

Mina Hoorfar

List of Publications by Year in descending order

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110
papers

5,226
citations

109321

35
h-index

91884

69
g-index

110
all docs

110
docs citations

110
times ranked

6298
citing authors

#	ARTICLE	IF	CITATIONS
1	Microfluidics Integrated Biosensors: A Leading Technology towards Lab-on-a-Chip and Sensing Applications. <i>Sensors</i> , 2015, 15, 30011-30031.	3.8	385
2	A review of digital microfluidics as portable platforms for lab-on a-chip applications. <i>Lab on A Chip</i> , 2016, 16, 2376-2396.	6.0	354
3	Challenges and opportunities in exosome research—Perspectives from biology, engineering, and cancer therapy. <i>APL Bioengineering</i> , 2019, 3, 011503.	6.2	327
4	Bioinks and bioprinting technologies to make heterogeneous and biomimetic tissue constructs. <i>Materials Today Bio</i> , 2019, 1, 100008.	5.5	312
5	Failure mechanisms of additively manufactured porous biomaterials: Effects of porosity and type of unit cell. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2015, 50, 180-191.	3.1	264
6	A review of sorting, separation and isolation of cells and microbeads for biomedical applications: microfluidic approaches. <i>Analyst, The</i> , 2019, 144, 87-113.	3.5	199
7	Additive manufacturing and mechanical characterization of graded porosity scaffolds designed based on triply periodic minimal surface architectures. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 62, 481-494.	3.1	197
8	3D-Printed Ultra-Robust Surface-Doped Porous Silicone Sensors for Wearable Biomonitoring. <i>ACS Nano</i> , 2020, 14, 1520-1532.	14.6	151
9	Permeability and mechanical properties of gradient porous PDMS scaffolds fabricated by 3D-printed sacrificial templates designed with minimal surfaces. <i>Acta Biomaterialia</i> , 2019, 96, 149-160.	8.3	139
10	Micro and nanoscale technologies in oral drug delivery. <i>Advanced Drug Delivery Reviews</i> , 2020, 157, 37-62.	13.7	123
11	Extrusion and Microfluidic-Based Bioprinting to Fabricate Biomimetic Tissues and Organs. <i>Advanced Materials Technologies</i> , 2020, 5, 1901044.	5.8	110
12	Investigating internal architecture effect in plastic deformation and failure for TPMS-based scaffolds using simulation methods and experimental procedure. <i>Materials Science and Engineering C</i> , 2014, 43, 587-597.	7.3	109
13	Online Drinking Water Quality Monitoring: Review on Available and Emerging Technologies. <i>Critical Reviews in Environmental Science and Technology</i> , 2014, 44, 1370-1421.	12.8	100
14	Hybrid Nanosystems for Biomedical Applications. <i>ACS Nano</i> , 2021, 15, 2099-2142.	14.6	100
15	Anti-bacterial and wound healing-promoting effects of zinc ferrite nanoparticles. <i>Journal of Nanobiotechnology</i> , 2021, 19, 38.	9.1	87
16	Compressive characteristics of radially graded porosity scaffolds architected with minimal surfaces. <i>Materials Science and Engineering C</i> , 2018, 92, 254-267.	7.3	82
17	Graphene-Coated Spandex Sensors Embedded into Silicone Sheath for Composites Health Monitoring and Wearable Applications. <i>Small</i> , 2019, 15, e1804991.	10.0	82
18	Engineered Hemostatic Biomaterials for Sealing Wounds. <i>Chemical Reviews</i> , 2022, 122, 12864-12903.	47.7	79

