

Weian Zhao

List of Publications by Year in descending order

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Version: 2024-02-01

83
papers

9,094
citations

61984

43
h-index

58581

82
g-index

88
all docs

88
docs citations

88
times ranked

12430
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Rolling circle amplification: a versatile tool for chemical biology, materials science and medicine. <i>Chemical Society Reviews</i> , 2014, 43, 3324. | 38.1 | 837 |
| 2 | Design of Gold Nanoparticle-Based Colorimetric Biosensing Assays. <i>ChemBioChem</i> , 2008, 9, 2363-2371. | 2.6 | 701 |
| 3 | Rolling Circle Amplification: Applications in Nanotechnology and Biodetection with Functional Nucleic Acids. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 6330-6337. | 13.8 | 506 |
| 4 | Elucidation of Exosome Migration Across the Blood-Brain Barrier Model In Vitro. <i>Cellular and Molecular Bioengineering</i> , 2016, 9, 509-529. | 2.1 | 368 |
| 5 | DNA Aptamer Folding on Gold Nanoparticles: From Colloid Chemistry to Biosensors. <i>Journal of the American Chemical Society</i> , 2008, 130, 3610-3618. | 13.7 | 352 |
| 6 | Stem Cell-Derived Exosomes as Nanotherapeutics for Autoimmune and Neurodegenerative Disorders. <i>ACS Nano</i> , 2019, 13, 6670-6688. | 14.6 | 341 |
| 7 | Paper-Based Bioassays Using Gold Nanoparticle Colorimetric Probes. <i>Analytical Chemistry</i> , 2008, 80, 8431-8437. | 6.5 | 305 |
| 8 | Enhanced Therapeutic Effects of Mesenchymal Stem Cell-Derived Exosomes with an Injectable Hydrogel for Hindlimb Ischemia Treatment. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 30081-30091. | 8.0 | 271 |
| 9 | Bioinspired multivalent DNA network for capture and release of cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 19626-19631. | 7.1 | 266 |
| 10 | Rapid detection of single bacteria in unprocessed blood using Integrated Comprehensive Droplet Digital Detection. <i>Nature Communications</i> , 2014, 5, 5427. | 12.8 | 248 |
| 11 | Stem Cell Extracellular Vesicles: Extended Messages of Regeneration. <i>Annual Review of Pharmacology and Toxicology</i> , 2017, 57, 125-154. | 9.4 | 223 |
| 12 | Nucleic acid aptamers in cancer research, diagnosis and therapy. <i>Chemical Society Reviews</i> , 2015, 44, 1240-1256. | 38.1 | 217 |
| 13 | Simple and Rapid Colorimetric Biosensors Based on DNA Aptamer and Noncrosslinking Gold Nanoparticle Aggregation. <i>ChemBioChem</i> , 2007, 8, 727-731. | 2.6 | 208 |
| 14 | Colorimetric and Ultrasensitive Bioassay Based on a Dual-Amplification System Using Aptamer and DNAzyme. <i>Analytical Chemistry</i> , 2012, 84, 4711-4717. | 6.5 | 203 |
| 15 | Lab on paper. <i>Lab on A Chip</i> , 2008, 8, 1988. | 6.0 | 202 |
| 16 | Cell-surface sensors for real-time probing of cellular environments. <i>Nature Nanotechnology</i> , 2011, 6, 524-531. | 31.5 | 201 |
| 17 | Engineered cell homing. <i>Blood</i> , 2011, 118, e184-e191. | 1.4 | 187 |
| 18 | Meta-analysis of preclinical studies of mesenchymal stromal cells for ischemic stroke. <i>Neurology</i> , 2014, 82, 1277-1286. | 1.1 | 179 |

