13.	2.5	7
42	Measuring the apparent viscosities of single cells by tracking the entire deformation dynamics in microfluidic channels. Analytical Methods, 2019, 11, 5680-5690.	2.7	7
43	Tuning of Classical Electromagnetically Induced Reflectance in Babinet Chalcogenide Metamaterials. IScience, 2020, 23, 101367.	4.1	7
44	Random Walks of a Cell With Correlated Speed and Persistence Influenced by the Extracellular Topography. Frontiers in Physics, 2021, 9, .	2.1	7
45	Microfluidic focusing of microparticles utilizing negative magnetophoresis and oscillatory flow. Microfluidics and Nanofluidics, 2021, 25, 1.	2.2	7
46	Hysteresis modeling for calcium-mediated ciliary beat frequency in airway epithelial cells. Mathematical Biosciences, 2011, 229, 101-108.	1.9	6
47	Transfer characteristics of dynamic biochemical signals in non-reversing pulsatile flows in a shallow Y-shaped microfluidic channel: signal filtering and nonlinear amplitude-frequency modulation. Applied Mathematics and Mechanics (English Edition), 2017, 38, 1481-1496.	3.6	6
48	Breakup Dynamics of Semi-dilute Polymer Solutions in a Microfluidic Flow-focusing Device. Micromachines, 2020, 11, 406.	2.9	6
49	A microfluidic platform enabling real-time control of dynamic biochemical stimuli to biological cells. Journal of Micromechanics and Microengineering, 2020, 30, 095011.	2.6	5
50	A microfluidic system for precisely reproducing physiological blood pressure and wall shear stress to endothelial cells. Analyst, The, 2021, 146, 5913-5922.	3.5	5
51	Acute Effects of Different Intensities of Cycling Acute Exercise on Carotid Arterial Apparent Elasticity and Hemodynamic Variables. BioMed Research International, 2020, 2020, 1-10.	1.9	5
52	Transportation of dynamic biochemical signals in non-reversing oscillatory flows in blood vessels. Science China: Physics, Mechanics and Astronomy, 2013, 56, 322-327.	5.1	4
53	A Novel Analytical Model for Ohmic Contacts to Planar Devices: Theoretical Design and Experimental Verification. IEEE Transactions on Electron Devices, 2021, 68, 299-306.	3.0	4
54	Raman Spectroscopic Characterization of Polymerization Kinetics of Cyanoacrylate Embolic Glues for Vascular Embolization. Polymers, 2021, 13, 3362.	4.5	4

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55	Swimming prevents nonalcoholic fatty liver disease by reducing migration inhibitory factor through Akt suppression and autophagy activation. American Journal of Translational Research (discontinued), 2019, 11, 4315-4325.	0.0	4
56	Vortex evolution patterns for flow of dilute polymer solutions in confined microfluidic cavities. Soft Matter, 2022, 18, 3867-3877.	2.7	4
57	A simplified dynamic model for the p53-Mdm2 feedback loop. , 2013, , .		3
58	Transport of dynamic biochemical signals in a microfluidic single cell trapping channel with varying cross-sections. European Physical Journal E, 2019, 42, 33.	1.6	3
59	Three-dimensional flow field simulation of steady flow in the serrated diffusers and nozzles of valveless micro-pumps. Journal of Hydrodynamics, 2019, 31, 413-420.	3.2	3
60	The intracellular calcium dynamics in a single vascular endothelial cell being squeezed through a narrow microfluidic channel. Biomechanics and Modeling in Mechanobiology, 2021, 20, 55-67.	2.8	3
61	AlGaIn/GaN Magnetic Sensors Featuring Heterojunction 2DEG Channel. Measurement Science and Technology, 0, , .	2.6	3
62	A Flow Sensor-Based Suction-Index Control Strategy for Rotary Left Ventricular Assist Devices. Sensors, 2021, 21, 6890.	3.8	3
63	Deep-learning-assisted extraction of height-averaged velocity from scalar signal transport in a shallow microfluidic channel. Microfluidics and Nanofluidics, 2022, 26, 1.	2.2	3
64	Dynamic modeling and control of extracellular ATP concentration on vascular endothelial cells via shear stress modulation. Journal of Control Theory and Applications, 2010, 8, 326-332.	0.8	2
65	A high-throughput microfluidic device for probing calcium dynamics of single cells squeezing through narrow channels. Journal of Micromechanics and Microengineering, 2019, 29, 115014.	2.6	2
66	Effects of a Short-Term Left Ventricular Assist Device on Hemodynamics in a Heart Failure Patient-Specific Aorta Model: A CFD Study. Frontiers in Physiology, 2021, 12, 733464.	2.8	2
67	Exercise controls arterial stiffness via hemodynamic modulation. , 2013, , .		1
68	Modeling of Endothelial Calcium Responses within a Microfluidic Generator of Spatio-Temporal ATP and Shear Stress Signals. Micromachines, 2021, 12, 161.	2.9	1
69	Clinical Application of the Musculoperiosteal Iliac Flap for Osteonecrosis of the Femoral Head. Annals of Plastic Surgery, 2021, Publish Ahead of Print, e129-e136.	0.9	1
70	The singular perturbation analysis for one-dimensional poisson-nernst-planck equation. , 2010, , .		0
71	A hysteresis model for calcium-mediated ciliary beat frequency in airway epithelial cells. , 2010, , .		0
72	Acute impact of upper and lower limb resistance training on common carotid arterial stiffness and local hemodynamics. , 2014, , .		0

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73	Dynamic modeling for Ca <sup>2+</sup> -mediated NFAT Activation in stem cells induced by ATP. , 2014, , .		0
74	A Radial Microfluidic Array for Studying Single-cell Ca <sup>2+</sup> Dynamics Stimulated by Dynamic ATP Signals. , 2018, , .		0
75	Transmission of Dynamic Biochemical Signals in a Variable Cross-section Microfluidic Channel*. , 2018, , .		0
76	A Microfluidic Chip for Rapidly Controlling Dynamic Biochemical Signals. , 2018, , .		0
77	Anomalous Confined Diffusion of Nanoparticles in Polymer Solutions. , 2020, , .		0
78	A microfluidic generator of dynamic shear stress and biochemical signals based on autonomously oscillatory flow. Electrophoresis, 2021, 42, 2264-2272.	2.4	0
79	Two Co(II) coordination polymers: application values on spinal osteomyelitis by reducing the inflammatory response in the paravertebral soft tissue. Chemical Papers, 2021, 75, 2217-2224.	2.2	0
80	An in Vitro Circulatory Device for Studying Blood Flow Electrical Impedance in Human Common Carotid Arteries. , 2020, , .		0
81	An On-Chip Microfluidic System for Reproducing Blood Pressure and Wall Shear Stress Waveforms in Human Common Carotid Arteries *. , 2020, , .		0
82	A Sensorless Suction-Index based Feedback Control Strategy for Rotary Right Ventricular Assist Devices. , 2020, , .		0
83	Microbial transport and dispersion in heterogeneous flows created by pillar arrays. Physics of Fluids, 2022, 34, 023308.	4.0	0