Shan-Hui Hsu

List of Publications by Citations

266 papers	10,519 citations	56 h-index	87 g-index
272 ext. papers	12,020 ext. citations	6.7 avg, IF	6.96 L-index

#	Paper	IF	Citations
266	Cytotoxicity and immunological response of gold and silver nanoparticles of different sizes. *Small*, **2009**, 5, 1553-61	11	452
265	Bacterial cellulose and bacterial cellulose-chitosan membranes for wound dressing applications. *Carbohydrate Polymers*, **2013**, 94, 603-11	10.3	411
264	An Injectable, Self-Healing Hydrogel to Repair the Central Nervous System. *Advanced Materials*, **2015**, 27, 3518-24	24	366
263	3D bioprinting of neural stem cell-laden thermoresponsive biodegradable polyurethane hydrogel and potential in central nervous system repair. *Biomaterials*, **2015**, 71, 48-57	15.6	297
262	Transplantation of bone marrow stromal cells for peripheral nerve repair. *Experimental Neurology*, **2007**, 204, 443-53	5.7	224
261	Water-based polyurethane 3D printed scaffolds with controlled release function for customized cartilage tissue engineering. *Biomaterials*, **2016**, 83, 156-68	15.6	166
260	Spheroid formation of mesenchymal stem cells on chitosan and chitosan-hyaluronan membranes. *Biomaterials*, **2011**, 32, 6929-45	15.6	166
259	Preparation of networks of gelatin and genipin as degradable biomaterials. *Materials Chemistry and Physics*, **2004**, 83, 204-208	4.4	151
258	The biocompatibility and antibacterial properties of waterborne polyurethane-silver nanocomposites. *Biomaterials*, **2010**, 31, 6796-808	15.6	148
257	Synthesis and 3D printing of biodegradable polyurethane elastomer by a water-based process for cartilage tissue engineering applications. *Advanced Healthcare Materials*, **2014**, 3, 1578-87	10.1	138
256	Review: Polymeric-Based 3D Printing for Tissue Engineering. *Journal of Medical and Biological Engineering*, **2015**, 35, 285-292	2.2	131
255	Preparation of controlled release ophthalmic drops, for glaucoma therapy using thermosensitive poly-N-isopropylacrylamide. *Biomaterials*, **2002**, 23, 457-62	15.6	128
254	Evaluation of chitosan-alginate-hyaluronate complexes modified by an RGD-containing protein as tissue-engineering scaffolds for cartilage regeneration. *Artificial Organs*, **2004**, 28, 693-703	2.6	124
253	Hydrogels Based on Schiff Base Linkages for Biomedical Applications. *Molecules*, **2019**, 24,	4.8	118
252	A graphene-polyurethane composite hydrogel as a potential bioink for 3D bioprinting and differentiation of neural stem cells. *Journal of Materials Chemistry B*, **2017**, 5, 8854-8864	7.3	100
251	Low-energy laser irradiation increases endothelial cell proliferation, migration, and eNOS gene expression possibly via PI3K signal pathway. *Lasers in Surgery and Medicine*, **2008**, 40, 46-54	3.6	95
250	Synthesis and Biomedical Applications of Self-healing Hydrogels. *Frontiers in Chemistry*, **2018**, 6, 449	5	93

249	A novel biodegradable self-healing hydrogel to induce blood capillary formation. *NPG Asia Materials*, **2017**, 9, e363-e363	10.3	89
248	Evaluation of chondrocyte growth in the highly porous scaffolds made by fused deposition manufacturing (FDM) filled with type II collagen. *Biomedical Microdevices*, **2009**, 11, 615-24	3.7	89
247	Enhanced thermal and mechanical properties and biostability of polyurethane containing silver nanoparticles. *Polymer Degradation and Stability*, **2006**, 91, 1017-1024	4.7	89
246	Poly(vinyl alcohol) Nanocomposites Reinforced with Bamboo Charcoal Nanoparticles: Mineralization Behavior and Characterization. *Materials*, **2015**, 8, 4895-4911	3.5	87
