Xiaojing Zhang

List of Publications by Year
in descending order

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109 papers	3,022 citations	147566 31 h-index	182168 51 g-index
110 all docs	110 docs citations	110 times ranked	4020 citing authors

#	Article	IF	Citations
1	Microchip-based immunomagnetic detection of circulating tumor cells. Lab on A Chip, 2011, 11, 3449.	3.1	354
2	Point-of-care technologies for molecular diagnostics using a drop of blood. Trends in Biotechnology, 2014, 32, 132-139.	4.9	192
3	Versatile Immunomagnetic Nanocarrier Platform for Capturing Cancer Cells. ACS Nano, 2013, 7, 8816-8823.	7.3	111
4	Multifunctional Magnetic Particles for Combined Circulating Tumor Cells Isolation and Cellular Metabolism Detection. Advanced Functional Materials, 2016, 26, 4016-4025.	7.8	99
5	Scalable COVID-19 Detection Enabled by Lab-on-Chip Biosensors. Cellular and Molecular Bioengineering, 2020, 13, 313-329.	1.0	81
6	Multiscale immunomagnetic enrichment of circulating tumor cells: from tubes to microchips. Lab on A Chip, 2014, 14, 446-458.	3.1	78
7	Mesoporous surface control of PVDF thin films for enhanced piezoelectric energy generation. Sensors and Actuators A: Physical, 2014, 216, 196-201.	2.0	77
8	Microfluidic synthesis of functional inorganic micro-/nanoparticles and applications in biomedical engineering. International Materials Reviews, 2018, 63, 461-487.	9.4	76
9	Microscale Magnetic Field Modulation for Enhanced Capture and Distribution of Rare Circulating Tumor Cells. Scientific Reports, 2015, 5, 8745.	1.6	69
10	Microfluidics-enabled rational design of ZnO micro-/nanoparticles with enhanced photocatalysis, cytotoxicity, and piezoelectric properties. Chemical Engineering Journal, 2019, 378, 122222.	6.6	67
11	Immunomagnetic nanoscreening of circulating tumor cells with a motion controlled microfluidic system. Biomedical Microdevices, 2013, 15, 673-681.	1.4	61
12	Aligned PVDF-TrFE Nanofibers With High-Density PVDF Nanofibers and PVDF Coreâ€“Shell Structures for Endovascular Pressure Sensing. IEEE Transactions on Biomedical Engineering, 2015, 62, 188-195.	2.5	61
13	Microfluidic continuous flow synthesis of functional hollow spherical silica with hierarchical sponge-like large porous shell. Chemical Engineering Journal, 2019, 366, 433-438.	6.6	59
14	Vibrationâ€Energyâ€Harvesting System: Transduction Mechanisms, Frequency Tuning Techniques, and Biomechanical Applications. Advanced Materials Technologies, 2019, 4, 1900177.	3.0	56
15	Design of peptide nucleic acid probes on plasmonic gold nanorods for detection of circulating tumor DNA point mutations. Biosensors and Bioelectronics, 2019, 130, 236-244.	5.3	56
16	In vivo cardiac power generation enabled by an integrated helical piezoelectric pacemaker lead. Nano Energy, 2019, 66, 104085.	8.2	53
17	Tunable plasmonic substrates with ultrahigh Q-factor resonances. Scientific Reports, 2017, 7, 15985.	1.6	52
18	Magnetic â€œSquashingâ€•of Circulating Tumor Cells on Plasmonic Substrates for Ultrasensitive NIR Fluorescence Detection. Small Methods, 2019, 3, 1800474.	4.6	52

