

Ping Wang

List of Publications by Year in descending order

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110
papers

3,542
citations

126708

33
h-index

161609

54
g-index

110
all docs

110
docs citations

110
times ranked

3650
citing authors

#	ARTICLE	IF	CITATIONS
1	Cell-Based Biosensors and Their Application in Biomedicine. <i>Chemical Reviews</i> , 2014, 114, 6423-6461.	23.0	294
2	Olfactory cell-based biosensor: A first step towards a neurochip of bioelectronic nose. <i>Biosensors and Bioelectronics</i> , 2006, 22, 318-322.	5.3	142
3	Recent achievements in electronic tongue and bioelectronic tongue as taste sensors. <i>Sensors and Actuators B: Chemical</i> , 2015, 207, 1136-1146.	4.0	141
4	The analysis of volatile organic compounds biomarkers for lung cancer in exhaled breath, tissues and cell lines. <i>Cancer Biomarkers</i> , 2012, 11, 129-137.	0.8	133
5	Cell-based biosensors and its application in biomedicine. <i>Sensors and Actuators B: Chemical</i> , 2005, 108, 576-584.	4.0	115
6	A novel electrochemical biosensor based on dynamic polymerase-extending hybridization for E. coli O157:H7 DNA detection. <i>Talanta</i> , 2009, 78, 647-652.	2.9	103
7	In-situ detection of cadmium with aptamer functionalized gold nanoparticles based on smartphone-based colorimetric system. <i>Talanta</i> , 2020, 208, 120231.	2.9	98
8	A miniaturized electrochemical system for high sensitive determination of chromium(VI) by screen-printed carbon electrode with gold nanoparticles modification. <i>Sensors and Actuators B: Chemical</i> , 2018, 272, 582-588.	4.0	96
9	3D cell-based biosensor for cell viability and drug assessment by 3D electric cell/matrigel-substrate impedance sensing. <i>Biosensors and Bioelectronics</i> , 2019, 130, 344-351.	5.3	87
10	A cardiomyocyte-based biosensor for antiarrhythmic drug evaluation by simultaneously monitoring cell growth and beating. <i>Biosensors and Bioelectronics</i> , 2013, 49, 9-13.	5.3	85
11	Detection of heavy metal toxicity using cardiac cell-based biosensor. <i>Biosensors and Bioelectronics</i> , 2007, 22, 3224-3229.	5.3	84
12	A novel biomimetic olfactory-based biosensor for single olfactory sensory neuron monitoring. <i>Biosensors and Bioelectronics</i> , 2009, 24, 1498-1502.	5.3	66
13	A novel microphysiometer based on high sensitivity LAPS and microfluidic system for cellular metabolism study and rapid drug screening. <i>Biosensors and Bioelectronics</i> , 2013, 40, 167-173.	5.3	59
14	High-sensitive and high-efficient biochemical analysis method using a bionic electronic eye in combination with a smartphone-based colorimetric reader system. <i>Sensors and Actuators B: Chemical</i> , 2015, 216, 134-140.	4.0	54
15	A novel smartphone-based CD-spectrometer for high sensitive and cost-effective colorimetric detection of ascorbic acid. <i>Analytica Chimica Acta</i> , 2020, 1093, 150-159.	2.6	54
16	A novel bionic in vitro bioelectronic tongue based on cardiomyocytes and microelectrode array for bitter and umami detection. <i>Biosensors and Bioelectronics</i> , 2019, 145, 111673.	5.3	53
17	Recent advances in acoustic wave biosensors for the detection of disease-related biomarkers: A review. <i>Analytica Chimica Acta</i> , 2021, 1164, 338321.	2.6	52
18	An improved functional assay for rapid detection of marine toxins, saxitoxin and brevetoxin using a portable cardiomyocyte-based potential biosensor. <i>Biosensors and Bioelectronics</i> , 2015, 72, 10-17.	5.3	51