245	Antibacterial properties of silver nanoparticles in three different sizes and their nanocomposites with a new waterborne polyurethane. *International Journal of Nanomedicine*, **2010**, 5, 1017-28	7.3	84
244	Sciatic nerve repair by microgrooved nerve conduits made of chitosan-gold nanocomposites. *World Neurosurgery*, **2008**, 70 Suppl 1, S1:9-18		81
243	Evaluation of biodegradable polyesters modified by type II collagen and Arg-Gly-Asp as tissue engineering scaffolding materials for cartilage regeneration. *Artificial Organs*, **2006**, 30, 42-55	2.6	81
242	Viscoelastic behaviour at the thermal sol-gel transition of gelatin. *Polymer*, **1993**, 34, 2602-2608	3.9	81
241	Biocompatibility and biodegradation of a bone composite containing tricalcium phosphate and genipin crosslinked gelatin. *Journal of Biomedical Materials Research Part B*, **2004**, 69, 709-17		79
240	Preparation, Characterization, and Mechanism for Biodegradable and Biocompatible Polyurethane Shape Memory Elastomers. *ACS Applied Materials & Interfaces*, **2017**, 9, 5419-5429	9.5	78
239	The effect of high outflow permeability in asymmetric poly(dl-lactic acid-co-glycolic acid) conduits for peripheral nerve regeneration. *Biomaterials*, **2006**, 27, 1035-42	15.6	78
238	Biodegradable Water-Based Polyurethane Shape Memory Elastomers for Bone Tissue Engineering. *ACS Biomaterials Science and Engineering*, **2018**, 4, 1397-1406	5.5	76
237	Chitosan as Scaffold Materials: Effects of Molecular Weight and Degree of Deacetylation. *Journal of Polymer Research*, **2004**, 11, 141-147	2.7	76
236	Characterization of biodegradable polyurethane nanoparticles and thermally induced self-assembly in water dispersion. *ACS Applied Materials & Interfaces*, **2014**, 6, 5685-94	9.5	72
235	Evaluation of the antibacterial activity and biocompatibility for silver nanoparticles immobilized on nano silicate platelets. *ACS Applied Materials & Interfaces*, **2013**, 5, 433-43	9.5	72
234	Oriented Schwann cell growth on microgrooved surfaces. *Biotechnology and Bioengineering*, **2005**, 92, 579-88	4.9	71
233	Novel chitosan□ellulose nanofiber self-healing hydrogels to correlate self-healing properties of hydrogels with neural regeneration effects. *NPG Asia Materials*, **2019**, 11,	10.3	69
232	Substrate-dependent Wnt signaling in MSC differentiation within biomaterial-derived 3D spheroids. *Biomaterials*, **2013**, 34, 4725-38	15.6	69

231	3D bioprinting: A new insight into the therapeutic strategy of neural tissue regeneration. *Organogenesis*, **2015**, 11, 153-8	1.7	69
230	Peripheral nerve regeneration using a microporous polylactic acid asymmetric conduit in a rabbit long-gap sciatic nerve transection model. *Biomaterials*, **2011**, 32, 3764-75	15.6	67
229	Composites of waterborne polyurethane and cellulose nanofibers for 3D printing and bioapplications. *Carbohydrate Polymers*, **2019**, 212, 75-88	10.3	66
228	Substrate-dependent gene regulation of self-assembled human MSC spheroids on chitosan membranes. *BMC Genomics*, **2014**, 15, 10	4.5	66
227	Water-based synthesis and processing of novel biodegradable elastomers for medical applications. *Journal of Materials Chemistry B*, **2014**, 2, 5083-5092	7.3	66
226	Characterization of chitosan-gelatin scaffolds for dermal tissue engineering. *Journal of Tissue Engineering and Regenerative Medicine*, **2013**, 7, 20-31	4.4	66
225	Biocompatibility of poly(ether)urethane-gold nanocomposites. *Journal of Biomedical Materials Research - Part A*, **2006**, 79, 759-70	5.4	66
224	Accumulation and Toxicity of Superparamagnetic Iron Oxide Nanoparticles in Cells and Experimental Animals. *International Journal of Molecular Sciences*, **2016**, 17,	6.3	66
