Hongkai Wu

List of Publications by Year
in descending order

130 papers	12,467 citations	47409 49 h-index	28425 109 g-index
136 all docs	136 docs citations	136 times ranked	18117 citing authors

#	Article	IF	Citations
1	A dual functional chondro-inductive chitosan thermogel with high shear modulus and sustained drug release for cartilage tissue engineering. International Journal of Biological Macromolecules, 2022, 205, 638-650.	3.6	15
2	Fabrication of a hydroxyapatite-PDMS microfluidic chip for bone-related cell culture and drug screening. Bioactive Materials, 2021, 6, 169-178.	8.6	41
3	A Biomimetic Nanoâ€Engineered Platform for Functional Tissue Engineering of Cartilage Superficial Zone. Advanced Healthcare Materials, 2021, 10, e2001018.	3.9	14
4	Efficient Inverted Perovskite Solar Cells Enabled by Dopant-Free Hole-Transporting Materials Based on Dibenzofulvene-Bridged Indacenodithiophene Core Attaching Varying Alkyl Chains. ACS Applied Materials & Interfaces, 2021, 13, 13254-13263.	4.0	19
5	Tuning an Electrode Work Function Using Organometallic Complexes in Inverted Perovskite Solar Cells. Journal of the American Chemical Society, 2021, 143, 7759-7768.	6.6	85
6	A high-throughput, open-space and reusable microfluidic chip for combinational drug screening on tumor spheroids. Lab on A Chip, 2021, 21, 3924-3932.	3.1	11
7	Quantum Dot Interface-Mediated CsPbIBr₂ Film Growth and Passivation for Efficient Carbon-Based Solar Cells. ACS Applied Materials & Interfaces, 2021, 13, 55349-55357.	4.0	17
8	A tough nitric oxide-eluting hydrogel coating suppresses neointimal hyperplasia on vascular stent. Nature Communications, 2021, 12, 7079.	5.8	54
9	Optimization of Factor Combinations for Stem Cell Differentiations on a Design-of-Experiment Microfluidic Chip. Analytical Chemistry, 2020, 92, 14228-14235.	3.2	7
10	Functional reconstruction of injured corpus cavernosa using 3D-printed hydrogel scaffolds seeded with HIF-1Î±-expressing stem cells. Nature Communications, 2020, 11, 2687.	5.8	43
11	Boosting Efficiency and Stability of Planar Inverted (FAPbI 3) x (MAPbBr 3) 1âˆ’ x Solar Cells via FAPbI 3 and MAPbBr 3 Crystal Powders. Solar Rrl, 2020, 4, 2000091.	3.1	19
12	Front-Contact Passivation of PIN MAPbI₃ Solar Cells with Superior Device Performances. ACS Applied Energy Materials, 2020, 3, 6344-6351.	2.5	15
13	Injectable in situ forming kartogenin-loaded chitosan hydrogel with tunable rheological properties for cartilage tissue engineering. Colloids and Surfaces B: Biointerfaces, 2020, 192, 111059.	2.5	57
14	Combinatorial Treatment of Human Cardiac Engineered Tissues With Biomimetic Cues Induces Functional Maturation as Revealed by Optical Mapping of Action Potentials and Calcium Transients. Frontiers in Physiology, 2020, 11, 165.	1.3	10
15	Wet-adhesive, haemostatic and antimicrobial bilayered composite nanosheets for sealing and healing soft-tissue bleeding wounds. Biomaterials, 2020, 252, 120018.	5.7	62
16	Crack engineering for the construction of arbitrary hierarchical architectures. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 23909-23914.	3.3	34
17	Human Skeletal Muscle Cells on Engineered 3D Platform Express Key Growth and Developmental Proteins. ACS Biomaterials Science and Engineering, 2019, 5, 970-976.	2.6	3
18	3D-printable self-healing and mechanically reinforced hydrogels with hostâ€“guest non-covalent interactions integrated into covalently linked networks. Materials Horizons, 2019, 6, 733-742.	6.4	148

