Ping Wang

List of Publications by Citations

106 papers	2,517 citations	28 h-index	46 g-index
110 ext. papers	3,078 ext. citations	8.1 avg, IF	5.15 L-index

#	Paper	IF	Citations
106	Cell-based biosensors and their application in biomedicine. *Chemical Reviews*, **2014**, 114, 6423-61	68.1	221
105	Olfactory cell-based biosensor: a first step towards a neurochip of bioelectronic nose. *Biosensors and Bioelectronics*, **2006**, 22, 318-22	11.8	127
104	Recent achievements in electronic tongue and bioelectronic tongue as taste sensors. *Sensors and Actuators B: Chemical*, **2015**, 207, 1136-1146	8.5	114
103	The analysis of volatile organic compounds biomarkers for lung cancer in exhaled breath, tissues and cell lines. *Cancer Biomarkers*, **2012**, 11, 129-37	3.8	98
102	Cell-based biosensors and its application in biomedicine. *Sensors and Actuators B: Chemical*, **2005**, 108, 576-584	8.5	93
101	A novel electrochemical biosensor based on dynamic polymerase-extending hybridization for E. coli O157:H7 DNA detection. *Talanta*, **2009**, 78, 647-52	6.2	87
100	Detection of heavy metal toxicity using cardiac cell-based biosensor. *Biosensors and Bioelectronics*, **2007**, 22, 3224-9	11.8	73
99	A cardiomyocyte-based biosensor for antiarrhythmic drug evaluation by simultaneously monitoring cell growth and beating. *Biosensors and Bioelectronics*, **2013**, 49, 9-13	11.8	70
98	A miniaturized electrochemical system for high sensitive determination of chromium(VI) by screen-printed carbon electrode with gold nanoparticles modification. *Sensors and Actuators B: Chemical*, **2018**, 272, 582-588	8.5	70
97	3D cell-based biosensor for cell viability and drug assessment by 3D electric cell/matrigel-substrate impedance sensing. *Biosensors and Bioelectronics*, **2019**, 130, 344-351	11.8	60
96	A novel biomimetic olfactory-based biosensor for single olfactory sensory neuron monitoring. *Biosensors and Bioelectronics*, **2009**, 24, 1498-502	11.8	59
95	A novel microphysiometer based on high sensitivity LAPS and microfluidic system for cellular metabolism study and rapid drug screening. *Biosensors and Bioelectronics*, **2013**, 40, 167-73	11.8	53
94	In-situ detection of cadmium with aptamer functionalized gold nanoparticles based on smartphone-based colorimetric system. *Talanta*, **2020**, 208, 120231	6.2	48
93	High-sensitive and high-efficient biochemical analysis method using a bionic electronic eye in combination with a smartphone-based colorimetric reader system. *Sensors and Actuators B: Chemical*, **2015**, 216, 134-140	8.5	46
92	An improved sensitive assay for the detection of PSP toxins with neuroblastoma cell-based impedance biosensor. *Biosensors and Bioelectronics*, **2015**, 67, 458-64	11.8	41
91	A novel electronic tongue combined MLAPS with stripping voltammetry for environmental detection. *Sensors and Actuators B: Chemical*, **2005**, 110, 350-357	8.5	41
90	An improved functional assay for rapid detection of marine toxins, saxitoxin and brevetoxin using a portable cardiomyocyte-based potential biosensor. *Biosensors and Bioelectronics*, **2015**, 72, 10-7	11.8	40

89	Bioengineered olfactory sensory neuron-based biosensor for specific odorant detection. *Biosensors and Bioelectronics*, **2013**, 40, 401-6	11.8	37
88	A novel smartphone-based CD-spectrometer for high sensitive and cost-effective colorimetric detection of ascorbic acid. *Analytica Chimica Acta*, **2020**, 1093, 150-159	6.6	36
87	A novel surface acoustic wave-based biosensor for highly sensitive functional assays of olfactory receptors. *Biochemical and Biophysical Research Communications*, **2011**, 407, 18-22	3.4	35