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19	Screening and Molecular Analysis of Single Circulating Tumor Cells Using Micromagnet Array. Scientific Reports, 2015, 5, 16047.	1.6	45
20	Advances in liquid biopsy on-chip for cancer management: Technologies, biomarkers, and clinical analysis. Critical Reviews in Clinical Laboratory Sciences, 2018, 55, 140-162.	2.7	44
21	Microfluidics for silica biomaterials synthesis: opportunities and challenges. Biomaterials Science, 2019, 7, 2218-2240.	2.6	42
22	Flexible Energy Harvester on a Pacemaker Lead Using Multibeam Piezoelectric Composite Thin Films. ACS Applied Materials & Interfaces, 2020, 12, 34170-34179.	4.0	40
23	Microfluidic Flow Synthesis of Functional Mesoporous Silica Nanofibers with Tunable Aspect Ratios. ACS Sustainable Chemistry and Engineering, 2018, 6, 1522-1526.	3.2	38
24	Advances in diagnostic microfluidics. Advances in Clinical Chemistry, 2020, 95, 1-72.	1.8	37
25	Microfluidics-enabled acceleration of Fenton oxidation for degradation of organic dyes with rod-like zero-valent iron nanoassemblies. Journal of Colloid and Interface Science, 2020, 559, 254-262.	5.0	36
26	Microfluidics for ZnO micro-/nanomaterials development: rational design, controllable synthesis, and on-chip bioapplications. Biomaterials Science, 2020, 8, 1783-1801.	2.6	35
27	Magneticâ€Nanoparticleâ€Based Immunoassaysâ€onâ€Chip: Materials Synthesis, Surface Functionalization, and Cancer Cell Screening. Advanced Functional Materials, 2016, 26, 3953-3972.	7.8	34
28	Flexible Porous Piezoelectric Cantilever on a Pacemaker Lead for Compact Energy Harvesting. Advanced Materials Technologies, 2019, 4, 1800148.	3.0	34
29	Microfluidic In Situ Patterning of Silver Nanoparticles for Surface-Enhanced Raman Spectroscopic Sensing of Biomolecules. ACS Sensors, 2021, 6, 2584-2592.	4.0	34
30	Liquid-phase tuning of porous PVDF-TrFE film on flexible substrate for energy harvesting. Applied Physics Letters, 2017, 110, .	1.5	33
31	Liquid biopsy on chip: a paradigm shift towards the understanding of cancer metastasis. Integrative Biology (United Kingdom), 2017, 9, 22-49.	0.6	33
32	Printable QR code paper microfluidic colorimetric assay for screening volatile biomarkers. Biosensors and Bioelectronics, 2019, 128, 97-103.	5.3	32
33	Microfluidic Screening of Circulating Tumor Biomarkers toward Liquid Biopsy. Separation and Purification Reviews, 2018, 47, 19-48.	2.8	31
34	Piezoelectric Buckled Beam Array on a Pacemaker Lead for Energy Harvesting. Advanced Materials Technologies, 2019, 4, 1800335.	3.0	30
35	Inkjet-Print Micromagnet Array on Glass Slides for Immunomagnetic Enrichment of Circulating Tumor Cells. Annals of Biomedical Engineering, 2016, 44, 1710-1720.	1.3	29
36	Microporous polyvinylidene fluoride film with dense surface enables efficient piezoelectric conversion. Applied Physics Letters, 2015, 106, .	1.5	28

