

Xi Xie

List of Publications by Year in descending order

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112
papers

5,072
citations

70961

41
h-index

102304

66
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115
all docs

115
docs citations

115
times ranked

5810
citing authors

#	ARTICLE	IF	CITATIONS
1	An intrinsically stretchable humidity sensor based on anti-drying, self-healing and transparent organohydrogels. <i>Materials Horizons</i> , 2019, 6, 595-603.	6.4	297
2	Nanostrawâ€“Electroporation System for Highly Efficient Intracellular Delivery and Transfection. <i>ACS Nano</i> , 2013, 7, 4351-4358.	7.3	257
3	Mechanical Model of Vertical Nanowire Cell Penetration. <i>Nano Letters</i> , 2013, 13, 6002-6008.	4.5	161
4	Physical activation of innate immunity by spiky particles. <i>Nature Nanotechnology</i> , 2018, 13, 1078-1086.	15.6	158
5	pH-sensitive polymeric nanoparticles for co-delivery of doxorubicin and curcumin to treat cancer via enhanced pro-apoptotic and anti-angiogenic activities. <i>Acta Biomaterialia</i> , 2017, 58, 349-364.	4.1	155
6	Reduction of measurement noise in a continuous glucose monitor by coating the sensor with a zwitterionic polymer. <i>Nature Biomedical Engineering</i> , 2018, 2, 894-906.	11.6	150
7	Ultrasensitive and Stretchable Temperature Sensors Based on Thermally Stable and Self-Healing Organohydrogels. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 19069-19079.	4.0	145
8	Microneedles for transdermal diagnostics: Recent advances and new horizons. <i>Biomaterials</i> , 2020, 232, 119740.	5.7	143
9	Quantification of nanowire penetration into living cells. <i>Nature Communications</i> , 2014, 5, 3613.	5.8	129
10	Microneedle-Mediated Delivery of Lipid-Coated Cisplatin Nanoparticles for Efficient and Safe Cancer Therapy. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 33060-33069.	4.0	125
11	3D superhydrophobic reduced graphene oxide for activated NO ₂ sensing with enhanced immunity to humidity. <i>Journal of Materials Chemistry A</i> , 2018, 6, 478-488.	5.2	116
12	Ultrasensitive, Stretchable, and Fast-Response Temperature Sensors Based on Hydrogel Films for Wearable Applications. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 21854-21864.	4.0	113
13	Analgesic Microneedle Patch for Neuropathic Pain Therapy. <i>ACS Nano</i> , 2017, 11, 395-406.	7.3	106
14	Tumor-on-a-chip: from bioinspired design to biomedical application. <i>Microsystems and Nanoengineering</i> , 2021, 7, 50.	3.4	103
15	A Fully Integrated Closed-Loop System Based on Mesoporous Microneedlesâ€“ontophoresis for Diabetes Treatment. <i>Advanced Science</i> , 2021, 8, e2100827.	5.6	91
16	Microfluidic Fabrication of Colloidal Nanomaterials-Encapsulated Microcapsules for Biomolecular Sensing. <i>Nano Letters</i> , 2017, 17, 2015-2020.	4.5	78
17	Ultrastable, stretchable, highly conductive and transparent hydrogels enabled by salt-percolation for high-performance temperature and strain sensing. <i>Journal of Materials Chemistry C</i> , 2021, 9, 13668-13679.	2.7	77
18	Environment tolerant, adaptable and stretchable organohydrogels: preparation, optimization, and applications. <i>Materials Horizons</i> , 2022, 9, 1356-1386.	6.4	75