86	A novel design of multifunctional integrated cell-based biosensors for simultaneously detecting cell acidification and extracellular potential. *Biosensors and Bioelectronics*, **2009**, 24, 1462-8	11.8	35
85	Sensitive detection of carcinoembryonic antigen in exhaled breath condensate using surface acoustic wave immunosensor. *Sensors and Actuators B: Chemical*, **2015**, 217, 100-106	8.5	34
84	High-performance beating pattern function of human induced pluripotent stem cell-derived cardiomyocyte-based biosensors for hERG inhibition recognition. *Biosensors and Bioelectronics*, **2015**, 67, 146-53	11.8	33
83	Detection of diarrhetic shellfish poisoning toxins using high-sensitivity human cancer cell-based impedance biosensor. *Sensors and Actuators B: Chemical*, **2016**, 222, 205-212	8.5	29
82	A novel bionic in vitro bioelectronic tongue based on cardiomyocytes and microelectrode array for bitter and umami detection. *Biosensors and Bioelectronics*, **2019**, 145, 111673	11.8	29
81	Evaluation of doxorubicin toxicity on cardiomyocytes using a dual functional extracellular biochip. *Biosensors and Bioelectronics*, **2010**, 26, 1493-9	11.8	29
80	In vitro assessing the risk of drug-induced cardiotoxicity by embryonic stem cell-based biosensor. *Sensors and Actuators B: Chemical*, **2011**, 155, 214-219	8.5	28
79	Embryonic stem cells as a novel cell source of cell-based biosensors. *Biosensors and Bioelectronics*, **2007**, 22, 810-5	11.8	28
78	High-Throughput Assessment of Drug Cardiac Safety Using a High-Speed Impedance Detection Technology-Based Heart-on-a-Chip. *Micromachines*, **2016**, 7,	3.3	28
77	A novel sensitive cell-based Love Wave biosensor for marine toxin detection. *Biosensors and Bioelectronics*, **2016**, 77, 573-9	11.8	27
76	Optimization of volatile markers of lung cancer to exclude interferences of non-malignant disease. *Cancer Biomarkers*, **2014**, 14, 371-9	3.8	27
75	Synchronized electromechanical integration recording of cardiomyocytes. *Biosensors and Bioelectronics*, **2018**, 117, 354-365	11.8	26
74	MnO nanosheets as the biomimetic oxidase for rapid and sensitive oxalate detection combining with bionic E-eye. *Biosensors and Bioelectronics*, **2019**, 130, 254-261	11.8	25
73	A novel bioelectronic tongue in vivo for highly sensitive bitterness detection with brain-machine interface. *Biosensors and Bioelectronics*, **2016**, 78, 374-380	11.8	25
72	3D microgroove electrical impedance sensing to examine 3D cell cultures for antineoplastic drug assessment. *Microsystems and Nanoengineering*, **2020**, 6, 23	7.7	24

71	A novel and functional assay for pharmacological effects of marine toxins, saxitoxin and tetrodotoxin by cardiomyocyte-based impedance biosensor. *Sensors and Actuators B: Chemical*, **2015**, 209, 828-837	8.5	23
70	Disposable poly (o-aminophenol)-carbon nanotubes modified screen print electrode-based enzyme sensor for electrochemical detection of marine toxin okadaic acid. *Sensors and Actuators B: Chemical*, **2016**, 235, 170-178	8.5	23
69	An improved efficient biochemical detection method to marine toxins with a smartphone-based portable systemBionic e-Eye. *Sensors and Actuators B: Chemical*, **2017**, 238, 1165-1172	8.5	22
68	Microfluidic chip system integrated with light addressable potentiometric sensor (LAPS) for real-time extracellular acidification detection. *Sensors and Actuators B: Chemical*, **2019**, 301, 127004	8.5	21
67	Detection and classification of natural odors with an in vivo bioelectronic nose. *Biosensors and Bioelectronics*, **2015**, 67, 694-9	11.8	21
66	A miniaturized immunosensor platform for automatic detection of carcinoembryonic antigen in EBC. *Sensors and Actuators B: Chemical*, **2014**, 205, 94-101	8.5	21
