

# Kai Zhang

## List of Publications by Year in descending order

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Version: 2024-02-01

103  
papers

2,814  
citations

172457  
29  
h-index

223800  
46  
g-index

105  
all docs

105  
docs citations

105  
times ranked

3562  
citing authors

#	ARTICLE	IF	CITATIONS
1	On-chip manipulation of continuous picoliter-volume superparamagnetic droplets using a magnetic force. <i>Lab on A Chip</i> , 2009, 9, 2992.	6.0	135
2	Entropy-driven amplified electrochemiluminescence biosensor for RdRp gene of SARS-CoV-2 detection with self-assembled DNA tetrahedron scaffolds. <i>Biosensors and Bioelectronics</i> , 2021, 178, 113015.	10.1	98
3	Protective Effect of Paeoniflorin on $\text{H}_2\text{O}_2$ -Induced SH-SY5Y Cell Injury by Preventing Mitochondrial Dysfunction. <i>Cellular and Molecular Neurobiology</i> , 2014, 34, 227-234.	3.3	90
4	Reliable Förster Resonance Energy Transfer Probe Based on Structure-Switching DNA for Ratiometric Sensing of Telomerase in Living Cells. <i>Analytical Chemistry</i> , 2017, 89, 4216-4222.	6.5	82
5	Investigation of Gallic Acid Induced Anticancer Effect in Human Breast Carcinoma MCF-7 Cells. <i>Journal of Biochemical and Molecular Toxicology</i> , 2014, 28, 387-393.	3.0	81
6	Sensitive detection of microRNA in complex biological samples by using two stages DSN-assisted target recycling signal amplification method. <i>Biosensors and Bioelectronics</i> , 2017, 87, 358-364.	10.1	78
7	On-demand microfluidic droplet manipulation using hydrophobic ferrofluid as a continuous-phase. <i>Lab on A Chip</i> , 2011, 11, 1271.	6.0	69
8	Strategy to Fabricate an Electrochemical Aptasensor: Application to the Assay of Adenosine Deaminase Activity. <i>Analytical Chemistry</i> , 2010, 82, 3207-3211.	6.5	68
9	Ziyuglycoside II induces cell cycle arrest and apoptosis through activation of ROS/JNK pathway in human breast cancer cells. <i>Toxicology Letters</i> , 2014, 227, 65-73.	0.8	62
10	A modified microfluidic chip for fabrication of paclitaxel-loaded poly(l-lactic acid) microspheres. <i>Microfluidics and Nanofluidics</i> , 2011, 10, 1289-1298.	2.2	61
11	Label-free and ultrasensitive fluorescence detection of cocaine based on a strategy that utilizes DNA-templated silver nanoclusters and the nicking endonuclease-assisted signal amplification method. <i>Chemical Communications</i> , 2014, 50, 180-182.	4.1	61
12	Rational Engineering of the DNA Walker Amplification Strategy by Using a $\text{Au@TiO}_2/\text{C}_2\text{N}_2\text{@PEI-Ru(dcbpy)}_3^{2+}$ Nanocomposite Biosensor for Detection of the SARS-CoV-2 RdRp Gene. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 19816-19824.	8.0	60
13	A strategy combining 3D-DNA Walker and CRISPR-Cas12a trans-cleavage activity applied to MXene based electrochemiluminescent sensor for SARS-CoV-2 RdRp gene detection. <i>Talanta</i> , 2022, 236, 122868.	5.5	59
14	Exploring the trans-cleavage activity of CRISPR-Cas12a for the development of a Mxene based electrochemiluminescence biosensor for the detection of Siglec-5. <i>Biosensors and Bioelectronics</i> , 2021, 178, 113019.	10.1	57
15	Puerarin inhibits amyloid $\text{A}\beta$ -induced NLRP3 inflammasome activation in retinal pigment epithelial cells via suppressing ROS-dependent oxidative and endoplasmic reticulum stresses. <i>Experimental Cell Research</i> , 2017, 357, 335-340.	2.6	56
16	Essential oil-mediated glycosomes increase transdermal paeoniflorin delivery: optimization, characterization, and evaluation in vitro and in vivo. <i>International Journal of Nanomedicine</i> , 2017, Volume 12, 3521-3532.	6.7	55
17	Dual-Wavelength Electrochemiluminescence Ratiometric Biosensor for NF- $\kappa$ B p50 Detection with Dimethylthiodiaminoterephthalate Fluorophore and Self-Assembled DNA Tetrahedron Nanostructures Probe. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 11409-11418.	8.0	54
18	Amyloid $\text{A}\beta$ induces NLRP3 inflammasome activation in retinal pigment epithelial cells via NADPH oxidase- and mitochondria-dependent ROS production. <i>Journal of Biochemical and Molecular Toxicology</i> , 2017, 31, e21887.	3.0	53