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19	Microfluidic technologies for vasculature biomimicry. Analyst, The, 2019, 144, 4461-4471.	1.7	34
20	A Controllable, Centrifugal-Based Hydrodynamic Microfluidic Chip for Cell-Pairing and Studying Long-Term Communications between Single Cells. Analytical Chemistry, 2019, 91, 15908-15914.	3.2	9
21	Human Skeletal Muscleâ€onâ€aâ€Chip. FASEB Journal, 2019, 33, lb645.	0.2	0
22	Cell pairing and polyethylene glycol (PEG)-mediated cell fusion using two-step centrifugation-assisted single-cell trapping (CAScT). Lab on A Chip, 2018, 18, 1113-1120.	3.1	18
23	Assembly of Metalâ€"Phenolic/Catecholamine Networks for Synergistically Anti-Inflammatory, Antimicrobial, and Anticoagulant Coatings. ACS Applied Materials & Interfaces, 2018, 10, 40844-40853.	4.0	104
24	A Rapidly Selfâ€Healing Hostâ€"Guest Supramolecular Hydrogel with High Mechanical Strength and Excellent Biocompatibility. Angewandte Chemie - International Edition, 2018, 57, 9008-9012.	7.2	149
25	A Rapidly Selfâ€Healing Hostâ€"Guest Supramolecular Hydrogel with High Mechanical Strength and Excellent Biocompatibility. Angewandte Chemie, 2018, 130, 9146-9150.	1.6	36
26	A microfluidic circulatory system integrated with capillary-assisted pressure sensors. Lab on A Chip, 2017, 17, 653-662.	3.1	69
27	Current Advances in Highly Multiplexed Antibodyâ€Based Singleâ€Cell Proteomic Measurements. Chemistry - an Asian Journal, 2017, 12, 1680-1691.	1.7	12
28	A simple fabricated thickness-based stiffness gradient for cell studies. Science Bulletin, 2017, 62, 222-228.	4.3	10
29	Facile formation of a microporous chitosan hydrogel based on self-crosslinking. Journal of Materials Chemistry B, 2017, 5, 9291-9299.	2.9	20
30	Point-of-care testing: applications of 3D printing. Lab on A Chip, 2017, 17, 2713-2739.	3.1	122
31	A Micropatterned Human Pluripotent Stem Cellâ€Based Ventricular Cardiac Anisotropic Sheet for Visualizing Drugâ€Induced Arrhythmogenicity. Advanced Materials, 2017, 29, 1602448.	11.1	32
32	Convenient, Reliable, Biasâ€Free Dynamic Patterning of Multiple Types of Cells into Precisely Defined Micropatterns for Coâ€Culture Study. ChemNanoMat, 2016, 2, 447-453.	1.5	2
33	Hierarchical Patterning of Cells with a Microeraser and Electrospun Nanofibers. Small, 2016, 12, 1230-1239.	5.2	15
34	Freestanding 3-D microvascular networks made of alginate hydrogel as a universal tool to create microchannels inside hydrogels. Biomicrofluidics, 2016, 10, 044112.	1.2	13
35	Nanofibers: Click Synthesis, Aggregation-Induced Emission and Chirality, Circularly Polarized Luminescence, and Helical Self-Assembly of a Leucine-Containing Silole (Small 47/2016). Small, 2016, 12, 6420-6420.	5.2	0
36	A one-step strategy for ultra-fast and low-cost mass production of plastic membrane microfluidic chips. Lab on A Chip, 2016, 16, 3909-3918.	3.1	25

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37	Click Synthesis, Aggregationâ€Induced Emission and Chirality, Circularly Polarized Luminescence, and Helical Selfâ€Assembly of a Leucineâ€Containing Silole. Small, 2016, 12, 6593-6601.	5.2	50
38	Fast Single-Cell Patterning for Study of Drug-Induced Phenotypic Alterations of HeLa Cells Using Time-of-Flight Secondary Ion Mass Spectrometry. Analytical Chemistry, 2016, 88, 12196-12203.	3.2	44
39	Probing stem cell differentiation using atomic force microscopy. Applied Surface Science, 2016, 366, 254-259.	3.1	18