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19	Reduced Graphene Oxide Nanohybrid-Assembled Microneedles as Mini-Invasive Electrodes for Real-Time Transdermal Biosensing. <i>Small</i> , 2019, 15, e1804298.	5.2	74
20	A touch-actuated glucose sensor fully integrated with microneedle array and reverse iontophoresis for diabetes monitoring. <i>Biosensors and Bioelectronics</i> , 2022, 203, 114026.	5.3	71
21	Niosome Encapsulation of Curcumin: Characterization and Cytotoxic Effect on Ovarian Cancer Cells. <i>Journal of Nanomaterials</i> , 2016, 2016, 1-9.	1.5	68
22	pH-sensitive micelles based on acid-labile pluronic F68-curcumin conjugates for improved tumor intracellular drug delivery. <i>International Journal of Pharmaceutics</i> , 2016, 502, 28-37.	2.6	67
23	Microneedles loaded with anti-PD-1 cisplatin nanoparticles for synergistic cancer immuno-chemotherapy. <i>Nanoscale</i> , 2020, 12, 18885-18898.	2.8	67
24	An ultrastretchable, high-performance, and crosstalk-free proximity and pressure bimodal sensor based on ionic hydrogel fibers for human-machine interfaces. <i>Materials Horizons</i> , 2022, 9, 1935-1946.	6.4	67
25	Determining the Time Window for Dynamic Nanowire Cell Penetration Processes. <i>ACS Nano</i> , 2015, 9, 11667-11677.	7.3	66
26	Comprehensive Stability Improvement of Silver Nanowire Networks via Self-Assembled Mercapto Inhibitors. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 37699-37708.	4.0	64
27	Stretchable Strain Vector Sensor Based on Parallely Aligned Vertical Graphene. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 1294-1302.	4.0	64
28	Multifunctional Branched Nanostraw-Electroporation Platform for Intracellular Regulation and Monitoring of Circulating Tumor Cells. <i>Nano Letters</i> , 2019, 19, 7201-7209.	4.5	61
29	Green Synthesis of 3D Chemically Functionalized Graphene Hydrogel for High-Performance NH ₃ and NO ₂ Detection at Room Temperature. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 20623-20632.	4.0	60
30	Redox-sensitive Pluronic F127-tocopherol micelles: synthesis, characterization, and cytotoxicity evaluation. <i>International Journal of Nanomedicine</i> , 2017, Volume 12, 2635-2644.	3.3	58
31	Nanoneedle Platforms: The Many Ways to Pierce the Cell Membrane. <i>Advanced Functional Materials</i> , 2020, 30, 1909890.	7.8	58
32	Stretchable, Stable, and Room-Temperature Gas Sensors Based on Self-Healing and Transparent Organohydrogels. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 52070-52081.	4.0	57
33	Intracellular Delivery and Sensing System Based on Electroplated Conductive Nanostraw Arrays. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 43936-43948.	4.0	56
34	Hierarchical graphene/nanorods-based H ₂ O ₂ electrochemical sensor with self-cleaning and anti-biofouling properties. <i>Sensors and Actuators B: Chemical</i> , 2019, 289, 15-23.	4.0	55
35	Ion-Conductive Hydrogel-Based Stretchable, Self-Healing, and Transparent NO ₂ Sensor with High Sensitivity and Selectivity at Room Temperature. <i>Small</i> , 2021, 17, e2104997.	5.2	55
36	Self-Healing, Self-Adhesive and Stable Organohydrogel-Based Stretchable Oxygen Sensor with High Performance at Room Temperature. <i>Nano-Micro Letters</i> , 2022, 14, 52.	14.4	53