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19	The relationships between deformation mechanisms and mechanical properties of additively manufactured porous biomaterials. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 70, 28-42.	3.1	76
20	Additively manufactured metallic biomaterials. <i>Bioactive Materials</i> , 2022, 15, 214-249.	15.6	75
21	Multiphase flow in microfluidics: From droplets and bubbles to the encapsulated structures. <i>Advances in Colloid and Interface Science</i> , 2020, 282, 102208.	14.7	73
22	Low-cost ultra-stretchable strain sensors for monitoring human motion and bio-signals. <i>Sensors and Actuators A: Physical</i> , 2018, 271, 182-191.	4.1	72
23	Stretchable and Bioadhesive Gelatin Methacryloyl-Based Hydrogels Enabled by <i>in Situ</i> Dopamine Polymerization. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 40290-40301.	8.0	72
24	Fluid Permeability of Graded Porosity Scaffolds Architected with Minimal Surfaces. <i>ACS Biomaterials Science and Engineering</i> , 2019, 5, 1228-1237.	5.2	61
25	Additively Manufactured Gradient Porous Ti-6Al-4V Hip Replacement Implants Embedded with Cell-Laden Gelatin Methacryloyl Hydrogels. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 22110-22123.	8.0	56
26	Leakage detection and location in water distribution systems using a fuzzy-based methodology. <i>Urban Water Journal</i> , 2011, 8, 351-365.	2.1	52
27	Exhaled Breath Analysis for Diabetes Diagnosis and Monitoring: Relevance, Challenges and Possibilities. <i>Biosensors</i> , 2021, 11, 476.	4.7	51
28	Reliability Assessment for Water Supply Systems under Uncertainties. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2014, 140, 468-479.	2.6	47
29	Characterization of channel coating and dimensions of microfluidic-based gas detectors. <i>Sensors and Actuators B: Chemical</i> , 2017, 241, 55-64.	7.8	44
30	Label-Free Capacitive Biosensor for Detection of <i>Cryptosporidium</i> . <i>Sensors</i> , 2019, 19, 258.	3.8	43
31	Predicting permeability of regular tissue engineering scaffolds: scaling analysis of pore architecture, scaffold length, and fluid flow rate effects. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2017, 20, 231-241.	1.6	39
32	3D-printed multimaterial composites tailored for compliancy and strain recovery. <i>Composite Structures</i> , 2018, 184, 11-17.	5.8	38
33	Systematic analysis of geometrical based unequal droplet splitting in digital microfluidics. <i>Journal of Micromechanics and Microengineering</i> , 2015, 25, 055008.	2.6	37
34	Properties and Applications of Graphene and Its Derivatives in Biosensors for Cancer Detection: A Comprehensive Review. <i>Biosensors</i> , 2022, 12, 269.	4.7	37
35	Integration of biosensors into digital microfluidics: Impact of hydrophilic surface of biosensors on droplet manipulation. <i>Biosensors and Bioelectronics</i> , 2016, 81, 480-486.	10.1	36
36	Selective detection of volatile organic compounds in microfluidic gas detectors based on α -like dissolves like. <i>Scientific Reports</i> , 2019, 9, 161.	3.3	36

