Ali Tamayol

List of Publications by Citations

124 papers	8,715 citations	45 h-index	92 g-index
134 ext. papers	10,813 ext. citations	9.4 avg, IF	6.3 L-index

#	Paper	IF	Citations
124	Synthesis, properties, and biomedical applications of gelatin methacryloyl (GelMA) hydrogels. *Biomaterials*, **2015**, 73, 254-71	15.6	1167
123	25th anniversary article: Rational design and applications of hydrogels in regenerative medicine. *Advanced Materials*, **2014**, 26, 85-123	24	895
122	Graphene-based materials for tissue engineering. *Advanced Drug Delivery Reviews*, **2016**, 105, 255-274	18.5	404
121	A liver-on-a-chip platform with bioprinted hepatic spheroids. *Biofabrication*, **2016**, 8, 014101	10.5	353
120	Fiber-based tissue engineering: Progress, challenges, and opportunities. *Biotechnology Advances*, **2013**, 31, 669-87	17.8	330
119	Drug delivery systems and materials for wound healing applications. *Advanced Drug Delivery Reviews*, **2018**, 127, 138-166	18.5	294
118	Bioprinted Osteogenic and Vasculogenic Patterns for Engineering 3D Bone Tissue. *Advanced Healthcare Materials*, **2017**, 6, 1700015	10.1	222
117	Highly Elastic and Conductive Human-Based Protein Hybrid Hydrogels. *Advanced Materials*, **2016**, 28, 40-9	24	187
116	Gold Nanocomposite Bioink for Printing 3D Cardiac Constructs. *Advanced Functional Materials*, **2017**, 27, 1605352	15.6	173
115	A Bioactive Carbon Nanotube-Based Ink for Printing 2D and 3D Flexible Electronics. *Advanced Materials*, **2016**, 28, 3280-9	24	156
114	In vitro and in vivo analysis of visible light crosslinkable gelatin methacryloyl (GelMA) hydrogels. *Biomaterials Science*, **2017**, 5, 2093-2105	7.4	152
113	Glucose-Sensitive Hydrogel Optical Fibers Functionalized with Phenylboronic Acid. *Advanced Materials*, **2017**, 29, 1606380	24	142
112	Smart Bandage for Monitoring and Treatment of Chronic Wounds. *Small*, **2018**, 14, e1703509	11	142
111	Microfluidics for Advanced Drug Delivery Systems. *Current Opinion in Chemical Engineering*, **2015**, 7, 101-112	5.4	140
110	Elastic sealants for surgical applications. *European Journal of Pharmaceutics and Biopharmaceutics*, **2015**, 95, 27-39	5.7	132
109	A Textile Dressing for Temporal and Dosage Controlled Drug Delivery. *Advanced Functional Materials*, **2017**, 27, 1702399	15.6	130
108	Surgical Materials: Current Challenges and Nano-enabled Solutions. *Nano Today*, **2014**, 9, 574-589	17.9	128