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|----|---|------|-----------|
| 19 | Simple and rapid colorimetric enzyme sensing assays using non-crosslinking gold nanoparticle aggregation. <i>Chemical Communications</i> , 2007, , 3729. | 4.1 | 170 |
| 20 | mRNA-engineered mesenchymal stem cells for targeted delivery of interleukin-10 to sites of inflammation. <i>Blood</i> , 2013, 122, e23-e32. | 1.4 | 169 |
| 21 | CAR-T design: Elements and their synergistic function. <i>EBioMedicine</i> , 2020, 58, 102931. | 6.1 | 144 |
| 22 | Enzymatic Cleavage of Nucleic Acids on Gold Nanoparticles: A Generic Platform for Facile Colorimetric Biosensors. <i>Small</i> , 2008, 4, 810-816. | 10.0 | 136 |
| 23 | Functional TCR T cell screening using single-cell droplet microfluidics. <i>Lab on A Chip</i> , 2018, 18, 3733-3749. | 6.0 | 132 |
| 24 | Tracking Mesenchymal Stem Cells with Iron Oxide Nanoparticle Loaded Poly(lactide-co-glycolide) Microparticles. <i>Nano Letters</i> , 2012, 12, 4131-4139. | 9.1 | 129 |
| 25 | DNA Polymerization on Gold Nanoparticles through Rolling Circle Amplification: Towards Novel Scaffolds for Three-Dimensional Periodic Nanoassemblies. <i>Angewandte Chemie - International Edition</i> , 2006, 45, 2409-2413. | 13.8 | 124 |
| 26 | Engineered mesenchymal stem cells with self-assembled vesicles for systemic cell targeting. <i>Biomaterials</i> , 2010, 31, 5266-5274. | 11.4 | 120 |
| 27 | A polyvalent aptamer system for targeted drug delivery. <i>Biomaterials</i> , 2013, 34, 9728-9735. | 11.4 | 120 |
| 28 | Evidence for High Translational Potential of Mesenchymal Stromal Cell Therapy to Improve Recovery from Ischemic Stroke. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2013, 33, 1322-1334. | 4.3 | 119 |
| 29 | From Blood to the Brain: Can Systemically Transplanted Mesenchymal Stem Cells Cross the Blood-Brain Barrier?. <i>Stem Cells International</i> , 2013, 2013, 1-7. | 2.5 | 99 |
| 30 | Droplet microfluidics for single-molecule and single-cell analysis in cancer research, diagnosis and therapy. <i>TrAC - Trends in Analytical Chemistry</i> , 2014, 58, 145-153. | 11.4 | 99 |
| 31 | Emerging Microtechnologies and Automated Systems for Rapid Bacterial Identification and Antibiotic Susceptibility Testing. <i>SLAS Technology</i> , 2017, 22, 585-608. | 1.9 | 81 |
| 32 | Mesenchymal stem cells engineered to express selectin ligands and IL-10 exert enhanced therapeutic efficacy in murine experimental autoimmune encephalomyelitis. <i>Biomaterials</i> , 2016, 77, 87-97. | 11.4 | 76 |
| 33 | Rapid bacterial detection and antibiotic susceptibility testing in whole blood using one-step, high throughput blood digital PCR. <i>Lab on A Chip</i> , 2020, 20, 477-489. | 6.0 | 75 |
| 34 | Nanoparticle-based monitoring of cell therapy. <i>Nanotechnology</i> , 2011, 22, 494001. | 2.6 | 74 |
| 35 | Novel Molecular and Nanosensors for In Vivo Sensing. <i>Theranostics</i> , 2013, 3, 583-594. | 10.0 | 74 |
| 36 | Mechanoresponsive stem cells to target cancer metastases through biophysical cues. <i>Science Translational Medicine</i> , 2017, 9, . | 12.4 | 74 |