65	Recent advances in acoustic wave biosensors for the detection of disease-related biomarkers: A review. *Analytica Chimica Acta*, **2021**, 1164, 338321	6.6	21
64	An olfactory bulb slice-based biosensor for multi-site extracellular recording of neural networks. *Biosensors and Bioelectronics*, **2011**, 26, 3313-9	11.8	20
63	Line-scanning LAPS array for measurement of heavy metal ions with micro-lens array based on MEMS. *Sensors and Actuators B: Chemical*, **2008**, 129, 397-403	8.5	20
62	Design of a novel hybrid sensor with microelectrode array and LAPS for heavy metal determination using multivariate nonlinear calibration. *Sensors and Actuators B: Chemical*, **2014**, 192, 755-761	8.5	19
61	A novel label-free bioengineered cell-based biosensor for salicin detection. *Sensors and Actuators B: Chemical*, **2017**, 238, 1151-1158	8.5	18
60	Assessment of cadmium-induced hepatotoxicity and protective effects of zinc against it using an improved cell-based biosensor. *Sensors and Actuators A: Physical*, **2013**, 199, 156-164	3.9	18
59	Detection of bitterness in vitro by a novel male mouse germ cell-based biosensor. *Sensors and Actuators B: Chemical*, **2016**, 223, 461-469	8.5	17
58	Confounding effect of benign pulmonary diseases in selecting volatile organic compounds as markers of lung cancer. *Journal of Breath Research*, **2018**, 12, 046013	3.1	17
57	Specific recognition of ion channel blocker by high-content cardiomyocyte electromechanical integrated correlation. *Biosensors and Bioelectronics*, **2020**, 162, 112273	11.8	16
56	Real-time assessment of food freshness in refrigerators based on a miniaturized electronic nose. *Analytical Methods*, **2018**, 10, 4741-4749	3.2	16
55	A novel portable biosensor based on aptamer functionalized gold nanoparticles for adenosine detection. *Analytica Chimica Acta*, **2020**, 1120, 43-49	6.6	15
54	Surface modification and construction of LAPS towards biosensing applications. *Sensors and Actuators B: Chemical*, **2018**, 265, 161-173	8.5	15

53	Comparison between ECIS and LAPS for establishing a cardiomyocyte-based biosensor. *Sensors and Actuators B: Chemical*, **2013**, 185, 238-244	8.5	15
52	Efficacy and cardiotoxicity integrated assessment of anticancer drugs by a dual functional cell-based biosensor. *Sensors and Actuators B: Chemical*, **2019**, 283, 881-889	8.5	15
51	In vivo bioelectronic nose using transgenic mice for specific odor detection. *Biosensors and Bioelectronics*, **2018**, 102, 150-156	11.8	14
50	Recent progress in micro/nano biosensors for shellfish toxin detection. *Biosensors and Bioelectronics*, **2021**, 176, 112899	11.8	13
49	A bioinspired in vitro bioelectronic tongue with human T2R38 receptor for high-specificity detection of N-C=S-containing compounds. *Talanta*, **2019**, 199, 131-139	6.2	12
48	Bionic 3D spheroids biosensor chips for high-throughput and dynamic drug screening. *Biomedical Microdevices*, **2018**, 20, 82	3.7	12
47	Multi-site dynamic recording for A□oligomers-induced Alzheimer's disease in vitro based on neuronal network chip. *Biosensors and Bioelectronics*, **2019**, 133, 183-191	11.8	11
46	Recent Developments of High-Resolution Chemical Imaging Systems Based on Light-Addressable Potentiometric Sensors (LAPSs). *Sensors*, **2019**, 19,	3.8	11
45	A multi-scale electrode array (MSEA) to study excitation□ontraction coupling of cardiomyocytes for high-throughput bioassays. *Sensors and Actuators B: Chemical*, **2011**, 152, 107-114	8.5	11
44	Novel research on okadaic acid field-based detection using cell viability biosensor and Bionic e-Eye. *Sensors and Actuators B: Chemical*, **2018**, 256, 448-456	8.5	10