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19	Binding-induced and label-free colorimetric method for protein detection based on autonomous assembly of hemin/G-quadruplex DNAzyme amplification strategy. <i>Biosensors and Bioelectronics</i> , 2015, 64, 572-578.	10.1	52
20	Rational engineering the DNA tetrahedrons of dual wavelength ratiometric electrochemiluminescence biosensor for high efficient detection of SARS-CoV-2 RdRp gene by using entropy-driven and bipedal DNA walker amplification strategy. <i>Chemical Engineering Journal</i> , 2022, 427, 131686.	12.7	50
21	A Sunlight Powered Portable Photoelectrochemical Biosensor Based on a Potentiometric Resolve Ratiometric Principle. <i>Analytical Chemistry</i> , 2018, 90, 13207-13211.	6.5	49
22	A pH-engineering regenerative DNA tetrahedron ECL biosensor for the assay of SARS-CoV-2 RdRp gene based on CRISPR/Cas12a trans-activity. <i>Chemical Engineering Journal</i> , 2022, 429, 132472.	12.7	49
23	Ziyuglycoside II Inhibits the Growth of Human Breast Carcinoma MDA-MB-435 Cells via Cell Cycle Arrest and Induction of Apoptosis through the Mitochondria Dependent Pathway. <i>International Journal of Molecular Sciences</i> , 2013, 14, 18041-18055.	4.1	43
24	Curcumin-loaded redox-responsive mesoporous silica nanoparticles for targeted breast cancer therapy. <i>Artificial Cells, Nanomedicine and Biotechnology</i> , 2018, 46, 921-935.	2.8	42
25	Graphene quantum dot based "switch-on" nanosensors for intracellular cytokine monitoring. <i>Nanoscale</i> , 2017, 9, 4934-4943.	5.6	37
26	DNA-templated silver nanoclusters based label-free fluorescent molecular beacon for the detection of adenosine deaminase. <i>Biosensors and Bioelectronics</i> , 2014, 52, 124-128.	10.1	36
27	Rational design of signal-on biosensors by using photoinduced electron transfer between Ag nanoclusters and split G-quadruplex halves-hemin complexes. <i>Chemical Communications</i> , 2014, 50, 14221-14224.	4.1	35
28	Ultrasensitive detection of microRNA with isothermal amplification and a time-resolved fluorescence sensor. <i>Biosensors and Bioelectronics</i> , 2014, 57, 91-95.	10.1	35
29	Preparation, characterization and biological activity of proanthocyanidin-chitosan nanoparticles. <i>International Journal of Biological Macromolecules</i> , 2021, 188, 43-51.	7.5	34
30	Galectin-1 knockdown in carcinoma-associated fibroblasts inhibits migration and invasion of human MDA-MB-231 breast cancer cells by modulating MMP-9 expression. <i>Acta Biochimica Et Biophysica Sinica</i> , 2016, 48, 462-467.	2.0	32
31	DNA Tetrahedron Based Biosensor for Argonaute2 Assay in Single Cells and Human Immunodeficiency Virus Type-1 Related Ribonuclease H Detection in Vitro. <i>Analytical Chemistry</i> , 2019, 91, 7086-7096.	6.5	30
32	Sensitive and selective amplified visual detection of cytokines based on exonuclease III-aided target recycling. <i>Chemical Communications</i> , 2014, 50, 13342-13345.	4.1	29
33	A label-free kissing complexes-induced fluorescence aptasensor using DNA-templated silver nanoclusters as a signal transducer. <i>Biosensors and Bioelectronics</i> , 2016, 78, 154-159.	10.1	28
34	Optimization of extraction flavonoids from <i>Exocarpium Citri Grandis</i> and evaluation its hypoglycemic and hypolipidemic activities. <i>Journal of Ethnopharmacology</i> , 2020, 262, 113178.	4.1	27
35	Comprehensive Two-Dimensional Manipulations of Picoliter Microfluidic Droplets Sampled from Nanoliter Samples. <i>Analytical Chemistry</i> , 2011, 83, 8029-8034.	6.5	26
36	Tetramethylpyrazine Protects Retinal Capillary Endothelial Cells (TR-iBRB2) against IL-1 $\beta$ -Induced Nitrate/Oxidative Stress. <i>International Journal of Molecular Sciences</i> , 2015, 16, 21775-21790.	4.1	26