223	Glucose-sensitive self-healing hydrogel as sacrificial materials to fabricate vascularized constructs. *Biomaterials*, **2017**, 133, 20-28	15.6	65
222	The calcium-dependent regulation of spheroid formation and cardiomyogenic differentiation for MSCs on chitosan membranes. *Biomaterials*, **2012**, 33, 8943-54	15.6	65
221	Mesenchymal stem cells from a hypoxic culture improve and engraft Achilles tendon repair. *American Journal of Sports Medicine*, **2013**, 41, 1117-25	6.8	65
220	Biocompatibility of poly(epsilon-caprolactone)/poly(ethylene glycol) diblock copolymers with nanophase separation. *Biomaterials*, **2004**, 25, 5593-601	15.6	64
219	Biocompatibility and antimicrobial evaluation of montmorillonite/chitosan nanocomposites. *Applied Clay Science*, **2012**, 56, 53-62	5.2	62
218	The cellular responses and antibacterial activities of silver nanoparticles stabilized by different polymers. *Nanotechnology*, **2012**, 23, 065102	3.4	61
217	Enhanced Thermal and Mechanical Properties in Polyurethane/Au Nanocomposites. *Macromolecular Materials and Engineering*, **2004**, 289, 1096-1101	3.9	60
216	Water-Soluble Fullerene Derivatives as Brain Medicine: Surface Chemistry Determines If They Are Neuroprotective and Antitumor. *ACS Applied Materials & Interfaces*, **2017**, 9, 11482-11492	9.5	59
215	Substrate-mediated nanoparticle/gene delivery to MSC spheroids and their applications in peripheral nerve regeneration. *Biomaterials*, **2014**, 35, 2630-41	15.6	59
214	Characterization and biocompatibility of chitosan nanocomposites. *Colloids and Surfaces B: Biointerfaces*, **2011**, 85, 198-206	6	59

213	The behavior of endothelial cells on polyurethane nanocomposites and the associated signaling pathways. *Biomaterials*, **2009**, 30, 1502-11	15.6	59
212	A novel approach to align adult neural stem cells on micropatterned conduits for peripheral nerve regeneration: a feasibility study. *Artificial Organs*, **2009**, 33, 26-35	2.6	58
211	Calvarial bone response to a tricalcium phosphate-genipin crosslinked gelatin composite. *Biomaterials*, **2005**, 26, 3065-74	15.6	57
210	In vitro and in vivo evaluation of chitosan-gelatin scaffolds for cartilage tissue engineering. *Materials Science and Engineering C*, **2013**, 33, 2855-63	8.3	56
209	Sciatic nerve regeneration by cocultured Schwann cells and stem cells on microporous nerve conduits. *Cell Transplantation*, **2013**, 22, 2029-39	4	55
208	The promotion of chondrogenesis in adipose-derived adult stem cells by an RGD-chimeric protein in 3D alginate culture. *Biomaterials*, **2009**, 30, 6265-75	15.6	55
207	Preparation and characterization of a biodegradable polyurethane hydrogel and the hybrid gel with soy protein for 3D cell-laden bioprinting. *Journal of Materials Chemistry B*, **2016**, 4, 6694-6705	7.3	55
206	Synthesis and Characterization of Dual Stimuli-Sensitive Biodegradable Polyurethane Soft Hydrogels for 3D Cell-Laden Bioprinting. *ACS Applied Materials & Interfaces*, **2018**, 10, 29273-29287	9.5	54
205	Acquisition of epithelial-mesenchymal transition and cancer stem-like phenotypes within chitosan-hyaluronan membrane-derived 3D tumor spheroids. *Biomaterials*, **2014**, 35, 10070-9	15.6	54
204	Synthesis of Thermoresponsive Amphiphilic Polyurethane Gel as a New Cell Printing Material near Body Temperature. *ACS Applied Materials & Interfaces*, **2015**, 7, 27613-23	9.5	53
203	Sciatic nerve regeneration by microporous nerve conduits seeded with glial cell line-derived neurotrophic factor or brain-derived neurotrophic factor gene transfected neural stem cells. *Artificial Organs*, **2011**, 35, 363-72	2.6	52