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|----|--|------|-----------|
| 37 | Nanoantennas heat up. <i>Nature Materials</i> , 2009, 8, 453-454. | 27.5 | 64 |
| 38 | Digital quantification of miRNA directly in plasma using integrated comprehensive droplet digital detection. <i>Lab on A Chip</i> , 2015, 15, 4217-4226. | 6.0 | 64 |
| 39 | To grab the stroma by the horns: From biology to cancer therapy with mesenchymal stem cells. <i>Oncotarget</i> , 2013, 4, 651-664. | 1.8 | 56 |
| 40 | Constructing real-time, wash-free, and reiterative sensors for cell surface proteins using binding-induced dynamic DNA assembly. <i>Chemical Science</i> , 2015, 6, 5729-5733. | 7.4 | 52 |
| 41 | A mathematical model of mechanotransduction reveals how mechanical memory regulates mesenchymal stem cell fate decisions. <i>BMC Systems Biology</i> , 2017, 11, 55. | 3.0 | 48 |
| 42 | Floating Droplet Array: An Ultrahigh-Throughput Device for Droplet Trapping, Real-time Analysis and Recovery. <i>Micromachines</i> , 2015, 6, 1469-1482. | 2.9 | 46 |
| 43 | Mimicking the inflammatory cell adhesion cascade by nucleic acid aptamer programmed cell-cell interactions. <i>FASEB Journal</i> , 2011, 25, 3045-3056. | 0.5 | 43 |
| 44 | DNA-scaffolded Multivalent Ligands to Modulate Cell Function. <i>ChemBioChem</i> , 2014, 15, 1268-1273. | 2.6 | 43 |
| 45 | Wrapping single-walled carbon nanotubes with long single-stranded DNA molecules produced by rolling circle amplification. <i>Chemical Communications</i> , 2006, , 3582. | 4.1 | 42 |
| 46 | An ultrasensitive test for profiling circulating tumor DNA using integrated comprehensive droplet digital detection. <i>Lab on A Chip</i> , 2019, 19, 993-1005. | 6.0 | 42 |
| 47 | A Simple DNAzyme-based Fluorescent Assay for <i>Klebsiella pneumoniae</i> . <i>ChemBioChem</i> , 2019, 20, 906-910. | 2.6 | 41 |
| 48 | Chemistry and material science at the cell surface. <i>Materials Today</i> , 2010, 13, 14-21. | 14.2 | 38 |
| 49 | Mesenchymal Stem Cell Biodistribution, Migration, and Homing <i>In Vivo</i> . <i>Stem Cells International</i> , 2014, 2014, 1-2. | 2.5 | 34 |
| 50 | A modular microarray imaging system for highly specific COVID-19 antibody testing. <i>Lab on A Chip</i> , 2020, 20, 3302-3309. | 6.0 | 34 |
| 51 | Cell Surface Engineering of Mesenchymal Stem Cells. <i>Methods in Molecular Biology</i> , 2011, 698, 505-523. | 0.9 | 33 |
| 52 | Meta-analysis of preclinical studies of mesenchymal stromal cells to treat rheumatoid arthritis. <i>EBioMedicine</i> , 2019, 47, 563-577. | 6.1 | 32 |
| 53 | Spatial transcriptomics using combinatorial fluorescence spectral and lifetime encoding, imaging and analysis. <i>Nature Communications</i> , 2022, 13, 169. | 12.8 | 31 |
| 54 | Therapeutic implications of transplanted-cell death. <i>Nature Biomedical Engineering</i> , 2021, 5, 379-384. | 22.5 | 27 |