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37	Graphene/poly (methyl methacrylate) electrochemical impedance-transduced chemiresistor for detection of volatile organic compounds in aqueous medium. <i>Analytica Chimica Acta</i> , 2020, 1109, 27-36.	5.4	35
38	Nanomaterial-based encapsulation for controlled gastrointestinal delivery of viable probiotic bacteria. <i>Nanoscale Advances</i> , 2021, 3, 2699-2709.	4.6	35
39	Evaluating Water Quality Failure Potential in Water Distribution Systems: A Fuzzy-TOPSIS-OWA-based Methodology. <i>Water Resources Management</i> , 2013, 27, 2195-2216.	3.9	32
40	Sacrificial 3D printing of shrinkable silicone elastomers for enhanced feature resolution in flexible tissue scaffolds. <i>Acta Biomaterialia</i> , 2020, 117, 261-272.	8.3	32
41	Toward a neurospheroid niche model: optimizing embedded 3D bioprinting for fabrication of neurospheroid brain-like co-culture constructs. <i>Biofabrication</i> , 2021, 13, 015014.	7.1	32
42	Nano-porous anodic alumina: fundamentals and applications in tissue engineering. <i>Journal of Materials Science: Materials in Medicine</i> , 2020, 31, 60.	3.6	31
43	A review of low-temperature H ₂ S gas sensors: fabrication and mechanism. <i>New Journal of Chemistry</i> , 2021, 45, 17727-17752.	2.8	30
44	On-Chip Electronic Nose For Wine Tasting: A Digital Microfluidic Approach. <i>IEEE Sensors Journal</i> , 2017, 17, 4322-4329.	4.7	29
45	An electrohydrodynamic technique for rapid mixing in stationary droplets on digital microfluidic platforms. <i>Lab on A Chip</i> , 2017, 17, 227-234.	6.0	29
46	Selective detection of VOCs using microfluidic gas sensor with embedded cylindrical microfeatures coated with graphene oxide. <i>Journal of Hazardous Materials</i> , 2022, 424, 127566.	12.4	28
47	Characterization of the geometry of negative dielectrophoresis traps for particle immobilization in digital microfluidic platforms. <i>Lab on A Chip</i> , 2013, 13, 1823.	6.0	27
48	Ultra-Portable Smartphone Controlled Integrated Digital Microfluidic System in a 3D-Printed Modular Assembly. <i>Micromachines</i> , 2015, 6, 1289-1305.	2.9	27
49	3D Printing-Based Integrated Water Quality Sensing System. <i>Sensors</i> , 2017, 17, 1336.	3.8	27
50	Integrated Sensors in Advanced Composites: A Critical Review. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2020, 45, 187-238.	12.3	27
51	Exploiting Microfluidics for Extracellular Vesicle Isolation and Characterization: Potential Use for Standardized Embryo Quality Assessment. <i>Frontiers in Veterinary Science</i> , 2020, 7, 620809.	2.2	26
52	Microfluidic-Based Oxygen (O ₂) Sensors for On-Chip Monitoring of Cell, Tissue and Organ Metabolism. <i>Biosensors</i> , 2022, 12, 6.	4.7	26
53	Ferritin Nanocage Conjugated Hybrid Hydrogel for Tissue Engineering and Drug Delivery Applications. <i>ACS Biomaterials Science and Engineering</i> , 2020, 6, 277-287.	5.2	25
54	Classification and Regression of Binary Hydrocarbon Mixtures using Single Metal Oxide Semiconductor Sensor With Application to Natural Gas Detection. <i>Sensors and Actuators B: Chemical</i> , 2021, 326, 129012.	7.8	22