202	Nylon textiles grafted with chitosan by open air plasma and their antimicrobial effect. *Fibers and Polymers*, **2009**, 10, 53-59	2	52
201	Evaluation of the growth of chondrocytes and osteoblasts seeded into precision scaffolds fabricated by fused deposition manufacturing. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2007**, 80, 519-27	3.5	52
200	Isolation of the multipotent MSC subpopulation from human gingival fibroblasts by culturing on chitosan membranes. *Biomaterials*, **2012**, 33, 2642-55	15.6	51
199	Nanoparticle uptake and gene transfer efficiency for MSCs on chitosan and chitosan-hyaluronan substrates. *Biomaterials*, **2012**, 33, 3639-50	15.6	51
198	Gold nanoparticles induce surface morphological transformation in polyurethane and affect the cellular response. *Biomacromolecules*, **2008**, 9, 241-8	6.9	51
197	Self-assembled adult adipose-derived stem cell spheroids combined with biomaterials promote wound healing in a rat skin repair model. *Wound Repair and Regeneration*, **2015**, 23, 57-64	3.6	50
196	Characterization, antimicrobial activities, and biocompatibility of organically modified clays and their nanocomposites with polyurethane. *ACS Applied Materials & Interfaces*, **2012**, 4, 338-50	9.5	50

195	Evaluation of type II collagen scaffolds reinforced by poly(epsilon-caprolactone) as tissue-engineered trachea. *Tissue Engineering - Part C: Methods*, **2008**, 14, 69-77	2.9	50
194	Microvessel scaffold with circular microchannels by photoresist melting. *Biomedical Microdevices*, **2007**, 9, 657-63	3.7	50
193	The effect of elastic biodegradable polyurethane electrospun nanofibers on the differentiation of mesenchymal stem cells. *Colloids and Surfaces B: Biointerfaces*, **2014**, 122, 414-422	6	49
192	Evaluation of biodegradable elastic scaffolds made of anionic polyurethane for cartilage tissue engineering. *Colloids and Surfaces B: Biointerfaces*, **2015**, 125, 34-44	6	47
191	The effects of low-intensity ultrasound on peripheral nerve regeneration in poly(DL-lactic acid-co-glycolic acid) conduits seeded with Schwann cells. *Ultrasound in Medicine and Biology*, **2004**, 30, 1079-84	3.5	47
190	Fabrication of the microgrooved/microporous polylactide substrates as peripheral nerve conduits and in vivo evaluation. *Tissue Engineering - Part A*, **2009**, 15, 1381-90	3.9	46
189	In vitro evaluation of degradation and cytotoxicity of a novel composite as a bone substitute. *Journal of Biomedical Materials Research - Part A*, **2003**, 67, 1163-9	5.4	46
188	Biodegradable polymer scaffolds. *Journal of Materials Chemistry B*, **2016**, 4, 7493-7505	7.3	45
187	Cell orientation and regulation of cell-cell communication in human mesenchymal stem cells on different patterns of electrospun fibers. *Biomedical Materials (Bristol)*, **2013**, 8, 055002	3.5	45
186	A scaffold-bioreactor system for a tissue-engineered trachea. *Biomaterials*, **2009**, 30, 4117-26	15.6	45
185	Transplantation of endothelial progenitor cells as therapeutics for cardiovascular diseases. *Cell Transplantation*, **2009**, 18, 1003-12	4	45
184	Fabrication and evaluation of microgrooved polymers as peripheral nerve conduits. *Biomedical Microdevices*, **2007**, 9, 665-74	3.7	45
183	Materials Nanoarchitectonics as Cell Regulators. *ChemNanoMat*, **2019**, 5, 692-702	3.5	44
182	Chondrogenesis from human placenta-derived mesenchymal stem cells in three-dimensional scaffolds for cartilage tissue engineering. *Tissue Engineering - Part A*, **2011**, 17, 1549-60	3.9	44
181	The static magnetic field accelerates the osteogenic differentiation and mineralization of dental pulp cells. *Cytotechnology*, **2010**, 62, 143-55	2.2	44
