Samad Ahadian

List of Publications by Year
in descending order

123 papers	6,582 citations	53751 45 h-index	71651 76 g-index
132 all docs	132 docs citations	132 times ranked	8491 citing authors

#	Article	IF	Citations
1	Flexible shape-memory scaffold for minimally invasive delivery of functional tissues. Nature Materials, 2017, 16, 1038-1046.	13.3	295
2	Gelatinâ€polysaccharide composite scaffolds for 3D cell culture and tissue engineering: Towards natural therapeutics. Bioengineering and Translational Medicine, 2019, 4, 96-115.	3.9	249
3	Dielectrophoretically Aligned Carbon Nanotubes to Control Electrical and Mechanical Properties of Hydrogels to Fabricate Contractile Muscle Myofibers. Advanced Materials, 2013, 25, 4028-4034.	11.1	236
4	Organâ€Onâ€Aâ€Chip Platforms: A Convergence of Advanced Materials, Cells, and Microscale Technologies. Advanced Healthcare Materials, 2018, 7, 1700506.	3.9	227
5	Skeletal Muscle Tissue Engineering: Methods to Form Skeletal Myotubes and Their Applications. Tissue Engineering - Part B: Reviews, 2014, 20, 403-436.	2.5	218
6	Engineered Contractile Skeletal Muscle Tissue on a Microgrooved Methacrylated Gelatin Substrate. Tissue Engineering - Part A, 2012, 18, 2453-2465.	1.6	206
7	Advances and Future Perspectives in 4D Bioprinting. Biotechnology Journal, 2018, 13, e1800148.	1.8	168
8	Roomâ€Temperatureâ€Formed PEDOT:PSS Hydrogels Enable Injectable, Soft, and Healable Organic Bioelectronics. Advanced Materials, 2020, 32, e1904752.	11.1	158
9	3D-Printed Ultra-Robust Surface-Doped Porous Silicone Sensors for Wearable Biomonitoring. ACS Nano, 2020, 14, 1520-1532.	7.3	151
10	Cardiovascular disease models: A game changing paradigm in drug discovery and screening. Biomaterials, 2019, 198, 3-26.	5.7	149
11	Gelatin methacrylate as a promising hydrogel for 3D microscale organization and proliferation of dielectrophoretically patterned cells. Lab on A Chip, 2012, 12, 2959.	3.1	148
12	Hybrid hydrogel-aligned carbon nanotube scaffolds to enhance cardiac differentiation of embryoid bodies. Acta Biomaterialia, 2016, 31, 134-143.	4.1	145
13	Electrically conductive nanomaterials for cardiac tissue engineering. Advanced Drug Delivery Reviews, 2019, 144, 162-179.	6.6	137
14	Moldable elastomeric polyester-carbon nanotube scaffolds for cardiac tissue engineering. Acta Biomaterialia, 2017, 52, 81-91.	4.1	135
15	Micro and nanoscale technologies in oral drug delivery. Advanced Drug Delivery Reviews, 2020, 157, 37-62.	6.6	123
16	Facile and green production of aqueous graphene dispersions for biomedical applications. Nanoscale, 2015, 7, 6436-6443.	2.8	114
17	Type V Collagen in Scar Tissue Regulates the Size of Scar after Heart Injury. Cell, 2020, 182, 545-562.e23.	13.5	113
18	Minimally Invasive and Regenerative Therapeutics. Advanced Materials, 2019, 31, e1804041.	11.1	112

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19	Gelatin Methacryloylâ€Based Tactile Sensors for Medical Wearables. Advanced Functional Materials, 2020, 30, 2003601.	7.8	112
20	Bioconjugated Hydrogels for Tissue Engineering and Regenerative Medicine. Bioconjugate Chemistry, 2015, 26, 1984-2001.	1.8	111
21	Extrusion and Microfluidicâ€Based Bioprinting to Fabricate Biomimetic Tissues and Organs. Advanced Materials Technologies, 2020, 5, 1901044.	3.0	110