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37	Microfluidics-mediated self-template synthesis of anisotropic hollow ellipsoidal mesoporous silica nanomaterials. Materials Research Letters, 2017, 5, 584-590.	4.1	27
38	Multifunctional Pacemaker Lead for Cardiac Energy Harvesting and Pressure Sensing. Advanced Healthcare Materials, 2020, 9, e2000053.	3.9	26
39	Magneto-sensitive bistable soft actuators: Experiments, simulations, and applications. Applied Physics Letters, 2018, 113, .	1.5	25
40	Geometric Confined Pneumatic Softâ€“Rigid Hybrid Actuators. Soft Robotics, 2020, 7, 574-582.	4.6	25
41	Direct Fabrication of Nanoscale Light Emitting Diode on Silicon Probe Tip for Scanning Microscopy. Journal of Microelectromechanical Systems, 2008, 17, 4-10.	1.7	22
42	Microfluidic enrichment of small proteins from complex biological mixture on nanoporous silica chip. Biomicrofluidics, 2011, 5, 013410.	1.2	22
43	Microfluidics-enabled rational design of immunomagnetic nanomaterials and their shape effect on liquid biopsy. Lab on A Chip, 2018, 18, 1997-2002.	3.1	22
44	Ultrafast microfluidic synthesis of hierarchical triangular silver core-silica shell nanoplatelet toward enhanced cellular internalization. Journal of Colloid and Interface Science, 2019, 542, 370-378.	5.0	22
45	Nanoscale fluorescence imaging with quantum dot near-field electroluminescence. Applied Physics Letters, 2012, 101, 043118.	1.5	21
46	Ultrafast Synthesis of Multifunctional Submicrometer Hollow Silica Spheres in Microfluidic Spiral Channels. Scientific Reports, 2017, 7, 12616.	1.6	21
47	Tunable directive radiation of surface-plasmon diffraction gratings. Optics Express, 2013, 21, 2748.	1.7	20
48	Hierarchical Lotus Leaf-Like Mesoporous Silica Material with Unique Bilayer and Hollow Sandwich-Like Folds: Synthesis, Mechanism, and Applications. ACS Sustainable Chemistry and Engineering, 2017, 5, 2044-2049.	3.2	20
49	Tunable, Flexible, and Resilient Robots Driven by an Electrostatic Actuator. Advanced Intelligent Systems, 2020, 2, 1900162.	3.3	20
50	Near-field scanning optical microscopy with monolithic silicon light emitting diode on probe tip. Applied Physics Letters, 2008, 92, .	1.5	19
51	Biomimetic hierarchical walnut kernel-like and erythrocyte-like mesoporous silica nanomaterials: Controllable synthesis and versatile applications. Microporous and Mesoporous Materials, 2018, 261, 144-149.	2.2	19
52	Magnetic nanotechnology for circulating tumor biomarkers screening: Rational design, microfluidics integration and applications. Biomicrofluidics, 2019, 13, .	1.2	19
53	Plasmonic nanosensors for point-of-care biomarker detection. Materials Today Bio, 2022, 14, 100263.	2.6	19
54	Implantable Cardiac Kirigamiâ€Inspired Leadâ€Based Energy Harvester Fabricated by Enhanced Piezoelectric Composite Film. Advanced Healthcare Materials, 2021, 10, e2002100.	3.9	18