180	Modulation of Macrophage Phenotype by Biodegradable Polyurethane Nanoparticles: Possible Relation between Macrophage Polarization and Immune Response of Nanoparticles. *ACS Applied Materials & Interfaces*, **2018**, 10, 19436-19448	9.5	42
179	Fabrication of bioactive conduits containing the fibroblast growth factor 1 and neural stem cells for peripheral nerve regeneration across a 15 mm critical gap. *Biofabrication*, **2013**, 5, 035010	10.5	41
178	Biological performances of poly(ether)urethane–silver nanocomposites. *Nanotechnology*, **2007**, 18, 475101	3.4	41

177	Biocompatibility and biostability of a series of poly(carbonate)urethanes. *Colloids and Surfaces B: Biointerfaces*, **2004**, 36, 1-12	6	41
176	The effect of dynamic culture conditions on endothelial cell seeding and retention on small diameter polyurethane vascular grafts. *Medical Engineering and Physics*, **2005**, 27, 267-72	2.4	41
175	Low-intensity-ultrasound-accelerated nerve regeneration using cell-seeded poly(D,L-lactic acid-co-glycolic acid) conduits: an in vivo and in vitro study. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2005**, 75, 99-107	3.5	40
174	Double-Network Polyurethane-Gelatin Hydrogel with Tunable Modulus for High-Resolution 3D Bioprinting. *ACS Applied Materials & Interfaces*, **2019**, 11, 32746-32757	9.5	39
173	Fabrication of precision scaffolds using liquid-frozen deposition manufacturing for cartilage tissue engineering. *Tissue Engineering - Part A*, **2009**, 15, 965-75	3.9	38
172	Cell reprogramming by 3D bioprinting of human fibroblasts in polyurethane hydrogel for fabrication of neural-like constructs. *Acta Biomaterialia*, **2018**, 70, 57-70	10.8	37
171	Substrate-dependent modulation of 3D spheroid morphology self-assembled in mesenchymal stem cell-endothelial progenitor cell coculture. *Biomaterials*, **2014**, 35, 7295-307	15.6	37
170	In vitro study of a novel nanogold-collagen composite to enhance the mesenchymal stem cell behavior for vascular regeneration. *PLoS ONE*, **2014**, 9, e104019	3.7	37
169	Improved retention of endothelial cells seeded on polyurethane small-diameter vascular grafts modified by a recombinant RGD-containing protein. *Artificial Organs*, **2003**, 27, 1068-78	2.6	37
168	Evaluation of cellular affinity and compatibility to biodegradable polyesters and Type-II collagen-modified scaffolds using immortalized rat chondrocytes. *Artificial Organs*, **2002**, 26, 647-58	2.6	36
167	Novel flexible nerve conduits made of water-based biodegradable polyurethane for peripheral nerve regeneration. *Journal of Biomedical Materials Research - Part A*, **2017**, 105, 1383-1392	5.4	35
166	Neural differentiation on aligned fullerene C nanowhiskers. *Chemical Communications*, **2017**, 53, 11024-11027	5.8	35
165	A study on chitosan modification of polyester fabrics by atmospheric pressure plasma and its antibacterial effects. *Fibers and Polymers*, **2008**, 9, 307-311	2	35
164	Spheroid formation and enhanced cardiomyogenic potential of adipose-derived stem cells grown on chitosan. *BioResearch Open Access*, **2013**, 2, 28-39	2.4	34
163	Quantitative evaluation of motor function before and after engraftment of dopaminergic neurons in a rat model of Parkinson's disease. *Journal of Biomedical Science*, **2010**, 17, 9	13.3	34
162	Semi-Interpenetrating Polymer Network of Hyaluronan and Chitosan Self-Healing Hydrogels for Central Nervous System Repair. *ACS Applied Materials & Interfaces*, **2020**, 12, 40108-40120	9.5	34
161	Cryogel/hydrogel biomaterials and acupuncture combined to promote diabetic skin wound healing through immunomodulation. *Biomaterials*, **2021**, 269, 120608	15.6	34