43	A whole animal-based biosensor for fast detection of bitter compounds using extracellular potentials in rat gustatory cortex. *Sensors and Actuators B: Chemical*, **2017**, 239, 746-753	8.5	10
42	Detection of 5-hydroxytryptamine (5-HT) in vitro using a hippocampal neuronal network-based biosensor with extracellular potential analysis of neurons. *Biosensors and Bioelectronics*, **2015**, 66, 572-8	11.8	9
41	Integrated olfaction, gustation and toxicity detection by a versatile bioengineered cell-based biomimetic sensor. *Bioelectrochemistry*, **2019**, 128, 1-8	5.6	9
40	Extracellular recordings of bionic engineered cardiac tissue based on a porous scaffold and microelectrode arrays. *Analytical Methods*, **2019**, 11, 5872-5879	3.2	9
39	Detection of cardiovascular drugs and marine toxins using a multifunctional cell-based impedance biosensor system. *Analytical Methods*, **2015**, 7, 7715-7723	3.2	8
38	Microfluidic-based fluorescent electronic eye with CdTe/CdS core-shell quantum dots for trace detection of cadmium ions. *Analytica Chimica Acta*, **2020**, 1131, 126-135	6.6	8
37	A Dual Functional Cardiomyocyte-based Hybrid-biosensor for the Detection of Diarrhetic Shellfish Poisoning and Paralytic Shellfish Poisoning Toxins. *Analytical Sciences*, **2018**, 34, 893-900	1.7	7
36	A point-of-care testing system with Love-wave sensor and immunogold staining enhancement for early detection of lung cancer. *Biomedical Microdevices*, **2014**, 16, 927-35	3.7	7

35	High-efficient and high-content cytotoxic recording via dynamic and continuous cell-based impedance biosensor technology. *Biomedical Microdevices*, **2016**, 18, 94	3.7	7
34	A biohybrid nose for evaluation of odor masking in the peripheral olfactory system. *Biosensors and Bioelectronics*, **2021**, 171, 112737	11.8	7
33	Multi-odor discrimination by a novel bio-hybrid sensing preserving rat's intact smell perception in vivo. *Sensors and Actuators B: Chemical*, **2016**, 225, 34-41	8.5	6
32	Simultaneous detection of hydrogen and methane in breath for the diagnosis of small intestinal bacterial overgrowth by fast gas chromatography. *Analytical Methods*, **2018**, 10, 4329-4338	3.2	6
31	Sensor-free and Sensor-based Heart-on-a-chip Platform: A Review of Design and Applications. *Current Pharmaceutical Design*, **2018**, 24, 5375-5385	3.3	6
30	Advances in Multidimensional Cardiac Biosensing Technologies: From Electrophysiology to Mechanical Motion and Contractile Force. *Small*, **2020**, 16, e2005828	11	6
29	An Odor Recognition Algorithm of Electronic Noses Based on Convolutional Spiking Neural Network for Spoiled Food Identification. *Journal of the Electrochemical Society*, **2021**, 168, 077519	3.9	6
28	A biomimetic taste biosensor based on bitter receptors synthesized and purified on chip from a cell-free expression system. *Sensors and Actuators B: Chemical*, **2020**, 312, 127949	8.5	5
27	Covalently grafting first-generation PAMAM dendrimers onto MXenes with self-adsorbed AuNPs for use as a functional nanoplatform for highly sensitive electrochemical biosensing of cTnT.. *Microsystems and Nanoengineering*, **2022**, 8, 35	7.7	5
26	An Ultrasensitive Gold Nanoband Aptasensor for Mercury(II) Detection in Aquatic Environment. *Journal of the Electrochemical Society*, **2019**, 166, B793-B798	3.9	4
25	Cardiomyocyte electrical-mechanical synchronized model for high-content, dose-quantitative and time-dependent drug assessment. *Microsystems and Nanoengineering*, **2021**, 7, 26	7.7	4
24	Facile Screen-Printed Carbon Nanotube Electrode on Porous Substrate with Gold Nanoparticle Modification for Rapid Electrochemical Gas Sensing. *Journal of the Electrochemical Society*,	3.9	4