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55	Patterned Plasmonic Surfacesâ€"Theory, Fabrication, and Applications in Biosensing. Journal of Microelectromechanical Systems, 2017, 26, 718-739.	1.7	17
56	Near-Field Scanning Nanophotonic Microscopyâ€"Breaking the Diffraction Limit Using Integrated Nano Light-Emitting Probe Tip. IEEE Journal of Selected Topics in Quantum Electronics, 2009, 15, 1393-1399.	1.9	16
57	Microfluidics-enabled rapid manufacturing of hierarchical silica-magnetic microflower toward enhanced circulating tumor cell screening. Biomaterials Science, 2018, 6, 3121-3125.	2.6	16
58	Microfluidic synthesis and on-chip enrichment application of two-dimensional hollow sandwich-like mesoporous silica nanosheet with water ripple-like surface. Journal of Colloid and Interface Science, 2019, 539, 87-94.	5.0	16
59	Microsystems for controlled genetic perturbation of live Drosophila embryos: RNA interference, development robustness and drug screening. Microfluidics and Nanofluidics, 2009, 6, 299-313.	1.0	15
60	Microfluidics-Based Organism Isolation from Whole Blood: An Emerging Tool for Bloodstream Infection Diagnosis. Annals of Biomedical Engineering, 2019, 47, 1657-1674.	1.3	15
61	Multi-Dimensional Nanostructures for Microfluidic Screening of Biomarkers: From Molecular Separation to Cancer Cell Detection. Annals of Biomedical Engineering, 2016, 44, 847-862.	1.3	13
62	Tunable Buckled Beams with Mesoporous PVDF-TrFE/SWCNT Composite Film for Energy Harvesting. ACS Applied Materials & Interfaces, 2018, 10, 33516-33522.	4.0	13
63	Method for Inkjet-Printing PEDOT:PSS Polymer Electrode Arrays on Piezoelectric PVDF-TrFE Fibers. IEEE Sensors Journal, 2021, 21, 26277-26285.	2.4	13
64	Magnetic-Actuated Stainless Steel Scanner for Two-Photon Hyperspectral Fluorescence Microscope. Journal of Microelectromechanical Systems, 2014, 23, 1208-1218.	1.7	11
65	Skinâ€like Elastomer Embedded Zinc Oxide Nanoarrays for Biomechanical Energy Harvesting. Advanced Materials Interfaces, 2021, 8, 2100094.	1.9	11
66	Engineering Biomimetic Extracellular Matrix with Silica Nanofibers: From 1D Material to 3D Network. ACS Biomaterials Science and Engineering, 2022, 8, 2258-2280.	2.6	11
67	Microfluidic immunodetection of cancer cells via site-specific microcontact printing of antibodies on nanoporous surface. Methods, 2013, 63, 266-275.	1.9	10
68	Integrated Terahertz Surface Plasmon Resonance on Polyvinylidene Fluoride Layer for the Profiling of Fluid Reflectance Spectra. Plasmonics, 2016, 11, 1093-1100.	1.8	10
69	Combined immunomagnetic capture coupled with ultrasensitive plasmonic detection of circulating tumor cells in blood. Biomedical Microdevices, 2018, 20, 99.	1.4	10
70	Microfluidic enrichment of bacteria coupled to contact-free lysis on a magnetic polymer surface for downstream molecular detection. Biomicrofluidics, 2020, 14, 034115.	1.2	10
71	Apertureless Near-Field Scanning Probes Based on Graphene Plasmonics. IEEE Photonics Journal, 2017, 9, 1-7.	1.0	9
72	Vibrant reflective sensors with percolation film Fabry-PÃ©rot nanocavities. Optics Express, 2021, 29, 25000.	1.7	9

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73	Plasmonic nanograting enhanced quantum dots excitation for cellular imaging on-chip. Nanotechnology, 2015, 26, 365301.	1.3	8
74	Scalable Signature-Based Molecular Diagnostics Through On-chip Biomarker Profiling Coupled with Machine Learning. Annals of Biomedical Engineering, 2020, 48, 2377-2399.	1.3	8
75	Fabrication of monodisperse magnetic nanorods for improving hyperthermia efficacy. Journal of Nanobiotechnology, 2021, 19, 63.	4.2	8
76	Metallic photonic crystal-based sensor for cryogenic environments. Optics Express, 2019, 27, 16344.	1.7	8
77	Emerging trends in bioenergy harvesters for chronic powered implants. MRS Energy & Sustainability, 2015, 2, 1.	1.3	7
78	Colloidal Quantum Dot-Based Light Emitting Diodes With Solution Processed Electron Transporting Layer for Cellular Imaging. IEEE Sensors Journal, 2015, 15, 234-239.	2.4	6
79	Energy Harvesting: Flexible Porous Piezoelectric Cantilever on a Pacemaker Lead for Compact Energy Harvesting (Adv. Mater. Technol. 1/2019). Advanced Materials Technologies, 2019, 4, 1970002.	3.0	6
80	Rational design of on-chip gold plasmonic nanoparticles towards ctDNA screening. Scientific Reports, 2021, 11, 14185.	1.6	6
81	Trapping the nematode on a micro chip for the future of science. HFSP Journal, 2007, 1, 220-224.	2.5	5
82	Use of colloidal quantum dots as a digitally switched swept light source for gold nanoparticle based hyperspectral microscopy. Biomedical Optics Express, 2014, 5, 1610.	1.5	5
83	Circulating Tumor Cells: Magnetic â€œSquashingâ€•of Circulating Tumor Cells on Plasmonic Substrates for Ultrasensitive NIR Fluorescence Detection (Small Methods 2/2019). Small Methods, 2019, 3, 1970004.	4.6	5
84	Nanowrinkled thin films for nanorod assembly in microfluidics. Microfluidics and Nanofluidics, 2019, 23, 1.	1.0	5
85	An Immunofluorescence-Assisted Microfluidic Single Cell Quantitative Reverse Transcription Polymerase Chain Reaction Analysis of Tumour Cells Separated from Blood. Journal of Circulating Biomarkers, 2015, 4, 11.	0.8	4
86	Plasmonic Gold Nanorods With Sequence Specific Conjugation for Circulating Tumor DNA Screening. , 2018, , .		4
87	Mode Switching With Waveguide-Coupled Plasmonic Nanogratings. IEEE Journal of Selected Topics in Quantum Electronics, 2021, 27, 1-10.	1.9	4
88	Heart-on-Chip for Combined Cellular Dynamics Measurements and Computational Modeling Towards Clinical Applications. Annals of Biomedical Engineering, 2022, 50, 111-137.	1.3	4
89	Emerging micro- and nanotechnologies in cancer diagnosis and therapy. Biomedical Microdevices, 2013, 15, 579-581.	1.4	3
90	Gold nanoparticles doped flexible PVDF-TrFE energy harvester. , 2013, , .		3

