Hsing-Wen Sung

List of Publications by Year
in descending order

255	23,522	4955 84	9579 142
papers	citations	h-index	g-index

266	266	266	25320
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Diverse Applications of Nanomedicine. ACS Nano, 2017, 11, 2313-2381.	7.3	976
2	A novel pH-sensitive hydrogel composed of N,O-carboxymethyl chitosan and alginate cross-linked by genipin for protein drug delivery. Journal of Controlled Release, 2004, 96, 285-300.	4.8	825
3	In vivo biocompatibility and degradability of a novel injectable-chitosan-based implant. Biomaterials, 2002, 23, 181-191.	5.7	501
4	In vitro evaluation of cytotoxicity of a naturally occurring cross-linking reagent for biological tissue fixation. Journal of Biomaterials Science, Polymer Edition, 1999, 10, 63-78.	1.9	423
5	Physically crosslinked alginate/N,O-carboxymethyl chitosan hydrogels with calcium for oral delivery of protein drugs. Biomaterials, 2005, 26, 2105-2113.	5.7	394
6	Highly cited research articles in Journal of Controlled Release: Commentaries and perspectives by authors. Journal of Controlled Release, 2014, 190, 29-74.	4.8	394
7	Recent advances in chitosan-based nanoparticles for oral delivery of macromolecules. Advanced Drug Delivery Reviews, 2013, 65, 865-879.	6.6	373
8	A review of the prospects for polymeric nanoparticle platforms in oral insulin delivery. Biomaterials, 2011, 32, 9826-9838.	5.7	371
9	Targeted nanoparticles for drug delivery through the bloodâ€“brain barrier for Alzheimer's disease. Journal of Controlled Release, 2005, 108, 193-214.	4.8	343
10	Preparation and Characterization of Nanoparticles Shelled with Chitosan for Oral Insulin Delivery. Biomacromolecules, 2007, 8, 146-152.	2.6	319
11	An Implantable Depot That Can Generate Oxygen in Situ for Overcoming Hypoxia-Induced Resistance to Anticancer Drugs in Chemotherapy. Journal of the American Chemical Society, 2016, 138, 5222-5225.	6.6	311
12	Drug release from chitosanâ€“alginate complex beads reinforced by a naturally occurring cross-linking agent. Carbohydrate Polymers, 2002, 48, 61-72.	5.1	294
13	Stimuliâ€Responsive Materials for Controlled Release of Theranostic Agents. Advanced Functional Materials, 2014, 24, 4206-4220.	7.8	294
14	Review of hydrodynamic principles for the cardiologist: Applications to the study of blood flow and jets by imaging techniques. Journal of the American College of Cardiology, 1988, 12, 1344-1353.	1.2	289
15	Mechanism and consequence of chitosan-mediated reversible epithelial tight junction opening. Biomaterials, 2011, 32, 6164-6173.	5.7	289
16	Feasibility study of a natural crosslinking reagent for biological tissue fixation. Journal of Biomedical Materials Research Part B, 1998, 42, 560-567.	3.0	283
17	In vivo evaluation of safety and efficacy of self-assembled nanoparticles for oral insulin delivery. Biomaterials, 2009, 30, 2329-2339.	5.7	265
18	Evaluation of gelatin hydrogel crosslinked with various crosslinking agents as bioadhesives:In vitro study. , 1999, 46, 520-530.		260