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37	FoxM1 inhibition enhances chemosensitivity of docetaxel-resistant A549 cells to docetaxel via activation of JNK/mitochondrial pathway. <i>Acta Biochimica Et Biophysica Sinica</i> , 2016, 48, 804-809.	2.0	26
38	Corosolic acid inhibits the proliferation of glomerular mesangial cells and protects against diabetic renal damage. <i>Scientific Reports</i> , 2016, 6, 26854.	3.3	26
39	Sensitive detection of transcription factors in cell nuclear extracts by using a molecular beacons based amplification strategy. <i>Biosensors and Bioelectronics</i> , 2016, 77, 264-269.	10.1	26
40	Ziyuglycoside I Inhibits the Proliferation of MDA-MB-231 Breast Carcinoma Cells through Inducing p53-Mediated G2/M Cell Cycle Arrest and Intrinsic/Extrinsic Apoptosis. <i>International Journal of Molecular Sciences</i> , 2016, 17, 1903.	4.1	25
41	Puerarin Protects Human Neuroblastoma SH-SY5Y Cells against Glutamate-Induced Oxidative Stress and Mitochondrial Dysfunction. <i>Journal of Biochemical and Molecular Toxicology</i> , 2016, 30, 22-28.	3.0	25
42	The effect of puerarin against IL-1 $\beta$ -mediated leukostasis and apoptosis in retinal capillary endothelial cells (TR-iBRB2). <i>Molecular Vision</i> , 2014, 20, 1815-23.	1.1	25
43	Induction of oxidative and nitrosative stresses in human retinal pigment epithelial cells by all-trans-retinal. <i>Experimental Cell Research</i> , 2016, 348, 87-94.	2.6	24
44	Entropy-driven electrochemiluminescence ultra-sensitive detection strategy of NF- $\kappa$ B p50 as the regulator of cytokine storm. <i>Biosensors and Bioelectronics</i> , 2021, 176, 112942.	10.1	22
45	Inclusion Complex of <i>Exocarpium Citri</i> Grandis Essential Oil with $\beta$ -Cyclodextrin: Characterization, Stability, and Antioxidant Activity. <i>Journal of Food Science</i> , 2019, 84, 1592-1599.	3.1	21
46	A gravity-actuated technique for flexible and portable microfluidic droplet manipulation. <i>Microfluidics and Nanofluidics</i> , 2010, 9, 995-1001.	2.2	20
47	A new strategy based on aptasensor to time-resolved fluorescence assay for adenosine deaminase activity. <i>Biosensors and Bioelectronics</i> , 2013, 41, 123-128.	10.1	20
48	Neuroprotective Effect of Puerarin on Glutamate-Induced Cytotoxicity in Differentiated Y-79 Cells via Inhibition of ROS Generation and Ca <sup>2+</sup> Influx. <i>International Journal of Molecular Sciences</i> , 2016, 17, 1109.	4.1	20
49	Whole-genome sequencing reveals the mutational landscape of metastatic small-cell gallbladder neuroendocrine carcinoma (GB-SCNEC). <i>Cancer Letters</i> , 2017, 391, 20-27.	7.2	20
50	Electrochemiluminescence platform for transcription factor diagnosis by using CRISPR-Cas12a <i>trans</i> -cleavage activity. <i>Chemical Communications</i> , 2021, 57, 8015-8018.	4.1	20
51	An enzyme substrate binding aptamer complex based time-resolved fluorescence sensor for the adenosine deaminase detection. <i>Biosensors and Bioelectronics</i> , 2013, 42, 87-92.	10.1	19
52	Ciliary neurotrophic factor protects SH-SY5Y neuroblastoma cells against A $\beta$ 1-42-induced neurotoxicity via activating the JAK2/STAT3 axis. <i>Folia Neuropathologica</i> , 2015, 3, 226-235.	1.2	19
53	Endogenous MicroRNA-Triggered and Real-Time Monitored Drug Release via Cascaded Energy Transfer Payloads. <i>Analytical Chemistry</i> , 2017, 89, 10239-10247.	6.5	19
54	In Situ Visualization of hERG Potassium Channel via Dual Signal Amplification. <i>Analytical Chemistry</i> , 2018, 90, 6199-6205.	6.5	19