22	Gelatin Methacryloyl Microneedle Patches for Minimally Invasive Extraction of Skin Interstitial Fluid. Small, 2020, 16, e1905910.	5.2	104
23	Interdigitated array of Pt electrodes for electrical stimulation and engineering of aligned muscle tissue. Lab on A Chip, 2012, 12, 3491.	3.1	96
24	Biodegradable Î²â€Cyclodextrin Conjugated Gelatin Methacryloyl Microneedle for Delivery of Waterâ€Insoluble Drug. Advanced Healthcare Materials, 2020, 9, e2000527.	3.9	91
25	A Patch of Detachable Hybrid Microneedle Depot for Localized Delivery of Mesenchymal Stem Cells in Regeneration Therapy. Advanced Functional Materials, 2020, 30, 2000086.	7.8	91
26	Three-Dimensional Bioprinting of Functional Skeletal Muscle Tissue Using GelatinMethacryloyl-Alginate Bioinks. Micromachines, 2019, 10, 679.	1.4	87
27	Engineered Nanomembranes for Directing Cellular Organization Toward Flexible Biodevices. Nano Letters, 2013, 13, 3185-3192.	4.5	85
28	Non-transdermal microneedles for advanced drug delivery. Advanced Drug Delivery Reviews, 2020, 165-166, 41-59.	6.6	80
29	Stretchable and Bioadhesive Gelatin Methacryloyl-Based Hydrogels Enabled by in Situ Dopamine Polymerization. ACS Applied Materials & Interfaces, 2021, 13, 40290-40301.	4.0	72
30	Three-dimensional co-culture of C2C12/PC12 cells improves skeletal muscle tissue formation and function. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 582-595.	1.3	70
31	Electrochemical cytosensors for detection of breast cancer cells. Biosensors and Bioelectronics, 2020, 151, 111984.	5.3	69
32	Flexible patch with printable and antibacterial conductive hydrogel electrodes for accelerated wound healing. Biomaterials, 2022, 285, 121479.	5.7	68
33	The emergence of 3D bioprinting in organ-on-chip systems. Progress in Biomedical Engineering, 2019, 1, 012001.	2.8	67
34	Electrical stimulation as a biomimicry tool for regulating muscle cell behavior. Organogenesis, 2013, 9, 87-92.	0.4	65
35	Controlling Differentiation of Stem Cells for Developing Personalized Organâ€onâ€Chip Platforms. Advanced Healthcare Materials, 2018, 7, 1700426.	3.9	65
36	A perspective on 3D bioprinting in tissue regeneration. Bio-Design and Manufacturing, 2018, 1, 157-160.	3.9	61

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37	In situ three-dimensional printing for reparative and regenerative therapy. Biomedical Microdevices, 2019, 21, 42.	1.4	61
38	Harnessing the wide-range strain sensitivity of bilayered PEDOT:PSS films for wearable health monitoring. Matter, 2021, 4, 2886-2901.	5.0	59
39	Electrically regulated differentiation of skeletal muscle cells on ultrathin graphene-based films. RSC Advances, 2014, 4, 9534.	1.7	57
40	Biodegradable microneedle patch for transdermal gene delivery. Nanoscale, 2020, 12, 16724-16729.	2.8	57
41	Hydrogelâ€Enabled Transferâ€Printing of Conducting Polymer Films for Soft Organic Bioelectronics. Advanced Functional Materials, 2020, 30, 1906016.	7.8	55
42	Biofabrication of endothelial cell, dermal fibroblast, and multilayered keratinocyte layers for skin tissue engineering. Biofabrication, 2021, 13, 035030.	3.7	54
43	A Human Liverâ€onâ€aâ€Chip Platform for Modeling Nonalcoholic Fatty Liver Disease. Advanced Biology, 2019, 3, e1900104.	3.0	50