160	Smart polymers for cell therapy and precision medicine. *Journal of Biomedical Science*, **2019**, 26, 73	13.3	33

159	Enhanced chondrogenic differentiation potential of human gingival fibroblasts by spheroid formation on chitosan membranes. *Tissue Engineering - Part A*, **2012**, 18, 67-79	3.9	33
158	The use of peptide-delivery to protect human adipose-derived adult stem cells from damage caused by the internalization of quantum dots. *Biomaterials*, **2008**, 29, 925-36	15.6	33
157	A novel use of genipin-fixed gelatin as extracellular matrix for peripheral nerve regeneration. *Journal of Biomaterials Applications*, **2004**, 19, 21-34	2.9	33
156	Compliance effects on small diameter polyurethane graft patency. *Journal of Biomedical Materials Research Part B*, **1993**, 27, 1269-79		33
155	3D printing of tubular scaffolds with elasticity and complex structure from multiple waterborne polyurethanes for tracheal tissue engineering. *Applied Materials Today*, **2018**, 12, 330-341	6.6	32
154	Biocompatibility of poly(carbonate urethane)s with various degrees of nanophase separation. *Macromolecular Bioscience*, **2005**, 5, 246-53	5.5	32
153	Effects of unidirectional permeability in asymmetric poly(DL-lactic acid-co-glycolic acid) conduits on peripheral nerve regeneration: an in vitro and in vivo study. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2007**, 83, 206-15	3.5	31
152	Biodegradable water-based polyurethane scaffolds with a sequential release function for cell-free cartilage tissue engineering. *Acta Biomaterialia*, **2019**, 88, 301-313	10.8	31
151	Chitosan promotes cancer progression and stem cell properties in association with Wnt signaling in colon and hepatocellular carcinoma cells. *Scientific Reports*, **2017**, 8, 45751	4.9	30
150	Biostability and biocompatibility of poly(ether)urethane containing gold or silver nanoparticles in a porcine model. *Journal of Biomedical Materials Research - Part A*, **2008**, 84, 785-94	5.4	30
149	Biostability and biocompatibility of poly(ester urethane)-gold nanocomposites. *Acta Biomaterialia*, **2008**, 4, 1797-808	10.8	30
148	In vitro and in vivo effects of Ginkgo biloba extract EGb 761 on seeded Schwann cells within poly(DL-lactic acid-co-glycolic acid) conduits for peripheral nerve regeneration. *Journal of Biomaterials Applications*, **2004**, 19, 163-82	2.9	30
147	The effect of an RGD-containing fusion protein CBD-RGD in promoting cellular adhesion. *Journal of Biotechnology*, **2004**, 111, 143-54	3.7	29
146	Comparative In Vitro Evaluation of Two Different Preparations of Small Diameter Polyurethane Vascular Grafts. *Artificial Organs*, **2000**, 24, 119-128	2.6	29
145	Self-Healing Hydrogels and Cryogels from Biodegradable Polyurethane Nanoparticle Crosslinked Chitosan. *Advanced Science*, **2020**, 7, 1901388	13.6	29
144	Synthesis of water-dispersible zinc oxide quantum dots with antibacterial activity and low cytotoxicity for cell labeling. *Nanotechnology*, **2013**, 24, 475102	3.4	28
143	Antimicrobial activities and cellular responses to natural silicate clays and derivatives modified by cationic alkylamine salts. *ACS Applied Materials & Interfaces*, **2009**, 1, 2556-64	9.5	28
142	Fabrication of PLGA microvessel scaffolds with circular microchannels using soft lithography. *Journal of Micromechanics and Microengineering*, **2007**, 17, 2000-2005	2	28

141	Chitosan-hyaluronan based 3D co-culture platform for studying the crosstalk of lung cancer cells and mesenchymal stem cells. *Acta Biomaterialia*, **2016**, 42, 157-167	10.8	27
140	Nanosheet transfection: effective transfer of naked DNA on silica glass. *NPG Asia Materials*, **2015**, 7, e184-e184	10.3	26