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55	Platelet-driven formation of interface peptide nano-network biosensor enabling a non-invasive means for early detection of Alzheimer's disease. <i>Biosensors and Bioelectronics</i> , 2019, 145, 111701.	10.1	19
56	Ultrasensitive fluorescence detection of transcription factors based on kisscomplex formation and the T7 RNA polymerase amplification method. <i>Chemical Communications</i> , 2017, 53, 5846-5849.	4.1	18
57	Regulation and imaging of gene expression via an RNA interference antagonistic biomimetic probe. <i>Chemical Science</i> , 2017, 8, 4973-4977.	7.4	18
58	Sensitive detection of cytokine in complex biological samples by using MB track mediated DNA walker and nicking enzyme assisted signal amplification method combined biosensor. <i>Talanta</i> , 2018, 189, 122-128.	5.5	18
59	Electrochemiluminescence aptasensor for Siglec-5 detection based on MoS <sub>2</sub> @Au nanocomposites emitter and exonuclease III-powered DNA walker. <i>Sensors and Actuators B: Chemical</i> , 2021, 334, 129592.	7.8	18
60	Hybridization chain reaction circuit-based electrochemiluminescent biosensor for SARS-cov-2 RdRp gene assay. <i>Talanta</i> , 2022, 240, 123207.	5.5	18
61	Entropy-driven reactions in living cells for assay let-7a microRNA. <i>Analytica Chimica Acta</i> , 2017, 949, 53-58.	5.4	17
62	Ultrasensitive detection of hERG potassium channel in single-cell with photocleavable and entropy-driven reactions by using an electrochemical biosensor. <i>Biosensors and Bioelectronics</i> , 2019, 132, 310-318.	10.1	15
63	A new method for the detection of adenosine based on time-resolved fluorescence sensor. <i>Biosensors and Bioelectronics</i> , 2013, 49, 226-230.	10.1	14
64	A one-pot strategy for the sensitive detection of miRNA by catalystâ€‘oligomer-mediated enzymatic amplification-based fluorescence biosensor. <i>Sensors and Actuators B: Chemical</i> , 2016, 223, 586-590.	7.8	14
65	A new method for sensitive detection of microphthalmia-associated transcription factor based on â€‘OFF-stateâ€‘ and â€‘ON-stateâ€‘ equilibrium of a well-designed probe and duplex-specific nuclease signal amplification. <i>Biosensors and Bioelectronics</i> , 2017, 87, 299-304.	10.1	14
66	A validated chiral liquid chromatographic method for the enantiomeric separation of safinamide mesilate, a new anti-Parkinson drug. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2011, 55, 220-224.	2.8	13
67	hERG optimizations of IMB1603, discovery of alternative benzothiazinones as new antitubercular agents. <i>European Journal of Medicinal Chemistry</i> , 2019, 179, 208-217.	5.5	13
68	Long noncoding RNA GSEC promotes neutrophil inflammatory activation by supporting PFKFB3-involved glycolytic metabolism in sepsis. <i>Cell Death and Disease</i> , 2021, 12, 1157.	6.3	13
69	Strategy for the detection of mercury ions by using exonuclease III-aided target recycling. <i>RSC Advances</i> , 2017, 7, 50420-50424.	3.6	12
70	Neuroprotective effect of tetramethylpyrazine against all-trans-retinal toxicity in the differentiated Y-79 cells via upregulation of IRBP expression. <i>Experimental Cell Research</i> , 2017, 359, 120-128.	2.6	12
71	Efficacy of levetiracetam compared with phenytoin in prevention of seizures in brain injured patients. <i>Medicine (United States)</i> , 2018, 97, e13247.	1.0	12
72	Ultrasensitive detection of transcription factors with a highly-efficient diaminoterephthalate fluorophore via an electrogenerated chemiluminescence strategy. <i>Chemical Communications</i> , 2019, 55, 11892-11895.	4.1	12