23	Development of QDs-based nanosensors for heavy metal detection: A review on transducer principles and in-situ detection. *Talanta*, **2021**, 122903	6.2	4
22	Multiplexed all-solid-state ion-sensitive light-addressable potentiometric sensor (ISLAPS) system based on silicone-rubber for physiological ions detection. *Analytica Chimica Acta*, **2021**, 1179, 338603	6.6	4
21	A sperm-cell-based biosensor using a fluorescence probe for responsive signal readout toward bitter flavor detection. *Talanta*, **2020**, 211, 120731	6.2	3
20	A method combining a kit with the Bionic e-Eye for rapid on site detection of diarrhetic shellfish poisoning. *Analytical Methods*, **2018**, 10, 2604-2613	3.2	3
19	A QDs Nanocomposites-Based Photoluminescence Ratiometric Method for Selective and Visual Cadmium Detection Combining with Smartphone-Based PL E-Eye. *Journal of the Electrochemical Society*, **2020**, 167, 147520	3.9	3
18	High-temporal-range drug-induced cardiac side-effect evaluation using simultaneous HL-1-based impedance and long-term electrophysiology recording systems. *Analytical Methods*, **2019**, 11, 5250-5259	3.2	3

17	Biomimetic integrated olfactory sensory and olfactory bulb systems in vitro based on a chip. *Biosensors and Bioelectronics*, **2021**, 171, 112739	11.8	3
16	Fabricating Tissues In Situ with the Controlled Cellular Alignments. *Advanced Healthcare Materials*, **2021**, e2100934	10.1	2
15	Biomimetic in vitro respiratory system using smooth muscle cells on ECIS chips for anti-asthma TCMs screening. *Analytica Chimica Acta*, **2021**, 1162, 338452	6.6	2
14	Hybrid Integrated Cardiomyocyte Biosensors for Bitter Detection and Cardiotoxicity Assessment. *ACS Sensors*, **2021**, 6, 2593-2604	9.2	2
13	In situ determination of cadmium and lead in water environment based on microelectrode array combined PLS with local optimum method. *Analytical Methods*, **2013**, 5, 1823	3.2	1
12	An bioelectronic nose for possible quantitative evaluation of odor masking using M/T cell spatial response patterns. *Analyst, The*, **2021**,	5	1
11	Detection of Hazardous Gas Mixtures in the Smart Kitchen Using an Electronic Nose with Support Vector Machine. *Journal of the Electrochemical Society*, **2020**, 167, 147519	3.9	1
10	Colorimetric detection of citric acid as the biomarker for urolithiasis based on sodium dodecylsulfate-AgNPs with a portable CD-spectrometer.. *Analytica Chimica Acta*, **2022**, 1191, 339178	6.6	1
9	3D Hierarchical Nanoarchitecture AuNPs/MXene@PAMAM based Biosensor for cTnT Detection in Human Serum* **2021**,		1
8	Surface acoustic wave (SAW) techniques in tissue engineering. *Cell and Tissue Research*, **2021**, 386, 215-226	4.2	1
7	A multi-channel handheld automatic spectrometer for wide range and on-site detection of okadaic acid based on specific aptamer binding. *Analytical Methods*, **2021**, 13, 4345-4353	3.2	1
6	Olfactory regulation by dopamine and DRD2 receptor in the nose.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2118570119	11.5	1
5	A Cell Co-Culture Taste Sensor Using Different Proportions of Caco-2 and SH-SY5Y Cells for Bitterness Detection. *Chemosensors*, **2022**, 10, 173	4	1
4	An In Vitro HL-1 Cardiomyocyte-Based Olfactory Biosensor for Olfr558-Inhibited Efficiency Detection. *Chemosensors*, **2022**, 10, 200	4	1
3	Quantifying the Compressive Force of 3D Cardiac Tissues via Calculating the Volumetric Deformation of Built-In Elastic Gelatin Microspheres. *Advanced Healthcare Materials*, **2021**, 10, e2001716	10.1	0
2	A multidimensional biosensor system to guide LUAD individualized treatment. *Journal of Materials Chemistry B*, **2021**, 9, 7991-8002	7.3	0
1	A Microphysiometric System Based on LAPS for Real-Time Monitoring of Microbial Metabolism. *Chemosensors*, **2022**, 10, 177	4	0