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91	Synthetic Alloys: Multifunctional Magnetic Particles for Combined Circulating Tumor Cells Isolation and Cellular Metabolism Detection (Adv. Funct. Mater. 22/2016). Advanced Functional Materials, 2016, 26, 3750-3750.	7.8	3
92	Nano-Grating Force Sensor for Measurement of Neuron Membrane Characteristics Under Growth and Cellular Differentiation. , 2007, , .		2
93	Forward-Imaging Swept Source Optical Coherence Tomography using Silicon MEMS Scanner for High-Speed 3-D Volumetric Imaging. , 2007, , .		2
94	Portable oral cancer detection using miniature confocal imaging probe with large field of view. , 2011, , .		2
95	Near-Field Scanning Optical Imaging with Monolithic Silicon Light Emitting Diode on Probe Tip. , 2008, , .		1
96	Nano-stamping of quantum dot based inorganic light emitting devices. , 2009, , .		1
97	MEMS scanner enabled real-time depth sensitive hyperspectral imaging. , 2010, , .		1
98	MEMS scanner based handheld fluorescent hyperspectral imaging system. , 2011, , .		1
99	Magnetic-actuated stainless steel micro-scanner for confocal hyperspectral fluorescence microscope. , 2012, , .		1
100	Multicolor colloidal quantum dot based light emitting diodes using a solution processed electron transporting layer. , 2013, , .		1
101	Integrated Grating-Nanoslot Probe Tip for Near-Field Subwavelength Light Confinement and Fluorescent Sensing. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 184-194.	1.9	1
102	Piezoelectric PVDF thin films with asymmetric microporous structures for pressure sensing. , 2015, , .		1
103	Biomechanical Energy Harvester: Skinâ€like Elastomer Embedded Zinc Oxide Nanoarrays for Biomechanical Energy Harvesting (Adv. Mater. Interfaces 10/2021). Advanced Materials Interfaces, 2021, 8, 2170057.	1.9	1
104	Method for Inkjet-printing PEDOT:PSS polymer electrodes on piezoelectric PVDF-TrFE fibers. , 2020, , .		1
105	Near-field scanning optical micro probe integrated with a nanometer-sized light emitting diode. , 2007, , .		0
106	Near-field Scanning Optical Microscopy — Breaking the diffraction limit using nano light emitting probe tip. , 2008, , .		0
107	Near-field scanning nanophotonic microscopy. , 2008, , .		0
108	MEMS scanner based handheld imaging guided Mohs surgery system. , 2011, , .		0

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109	Mode Switching in a Metallic Photonic Crystal Slab. , 2020, , .		0