40	Simple, Cost-Effective 3D Printed Microfluidic Components for Disposable, Point-of-Care Colorimetric Analysis. ACS Sensors, 2016, 1, 227-234.	4.0	107
41	Replicating 3D printed structures into hydrogels. Materials Horizons, 2016, 3, 309-313.	6.4	19
42	Aqueous and Nonaqueous Electrochemical Sensing on Whole-Teflon Chip. ACS Sensors, 2016, 1, 251-257.	4.0	3
43	Microfluidic Spinning of Cellâ€Responsive Grooved Microfibers. Advanced Functional Materials, 2015, 25, 2250-2259.	7.8	130
44	A Universal and Facile Approach for the Formation of a Protein Hydrogel for 3D Cell Encapsulation. Advanced Functional Materials, 2015, 25, 6189-6198.	7.8	21
45	Well-designed metal nanostructured arrays for label-free plasmonic biosensing. Journal of Materials Chemistry C, 2015, 3, 6479-6492.	2.7	42
46	Centrifugation-Assisted Single-Cell Trapping in a Truncated Cone-Shaped Microwell Array Chip for the Real-Time Observation of Cellular Apoptosis. Analytical Chemistry, 2015, 87, 12169-12176.	3.2	51
47	Realâ€Time Labelâ€Free Monitoring of <i>Shewanella oneidensis</i> MRâ€1 Biofilm Formation on Electrode During Bacterial Electrogenesis Using Scanning Electrochemical Microscopy. Electroanalysis, 2015, 27, 648-655.	1.5	10
48	Poly(<scp>l</scp>-lysine)-<i>graft</i>-folic acid-coupled poly(2-methyl-2-oxazoline) (PLL-<i>g</i>-PMOXA-<i>c</i>-FA): A Bioactive Copolymer for Specific Targeting to Folate Receptor-Positive Cancer Cells. ACS Applied Materials & Interfaces, 2015, 7, 2919-2930.	4.0	46
49	Aggregation-induced chirality, circularly polarized luminescence, and helical self-assembly of a leucine-containing AIE luminogen. Journal of Materials Chemistry C, 2015, 3, 2399-2404.	2.7	114
50	Direct, one-step molding of 3D-printed structures for convenient fabrication of truly 3D PDMS microfluidic chips. Microfluidics and Nanofluidics, 2015, 19, 9-18.	1.0	180
51	Spatial coordination of cell orientation directed by nanoribbon sheets. Biomaterials, 2015, 53, 86-94.	5.7	39
52	Nanostructured Zr-Pd Metallic Glass Thin Film for Biochemical Applications. Scientific Reports, 2015, 5, 7799.	1.6	56
53	Convenient surface functionalization of whole-Teflon chips with polydopamine coating. Biomicrofluidics, 2015, 9, 044111.	1.2	20
54	Engineering a Freestanding Biomimetic Cardiac Patch Using Biodegradable Poly(lacticâ€coâ€glycolic acid) (PLGA) and Human Embryonic Stem Cellâ€derived Ventricular Cardiomyocytes (hESCâ€VCMs). Macromolecular Bioscience, 2015, 15, 426-436.	2.1	31

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55	Growth of Monodisperse Gold Nanospheres with Diameters from 20 nm to 220 nm and Their Core/Satellite Nanostructures. Advanced Optical Materials, 2014, 2, 65-73.	3.6	158
56	Periosteumâ€Mimetic Structures Made from Freestanding Microgrooved Nanosheets. Advanced Materials, 2014, 26, 3290-3296.	11.1	94
57	New materials for microfluidics in biology. Current Opinion in Biotechnology, 2014, 25, 78-85.	3.3	98
58	Microfluidic generation of chitosan/CpG oligodeoxynucleotide nanoparticles with enhanced cellular uptake and immunostimulatory properties. Lab on A Chip, 2014, 14, 1842.	3.1	36
59	Low-temperature solution-processable Ni(OH)₂ ultrathin nanosheet/N-graphene nanohybrids for high-performance supercapacitor electrodes. Nanoscale, 2014, 6, 5960-5966.	2.8	41
60	Stretchable and Micropatterned Membrane for Osteogenic Differentiation of Stem Cells. ACS Applied Materials & Interfaces, 2014, 6, 11915-11923.	4.0	48
61	Electrically regulated differentiation of skeletal muscle cells on ultrathin graphene-based films. RSC Advances, 2014, 4, 9534.	1.7	57