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37	Smartphone-powered iontophoresis-microneedle array patch for controlled transdermal delivery. <i>Microsystems and Nanoengineering</i> , 2020, 6, 112.	3.4	52
38	A Facile and Versatile Method to Endow Biomaterial Devices with Zwitterionic Surface Coatings. <i>Advanced Healthcare Materials</i> , 2017, 6, 1601091.	3.9	51
39	Recent Advances in Gas and Humidity Sensors Based on 3D Structured and Porous Graphene and Its Derivatives. , 2020, 2, 1381-1411.		50
40	Tutorial: using nanoneedles for intracellular delivery. <i>Nature Protocols</i> , 2021, 16, 4539-4563.	5.5	47
41	Hydrogel- and organohydrogel-based stretchable, ultrasensitive, transparent, room-temperature and real-time NO ₂ sensors and the mechanism. <i>Materials Horizons</i> , 2022, 9, 1921-1934.	6.4	47
42	Emerging Roles of 1D Vertical Nanostructures in Orchestrating Immune Cell Functions. <i>Advanced Materials</i> , 2020, 32, e2001668.	11.1	45
43	Slippery Liquid-Attached Surface for Robust Biofouling Resistance. <i>ACS Biomaterials Science and Engineering</i> , 2020, 6, 358-366.	2.6	44
44	Tunable supramolecular hydrogel for in situ encapsulation and sustained release of bioactive lysozyme. <i>Journal of Colloid and Interface Science</i> , 2011, 359, 399-406.	5.0	42
45	Protection of Nanostructures-Integrated Microneedle Biosensor Using Dissolvable Polymer Coating. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 4809-4819.	4.0	42
46	Rapid-response, reversible and flexible humidity sensing platform using a hydrophobic and porous substrate. <i>Journal of Materials Chemistry B</i> , 2019, 7, 2063-2073.	2.9	42
47	Surgical Tumor-Derived Photothermal Nanovaccine for Personalized Cancer Therapy and Prevention. <i>Nano Letters</i> , 2022, 22, 3095-3103.	4.5	42
48	Hierarchical Spiky Microstraws-Integrated Microfluidic Device for Efficient Capture and In Situ Manipulation of Cancer Cells. <i>Advanced Functional Materials</i> , 2019, 29, 1806484.	7.8	39
49	Hollow Nanoneedle-Electroporation System To Extract Intracellular Protein Repetitively and Nondestructively. <i>ACS Sensors</i> , 2018, 3, 1675-1682.	4.0	38
50	Intelligent wireless theranostic contact lens for electrical sensing and regulation of intraocular pressure. <i>Nature Communications</i> , 2022, 13, 2556.	5.8	36
51	Anomalous dispersion of magnetic spiky particles for enhanced oil emulsions/water separation. <i>Nanoscale</i> , 2018, 10, 1978-1986.	2.8	35
52	Recent Progress in Microneedles-Mediated Diagnosis, Therapy, and Theranostic Systems. <i>Advanced Healthcare Materials</i> , 2022, 11, e2102547.	3.9	34
53	Fabrication of Various Structures of Nanostraw Arrays and Their Applications in Gene Delivery. <i>Advanced Materials Interfaces</i> , 2018, 5, 1701535.	1.9	32
54	Cleavable Multifunctional Targeting Mixed Micelles with Sequential pH-Triggered TAT Peptide Activation for Improved Antihepatocellular Carcinoma Efficacy. <i>Molecular Pharmaceutics</i> , 2017, 14, 3644-3659.	2.3	31

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55	High-performance water desalination of heteroatom nitrogen- and sulfur-codoped open hollow tubular porous carbon electrodes via capacitive deionization. <i>Environmental Science: Nano</i> , 2019, 6, 3359-3373.	2.2	31
56	Laser heating of metallic nanoparticles for photothermal ablation applications. <i>AIP Advances</i> , 2017, 7, .	0.6	28
57	Integrated Multiplex Sensing Bandage for In Situ Monitoring of Early Infected Wounds. <i>ACS Sensors</i> , 2021, 6, 3112-3124.	4.0	28
58	Wearable and Implantable Intraocular Pressure Biosensors: Recent Progress and Future Prospects. <i>Advanced Science</i> , 2021, 8, 2002971.	5.6	28
59	A novel route to in situ incorporation of silver nanoparticles into supramolecular hydrogel networks. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2009, 47, 740-749.	2.4	27
60	Intracellular recording of cardiomyocyte action potentials by nanobranched microelectrode array. <i>Biosensors and Bioelectronics</i> , 2020, 169, 112588.	5.3	26
61	Biodegradable Therapeutic Microneedle Patch for Rapid Antihypertensive Treatment. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 30575-30584.	4.0	25
62	Liquid-like polymer-based self-cleaning coating for effective prevention of liquid foods contaminations. <i>Journal of Colloid and Interface Science</i> , 2021, 589, 327-335.	5.0	25
63	Self-Calibrated, Sensitive, and Flexible Temperature Sensor Based on 3D Chemically Modified Graphene Hydrogel. <i>Advanced Electronic Materials</i> , 2021, 7, 2001084.	2.6	24
64	Specific recognition of ion channel blocker by high-content cardiomyocyte electromechanical integrated correlation. <i>Biosensors and Bioelectronics</i> , 2020, 162, 112273.	5.3	23
65	Tape-Based Photodetector: Transfer Process and Persistent Photoconductivity. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 16596-16604.	4.0	21
66	Vertical nanowire array-based biosensors: device design strategies and biomedical applications. <i>Journal of Materials Chemistry B</i> , 2020, 8, 7609-7632.	2.9	21
67	In-Cell Nanoelectronics: Opening the Door to Intracellular Electrophysiology. <i>Nano-Micro Letters</i> , 2021, 13, 127.	14.4	21
68	Fabrication of sub-cell size spiky nanoparticles and their interfaces with biological cells. <i>Journal of Materials Chemistry B</i> , 2015, 3, 5155-5160.	2.9	19
69	Fabrication and properties of a supramolecular hybrid hydrogel doped with CdTe quantum dots. <i>RSC Advances</i> , 2015, 5, 58746-58754.	1.7	19
70	Functionalized Spiky Particles for Intracellular Biomolecular Delivery. <i>ACS Central Science</i> , 2019, 5, 960-969.	5.3	19
71	Anti-biofouling NH ₃ gas sensor based on reentrant thorny ZnO/graphene hybrid nanowalls. <i>Microsystems and Nanoengineering</i> , 2020, 6, 41.	3.4	19
72	Transdermal Delivery of Living and Biofunctional Probiotics through Dissolvable Microneedle Patches. <i>ACS Applied Bio Materials</i> , 2018, 1, 374-381.	2.3	18