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19	An improved sensitive assay for the detection of PSP toxins with neuroblastoma cell-based impedance biosensor. <i>Biosensors and Bioelectronics</i> , 2015, 67, 458-464.	5.3	51
20	A novel electronic tongue combined MLAPS with stripping voltammetry for environmental detection. <i>Sensors and Actuators B: Chemical</i> , 2005, 110, 350-357.	4.0	49
21	High-performance beating pattern function of human induced pluripotent stem cell-derived cardiomyocyte-based biosensors for hERG inhibition recognition. <i>Biosensors and Bioelectronics</i> , 2015, 67, 146-153.	5.3	45
22	Sensitive detection of carcinoembryonic antigen in exhaled breath condensate using surface acoustic wave immunosensor. <i>Sensors and Actuators B: Chemical</i> , 2015, 217, 100-106.	4.0	44
23	Bioengineered olfactory sensory neuron-based biosensor for specific odorant detection. <i>Biosensors and Bioelectronics</i> , 2013, 40, 401-406.	5.3	43
24	3D microgroove electrical impedance sensing to examine 3D cell cultures for antineoplastic drug assessment. <i>Microsystems and Nanoengineering</i> , 2020, 6, 23.	3.4	42
25	High-Throughput Assessment of Drug Cardiac Safety Using a High-Speed Impedance Detection Technology-Based Heart-on-a-Chip. <i>Micromachines</i> , 2016, 7, 122.	1.4	40
26	A novel sensitive cell-based Love Wave biosensor for marine toxin detection. <i>Biosensors and Bioelectronics</i> , 2016, 77, 573-579.	5.3	40
27	MnO ₂ nanosheets as the biomimetic oxidase for rapid and sensitive oxalate detection combining with bionic E-eye. <i>Biosensors and Bioelectronics</i> , 2019, 130, 254-261.	5.3	40
28	A novel design of multifunctional integrated cell-based biosensors for simultaneously detecting cell acidification and extracellular potential. <i>Biosensors and Bioelectronics</i> , 2009, 24, 1462-1468.	5.3	38
29	Synchronized electromechanical integration recording of cardiomyocytes. <i>Biosensors and Bioelectronics</i> , 2018, 117, 354-365.	5.3	38
30	A novel surface acoustic wave-based biosensor for highly sensitive functional assays of olfactory receptors. <i>Biochemical and Biophysical Research Communications</i> , 2011, 407, 18-22.	1.0	37
31	Detection of diarrhetic shellfish poisoning toxins using high-sensitivity human cancer cell-based impedance biosensor. <i>Sensors and Actuators B: Chemical</i> , 2016, 222, 205-212.	4.0	36
32	Real-time assessment of food freshness in refrigerators based on a miniaturized electronic nose. <i>Analytical Methods</i> , 2018, 10, 4741-4749.	1.3	36
33	In vitro assessing the risk of drug-induced cardiotoxicity by embryonic stem cell-based biosensor. <i>Sensors and Actuators B: Chemical</i> , 2011, 155, 214-219.	4.0	35
34	Evaluation of doxorubicin toxicity on cardiomyocytes using a dual functional extracellular biochip. <i>Biosensors and Bioelectronics</i> , 2010, 26, 1493-1499.	5.3	34
35	Recent progress in micro/nano biosensors for shellfish toxin detection. <i>Biosensors and Bioelectronics</i> , 2021, 176, 112899.	5.3	33
36	Optimization of volatile markers of lung cancer to exclude interferences of non-malignant disease. <i>Cancer Biomarkers</i> , 2014, 14, 371-379.	0.8	32