44	Smart Contact Lenses for Biosensing Applications. Advanced Intelligent Systems, 2021, 3, 2000263.	3.3	50
45	Drug delivery to the anterior segment of the eye: A review of current and future treatment strategies. International Journal of Pharmaceutics, 2021, 607, 120924.	2.6	49
46	Labâ€onâ€aâ€Contact Lens: Recent Advances and Future Opportunities in Diagnostics and Therapeutics. Advanced Materials, 2022, 34, e2108389.	11.1	48
47	Smart scaffolds in tissue regeneration. International Journal of Energy Production and Management, 2018, 5, 125-128.	1.9	44
48	Multimaterial bioprinting and combination of processing techniques towards the fabrication of biomimetic tissues and organs. Biofabrication, 2021, 13, 042002.	3.7	42
49	Recent developments in mussel-inspired materials for biomedical applications. Biomaterials Science, 2021, 9, 6653-6672.	2.6	42
50	Fiberâ€Assisted Molding (FAM) of Surfaces with Tunable Curvature to Guide Cell Alignment and Complex Tissue Architecture. Small, 2014, 10, 4851-4857.	5.2	41
51	Highly absorptive dressing composed of natural latex loaded with alginate for exudate control and healing of diabetic wounds. Materials Science and Engineering C, 2021, 119, 111589.	3.8	40
52	Graphene induces spontaneous cardiac differentiation in embryoid bodies. Nanoscale, 2016, 8, 7075-7084.	2.8	39
53	Mesoporous silica rods with cone shaped pores modulate inflammation and deliver BMP-2 for bone regeneration. Nano Research, 2020, 13, 2323-2331.	5.8	39
54	Antimicrobial coreâ€“shell electrospun nanofibers containing Ajwain essential oil for accelerating infected wound healing. International Journal of Pharmaceutics, 2021, 603, 120698.	2.6	39

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55	Carbon Nanotubes and Graphene-Based Nanomaterials for Stem Cell Differentiation and Tissue Regeneration. Journal of Nanoscience and Nanotechnology, 2016, 16, 8862-8880.	0.9	37
56	Gelatin methacryloyl hydrogel for glucose biosensing using Ni nanoparticles-reduced graphene oxide: An experimental and modeling study. Electrochimica Acta, 2018, 261, 275-283.	2.6	36
57	Ranking proposed models for attaining surface free energy of powders using contact angle measurements. International Journal of Adhesion and Adhesives, 2009, 29, 458-469.	1.4	35
58	A contactless electrical stimulator: application to fabricate functional skeletal muscle tissue. Biomedical Microdevices, 2013, 15, 109-115.	1.4	35
59	Facile and rapid generation of 3D chemical gradients within hydrogels for high-throughput drug screening applications. Biosensors and Bioelectronics, 2014, 59, 166-173.	5.3	35
60	State of the art in integrated biosensors for organ-on-a-chip applications. Current Opinion in Biomedical Engineering, 2021, 19, 100309.	1.8	34
61	Biochemical and Biophysical Cues in Matrix Design for Chronic and Diabetic Wound Treatment. Tissue Engineering - Part B: Reviews, 2017, 23, 9-26.	2.5	30
62	In Vitro Human Liver Model of Nonalcoholic Steatohepatitis by Coculturing Hepatocytes, Endothelial Cells, and Kupffer Cells. Advanced Healthcare Materials, 2019, 8, e1901379.	3.9	30
63	Cancerâ€onâ€aâ€Chip for Modeling Immune Checkpoint Inhibitor and Tumor Interactions. Small, 2021, 17, e2004282.	5.2	30
64	Applications of Carbon Nanotubes in Stem Cell Research. Journal of Biomedical Nanotechnology, 2014, 10, 2539-2561.	0.5	29