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73	Determination of the concentration of transcription factor by using exonuclease III-aided amplification and gold nanoparticle mediated fluorescence intensity: A new method for gene transcription related enzyme detection. <i>Analytica Chimica Acta</i> , 2020, 1104, 132-139.	5.4	12
74	Circular RNA circGSK3B Promotes Cell Proliferation, Migration, and Invasion by Sponging miR-1265 and Regulating CAB39 Expression in Hepatocellular Carcinoma. <i>Frontiers in Oncology</i> , 2020, 10, 598256.	2.8	12
75	Exploring the entropy-driven amplification reaction and <i>trans</i> -cleavage activity of CRISPR-Cas12a for the development of an electrochemiluminescence biosensor for the detection of the SARS-CoV-2 RdRp gene in real samples and environmental surveillance. <i>Environmental Science: Nano</i> , 2022, 9, 162-172.	4.3	12
76	A new signal-on method for the detection of protein based on binding-induced strategy and photoinduced electron transfer between Ag nanoclusters and split G-quadruplex-hemin complexes. <i>Analytica Chimica Acta</i> , 2015, 887, 224-229.	5.4	11
77	Design, synthesis and biological evaluation of 6-substituted pyrrolo[2,3-d]pyrimidines as dual inhibitors of TS and AICARFTase and as potential antitumor agents. <i>European Journal of Medicinal Chemistry</i> , 2016, 115, 245-256.	5.5	11
78	Novel 6-substituted benzoyl and non-benzoyl straight chain pyrrolo[2,3-d]pyrimidines as potential antitumor agents with multitargeted inhibition of TS, GARFTase and AICARFTase. <i>European Journal of Medicinal Chemistry</i> , 2017, 139, 531-541.	5.5	11
79	Targeting dihydrofolate reductase: Design, synthesis and biological evaluation of novel 6-substituted pyrrolo[2,3-d]pyrimidines as nonclassical antifolates and as potential antitumor agents. <i>European Journal of Medicinal Chemistry</i> , 2019, 178, 329-340.	5.5	10
80	Rapid Advances of Versatile MXenes for Electrochemical Enzyme-Based Biosensors, Immunosensors, and Nucleic Acid-Based Biosensors. <i>ChemElectroChem</i> , 2022, 9, .	3.4	10
81	Gas1 Knockdown Increases the Neuroprotective Effect of Glial Cell-Derived Neurotrophic Factor Against Glutamate-Induced Cell Injury in Human SH-SY5Y Neuroblastoma Cells. <i>Cellular and Molecular Neurobiology</i> , 2016, 36, 603-611.	3.3	9
82	Optimized preparation process for naringenin and evaluation of its antioxidant and $\alpha$ -glucosidase inhibitory activities. <i>Journal of Food Processing and Preservation</i> , 2020, 44, e14931.	2.0	9
83	Therapeutic plasma exchange and a double plasma molecular absorption system in the treatment of thyroid storm with severe liver injury: A case report. <i>World Journal of Clinical Cases</i> , 2019, 7, 1184-1190.	0.8	8
84	An herbal-compound-based combination therapy that relieves cirrhotic ascites by affecting the L-arginine/nitric oxide pathway: A metabolomics-based systematic study. <i>Journal of Ethnopharmacology</i> , 2019, 241, 112034.	4.1	8
85	Determination of the activity of uracil-DNA glycosylase by using two-tailed reverse transcription PCR and gold nanoparticle-mediated silver nanocluster fluorescence: a new method for gene therapy-related enzyme detection. <i>Mikrochimica Acta</i> , 2019, 186, 181.	5.0	8
86	Separation of the Two Enantiomers of Naproxenol by Chiral Normal-Phase Liquid Chromatography. <i>Journal of Chromatographic Science</i> , 2011, 49, 272-275.	1.4	7
87	Optimization and SAR research at the piperazine and phenyl rings of JNJ4796 as new anti-influenza A virus agents, part 1. <i>European Journal of Medicinal Chemistry</i> , 2021, 222, 113591.	5.5	7
88	A label-free kissing complex-induced fluorescence sensor for DNA and RNA detection by using DNA-templated silver nanoclusters as a signal transducer. <i>RSC Advances</i> , 2016, 6, 99269-99273.	3.6	6
89	Identification of benzothiazones containing a hexahydropyrrolo[3,4- <i>c</i> ]pyrrol moiety as antitubercular agents against MDR-MTB. <i>RSC Advances</i> , 2020, 10, 14410-14414.	3.6	6
90	Dual Targeting of Cancer Cells and MMPs with Self-Assembly Hybrid Nanoparticles for Combination Therapy in Combating Cancer. <i>Pharmaceutics</i> , 2021, 13, 1990.	4.5	6