107	Textile Technologies and Tissue Engineering: A Path Toward Organ Weaving. *Advanced Healthcare Materials*, **2016**, 5, 751-66	10.1	125
106	A highly adhesive and naturally derived sealant. *Biomaterials*, **2017**, 140, 115-127	15.6	122
105	Flexible pH-Sensing Hydrogel Fibers for Epidermal Applications. *Advanced Healthcare Materials*, **2016**, 5, 711-9	10.1	122
104	Composite Living Fibers for Creating Tissue Constructs Using Textile Techniques. *Advanced Functional Materials*, **2014**, 24, 4060-4067	15.6	118
103	Spatially and Temporally Controlled Hydrogels for Tissue Engineering. *Materials Science and Engineering Reports*, **2017**, 119, 1-35	30.9	115
102	3D Bioprinting in Skeletal Muscle Tissue Engineering. *Small*, **2019**, 15, e1805530	11	113
101	A Multifunctional Polymeric Periodontal Membrane with Osteogenic and Antibacterial Characteristics. *Advanced Functional Materials*, **2018**, 28, 1703437	15.6	111
100	Hydrogel Templates for Rapid Manufacturing of Bioactive Fibers and 3D Constructs. *Advanced Healthcare Materials*, **2015**, 4, 2146-2153	10.1	109
99	Highly Stretchable Potentiometric pH Sensor Fabricated via Laser Carbonization and Machining of Carbon-Polyaniline Composite. *ACS Applied Materials & Interfaces*, **2017**, 9, 9015-9023	9.5	101
98	Biodegradable nanofibrous polymeric substrates for generating elastic and flexible electronics. *Advanced Materials*, **2014**, 26, 5823-30	24	100
97	Magnetic Nanoparticles in Cancer Therapy and Diagnosis. *Advanced Healthcare Materials*, **2020**, 9, e1901058	10.1	96
96	Smart Bandages: The Future of Wound Care. *Trends in Biotechnology*, **2018**, 36, 1259-1274	15.1	94
95	A low-cost flexible pH sensor array for wound assessment. *Sensors and Actuators B: Chemical*, **2016**, 229, 609-617	8.5	91
94	Paper-based microfluidic system for tear electrolyte analysis. *Lab on A Chip*, **2017**, 17, 1137-1148	7.2	90
93	Patient-Specific Bioinks for 3D Bioprinting of Tissue Engineering Scaffolds. *Advanced Healthcare Materials*, **2018**, 7, e1701347	10.1	90
92	Stimuli-responsive hydrogels for manipulation of cell microenvironment: From chemistry to biofabrication technology. *Progress in Polymer Science*, **2019**, 98, 101147	29.6	80
91	Additive manufacturing of magnesium alloys. *Bioactive Materials*, **2020**, 5, 44-54	16.7	77
90	Dermal Patch with Integrated Flexible Heater for on Demand Drug Delivery. *Advanced Healthcare Materials*, **2016**, 5, 175-84	10.1	77

89	Rapid prototyping of whole-thermoplastic microfluidics with built-in microvalves using laser ablation and thermal fusion bonding. *Sensors and Actuators B: Chemical*, **2018**, 255, 100-109	8.5	70
88	Biodegradable elastic nanofibrous platforms with integrated flexible heaters for on-demand drug delivery. *Scientific Reports*, **2017**, 7, 9220	4.9	67
87	Fluid flow and forced convection heat transfer around a solid cylinder wrapped with a porous ring. *International Journal of Heat and Mass Transfer*, **2013**, 63, 91-100	4.9	63
86	Soft-Nanoparticle Functionalization of Natural Hydrogels for Tissue Engineering Applications. *Advanced Healthcare Materials*, **2019**, 8, e1900506	10.1	62
85	Nanostructured Fibrous Membranes with Rose Spike-Like Architecture. *Nano Letters*, **2017**, 17, 6235-6240	11.5	60
84	Microfluidic direct writer with integrated declogging mechanism for fabricating cell-laden hydrogel constructs. *Biomedical Microdevices*, **2014**, 16, 387-95	3.7	57
83	A Wirelessly Controlled Smart Bandage with 3D-Printed Miniaturized Needle Arrays. *Advanced Functional Materials*, **2020**, 30, 1905544	15.6	52
82	Single Cell Microgel Based Modular Bioinks for Uncoupled Cellular Micro- and Macroenvironments. *Advanced Healthcare Materials*, **2017**, 6, 1600913	10.1	51
81	Printing of Adhesive Hydrogel Scaffolds for the Treatment of Skeletal Muscle Injuries.. *ACS Applied Bio Materials*, **2020**, 3, 1568-1579	4.1	50
80	Microengineered 3D cell-laden thermoresponsive hydrogels for mimicking cell morphology and orientation in cartilage tissue engineering. *Biotechnology and Bioengineering*, **2017**, 114, 217-231	4.9	47
79	Human Periodontal Ligament- and Gingiva-derived Mesenchymal Stem Cells Promote Nerve Regeneration When Encapsulated in Alginate/Hyaluronic Acid 3D Scaffold. *Advanced Healthcare Materials*, **2017**, 6, 1700670	10.1	44
78	Micro and nanotechnologies for bone regeneration: Recent advances and emerging designs. *Journal of Controlled Release*, **2018**, 274, 35-55	11.7	44
77	Engineering Photocrosslinkable Bicomponent Hydrogel Constructs for Creating 3D Vascularized Bone. *Advanced Healthcare Materials*, **2017**, 6, 1601122	10.1	42
76	Mechanical and Biochemical Stimulation of 3D Multilayered Scaffolds for Tendon Tissue Engineering. *ACS Biomaterials Science and Engineering*, **2019**, 5, 2953-2964	5.5	41
75	Numerical analysis for curved vortex tube optimization. *International Communications in Heat and Mass Transfer*, **2014**, 50, 98-107	5.8	40
74	Nanobead-on-string composites for tendon tissue engineering. *Journal of Materials Chemistry B*, **2018**, 6, 3116-3127	7.3	38
73	Visible light crosslinkable human hair keratin hydrogels. *Bioengineering and Translational Medicine*, **2018**, 3, 37-48	14.8	38
72	Numerical analysis of the curvature effects on Ranque-Hilsch vortex tube refrigerators. *Applied Thermal Engineering*, **2014**, 65, 176-183	5.8	32