#	Article	IF	Citations
19	Enteric-coated capsules filled with freeze-dried chitosan/poly(Î³-glutamic acid) nanoparticles for oral insulin delivery. Biomaterials, 2010, 31, 3384-3394.	5.7	255
20	A Thermoresponsive Bubble-Generating Liposomal System for Triggering Localized Extracellular Drug Delivery. ACS Nano, 2013, 7, 438-446.	7.3	246
21	Synthesis and characterization of biodegradable TPP/genipin co-crosslinked chitosan gel beads. Polymer, 2003, 44, 6521-6530.	1.8	228
22	Electrical coupling of isolated cardiomyocyte clusters grown on aligned conductive nanofibrous meshes for their synchronized beating. Biomaterials, 2013, 34, 1063-1072.	5.7	228
23	Crosslinking of biological tissues using genipin and/or carbodiimide. Journal of Biomedical Materials Research Part B, 2003, 64A, 427-438.	3.0	224
24	pH-Responsive Nanoparticles Shelled with Chitosan for Oral Delivery of Insulin: From Mechanism to Therapeutic Applications. Accounts of Chemical Research, 2012, 45, 619-629.	7.6	206
25	Synthesis and characterization of a novel chitosan-based network prepared using naturally occurring crosslinker. Journal of Polymer Science Part A, 2000, 38, 2804-2814.	2.5	205
26	Effects of crosslinking degree of an acellular biological tissue on its tissue regeneration pattern. Biomaterials, 2004, 25, 3541-3552.	5.7	202
27	A Conductive Polymer Hydrogel Supports Cell Electrical Signaling and Improves Cardiac Function After Implantation into Myocardial Infarct. Circulation, 2015, 132, 772-784.	1.6	199
28	Preparation of Nanoparticles Composed of Chitosan/Poly-Î³-glutamic Acid and Evaluation of Their Permeability through Caco-2 Cells. Biomacromolecules, 2005, 6, 1104-1112.	2.6	196
29	Evaluation of gelatin hydrogel crosslinked with various crosslinking agents as bioadhesives: In vitro study. , 1999, 46, 520.		196
30	Stability of a biological tissue fixed with a naturally occurring crosslinking agent (genipin). Journal of Biomedical Materials Research Part B, 2001, 55, 538-546.	3.0	194
31	Opening of Epithelial Tight Junctions and Enhancement of Paracellular Permeation by Chitosan: Microscopic, Ultrastructural, and Computed-Tomographic Observations. Molecular Pharmaceutics, 2012, 9, 1271-1279.	2.3	194
32	The characteristics, cellular uptake and intracellular trafficking of nanoparticles made of hydrophobically-modified chitosan. Journal of Controlled Release, 2010, 146, 152-159.	4.8	192
33	Crosslinking structures of gelatin hydrogels crosslinked with genipin or a water-soluble carbodiimide. Journal of Applied Polymer Science, 2004, 91, 4017-4026.	1.3	191
34	pH-triggered injectable hydrogels prepared from aqueous N-palmitoyl chitosan: In vitro characteristics and in vivo biocompatibility. Biomaterials, 2009, 30, 4877-4888.	5.7	185
35	Genipin-crosslinked gelatin microspheres as a drug carrier for intramuscular administration:In vitro andin vivo studies. Journal of Biomedical Materials Research Part B, 2003, 65A, 271-282.	3.0	183
36	Protease inhibition and absorption enhancement by functional nanoparticles for effective oral insulin delivery. Biomaterials, 2012, 33, 2801-2811.	5.7	178

#	Article	IF	Citations
37	Characterization of tea catechins-loaded nanoparticles prepared from chitosan and an edible polypeptide. Food Hydrocolloids, 2013, 30, 33-41.	5.6	178
38	Paclitaxel-loaded poly(Î³-glutamic acid)-poly(lactide) nanoparticles as a targeted drug delivery system for the treatment of liver cancer. Biomaterials, 2006, 27, 2051-2059.	5.7	176
39	In vitro evaluation of a chitosan membrane cross-linked with genipin. Journal of Biomaterials Science, Polymer Edition, 2001, 12, 835-850.	1.9	172
40	Biodistribution, pharmacodynamics and pharmacokinetics of insulin analogues in a rat model: Oral delivery using pH-Responsive nanoparticles vs. subcutaneous injection. Biomaterials, 2010, 31, 6849-6858.	5.7	172
41	Multi-ion-crosslinked nanoparticles with pH-responsive characteristics for oral delivery of protein drugs. Journal of Controlled Release, 2008, 132, 141-149.	4.8	168
42	Biocompatibility study of a biological tissue fixed with a naturally occurring crosslinking reagent. Journal of Biomedical Materials Research Part B, 1998, 42, 568-576.	3.0	165
43	Nanoparticles with Dual Responses to Oxidative Stress and Reduced pH for Drug Release and Anti-inflammatory Applications. ACS Nano, 2014, 8, 1213-1221.	7.3	162
44	A pHâ€Responsive Carrier System that Generates NO Bubbles to Trigger Drug Release and Reverse Pâ€Glycoproteinâ€Mediated Multidrug Resistance. Angewandte Chemie - International Edition, 2015, 54, 9890-9893.	7.2	162
45	Heparin-functionalized chitosanâ€“alginate scaffolds for controlled release of growth factor. International Journal of Pharmaceutics, 2009, 376, 69-75.	2.6	161
46	Hyperthermia-Mediated Local Drug Delivery by a Bubble-Generating Liposomal System for Tumor-Specific Chemotherapy. ACS Nano, 2014, 8, 5105-5115.	7.3	160
47	In vivo evaluation of cellular and acellular bovine pericardia fixed with a naturally occurring crosslinking agent (genipin). Biomaterials, 2002, 23, 2447-2457.	5.7	157
48	In vitro evaluation of the genotoxicity of a naturally occurring crosslinking agent (genipin) for biologic tissue fixation. Journal of Biomedical Materials Research Part B, 2000, 52, 58-65.	3.0	155
49	Mechanisms of cellular uptake and intracellular trafficking with chitosan/DNA/poly(Î³-glutamic acid) complexes as a gene delivery vector. Biomaterials, 2011, 32, 239-248.	5.7	154
50	Crosslinking characteristics and mechanical properties of a bovine pericardium fixed with a naturally occurring crosslinking agent. , 1999, 47, 116-126.		152
51	Novel Method Using a Temperature-Sensitive Polymer (Methylcellulose) to Thermally Gel Aqueous Alginate as a pH-Sensitive Hydrogel. Biomacromolecules, 2004, 5, 1917-1925.	2.6	151
52	Smart Multifunctional Hollow Microspheres for the Quick Release of Drugs in Intracellular Lysosomal Compartments. Angewandte Chemie - International Edition, 2011, 50, 8086-8089.	7.2	148
53	Rapidly Self-Expandable Polymeric Stents with a Shape-Memory Property. Biomacromolecules, 2007, 8, 2774-2780.	2.6	142
54	Oral Delivery of Peptide Drugs Using Nanoparticles Self-Assembled by Poly(Î³-glutamic acid) and a Chitosan Derivative Functionalized by Trimethylation. Bioconjugate Chemistry, 2008, 19, 1248-1255.	1.8	137