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91	In situ imaging and interfering Dicer-mediated cleavage process via a versatile molecular beacon probe. <i>Analytica Chimica Acta</i> , 2019, 1079, 146-152.	5.4	5
92	Design, synthesis and antitumor activity of aromatic urea-quinazolines. <i>Future Medicinal Chemistry</i> , 2019, 11, 2821-2830.	2.3	5
93	A well-designed Gold nanoparticle based fluorescence probe for assay Argonaute2 and Let-7a interaction in living cells. <i>Sensors and Actuators B: Chemical</i> , 2020, 312, 128000.	7.8	5
94	SARS-CoV-2 monitoring by automated target-driven molecular machine-based engineering. <i>Environmental Chemistry Letters</i> , 2022, 20, 2227-2233.	16.2	5
95	High level soluble expression, purification, and characterization of human ciliary neuronotrophic factor in <i>Escherichia coli</i> by single protein production system. <i>Protein Expression and Purification</i> , 2014, 96, 8-13.	1.3	4
96	Sensitive and selective amplified detection of silver ion based on NEase-aided target recycling. <i>RSC Advances</i> , 2015, 5, 89047-89051.	3.6	4
97	Thiol-sensitive probe enables dynamic electrochemical assembly of serum protein for detecting SARS-Cov-2 marker protease in clinical samples. <i>Biosensors and Bioelectronics</i> , 2021, 194, 113579.	10.1	4
98	“Covalent biosensing” enables a one-step, reagent-less, low-cost and highly robust assay of SARS-CoV-2. <i>Chemical Communications</i> , 2021, 57, 10771-10774.	4.1	3
99	Nanoparticle-based fluorescence probe for detection of NF- $\kappa$ B transcription factor in single cell via steric hindrance. <i>Mikrochimica Acta</i> , 2021, 188, 226.	5.0	3
100	A general strategy based on luminescent oxygen channeling for the detection of adenosine in serum using the steric hindrance effect of thrombin. <i>Sensors and Actuators B: Chemical</i> , 2014, 200, 19-24.	7.8	2
101	Enabling Molecular Gapping and Bridging on a Biosensing Surface via Electrochemical Cross-Linking and Cleavage. <i>Analytical Chemistry</i> , 2020, 92, 2635-2641.	6.5	2
102	A sensitive RNA chaperone assay using induced RNA annealing by duplex specific nuclease for amplification. <i>Analytica Chimica Acta</i> , 2018, 1033, 199-204.	5.4	0
103	RNA chaperone assisted intramolecular annealing reaction towards oligouridylated RNA detection in cancer cells. <i>Analyst</i> , 2019, 144, 186-190.	3.5	0