71	Process-Structure-Quality Relationships of Three-Dimensional Printed Poly(Caprolactone)-Hydroxyapatite Scaffolds. *Tissue Engineering - Part A*, **2020**, 26, 279-291	3.9	29
70	Biofabrication of natural hydrogels for cardiac, neural, and bone Tissue engineering Applications. *Bioactive Materials*, **2021**, 6, 3904-3923	16.7	29
69	Serpentine and leading-edge capillary pumps for microfluidic capillary systems. *Microfluidics and Nanofluidics*, **2015**, 18, 357-366	2.8	28
68	Nanofibrous Scaffolds with Biomimetic Composition for Skin Regeneration. *Applied Biochemistry and Biotechnology*, **2019**, 187, 1193-1203	3.2	28
67	Measurement of pressure drop and flow resistance in microchannels with integrated micropillars. *Microfluidics and Nanofluidics*, **2013**, 14, 711-721	2.8	27
66	Textile Processes for Engineering Tissues with Biomimetic Architectures and Properties. *Trends in Biotechnology*, **2016**, 34, 683-685	15.1	25
65	Ultrasound induced strain cytoskeleton rearrangement: An experimental and simulation study. *Journal of Biomechanics*, **2017**, 60, 39-47	2.9	24
64	Breathable hydrogel dressings containing natural antioxidants for management of skin disorders. *Journal of Biomaterials Applications*, **2019**, 33, 1265-1276	2.9	23
63	Adenosine-associated delivery systems. *Journal of Drug Targeting*, **2015**, 23, 580-96	5.4	22
62	Oxygen-Releasing Antibacterial Nanofibrous Scaffolds for Tissue Engineering Applications. *Polymers*, **2020**, 12,	4.5	22
61	The Positive Role of Curcumin-Loaded Salmon Nanoliposomes on the Culture of Primary Cortical Neurons. *Marine Drugs*, **2018**, 16,	6	21
60	Growth-Inhibitory Effect of Chitosan-Coated Liposomes Encapsulating Curcumin on MCF-7 Breast Cancer Cells. *Marine Drugs*, **2020**, 18,	6	21
59	Morphological and physical analysis of natural phospholipids-based biomembranes. *PLoS ONE*, **2014** , 9, e107435	3.7	20
58	Microneedle arrays for the treatment of chronic wounds. *Expert Opinion on Drug Delivery*, **2020**, 17, 1767-1780		20
57	Controlling cellular organization in bioprinting through designed 3D microcompartmentalization. *Applied Physics Reviews*, **2021**, 8, 021404	17.3	20
56	Cell-laden composite suture threads for repairing damaged tendons. *Journal of Tissue Engineering and Regenerative Medicine*, **2018**, 12, 1039-1048	4.4	20
55	3D-Printed Sugar-Based Stents Facilitating Vascular Anastomosis. *Advanced Healthcare Materials*, **2018**, 7, e1800702	10.1	20
54	Customizable Composite Fibers for Engineering Skeletal Muscle Models. *ACS Biomaterials Science and Engineering*, **2020**, 6, 1112-1123	5.5	18