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73	Three-dimensional gold nanoparticles-modified graphene hydrogel for high-sensitive NO ₂ and NH ₃ detection with enhanced resistance to humidity. <i>Sensors and Actuators B: Chemical</i> , 2021, 344, 130259.	4.0	16
74	Smart Diaper Based on Integrated Multiplex Carbon Nanotube-Coated Electrode Array Sensors for <i>In Situ</i> Urine Monitoring. <i>ACS Applied Nano Materials</i> , 2022, 5, 4767-4778.	2.4	16
75	Injectable Slippery Lubricant-Coated Spiky Microparticles with Persistent and Exceptional Biofouling-Resistance. <i>ACS Central Science</i> , 2019, 5, 250-258.	5.3	15
76	Liquid-like Polymer Coating as a Promising Candidate for Reducing Electrode Contamination and Noise in Complex Biofluids. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 4450-4462.	4.0	15
77	Synchronized intracellular and extracellular recording of action potentials by three-dimensional nanoroded electroporation. <i>Biosensors and Bioelectronics</i> , 2021, 192, 113501.	5.3	15
78	Deformable, transparent, high-performance, room-temperature oxygen sensors based on ion-conductive, environment-tolerant, and green organohydrogels. <i>EcoMat</i> , 2022, 4, .	6.8	14
79	Semi-Implantable Bioelectronics. <i>Nano-Micro Letters</i> , 2022, 14, .	14.4	14
80	Constructing Electrophoretic Displays on Foldable Paper-Based Electrodes by a Facile Transferring Method. <i>ACS Applied Electronic Materials</i> , 2020, 2, 1335-1342.	2.0	13
81	Ultrasensitive, stretchable, and transparent humidity sensor based on ion-conductive double-network hydrogel thin films. <i>Science China Materials</i> , 2022, 65, 2540-2552.	3.5	13
82	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
83	Electrostatic assembly of ultraviolet-curable cellulose-coated silver nanowires as transparent electrodes for nanogenerator. <i>Applied Physics Express</i> , 2018, 11, 075002.	1.1	10
84	Slippery surface based on lubricant infused hierarchical silicon nanowire film. <i>RSC Advances</i> , 2017, 7, 55812-55818.	1.7	9
85	Facile patterning and transferring method for constructing self-powered UV photodetectors. <i>Applied Physics Express</i> , 2018, 11, 116502.	1.1	8
86	Antibody-free isolation and regulation of adherent cancer cells <i>via</i> hybrid branched microtube-sandwiched hydrodynamic system. <i>Nanoscale</i> , 2020, 12, 5103-5113.	2.8	8
87	Degradable porous nanoflower substrate-embedded microfluidic device for capture, release and in situ manipulation of cancer cells. <i>Applied Materials Today</i> , 2020, 19, 100617.	2.3	8
88	Liquid-like layer coated intraocular lens for posterior capsular opacification prevention. <i>Applied Materials Today</i> , 2021, 23, 100981.	2.3	8
89	Accurate and efficient intracellular delivery biosensing system by nanostrawed electroporation array. <i>Biosensors and Bioelectronics</i> , 2021, 194, 113583.	5.3	8
90	Integrated Strain Sensors with Stretchable Vertical Graphene Networks for Non-invasive Physiological Assessment. <i>ACS Applied Electronic Materials</i> , 2022, 4, 964-973.	2.0	8