#	Article	IF	Citations
55	Controlled Release of an Anti-inflammatory Drug Using an Ultrasensitive ROS-Responsive Gas-Generating Carrier for Localized Inflammation Inhibition. Journal of the American Chemical Society, 2015, 137, 12462-12465.	6.6	136
56	Acidity-triggered charge-convertible nanoparticles that can cause bacterium-specific aggregation in situ to enhance photothermal ablation of focal infection. Biomaterials, 2017, 116, 1-9.	5.7	135
57	Bioengineered cardiac patch constructed from multilayered mesenchymal stem cells for myocardial repair. Biomaterials, 2008, 29, 3547-3556.	5.7	134
58	A genipin-crosslinked gelatin membrane as wound-dressing material: in vitro and in vivo studies. Journal of Biomaterials Science, Polymer Edition, 2003, 14, 481-495.	1.9	132
59	Effective Photothermal Killing of Pathogenic Bacteria by Using Spatially Tunable Colloidal Gels with Nanoâ€Localized Heating Sources. Advanced Functional Materials, 2015, 25, 721-728.	7.8	132
60	Effects of chitosan-nanoparticle-mediated tight junction opening on the oral absorption of endotoxins. Biomaterials, 2011, 32, 8712-8721.	5.7	127
61	A novel drug-eluting stent spray-coated with multi-layers of collagen and sirolimus. Journal of Controlled Release, 2005, 108, 178-189.	4.8	126
62	Shell-crosslinked Pluronic L121 micelles as a drug delivery vehicle. Biomaterials, 2007, 28, 725-734.	5.7	126
63	Heparinized chitosan/poly(Î³-glutamic acid) nanoparticles for multi-functional delivery of fibroblast growth factor and heparin. Biomaterials, 2010, 31, 9320-9332.	5.7	125
64	Novel Living Cell Sheet Harvest System Composed of Thermoreversible Methylcellulose Hydrogels. Biomacromolecules, 2006, 7, 736-743.	2.6	119
65	Multidrug release based on microneedle arrays filled with pH-responsive PLGA hollow microspheres. Biomaterials, 2012, 33, 5156-5165.	5.7	119
66	An AS1411 aptamer-conjugated liposomal system containing a bubble-generating agent for tumor-specific chemotherapy that overcomes multidrug resistance. Journal of Controlled Release, 2015, 208, 42-51.	4.8	119
67	Polypyrrole-chitosan conductive biomaterial synchronizes cardiomyocyte contraction and improves myocardial electrical impulse propagation. Theranostics, 2018, 8, 2752-2764.	4.6	119
68	Effects of incorporation of poly(Î³-glutamic acid) in chitosan/DNA complex nanoparticles on cellular uptake and transfection efficiency. Biomaterials, 2009, 30, 1797-1808.	5.7	118
69	<i>In Situ</i> Nanoreactor for Photosynthesizing H₂ Gas To Mitigate Oxidative Stress in Tissue Inflammation. Journal of the American Chemical Society, 2017, 139, 12923-12926.	6.6	117
70	Synergistic antibacterial effects of localized heat and oxidative stress caused by hydroxyl radicals mediated by graphene/iron oxide-based nanocomposites. Nanomedicine: Nanotechnology, Biology, and Medicine, 2016, 12, 431-438.	1.7	113
71	Turbulent shear stress measurements in the vicinity of aortic heart valve prostheses. Journal of Biomechanics, 1986, 19, 433-442.	0.9	112
72	A Liposomal System Capable of Generating CO₂ Bubbles to Induce Transient Cavitation, Lysosomal Rupturing, and Cell Necrosis. Angewandte Chemie - International Edition, 2012, 51, 10089-10093.	7.2	112