65	Dissolvable carboxymethyl cellulose/polyvinylpyrrolidone microneedle arrays for transdermal delivery of Amphotericin B to treat cutaneous leishmaniasis. International Journal of Biological Macromolecules, 2021, 182, 1310-1321.	3.6	29
66	Incorporation of Graphene Quantum Dots, Iron, and Doxorubicin in/on Ferritin Nanocages for Bimodal Imaging and Drug Delivery. Advanced Therapeutics, 2020, 3, 1900183.	1.6	28
67	Hydrogels containing metallic glass sub-micron wires for regulating skeletal muscle cell behaviour. Biomaterials Science, 2015, 3, 1449-1458.	2.6	27
68	Macroporous mesh of nanoporous gold in electrochemical monitoring of superoxide release from skeletal muscle cells. Biosensors and Bioelectronics, 2017, 88, 41-47.	5.3	27
69	Microengineered poly(HEMA) hydrogels for wearable contact lens biosensing. Lab on A Chip, 2020, 20, 4205-4214.	3.1	27
70	Recent Advances in Bioinspired Hydrogels: Materials, Devices, and Biosignal Computing. ACS Biomaterials Science and Engineering, 2023, 9, 2048-2069.	2.6	27
71	The Use of Microtechnology and Nanotechnology in Fabricating Vascularized Tissues. Journal of Nanoscience and Nanotechnology, 2014, 14, 487-500.	0.9	25
72	Mechanical Cues Regulating Proangiogenic Potential of Human Mesenchymal Stem Cells through YAPâ€Mediated Mechanosensing. Small, 2020, 16, e2001837.	5.2	25

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73	Synthesis of Injectable Shearâ€Thinning Biomaterials of Various Compositions of Gelatin and Synthetic Silicate Nanoplatelet. Biotechnology Journal, 2020, 15, e1900456.	1.8	25
74	On the kinetics of the capillary imbibition of a simple fluid through a designed nanochannel using the molecular dynamics simulation approach. Journal of Colloid and Interface Science, 2010, 352, 566-572.	5.0	24
75	Fabrication of poly(ethylene glycol) hydrogels containing vertically and horizontally aligned graphene using dielectrophoresis: An experimental and modeling study. Carbon, 2017, 123, 460-470.	5.4	24
76	Engineered hydrogels for brain tumor culture and therapy. Bio-Design and Manufacturing, 2020, 3, 203-226.	3.9	24
77	Coâ€Electrospun Silk Fibroin and Gelatin Methacryloyl Sheet Seeded with Mesenchymal Stem Cells for Tendon Regeneration. Small, 2022, 18, e2107714.	5.2	23
78	Rapid and high-throughput formation of 3D embryoid bodies in hydrogels using the dielectrophoresis technique. Lab on A Chip, 2014, 14, 3690-3694.	3.1	22
79	Curvature facilitates podocyte culture in a biomimetic platform. Lab on A Chip, 2018, 18, 3112-3128.	3.1	22
80	Non-invasive measurement of glucose uptake of skeletal muscle tissue models using a glucose nanobiosensor. Biosensors and Bioelectronics, 2013, 50, 194-201.	5.3	20
81	Bioengineered Multicellular Liver Microtissues for Modeling Advanced Hepatic Fibrosis Driven Through Nonâ€Alcoholic Fatty Liver Disease. Small, 2021, 17, e2007425.	5.2	20
82	MRI-Tracking of Dental Pulp Stem Cells In Vitro and In Vivo Using Dextran-Coated Superparamagnetic Iron Oxide Nanoparticles. Journal of Clinical Medicine, 2019, 8, 1418.	1.0	19
83	Antimicrobial Activity of Silver Containing Crosslinked Poly(Acrylic Acid) Fibers. Micromachines, 2019, 10, 829.	1.4	19
84	Synthetic Biology and Tissue Engineering: Toward Fabrication of Complex and Smart Cellular Constructs. Advanced Functional Materials, 2020, 30, 1909882.	7.8	19