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37	Microfluidic chip system integrated with light addressable potentiometric sensor (LAPS) for real-time extracellular acidification detection. <i>Sensors and Actuators B: Chemical</i> , 2019, 301, 127004.	4.0	32
38	Development of QDs-based nanosensors for heavy metal detection: A review on transducer principles and in-situ detection. <i>Talanta</i> , 2022, 239, 122903.	2.9	32
39	A novel and functional assay for pharmacological effects of marine toxins, saxitoxin and tetrodotoxin by cardiomyocyte-based impedance biosensor. <i>Sensors and Actuators B: Chemical</i> , 2015, 209, 828-837.	4.0	31
40	Detection and classification of natural odors with an in vivo bioelectronic nose. <i>Biosensors and Bioelectronics</i> , 2015, 67, 694-699.	5.3	31
41	Disposable poly (o-aminophenol)-carbon nanotubes modified screen print electrode-based enzyme sensor for electrochemical detection of marine toxin okadaic acid. <i>Sensors and Actuators B: Chemical</i> , 2016, 235, 170-178.	4.0	30
42	A novel bioelectronic tongue in vivo for highly sensitive bitterness detection with brain-machine interface. <i>Biosensors and Bioelectronics</i> , 2016, 78, 374-380.	5.3	30
43	Embryonic stem cells as a novel cell source of cell-based biosensors. <i>Biosensors and Bioelectronics</i> , 2007, 22, 810-815.	5.3	28
44	Multi-site dynamic recording for A β oligomers-induced Alzheimer's disease in vitro based on neuronal network chip. <i>Biosensors and Bioelectronics</i> , 2019, 133, 183-191.	5.3	28
45	An improved efficient biochemical detection method to marine toxins with a smartphone-based portable system-Bionic e-Eye. <i>Sensors and Actuators B: Chemical</i> , 2017, 238, 1165-1172.	4.0	27
46	In vivo bioelectronic nose using transgenic mice for specific odor detection. <i>Biosensors and Bioelectronics</i> , 2018, 102, 150-156.	5.3	26
47	A novel portable biosensor based on aptamer functionalized gold nanoparticles for adenosine detection. <i>Analytica Chimica Acta</i> , 2020, 1120, 43-49.	2.6	26
48	A miniaturized immunosensor platform for automatic detection of carcinoembryonic antigen in EBC. <i>Sensors and Actuators B: Chemical</i> , 2014, 205, 94-101.	4.0	25
49	Bionic 3D spheroids biosensor chips for high-throughput and dynamic drug screening. <i>Biomedical Microdevices</i> , 2018, 20, 82.	1.4	25
50	Confounding effect of benign pulmonary diseases in selecting volatile organic compounds as markers of lung cancer. <i>Journal of Breath Research</i> , 2018, 12, 046013.	1.5	25
51	An olfactory bulb slice-based biosensor for multi-site extracellular recording of neural networks. <i>Biosensors and Bioelectronics</i> , 2011, 26, 3313-3319.	5.3	24
52	A novel label-free bioengineered cell-based biosensor for salicin detection. <i>Sensors and Actuators B: Chemical</i> , 2017, 238, 1151-1158.	4.0	24
53	Efficacy and cardiotoxicity integrated assessment of anticancer drugs by a dual functional cell-based biosensor. <i>Sensors and Actuators B: Chemical</i> , 2019, 283, 881-889.	4.0	23
54	Specific recognition of ion channel blocker by high-content cardiomyocyte electromechanical integrated correlation. <i>Biosensors and Bioelectronics</i> , 2020, 162, 112273.	5.3	23

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55	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. <i>Microsystems and Nanoengineering</i> , 2022, 8, 35.	3.4	23
56	Line-scanning LAPS array for measurement of heavy metal ions with micro-lens array based on MEMS. <i>Sensors and Actuators B: Chemical</i> , 2008, 129, 397-403.	4.0	22
57	Detection of bitterness in vitro by a novel male mouse germ cell-based biosensor. <i>Sensors and Actuators B: Chemical</i> , 2016, 223, 461-469.	4.0	22
58	Design of a novel hybrid sensor with microelectrode array and LAPS for heavy metal determination using multivariate nonlinear calibration. <i>Sensors and Actuators B: Chemical</i> , 2014, 192, 755-761.	4.0	20
59	Surface modification and construction of LAPS towards biosensing applications. <i>Sensors and Actuators B: Chemical</i> , 2018, 265, 161-173.	4.0	20
60	A bioinspired in vitro bioelectronic tongue with human T2R38 receptor for high-specificity detection of N-C=S-containing compounds. <i>Talanta</i> , 2019, 199, 131-139.	2.9	19
61	Microfluidic-based fluorescent electronic eye with CdTe/CdS core-shell quantum dots for trace detection of cadmium ions. <i>Analytica Chimica Acta</i> , 2020, 1131, 126-135.	2.6	19
62	An Odor Recognition Algorithm of Electronic Noses Based on Convolutional Spiking Neural Network for Spoiled Food Identification. <i>Journal of the Electrochemical Society</i> , 2021, 168, 077519.	1.3	19
63	Assessment of cadmium-induced hepatotoxicity and protective effects of zinc against it using an improved cell-based biosensor. <i>Sensors and Actuators A: Physical</i> , 2013, 199, 156-164.	2.0	18
64	Recent Developments of High-Resolution Chemical Imaging Systems Based on Light-Addressable Potentiometric Sensors (LAPSs). <i>Sensors</i> , 2019, 19, 4294.	2.1	18
65	Comparison between ECIS and LAPS for establishing a cardiomyocyte-based biosensor. <i>Sensors and Actuators B: Chemical</i> , 2013, 185, 238-244.	4.0	16
66	A whole animal-based biosensor for fast detection of bitter compounds using extracellular potentials in rat gustatory cortex. <i>Sensors and Actuators B: Chemical</i> , 2017, 239, 746-753.	4.0	16
67	Extracellular recordings of bionic engineered cardiac tissue based on a porous scaffold and microelectrode arrays. <i>Analytical Methods</i> , 2019, 11, 5872-5879.	1.3	16
68	Advances in Multidimensional Cardiac Biosensing Technologies: From Electrophysiology to Mechanical Motion and Contractile Force. <i>Small</i> , 2020, 16, e2005828.	5.2	16
69	Integrated olfaction, gustation and toxicity detection by a versatile bioengineered cell-based biomimetic sensor. <i>Bioelectrochemistry</i> , 2019, 128, 1-8.	2.4	15
70	A biohybrid nose for evaluation of odor masking in the peripheral olfactory system. <i>Biosensors and Bioelectronics</i> , 2021, 171, 112737.	5.3	15
71	A multi-scale electrode array (MSEA) to study excitation-contraction coupling of cardiomyocytes for high-throughput bioassays. <i>Sensors and Actuators B: Chemical</i> , 2011, 152, 107-114.	4.0	14
72	Novel research on okadaic acid field-based detection using cell viability biosensor and Bionic e-Eye. <i>Sensors and Actuators B: Chemical</i> , 2018, 256, 448-456.	4.0	14