139	Non-viral delivery of an optogenetic tool into cells with self-healing hydrogel. *Biomaterials*, **2018**, 174, 31-40	15.6	26
138	Surfactant-modified nanoclay exhibits an antiviral activity with high potency and broad spectrum. *Journal of Virology*, **2014**, 88, 4218-28	6.6	26
137	Enhanced biocompatibility in biostable poly(carbonate)urethane. *Macromolecular Bioscience*, **2004**, 4, 464-70	5.5	26
136	Dynamic viscoelasticity study of the phase transition of poly(N-isopropylacrylamide). *Macromolecular Rapid Communications*, **2000**, 21, 476-480	4.8	26
135	Bioeffect of ultrasound on endothelial cells in vitro. *New Biotechnology*, **2004**, 21, 99-104		25
134	Effect of different solvents and crosslinkers on cytocompatibility of Type II collagen scaffolds for chondrocyte seeding. *Artificial Organs*, **2002**, 26, 18-26	2.6	25
133	Biomaterial substrate-derived compact cellular spheroids mimicking the behavior of pancreatic cancer and microenvironment. *Biomaterials*, **2019**, 213, 119202	15.6	24
132	Fractal Structure of Hydrogels Modulates Stem Cell Behavior. *ACS Macro Letters*, **2015**, 4, 1056-1061	6.6	24
131	Self-healing hydrogel for tissue repair in the central nervous system. *Neural Regeneration Research*, **2015**, 10, 1922-3	4.5	24
130	The substrate-dependent regeneration capacity of mesenchymal stem cell spheroids derived on various biomaterial surfaces. *Biomaterials Science*, **2014**, 2, 1652-1660	7.4	23
129	The effect of ultrasound stimulation versus bioreactors on neocartilage formation in tissue engineering scaffolds seeded with human chondrocytes in vitro. *New Biotechnology*, **2006**, 23, 259-64		23
128	Design Strategies of Conductive Hydrogel for Biomedical Applications. *Molecules*, **2020**, 25,	4.8	23
127	Synthesis of water-based cationic polyurethane for antibacterial and gene delivery applications. *Colloids and Surfaces B: Biointerfaces*, **2016**, 146, 825-32	6	23
126	Synthesis and characterization of waterborne polyurethane containing poly(3-hydroxybutyrate) as new biodegradable elastomers. *Journal of Materials Chemistry B*, **2015**, 3, 9089-9097	7.3	22
125	A facile method to prepare superparamagnetic iron oxide and hydrophobic drug-encapsulated biodegradable polyurethane nanoparticles. *International Journal of Nanomedicine*, **2017**, 12, 1775-1789	7.3	22
124	Substrate-mediated reprogramming of human fibroblasts into neural crest stem-like cells and their applications in neural repair. *Biomaterials*, **2016**, 102, 148-61	15.6	22

123	Mediation of the migration of endothelial cells and fibroblasts on polyurethane nanocomposites by the activation of integrin-focal adhesion kinase signaling. *Journal of Biomedical Materials Research - Part A*, **2012**, 100, 26-37	5.4	22
122	The regulation of the gap junction of human mesenchymal stem cells through the internalization of quantum dots. *Biomaterials*, **2009**, 30, 1937-46	15.6	22
121	Enhanced biostability of polyurethane containing gold nanoparticles. *Polymer Degradation and Stability*, **2004**, 85, 675-680	4.7	22
120	Biocompatibility and favorable response of mesenchymal stem cells on fibronectin-gold nanocomposites. *PLoS ONE*, **2013**, 8, e65738	3.7	22
119	Evaluation and characterization of waterborne biodegradable polyurethane films for the prevention of tendon postoperative adhesion. *International Journal of Nanomedicine*, **2018**, 13, 5485-5497	7.3	22
118	Spongelike Porous Silica Nanosheets: From "Soft" Molecular Trapping to DNA Delivery. *ACS Applied Materials & Interfaces*, **2017**, 9, 4509-4518	9.5	21