62	A microfluidic system for the study of the response of endothelial cells under pressure. Microfluidics and Nanofluidics, 2014, 16, 1089-1096.	1.0	13
63	Microfluidic Generation of Polydopamine Gradients on Hydrophobic Surfaces. Langmuir, 2014, 30, 832-838.	1.6	27
64	<scp>l</scp>-Valine methyl ester-containing tetraphenylethene: aggregation-induced emission, aggregation-induced circular dichroism, circularly polarized luminescence, and helical self-assembly. Materials Horizons, 2014, 1, 518-521.	6.4	122
65	Recent Developments in Microfluidics for Cell Studies. Advanced Materials, 2014, 26, 5525-5532.	11.1	82
66	Single adatom dynamics at monatomic steps of free-standing few-layer reduced graphene. Scientific Reports, 2014, 4, 6037.	1.6	10
67	Engineered Nanomembranes for Directing Cellular Organization Toward Flexible Biodevices. Nano Letters, 2013, 13, 3185-3192.	4.5	85
68	One-Step Generation of Engineered Drug-Laden Poly(lactic-<i>co</i>-glycolic acid) Micropatterned with Teflon Chips for Potential Application in Tendon Restoration. ACS Applied Materials & Interfaces, 2013, 5, 10583-10590.	4.0	20
69	Graphene-based nanocomposites: preparation, functionalization, and energy and environmental applications. Energy and Environmental Science, 2013, 6, 3483.	15.6	480
70	A novel Ti-based nanoglass composite with submicronâ€"nanometer-sized hierarchical structures to modulate osteoblast behaviors. Journal of Materials Chemistry B, 2013, 1, 2568.	2.9	59
71	Grapheneâ€Based Nanomaterials: Synthesis, Properties, and Optical and Optoelectronic Applications. Advanced Functional Materials, 2013, 23, 1984-1997.	7.8	257
72	Regulating Infrared Photoresponses in Reduced Graphene Oxide Phototransistors by Defect and Atomic Structure Control. ACS Nano, 2013, 7, 6310-6320.	7.3	112

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73	Bioinspired prospects of graphene: from biosensing to energy. Journal of Materials Chemistry B, 2013, 1, 3521.	2.9	26
74	Materials for Microfluidic Chip Fabrication. Accounts of Chemical Research, 2013, 46, 2396-2406.	7.6	664
75	Generation of microgrooved silica nanotube membranes with sustained drug delivery and cell contact guidance ability by using a Teflon microfluidic chip. Science and Technology of Advanced Materials, 2013, 14, 015005.	2.8	15
76	Gradientâ€Regulated Hydrogel for Interface Tissue Engineering: Steering Simultaneous Osteo/Chondrogenesis of Stem Cells on a Chip. Advanced Healthcare Materials, 2013, 2, 846-853.	3.9	61
77	Enhanced Osteogenesis by a Biomimic Pseudoâ€Periosteumâ€Involved Tissue Engineering Strategy. Advanced Healthcare Materials, 2013, 2, 1229-1235.	3.9	31
78	A microfluidic platform for osmotic fragility test of red blood cells. RSC Advances, 2012, 2, 7161.	1.7	3
79	Massively Parallel Bacterial and Yeast Suspension Culture on a Chip. Small, 2012, 8, 863-867.	5.2	9
80	Monolithic integration of fine cylindrical glass microcapillaries on silicon for electrophoretic separation of biomolecules. Biomicrofluidics, 2012, 6, 036501.	1.2	9
81	What makes efficient circularly polarised luminescence in the condensed phase: aggregation-induced circular dichroism and light emission. Chemical Science, 2012, 3, 2737.	3.7	338
82	Directing Osteogenesis of Stem Cells with Drugâ€Laden, Polymerâ€Microsphereâ€Based Micropatterns Generated by Teflon Microfluidic Chips. Advanced Functional Materials, 2012, 22, 3799-3807.	7.8	49