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73	A biomimetic taste biosensor based on bitter receptors synthesized and purified on chip from a cell-free expression system. <i>Sensors and Actuators B: Chemical</i> , 2020, 312, 127949.	4.0	13
74	Surface acoustic wave (SAW) techniques in tissue engineering. <i>Cell and Tissue Research</i> , 2021, 386, 215-226.	1.5	13
75	A Dual Functional Cardioiocyte-based Hybrid-biosensor for the Detection of Diarrhetic Shellfish Poisoning and Paralytic Shellfish Poisoning Toxins. <i>Analytical Sciences</i> , 2018, 34, 893-900.	0.8	12
76	Sensor-free and Sensor-based Heart-on-a-chip Platform: A Review of Design and Applications. <i>Current Pharmaceutical Design</i> , 2019, 24, 5375-5385.	0.9	11
77	Cardiomyocyte electrical-mechanical synchronized model for high-content, dose-quantitative and time-dependent drug assessment. <i>Microsystems and Nanoengineering</i> , 2021, 7, 26.	3.4	11
78	A point-of-care testing system with Love-wave sensor and immunogold staining enhancement for early detection of lung cancer. <i>Biomedical Microdevices</i> , 2014, 16, 927-935.	1.4	10
79	Detection of 5-hydroxytryptamine (5-HT) in vitro using a hippocampal neuronal network-based biosensor with extracellular potential analysis of neurons. <i>Biosensors and Bioelectronics</i> , 2015, 66, 572-578.	5.3	10
80	Biohybrid Tongue for Evaluation of Taste Interaction between Sweetness and Sourness. <i>Analytical Chemistry</i> , 2022, 94, 6976-6985.	3.2	10
81	Detection of cardiovascular drugs and marine toxins using a multifunctional cell-based impedance biosensor system. <i>Analytical Methods</i> , 2015, 7, 7715-7723.	1.3	9
82	Facile Screen-Printed Carbon Nanotube Electrode on Porous Substrate with Gold Nanoparticle Modification for Rapid Electrochemical Gas Sensing. <i>Journal of the Electrochemical Society</i> , 2021, 168, 067514.	1.3	9
83	Multiplexed all-solid-state ion-sensitive light-addressable potentiometric sensor (ISLAPS) system based on silicone-rubber for physiological ions detection. <i>Analytica Chimica Acta</i> , 2021, 1179, 338603.	2.6	9
84	Detection of Hazardous Gas Mixtures in the Smart Kitchen Using an Electronic Nose with Support Vector Machine. <i>Journal of the Electrochemical Society</i> , 2020, 167, 147519.	1.3	9
85	Multi-odor discrimination by a novel bio-hybrid sensing preserving rat's intact smell perception in vivo. <i>Sensors and Actuators B: Chemical</i> , 2016, 225, 34-41.	4.0	8
86	Simultaneous detection of hydrogen and methane in breath for the diagnosis of small intestinal bacterial overgrowth by fast gas chromatography. <i>Analytical Methods</i> , 2018, 10, 4329-4338.	1.3	8
87	An Ultrasensitive Gold Nanoband Aptasensor for Mercury(II) Detection in Aquatic Environment. <i>Journal of the Electrochemical Society</i> , 2019, 166, B793-B798.	1.3	8
88	Biomimetic integrated olfactory sensory and olfactory bulb systems in vitro based on a chip. <i>Biosensors and Bioelectronics</i> , 2021, 171, 112739.	5.3	8
89	Biomimetic in vitro respiratory system using smooth muscle cells on ECIS chips for anti-asthma TCMs screening. <i>Analytica Chimica Acta</i> , 2021, 1162, 338452.	2.6	8
90	Fabricating Tissues In Situ with the Controlled Cellular Alignments. <i>Advanced Healthcare Materials</i> , 2022, 11, e2100934.	3.9	8