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55	A dielectrophoretic-gravity driven particle focusing technique for digital microfluidic systems. <i>Applied Physics Letters</i> , 2015, 106, .	3.3	21
56	Laterally Confined Microfluidic Patterning of Cells for Engineering Spatially Defined Vascularization. <i>Small</i> , 2016, 12, 5132-5139.	10.0	21
57	Diffusion-based humidity control membrane for microfluidic-based gas detectors. <i>Analytica Chimica Acta</i> , 2018, 1021, 103-112.	5.4	21
58	Dielectrophoretic manipulation of particles on a microfluidics platform with planar tilted electrodes. <i>Sensors and Actuators B: Chemical</i> , 2021, 329, 129204.	7.8	21
59	Experimental characterization of the inter-ply shear behavior of dry and prepreg woven fabrics: Significance of mixed lubrication mode during thermoset composites processing. <i>Composites Part A: Applied Science and Manufacturing</i> , 2020, 129, 105725.	7.6	20
60	Parametric study on the geometrical parameters of a lab-on-a-chip platform with tilted planar electrodes for continuous dielectrophoretic manipulation of microparticles. <i>Scientific Reports</i> , 2020, 10, 11718.	3.3	20
61	A Nanostructured Microfluidic Artificial Olfaction for Organic Vapors Recognition. <i>Scientific Reports</i> , 2019, 9, 19051.	3.3	19
62	A selective polypyrrole-based sub-ppm impedimetric sensor for the detection of dissolved hydrogen sulfide and ammonia in a mixture. <i>Journal of Hazardous Materials</i> , 2021, 416, 125892.	12.4	19
63	Evidential reasoning using extended fuzzy Dempster-Shafer theory for handling various facets of information deficiency. <i>International Journal of Intelligent Systems</i> , 2011, 26, 731-758.	5.7	18
64	A frameless picture frame test with embedded sensor: Mitigation of imperfections in shear characterization of woven fabrics. <i>Composite Structures</i> , 2019, 211, 112-124.	5.8	18
65	Enhanced selectivity of microfluidic gas sensors by modifying microchannel geometry and surface chemistry with graphene quantum dots. <i>Sensors and Actuators B: Chemical</i> , 2021, 342, 130050.	7.8	17
66	High Throughput Screening of Cell Mechanical Response Using a Stretchable 3D Cellular Microarray Platform. <i>Small</i> , 2020, 16, e2000941.	10.0	16
67	Comprehensive review of conventional and state-of-the-art detection methods of <i>Cryptosporidium</i> . <i>Journal of Hazardous Materials</i> , 2022, 421, 126714.	12.4	16
68	Electrohydrodynamic modeling of microdroplet transient dynamics in electrocapillary-based digital microfluidic devices. <i>Microfluidics and Nanofluidics</i> , 2011, 10, 1019-1032.	2.2	15
69	Purification of a droplet using negative dielectrophoresis traps in digital microfluidics. <i>Microfluidics and Nanofluidics</i> , 2015, 18, 483-492.	2.2	15
70	Micron-sized particle separation with standing surface acoustic wave”Experimental and numerical approaches. <i>Ultrasonics Sonochemistry</i> , 2021, 76, 105651.	8.2	15
71	Performance optimization of a novel passive T-shaped micromixer with deformable baffles. <i>Chemical Engineering and Processing: Process Intensification</i> , 2021, 163, 108369.	3.6	14
72	Gravity-driven hydrodynamic particle separation in digital microfluidic systems. <i>RSC Advances</i> , 2015, 5, 35966-35975.	3.6	13

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73	Kinetic characterization of acetone monooxygenase from <i>Gordonia</i> sp. strain TY-5. <i>AMB Express</i> , 2018, 8, 181.	3.0	13
74	Motion and deformation of migrating compound droplets in shear-thinning fluids in a microcapillary tube. <i>Physics of Fluids</i> , 2021, 33, .	4.0	13
75	Online monitoring of drinking water quality in a distribution network: a selection procedure for suitable water quality parameters and sensor devices. <i>International Journal of Systems Assurance Engineering and Management</i> , 2012, 3, 323-337.	2.4	12
76	Development of a Sensing Platform for Nuisance Sewer Gas Monitoring: Hydrogen Sulfide Detection in Aqueous Versus Gaseous Samples. <i>IEEE Sensors Journal</i> , 2018, 18, 7772-7778.	4.7	12
77	Portable on-chip colorimetric biosensing platform integrated with a smartphone for label/PCR-free detection of <i>Cryptosporidium</i> RNA. <i>Scientific Reports</i> , 2021, 11, 23192.	3.3	12
78	On-chip-based electrochemical biosensor for the sensitive and label-free detection of <i>Cryptosporidium</i> . <i>Scientific Reports</i> , 2022, 12, 6957.	3.3	12
79	A review on 3D printing functional brain model. <i>Biomechanics</i> , 2022, 16, 011501.	2.4	11
80	Integrated Decision Support System for Prognostic and Diagnostic Analyses of Water Distribution System Failures. <i>Water Resources Management</i> , 2016, 30, 2831-2850.	3.9	10
81	Topical review on monitoring tetrahydrocannabinol in breath. <i>Journal of Breath Research</i> , 2020, 14, 034002.	3.0	10
82	Template-enabled Biofabrication of Thick 3D Tissues with Patterned Perfusable Macrochannels. <i>Advanced Healthcare Materials</i> , 2022, 11, e2102123.	7.6	10
83	Highly selective multi-target 3D-printed microfluidic-based breath analyzer. , 2016, , .		9
84	Quantifying the dielectrophoretic force on colloidal particles in microfluidic devices. <i>Microfluidics and Nanofluidics</i> , 2022, 26, .	2.2	9
85	Simulation of combustion in a porous-medium diesel engine. <i>Journal of Mechanical Science and Technology</i> , 2018, 32, 2327-2337.	1.5	8
86	Sheath-assisted focusing of microparticles on lab-on-a-chip platforms. <i>Electrophoresis</i> , 2020, 41, 2188-2196.	2.4	8
87	Fabrication of SnO ₂ Composite Nanofiber-Based Gas Sensor Using the Electrospinning Method for Tetrahydrocannabinol (THC) Detection. <i>Micromachines</i> , 2020, 11, 190.	2.9	8
88	Slip-bias extension test: A characterization tool for understanding and modeling the effect of clamping conditions in forming of woven fabrics. <i>Composite Structures</i> , 2021, 260, 113529.	5.8	8
89	Analytical study of unsteady sedimentation analysis of spherical particle in Newtonian fluid media. <i>Thermal Science</i> , 2018, 22, 847-855.	1.1	8
90	Selective monitoring of natural gas sulphur-based odorant mixture of t-butyl mercaptan and methyl ethyl sulphide using an array of microfluidic gas sensors. <i>Journal of Hazardous Materials</i> , 2022, 438, 129548.	12.4	8