117	Biomaterial Substrate-Mediated Multicellular Spheroid Formation and Their Applications in Tissue Engineering. *Biotechnology Journal*, **2017**, 12, 1700064	5.6	21
116	In vitro biocompatibility of PTMO-based polyurethanes and those containing PDMS blocks. *Journal of Biomaterials Applications*, **2004**, 19, 135-46	2.9	21
115	Post-assembly dimension-dependent face-selective etching of fullerene crystals. *Materials Horizons* , **2020**, 7, 787-795	14.4	21
114	Effect of an Epineurial-Like Biohybrid Nerve Conduit on Nerve Regeneration. *Cell Transplantation*, **2016**, 25, 559-74	4	21
113	JSR photolithography based microvessel scaffold fabrication and cell seeding. *Biomedical Microdevices*, **2006**, 8, 17-23	3.7	20
112	Viscoelastic Behavior of Whey Protein Isolates at the Sol-Gel Transition Point. *Journal of Food Science*, **1996**, 61, 65-68	3.4	20
111	Thermo-Responsive Polyurethane Hydrogels Based on Poly(Ε-caprolactone) Diol and Amphiphilic Polylactide-Poly(Ethylene Glycol) Block Copolymers. *Polymers*, **2016**, 8,	4.5	20
110	Carboxyl-functionalized polyurethane nanoparticles with immunosuppressive properties as a new type of anti-inflammatory platform. *Nanoscale*, **2015**, 7, 20352-64	7.7	19
109	Preparation of Polyurethane-Graphene Nanocomposite and Evaluation of Neurovascular Regeneration. *ACS Biomaterials Science and Engineering*, **2020**, 6, 597-609	5.5	19
108	An injectable, self-healing phenol-functionalized chitosan hydrogel with fast gelling property and visible light-crosslinking capability for 3D printing. *Acta Biomaterialia*, **2021**, 122, 211-219	10.8	19
107	Cellular Spheroids of Mesenchymal Stem Cells and Their Perspectives in Future Healthcare. *Applied Sciences (Switzerland)*, **2019**, 9, 627	2.6	18
106	Cell attachment and proliferation on poly(carbonate urethanes) with various degrees of nanophase separation. *Macromolecular Bioscience*, **2004**, 4, 891-900	5.5	18

105	Using 3D bioprinting to produce mini-brain. *Neural Regeneration Research*, **2017**, 12, 1595-1596	4.5	18
104	Gene transfer on inorganic/organic hybrid silica nanosheets. *Physical Chemistry Chemical Physics*, **2015**, 17, 25455-62	3.6	17
103	Regulation of human endothelial progenitor cell maturation by polyurethane nanocomposites. *Biomaterials*, **2014**, 35, 6810-21	15.6	17
102	Chitosan derived co-spheroids of neural stem cells and mesenchymal stem cells for neural regeneration. *Colloids and Surfaces B: Biointerfaces*, **2017**, 158, 527-538	6	17
101	Efficacy and safety of nanohybrids comprising silver nanoparticles and silicate clay for controlling Salmonella infection. *International Journal of Nanomedicine*, **2012**, 7, 2421-32	7.3	17
100	The properties of gelatin-poly (gamma-glutamic acid) hydrogels as biological glues. *Biorheology*, **2007**, 44, 17-28	1.7	17
99	Toward Understanding the Antitumor Effects of Water-Soluble Fullerene Derivatives on Lung Cancer Cells: Apoptosis or Autophagy Pathways?. *Journal of Medicinal Chemistry*, **2019**, 62, 7111-7125	8.3	16
98	Surface modification of poly(Ecaprolactone) porous scaffolds using gelatin hydrogel as the tracheal replacement. *Journal of Tissue Engineering and Regenerative Medicine*, **2011**, 5, 156-62	4.4	16
97	Comparison between two different methods of immobilizing NGF in poly(DL-lactic acid-co-glycolic acid) conduit for peripheral nerve regeneration by EDC/NHS/MES and genipin. *Journal of Biomedical Materials Research - Part A*, **2011**, 99, 576-85	5.4	16
96	Fabrication of orderly nanostructured PLGA scaffolds using anodic aluminum oxide templates. *Biomedical Microdevices*, **2009**, 11, 843-50	3.7	16
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