85	A Microfabricated Sandwiching Assay for Nanoliter and Highâ€Throughput Biomarker Screening. Small, 2019, 15, e1900300.	5.2	18
86	Healthy and diseased in vitro models of vascular systems. Lab on A Chip, 2021, 21, 641-659.	3.1	18
87	Coaxial <scp>3D</scp> bioprinting of triâ€polymer scaffolds to improve the osteogenic and vasculogenic potential of cells in coâ€culture models. Journal of Biomedical Materials Research - Part A, 2022, 110, 1077-1089.	2.1	17
88	Effects of hydration level, temperature, side chain and backbone flexibility of the polymer on the proton transfer in short-side-chain perfluorosulfonic acid membranes at low humidity conditions. Journal of Membrane Science, 2011, 369, 339-349.	4.1	16
89	Fabrication of Carboxymethyl Chitosan Nanoparticles to Deliver Paclitaxel for Melanoma Treatment. ChemNanoMat, 2020, 6, 1373-1385.	1.5	16
90	Advances in microfabrication technologies in tissue engineering and regenerative medicine. Artificial Organs, 2022, 46, .	1.0	16

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91	Combined Effects of Electric Stimulation and Microgrooves in Cardiac Tissueâ€onâ€aâ€Chip for Drug Screening. Small Methods, 2020, 4, 2000438.	4.6	15
92	Engineered Muscle Tissues for Disease Modeling and Drug Screening Applications. Current Pharmaceutical Design, 2017, 23, 2991-3004.	0.9	15
93	An Artificial Intelligence Approach for Modeling and Prediction of Water Diffusion Inside a Carbon Nanotube. Nanoscale Research Letters, 2009, 4, 1054-1058.	3.1	14
94	Prediction and analysis of flow behavior of a polymer melt through nanochannels using artificial neural network and statistical methods. Microfluidics and Nanofluidics, 2010, 9, 319-328.	1.0	12
95	Rhodamine Conjugated Gelatin Methacryloyl Nanoparticles for Stable Cell Imaging. ACS Applied Bio Materials, 2020, 3, 6908-6918.	2.3	12
96	A novel computational approach to study proton transfer in perfluorosulfonic acid membranes. International Journal of Hydrogen Energy, 2010, 35, 3648-3655.	3.8	10
97	Everolimus Rescues the Phenotype of Elastin Insufficiency in Patient Induced Pluripotent Stem Cellâ€"Derived Vascular Smooth Muscle Cells. Arteriosclerosis, Thrombosis, and Vascular Biology, 2020, 40, 1325-1339.	1.1	10
98	Single-chain antibody-decorated Au nanocages@liposomal layer nanoprobes for targeted SERS imaging and remote-controlled photothermal therapy of melanoma cancer cells. Materials Science and Engineering C, 2021, 124, 112086.	3.8	10
99	Impact of Nanophase Hydroxyapatite-Based Biomaterials on Tissue Engineering. Journal of Bionanoscience, 2018, 12, 469-477.	0.4	10
100	An efficient tool for modeling and predicting fluid flow in nanochannels. Journal of Chemical Physics, 2009, 131, 184506.	1.2	9
101	A Facile Method for Controlled Fabrication of Hybrid Silver Nanoparticle-Poly(<i />-caprolactone) Fibrous Constructs with Antimicrobial Properties. Journal of Nanoscience and Nanotechnology, 2019, 19, 6949-6955.	0.9	9
102	Non-destructive mechanical assessment for optimization of 3D bioprinted soft tissue scaffolds. IScience, 2022, 25, 104251.	1.9	8
103	SPAER: Sparse Deep Convolutional Autoencoder Model to Extract Low Dimensional Imaging Biomarkers for Early Detection of Breast Cancer Using Dynamic Thermography. Applied Sciences (Switzerland), 2021, 11, 3248.	1.3	7