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|----|---|------|-----------|
| 55 | Cellâ€surface sensors: lighting the cellular environment. Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology, 2012, 4, 547-561. | 6.1 | 25 |
| 56 | Isolation and characterization of microvesicles from mesenchymal stem cells. Methods, 2020, 177, 50-57. | 3.8 | 25 |
| 57 | Tetrandrine identified in a small molecule screen to activate mesenchymal stem cells for enhanced immunomodulation. Scientific Reports, 2016, 6, 30263. | 3.3 | 24 |
| 58 | Exosome loaded immunomodulatory biomaterials alleviate local immune response in immunocompetent diabetic mice post islet xenotransplantation. Communications Biology, 2021, 4, 685. | 4.4 | 24 |
| 59 | Transplantation of stem cells from umbilical cord blood as therapy for type I diabetes. Cell and Tissue Research, 2019, 378, 155-162. | 2.9 | 22 |
| 60 | Nanoparticle-based Monitoring of Stem Cell Therapy. Theranostics, 2013, 3, 616-617. | 10.0 | 20 |
| 61 | Aptamer technology for tracking cellsâ€™ status & function. Molecular and Cellular Therapies, 2014, 2, 33. | 0.2 | 20 |
| 62 | The International Society for Extracellular Vesicles launches the first massive open online course on extracellular vesicles. Journal of Extracellular Vesicles, 2016, 5, 34299. | 12.2 | 19 |
| 63 | Targeting Biophysical Cues: a Niche Approach to Study, Diagnose, and Treat Cancer. Trends in Cancer, 2018, 4, 268-271. | 7.4 | 19 |
| 64 | Combinatorial targeting of cancer bone metastasis using mRNA engineered stem cells. EBioMedicine, 2019, 45, 39-57. | 6.1 | 18 |
| 65 | Bioengineering nanotechnology: towards the clinic. Nanotechnology, 2011, 22, 490201-490201. | 2.6 | 16 |
| 66 | A rapid, point-of-care antibiotic susceptibility test for urinary tract infections. Journal of Medical Microbiology, 2020, 69, 52-62. | 1.8 | 13 |
| 67 | Bioengineering tools to elucidate and control the fate of transplanted stem cells. Biochemical Society Transactions, 2014, 42, 679-687. | 3.4 | 12 |
| 68 | Facile Supermolecular Aptamer Inhibitors of L-Selectin. PLoS ONE, 2015, 10, e0123034. | 2.5 | 11 |
| 69 | Controlled Release of Stem Cell Secretome Attenuates Inflammatory Response against Implanted Biomaterials. Advanced Healthcare Materials, 2020, 9, e1901874. | 7.6 | 10 |
| 70 | Controlling Cell Fate In Vivo. ChemBioChem, 2009, 10, 2308-2310. | 2.6 | 9 |
| 71 | Periodic Assembly of Nanospecies on Repetitive DNA Sequences Generated on Gold Nanoparticles by Rolling Circle Amplification. Methods in Molecular Biology, 2008, 474, 79-90. | 0.9 | 9 |
| 72 | Opening windows on new biology and disease mechanisms: development of real-time in vivo sensors. Interface Focus, 2013, 3, 20130014. | 3.0 | 8 |

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|----|--|-----|-----------|
| 73 | Rapid Detection of β -Lactamase-Producing Bacteria Using the Integrated Comprehensive Droplet Digital Detection (IC 3D) System. <i>Sensors</i> , 2020, 20, 4667. | 3.8 | 7 |
| 74 | Optimization of a syngeneic murine model of bone metastasis. <i>Journal of Bone Oncology</i> , 2020, 23, 100298. | 2.4 | 7 |
| 75 | Epigenetic silencing directs expression heterogeneity of stably integrated multi-transcript unit genetic circuits. <i>Scientific Reports</i> , 2021, 11, 2424. | 3.3 | 7 |
| 76 | Exogenous marker-engineered mesenchymal stem cells detect cancer and metastases in a simple blood assay. <i>Stem Cell Research and Therapy</i> , 2015, 6, 181. | 5.5 | 6 |
| 77 | β -endorphin at the intersection of pain and cancer progression: Preclinical evidence. <i>Neuroscience Letters</i> , 2021, 744, 135601. | 2.1 | 5 |
| 78 | Rapid isolation of rare targets from large fluid volumes. <i>Scientific Reports</i> , 2020, 10, 12458. | 3.3 | 4 |
| 79 | Fluorescence lifetime detection with particle counting devices. <i>Biomedical Optics Express</i> , 2019, 10, 1223. | 2.9 | 3 |
| 80 | Comparative study of folate cofactor models. <i>International Journal of Quantum Chemistry</i> , 2002, 87, 152-157. | 2.0 | 2 |
| 81 | Probe and Control of Cell-Cell Interactions Using Bioengineered Tools. , 2014, , 349-370. | | 0 |
| 82 | 138. Microencapsulated Aptamer Sensors for Digital Quantification of Blood Biomarkers. <i>Molecular Therapy</i> , 2015, 23, S56. | 8.2 | 0 |
| 83 | mRNA rescues neonatal acidemia while mice report no aftereffects. <i>EBioMedicine</i> , 2019, 46, 23-24. | 6.1 | 0 |