53	Laterally Confined Microfluidic Patterning of Cells for Engineering Spatially Defined Vascularization. *Small*, **2016**, 12, 5132-5139	11	18
52	Ischemic optic neuropathy as a model of neurodegenerative disorder: A review of pathogenic mechanism of axonal degeneration and the role of neuroprotection. *Journal of the Neurological Sciences*, **2017**, 375, 430-441	3.2	17
51	The Effect of Poly (Glycerol Sebacate) Incorporation within Hybrid Chitin-Lignin Sol-Gel Nanofibrous Scaffolds. *Materials*, **2018**, 11,	3.5	17
50	Microfibrous silver-coated polymeric scaffolds with tunable mechanical properties. *RSC Advances*, **2017**, 7, 34331-34338	3.7	17
49	Nanofibrous Silver-Coated Polymeric Scaffolds with Tunable Electrical Properties. *Nanomaterials*, **2017**, 7,	5.4	17
48	Natural lecithin promotes neural network complexity and activity. *Scientific Reports*, **2016**, 6, 25777	4.9	17
47	Nanofibrous scaffolds with biomimetic structure. *Journal of Biomedical Materials Research - Part A*, **2018**, 106, 370-376	5.4	16
46	Cholesteryl Ester Liquid Crystal Nanofibers for Tissue Engineering Applications **2020**, 2, 1067-1073		16
45	A paper-based in vitro model for on-chip investigation of the human respiratory system. *Lab on A Chip*, **2016**, 16, 4319-4325	7.2	16
44	Sustainable drug release from polycaprolactone coated chitin-lignin gel fibrous scaffolds. *Scientific Reports*, **2020**, 10, 20428	4.9	15
43	Extrusion bioprinting: Recent progress, challenges, and future opportunities. *Bioprinting*, **2021**, 21, e00116	7	15
42	In Vivo Printing of Nanoenabled Scaffolds for the Treatment of Skeletal Muscle Injuries. *Advanced Healthcare Materials*, **2021**, 10, e2002152	10.1	15
41	Biomarkers and diagnostic tools for detection of Helicobacter pylori. *Applied Microbiology and Biotechnology*, **2016**, 100, 4723-34	5.7	14
40	Neuroprotective and Anti-Inflammatory Effects of Extract in a Mouse Model of Ischemic Optic Neuropathy. *Biomedicines*, **2018**, 6,	4.8	13
39	printing of growth factor-eluting adhesive scaffolds improves wound healing. *Bioactive Materials*, **2022**, 8, 296-308	16.7	13
38	In situ printing of scaffolds for reconstruction of bone defects. *Acta Biomaterialia*, **2021**, 127, 313-326	10.8	12
37	Electrospun Nanofibrous Membranes for Preventing Tendon Adhesion. *ACS Biomaterials Science and Engineering*, **2020**, 6, 4356-4376	5.5	10
36	Fibrous Systems as Potential Solutions for Tendon and Ligament Repair, Healing, and Regeneration. *Advanced Healthcare Materials*, **2021**, 10, e2001305	10.1	10

35	Miniaturized Needle Array-Mediated Drug Delivery Accelerates Wound Healing. *Advanced Healthcare Materials*, **2021**, 10, e2001800	10.1	10
34	Effects of ?Bioactive ?Marine-Derived ?Liposomes on ?Two ?Human ?Breast Cancer ??Cell Lines. *Marine Drugs*, **2020**, 18,	6	9
33	Time dependency of morphological remodeling of endothelial cells in response to substrate stiffness. *BioImpacts*, **2017**, 7, 41-47	3.5	9
32	A porous collagen-GAG scaffold promotes muscle regeneration following volumetric muscle loss injury. *Wound Repair and Regeneration*, **2020**, 28, 61-74	3.6	9
31	Tailored electrospun small-diameter graft for vascular prosthesis. *International Journal of Polymeric Materials and Polymeric Biomaterials*, **2017**, 66, 635-643	3	8
30	Characterization, mechanistic analysis and improving the properties of denture adhesives. *Dental Materials*, **2018**, 34, 120-131	5.7	8
29	Assessment of neuroprotective properties of Rhus coriaria L. ethanol extract in an in vitro model of retinal degeneration. *Journal of Herbal Medicine*, **2017**, 10, 45-52	2.3	7
28	Smart flexible wound dressing with wireless drug delivery **2015**,		7
27	3D Printed Anchoring Sutures for Permanent Shaping of Tissues. *Macromolecular Bioscience*, **2017**, 17, 1700304	5.5	6
26	3D-Printed Hydrogel-Filled Microneedle Arrays. *Advanced Healthcare Materials*, **2021**, 10, e2001922	10.1	6
25	Hydrogen Production by Immobilized Cells of Clostridium intestinale Strain URNW Using Alginate Beads. *Applied Biochemistry and Biotechnology*, **2021**, 193, 1558-1573	3.2	6
24	Bioinks and bioprinting strategies for skeletal muscle tissue engineering. *Advanced Materials*, **2021**, e2105883	29	5
23	Microfluidic Systems with Embedded Cell Culture Chambers for High-Throughput Biological Assays.. *ACS Applied Bio Materials*, **2020**, 3, 6661-6671	4.1	5
22	Tissue Regeneration: A Multifunctional Polymeric Periodontal Membrane with Osteogenic and Antibacterial Characteristics (Adv. Funct. Mater. 3/2018). *Advanced Functional Materials*, **2018**, 28, 1870021	15.6	4
21	Medical Textiles as Substrates for Tissue Engineering **2017**, 363-421		4
20	Colloidal multiscale porous adhesive (bio)inks facilitate scaffold integration.. *Applied Physics Reviews*, **2021**, 8, 041415	17.3	4
19	Multimodal sensing and therapeutic systems for wound healing and management: A review. *Sensors and Actuators Reports*, **2022**, 4, 100075	4.7	4
18	Fracture-Resistant and Bioresorbable Drug-Eluting Poly(glycerol Sebacate) Coils. *Advanced Therapeutics*, **2019**, 2, 1800109	4.9	4