104	Enhancement of label-free biosensing of cardiac troponin I. , 2020, 11251, .		7
105	AN ARTIFICIAL NEURAL NETWORK APPROACH TO CAPILLARY RISE IN POROUS MEDIA. Chemical Engineering Communications, 2007, 195, 435-448.	1.5	6
106	Assessing the equation of state and comparing it with other relationships used for determining the surface tension of solids. Applied Surface Science, 2010, 256, 1983-1991.	3.1	6
107	Wearable Tactile Sensors: Gelatin Methacryloylâ€Based Tactile Sensors for Medical Wearables (Adv.) Tj ETQq1 1 0.784314 rgBT /Over	7.8	6
108	Graphene Quantum Dots for Fluorescent Labeling of Gelatinâ€Based Shearâ€Thinning Hydrogels. Advanced NanoBiomed Research, 2021, 1, 2000113.	1.7	6

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109	Impartially Validated Multiple Deep-Chain Models to Detect COVID-19 in Chest X-ray Using Latent Space Radiomics. Journal of Clinical Medicine, 2021, 10, 3100.	1.0	6
110	Microneedle Patches: Gelatin Methacryloyl Microneedle Patches for Minimally Invasive Extraction of Skin Interstitial Fluid (Small 16/2020). Small, 2020, 16, 2070086.	5.2	4
111	Hydrogels: Roomâ€Temperatureâ€Formed PEDOT:PSS Hydrogels Enable Injectable, Soft, and Healable Organic Bioelectronics (Adv. Mater. 1/2020). Advanced Materials, 2020, 32, 2070005.	11.1	3
112	Smart Contact Lenses for Biosensing Applications. Advanced Intelligent Systems, 2021, 3, 2170047.	3.3	3
113	Advances and challenges in bioprinting of biological tissues and organs. Artificial Organs, 2021, 45, 1441-1445.	1.0	3
114	A First-Principles Study on Water Flow Through Single-Walled Carbon Nanotubes Using Artificial Neural Network Method. Journal of Nanoscience and Nanotechnology, 2011, 11, 10227-10233.	0.9	2
115	Hall of Fame Article: Minimally Invasive and Regenerative Therapeutics (Adv. Mater. 1/2019). Advanced Materials, 2019, 31, 1970005.	11.1	2
116	Hydrogelâ€Enabled Transfer Printing: Hydrogelâ€Enabled Transferâ€Printing of Conducting Polymer Films for Soft Organic Bioelectronics (Adv. Funct. Mater. 6/2020). Advanced Functional Materials, 2020, 30, 2070038.	7.8	2
117	Microfabrication and Nanofabrication Techniques. , 2015, , 207-219.		1
118	Liverâ€onâ€aâ€Chip: A Human Liverâ€onâ€aâ€Chip Platform for Modeling Nonalcoholic Fatty Liver Disease (Adv.) Tj ETQq0 0 0 rgBT /Ov	3.0	1
119	Highâ€Throughput Drug Screening: A Microfabricated Sandwiching Assay for Nanoliter and Highâ€Throughput Biomarker Screening (Small 15/2019). Small, 2019, 15, 1970078.	5.2	1
120	Angiogenesis: Mechanical Cues Regulating Proangiogenic Potential of Human Mesenchymal Stem Cells through YAPâ€Mediated Mechanosensing (Small 25/2020). Small, 2020, 16, 2070142.	5.2	0
121	Tissue Engineering: Synthetic Biology and Tissue Engineering: Toward Fabrication of Complex and Smart Cellular Constructs (Adv. Funct. Mater. 26/2020). Advanced Functional Materials, 2020, 30, 2070169.	7.8	0
122	Graphene Quantum Dots for Fluorescent Labeling of Gelatinâ€Based Shearâ€Thinning Hydrogels. Advanced NanoBiomed Research, 2021, 1, 2170073.	1.7	0
123	Multifunctional Thermoresponsive Microcarriers for Highâ€Throughput Cell Culture and Enzymeâ€Free Cell Harvesting (Small 44/2021). Small, 2021, 17, 2170232.	5.2	0