83	Yeast surface display-based microfluidic immunoassay. Sensors and Actuators B: Chemical, 2012, 166-167, 878-883.	4.0	2
84	Regulating Cellular Behavior on Fewâ€Layer Reduced Graphene Oxide Films with Wellâ€Controlled Reduction States. Advanced Functional Materials, 2012, 22, 751-759.	7.8	189
85	A Gold Nanocrystal/Poly(dimethylsiloxane) Composite for Plasmonic Heating on Microfluidic Chips. Advanced Materials, 2012, 24, 94-98.	11.1	88
86	Convenient formation of nanoparticle aggregates on microfluidic chips for highly sensitive SERS detection of biomolecules. Analytical and Bioanalytical Chemistry, 2012, 402, 1601-1609.	1.9	41
87	A scalable microfluidic chip for bacterial suspension culture. Lab on A Chip, 2011, 11, 4087.	3.1	18
88	Pumping-induced perturbation of flow in microfluidic channels and its implications for on-chip cell culture. Lab on A Chip, 2011, 11, 2288.	3.1	26
89	Onâ€Chip Screening of Experimental Conditions for the Synthesis of Nobleâ€Metal Nanostructures with Different Morphologies. Small, 2011, 7, 3308-3316.	5.2	32
90	A prototypic system of parallel electrophoresis in multiple capillaries coupled with microwell arrays. Electrophoresis, 2011, 32, 3324-3330.	1.3	1

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91	Bioinspired solar water splitting, sensitized solar cells, and ultraviolet sensor based on semiconductor nanocrystal antenna/graphene nanoassemblies. , 2011, , .		1
92	Single-cell assays. Biomicrofluidics, 2011, 5, 21501.	1.2	30
93	Whole-Teflon microfluidic chips. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 8162-8166.	3.3	184
94	A convenient platform of tunable microlens arrays for the study of cellular responses to mechanical strains. Journal of Micromechanics and Microengineering, 2011, 21, 054017.	1.5	10
95	Partial transfection of cells using laminar flows in microchannels. Biomicrofluidics, 2011, 5, 036503.	1.2	8
96	Fabrication of a microfluidic Ag/AgCl reference electrode and its application for portable and disposable electrochemical microchips. Electrophoresis, 2010, 31, 3083-3089.	1.3	59
97	Fabrication of freestanding, microperforated membranes and their applications in microfluidics. Biomicrofluidics, 2010, 4, 036504.	1.2	27
98	A prototypic microfluidic platform generating stepwise concentration gradients for real-time study of cell apoptosis. Biomicrofluidics, 2010, 4, 024101.	1.2	34
99	Convenient Method for Modifying Poly(dimethylsiloxane) To Be Airtight and Resistive against Absorption of Small Molecules. Analytical Chemistry, 2010, 82, 5965-5971.	3.2	62
100	Highly Fluorescent Poly(dimethylsiloxane) for Onâ€Chip Temperature Measurements. Advanced Functional Materials, 2009, 19, 324-329.	7.8	37
101	A screw-actuated pneumatic valve for portable, disposable microfluidics. Lab on A Chip, 2009, 9, 469-472.	3.1	45
102	Convenient Method for Modifying Poly(dimethylsiloxane) with Poly(ethylene glycol) in Microfluidics. Analytical Chemistry, 2009, 81, 6627-6632.	3.2	69
103	Generation of alginate microfibers with a roller-assisted microfluidic system. Lab on A Chip, 2009, 9, 996-1001.	3.1	57
104	Chemical cytometry on microfluidic chips. Electrophoresis, 2008, 29, 1775-1786.	1.3	22
105	Micropatterning of inorganic precipitations in hydrogels with soft lithography. Sensors and Actuators B: Chemical, 2008, 132, 20-25.	4.0	11
106	Counting Low-Copy Number Proteins in a Single Cell. Science, 2007, 315, 81-84.	6.0	374
107	Use of a Mixture of <i>n</i>-Dodecyl-Î²-<scp>d</scp>-maltoside and Sodium Dodecyl Sulfate in Poly(dimethylsiloxane) Microchips To Suppress Adhesion and Promote Separation of Proteins. Analytical Chemistry, 2007, 79, 9145-9149.	3.2	21