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91	Water distribution system failure: a framework for forensic analysis. Environment Systems and Decisions, 2014, 34, 168-179.	3.4	7
92	Microfluidic On-Chip Production of Alginate Hydrogels Using Double Coflow Geometry. ACS Omega, 2021, 6, 25964-25971.	3.5	7
93	Neural Network-Based Optimization of an Acousto Microfluidic System for Submicron Bioparticle Separation. Frontiers in Bioengineering and Biotechnology, 2022, 10, 878398.	4.1	7
94	Study of the effect of electric field and electroneutrality on transport of biomolecules in microreactors. Microfluidics and Nanofluidics, 2012, 12, 279-294.	2.2	6
95	Potentiodynamic Electrochemical Impedance Spectroscopy of Polyaniline-Modified Pencil Graphite Electrodes for Selective Detection of Biochemical Trace Elements. Polymers, 2022, 14, 31.	4.5	6
96	Interval belief structure rule-based system using extended fuzzy Dempster-Shafer inference. , 2011, , .		5
97	Numerical study of the microdroplet actuation switching frequency in digital microfluidic biochips. Microfluidics and Nanofluidics, 2012, 12, 295-305.	2.2	5
98	A fuzzy rule-based approach for water quality assessment in the distribution network. , 2013, , .		3
99	Effect of Gas Diffusion Layer Properties on Breakthrough Time and Pressure. Transport in Porous Media, 2014, 105, 43-55.	2.6	3
100	Control of artificial human finger using wearable device and adaptive network-based fuzzy inference system. , 2016, , .		3
101	Sheath-assisted versus sheathless dielectrophoretic particle separation. Electrophoresis, 2021, 42, 1570-1577.	2.4	3
102	Multicriteria information fusion using a fuzzy evidential rule-based framework. , 2012, , .		2
103	Enhanced fuzzy evidential reasoning using an optimization approach for water quality monitoring. , 2013, , .		1
104	Networked fuzzy belief rule-based system for spatiotemporal monitoring. , 2013, , .		1
105	A graphene-based chemical sensor for hydrogen sulfide measurement in water. , 2019, , .		1
106	High-throughput three-dimensional cellular platforms for screening biophysical microenvironmental signals. , 2021, , 125-152.		1
107	Fabrication of palladium functionalized sol-gel based SnO ₂ gas sensor for H ₂ and CO detection. , 2017, , .		0
108	A method of accelerated regeneration for a microfluidic gas sensor. , 2017, , .		0

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109	Template-Enabled Biofabrication of Thick 3D Tissues with Patterned Perfusable Macrochannels (Adv.) Tj ETQq1 1 0,784314 jgBT /Over	7.6	0
110	Nano-scale Particle Separation with Tilted Standing Surface Acoustic Wave - Experimental and Numerical Approaches. Particle and Particle Systems Characterization, 0, , 2200057.	2.3	0