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91	High-efficient and high-content cytotoxic recording via dynamic and continuous cell-based impedance biosensor technology. <i>Biomedical Microdevices</i> , 2016, 18, 94.	1.4	7
92	Hybrid Integrated Cardiomyocyte Biosensors for Bitter Detection and Cardiotoxicity Assessment. <i>ACS Sensors</i> , 2021, 6, 2593-2604.	4.0	7
93	Quantifying the Compressive Force of 3D Cardiac Tissues via Calculating the Volumetric Deformation of Built-in Elastic Gelatin Microspheres. <i>Advanced Healthcare Materials</i> , 2021, 10, e2001716.	3.9	7
94	A multi-channel handheld automatic spectrometer for wide range and on-site detection of okadaic acid based on specific aptamer binding. <i>Analytical Methods</i> , 2021, 13, 4345-4353.	1.3	7
95	A Cell Co-Culture Taste Sensor Using Different Proportions of Caco-2 and SH-SY5Y Cells for Bitterness Detection. <i>Chemosensors</i> , 2022, 10, 173.	1.8	7
96	Olfactory regulation by dopamine and DRD2 receptor in the nose. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2118570119.	3.3	5
97	A sperm-cell-based biosensor using a fluorescence probe for responsive signal readout toward bitter flavor detection. <i>Talanta</i> , 2020, 211, 120731.	2.9	4
98	Real-Time Monitoring of HL-1 Cell Viscoelasticity for Drug Cardiotoxicity Assessment using a Love Wave Biosensor. <i>Journal of the Electrochemical Society</i> , 2021, 168, 107504.	1.3	4
99	An In Vitro HL-1 Cardiomyocyte-Based Olfactory Biosensor for Olfr558-Inhibited Efficiency Detection. <i>Chemosensors</i> , 2022, 10, 200.	1.8	4
100	A method combining a kit with the Bionic e-Eye for rapid on site detection of diarrhetic shellfish poisoning. <i>Analytical Methods</i> , 2018, 10, 2604-2613.	1.3	3
101	High-temporal-range drug-induced cardiac side-effect evaluation using simultaneous HL-1-based impedance and long-term electrophysiology recording systems. <i>Analytical Methods</i> , 2019, 11, 5250-5259.	1.3	3
102	A multidimensional biosensor system to guide LUAD individualized treatment. <i>Journal of Materials Chemistry B</i> , 2021, 9, 7991-8002.	2.9	3
103	A QDs Nanocomposites-Based Photoluminescence Ratiometric Method for Selective and Visual Cadmium Detection Combining with Smartphone-Based PL E-Eye. <i>Journal of the Electrochemical Society</i> , 2020, 167, 147520.	1.3	3
104	Colorimetric detection of citric acid as the biomarker for urolithiasis based on sodium dodecylsulfate-AgNPs with a portable CD-spectrometer. <i>Analytica Chimica Acta</i> , 2022, 1191, 339178.	2.6	3
105	A Microphysiometric System Based on LAPS for Real-Time Monitoring of Microbial Metabolism. <i>Chemosensors</i> , 2022, 10, 177.	1.8	3
106	In situ determination of cadmium and lead in water environment based on microelectrode array combined PLS with local optimum method. <i>Analytical Methods</i> , 2013, 5, 1823.	1.3	2
107	An in vivo bioelectronic nose for possible quantitative evaluation of odor masking using M/T cell spatial response patterns. <i>Analyst</i> , The, 2021, 147, 178-186.	1.7	2
108	3D Hierarchical Nanoarchitecture AuNPs/MXene@PAMAM based Biosensor for cTnT Detection in Human Serum*. , 2021, , .		1

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109	Olfactory Bulb Biosensor Monitoring the Effect of Treatment Drugs for AD in vitro. , 2022, , .		1
110	A novel micro-groove impedance sensor for 3D cell viability monitoring and high-throughput drug screening. , 2019, , .		0