17	Nanocomposite hydrogels for tissue engineering applications **2020**, 499-528		3
16	pH-Sensing Hydrogel Fibers: Flexible pH-Sensing Hydrogel Fibers for Epidermal Applications (Adv. Healthcare Mater. 6/2016). *Advanced Healthcare Materials*, **2016**, 5, 624-624	10.1	3
15	Three-Dimensional Printing Using a Maize Protein: Zein-Based Inks in Biomedical Applications. *ACS Biomaterials Science and Engineering*, **2021**, 7, 3964-3979	5.5	3
14	Tissue Engineering: Gold Nanocomposite Bioink for Printing 3D Cardiac Constructs (Adv. Funct. Mater. 12/2017). *Advanced Functional Materials*, **2017**, 27,	15.6	2
13	Smart Bandages: Smart Bandage for Monitoring and Treatment of Chronic Wounds (Small 33/2018). *Small*, **2018**, 14, 1870150	11	2
12	Bioactive Fibers: Hydrogel Templates for Rapid Manufacturing of Bioactive Fibers and 3D Constructs (Adv. Healthcare Mater. 14/2015). *Advanced Healthcare Materials*, **2015**, 4, 2050	10.1	2
11	Nanoengineered myogenic scaffolds for skeletal muscle tissue engineering.. *Nanoscale*, **2021**,	7.7	2
10	Nanoengineered Antiviral Fibrous Arrays with Rose-Thorn-Inspired Architectures **2021**, 3, 1566-1571		2
9	Corrugated Compliant Capacitor towards Smart Bandage Application **2021**,		2
8	Controlled self-assembly of microgels in microdroplets. *Sensors and Actuators B: Chemical*, **2021**, 348, 130693	8.5	2
7	hiPSC-derived 3D Bioprinted Skeletal Muscle Tissue Implants Regenerate Skeletal Muscle Following Volumetric Muscle Loss		2
6	(Bio)manufactured Solutions for Treatment of Bone Defects with an Emphasis on US-FDA Regulatory Science Perspective. *Advanced NanoBiomed Research*,2100073	0	1
5	Tailoring the spatial filament organization within nanofibrous tissue engineering scaffolds. *International Journal of Polymeric Materials and Polymeric Biomaterials*, **2020**, 1-10	3	1
4	Extrusion-based 3D (Bio)Printed Tissue Engineering Scaffolds: Process-Structure-Quality Relationships. *ACS Biomaterials Science and Engineering*, **2021**, 7, 4694-4717	5.5	1
3	Controlled release of azithromycin from polycaprolactone/chitosan nanofibrous membranes. *Journal of Drug Delivery Science and Technology*, **2022**, 103246	4.5	0
2	3D printing for soft musculoskeletal tissue engineering **2022**, 167-200		
1	Dissolvable Stents: 3D-Printed Sugar-Based Stents Facilitating Vascular Anastomosis (Adv. Healthcare Mater. 24/2018). *Advanced Healthcare Materials*, **2018**, 7, 1870088	10.1	