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91	PCL-PEG-PLGA mixed micelles mediated delivery of mitoxantrone for reversing multidrug resistant in breast cancer. RSC Advances, 2016, 6, 35318-35327.	1.7	7
92	Ultrahigh Sensitivity of Flexible Thermistors Based on 3D Porous Graphene Characterized by Imbedded Microheaters. Advanced Electronic Materials, 2020, 6, 2000451.	2.6	7
93	Minimally invasive technology for continuous glucose monitoring. Bio-Design and Manufacturing, 2022, 5, 9-13.	3.9	7
94	iRGD-mediated reduction-responsive DSPE-PEG/LA-PLGA-TPGS mixed micelles used in the targeted delivery and triggered release of docetaxel in cancer. RSC Advances, 2016, 6, 28331-28342.	1.7	6
95	TiO ₂ nanowire-templated hierarchical nanowire network as water-repelling coating. Royal Society Open Science, 2017, 4, 171431.	1.1	6
96	Nanospikes-mediated Anomalous Dispersities of Hydrophobic Micro-objects and their Application for Oil Emulsion Cleaning. Scientific Reports, 2018, 8, 12600.	1.6	6
97	Self-Cleaning Ultraviolet Photodetectors Based on Tree Crown-Like Microtube Structure. Advanced Materials Interfaces, 2019, 6, 1801251.	1.9	6
98	Revealing the Role of Surface Co-modification in Boosting the Gas Sensing Performance of Graphene Using Experimental and Theoretical Evidences. Sensors and Actuators B: Chemical, 2020, 316, 128162.	4.0	6
99	Spin-Coating-Based Fabrication of Nanostraw Arrays for Cellular Nano-electroporation. ACS Applied Nano Materials, 2022, 5, 2057-2067.	2.4	6
100	Anomalous dispersion of bioinspired flower-like microparticles for oil/water separation. Nanotechnology, 2020, 31, 095712.	1.3	5
101	Immunoengineered adjuvants for universal vaccines against respiratory viruses. Fundamental Research, 2021, 1, 189-192.	1.6	4
102	Cellular nanointerface of vertical nanostructure arrays and its applications. Nanoscale Advances, 2022, 4, 1844-1867.	2.2	4
103	Layer dependence of the photoelectrochemical performance of a WSe ₂ photocathode characterized using <i>in situ</i> microscale measurements. RSC Advances, 2019, 9, 30925-30931.	1.7	3
104	Recognition of high-specificity hERG K ⁺ channel inhibitor-induced arrhythmia in cardiomyocytes by automated template matching. Microsystems and Nanoengineering, 2021, 7, 24.	3.4	3
105	Expansion of Rare Cancer Cells into Tumoroids for Therapeutic Regimen and Cancer Therapy. Advanced Therapeutics, 2021, 4, 2100017.	1.6	3
106	Determination of Transdermal Rate of Metallic Microneedle Array through an Impedance Measurements-Based Numerical Check Screening Algorithm. Micromachines, 2022, 13, 718.	1.4	3
107	Monosaccharide-mediated rational synthesis of a universal plasmonic platform with broad spectral fluorescence enhancement for high-sensitivity cancer biomarker analysis. Journal of Nanobiotechnology, 2022, 20, 184.	4.2	2
108	Nanospikes functionalization as a universal strategy to disperse hydrophilic particles in non-polar media. Nanotechnology, 2018, 29, 185705.	1.3	1

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109	Flexible Tongue Electrode Array System for In Vivo Mapping of Electrical Signals of Taste Sensation. ACS Sensors, 2021, 6, 4108-4117.	4.0	1
110	Interrogation on the Cellular Nano-Interface and Biosafety of Repeated Nano-Electroporation by Nanostraw System. Biosensors, 2022, 12, 522.	2.3	1
111	Highly Deformable and Stable Gas Sensor Based on Anti-Drying Ionic Organohydrogel for O2 Gas Detection. , 2021, , .		0
112	An integrated micro-extracting system facilitates lesion-free biomacromolecules enrichment and detection. Materials and Design, 2022, 219, 110812.	3.3	0