108	Phospholipid biotinylation of polydimethylsiloxane (PDMS) for protein immobilization. Lab on A Chip, 2006, 6, 369.	3.1	39

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109	Controlling Electroosmotic Flow in Poly(dimethylsiloxane) Separation Channels by Means of Prepolymer Additives. Analytical Chemistry, 2006, 78, 4588-4592.	3.2	45
110	Generation of Complex, Static Solution Gradients in Microfluidic Channels. Journal of the American Chemical Society, 2006, 128, 4194-4195.	6.6	98
111	Construction of microfluidic chips using polydimethylsiloxane for adhesive bonding. Lab on A Chip, 2005, 5, 1393.	3.1	183
112	Coating of poly(dimethylsiloxane) with n-dodecyl-Î²-d-maltoside to minimize nonspecific protein adsorption. Lab on A Chip, 2005, 5, 1005.	3.1	134
113	Chemical cytometry on a picoliter-scale integrated microfluidic chip. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 12809-12813.	3.3	232
114	Rapid Prototyping of 2D Structures with Feature Sizes Larger than 8 Î¼m. Analytical Chemistry, 2003, 75, 2522-2527.	3.2	49
115	Fabrication of Complex Three-Dimensional Microchannel Systems in PDMS. Journal of the American Chemical Society, 2003, 125, 554-559.	6.6	240
116	Using Hierarchical Self-Assembly To Form Three-Dimensional Lattices of Spheres. Journal of the American Chemical Society, 2002, 124, 14495-14502.	6.6	56
117	Connectivity of Features in Microlens Array Reduction Photolithography:â€‰ Generation of Various Patterns with a Single Photomask. Journal of the American Chemical Society, 2002, 124, 7288-7289.	6.6	42
118	Controlling Mammalian Cell Spreading and Cytoskeletal Arrangement with Conveniently Fabricated Continuous Wavy Features on Poly(dimethylsiloxane). Langmuir, 2002, 18, 3273-3280.	1.6	185
119	Reduction Photolithography Using Microlens Arrays:Â Applications in Gray Scale Photolithography. Analytical Chemistry, 2002, 74, 3267-3273.	3.2	85
120	A Prototype Two-Dimensional Capillary Electrophoresis System Fabricated in Poly(dimethylsiloxane). Analytical Chemistry, 2002, 74, 1772-1778.	3.2	153
121	Title is missing!. Biomedical Microdevices, 2002, 4, 117-121.	1.4	130
122	Microorigami:Â Fabrication of Small, Three-Dimensional, Metallic Structures. Journal of Physical Chemistry B, 2001, 105, 347-350.	1.2	49
123	Fabrication of microfluidic systems in poly(dimethylsiloxane). Electrophoresis, 2000, 21, 27-40.	1.3	3,078
124	Fabrication of Topologically Complex Three-Dimensional Microstructures:Â Metallic Microknots. Journal of the American Chemical Society, 2000, 122, 12691-12699.	6.6	22
125	Fabrication of Topologically Complex Three-Dimensional Microfluidic Systems in PDMS by Rapid Prototyping. Analytical Chemistry, 2000, 72, 3158-3164.	3.2	643
126	Prototyping of Masks, Masters, and Stamps/Molds for Soft Lithography Using an Office Printer and Photographic Reduction. Analytical Chemistry, 2000, 72, 3176-3180.	3.2	127

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127	Fabrication of microfluidic systems in poly(dimethylsiloxane). , 2000, 21, 27.		19
128	Fabrication of microfluidic systems in poly(dimethylsiloxane). Electrophoresis, 2000, 21, 27-40.	1.3	73
129	Selectivities among capillary bonds in mesoscale self-assembly. Applied Physics Letters, 1999, 75, 3222-3224.	1.5	17
130	Replicating 3D printed structures into functional materials. Journal of Applied Polymer Science, 0, , .	1.3	2