#	Article	IF	Citations
73	Real-time visualization of pH-responsive PLGA hollow particles containing a gas-generating agent targeted for acidic organelles for overcoming multi-drug resistance. Biomaterials, 2013, 34, 1-10.	5.7	111
74	Preparation of nanoparticles composed of poly(Î³-glutamic acid)-poly(lactide) block copolymers and evaluation of their uptake by HepG2 cells. Journal of Controlled Release, 2005, 105, 213-225.	4.8	107
75	The characteristics, biodistribution and bioavailability of a chitosan-based nanoparticulate system for the oral delivery of heparin. Biomaterials, 2009, 30, 6629-6637.	5.7	106
76	Multifunctional core-shell polymeric nanoparticles for transdermal DNA delivery and epidermal Langerhans cells tracking. Biomaterials, 2010, 31, 2425-2434.	5.7	106
77	Selfâ€Assembled pHâ€Sensitive Nanoparticles: A Platform for Oral Delivery of Protein Drugs. Advanced Functional Materials, 2010, 20, 3695-3700.	7.8	104
78	Enhancing the Stiffness of Electrospun Nanofiber Scaffolds with a Controlled Surface Coating and Mineralization. Langmuir, 2011, 27, 9088-9093.	1.6	104
79	The glucose-lowering potential of exendin-4 orally delivered via a pH-sensitive nanoparticle vehicle and effects on subsequent insulin secretion in vivo. Biomaterials, 2011, 32, 2673-2682.	5.7	103
80	A rapid drug release system with a NIR light-activated molecular switch for dual-modality photothermal/antibiotic treatments of subcutaneous abscesses. Journal of Controlled Release, 2015, 199, 53-62.	4.8	102
81	Fixation of biological tissues with a naturally occurring crosslinking agent: Fixation rate and effects of pH, temperature, and initial fixative concentration. Journal of Biomedical Materials Research Part B, 2000, 52, 77-87.	3.0	98
82	The use of biodegradable polymeric nanoparticles in combination with a low-pressure gene gun for transdermal DNA delivery. Biomaterials, 2008, 29, 742-751.	5.7	96
83	Photothermal tumor ablation in mice with repeated therapy sessions using NIR-absorbing micellar hydrogels formed in situ. Biomaterials, 2015, 56, 26-35.	5.7	93
84	Mechanical properties of a porcine aortic valve fixed with a naturally occurring crosslinking agent. Biomaterials, 1999, 20, 1759-1772.	5.7	91
85	Direct intramyocardial injection of mesenchymal stem cell sheet fragments improves cardiac functions after infarction. Cardiovascular Research, 2008, 77, 515-524.	1.8	91
86	Conductive Materials for Healing Wounds: Their Incorporation in Electroactive Wound Dressings, Characterization, and Perspectives. Advanced Healthcare Materials, 2021, 10, e2001384.	3.9	88
87	The characteristics, biodistribution, magnetic resonance imaging and biodegradability of superparamagnetic coreâ€"shell nanoparticles. Biomaterials, 2010, 31, 1316-1324.	5.7	87
88	The use of injectable spherically symmetric cell aggregates self-assembled in a thermo-responsive hydrogel for enhanced cell transplantation. Biomaterials, 2009, 30, 5505-5513.	5.7	86
89	Modulation of tumor microenvironment using a TLR-7/8 agonist-loaded nanoparticle system that exerts low-temperature hyperthermia and immunotherapy for in situ cancer vaccination. Biomaterials, 2020, 230, 119629.	5.7	86
90	A Natural Compound (Ginsenoside Re) Isolated from Panax ginseng as a Novel Angiogenic Agent for Tissue Regeneration. Pharmaceutical Research, 2005, 22, 636-646.	1.7	82

#	Article	IF	Citations
91	Novel nanoparticles for oral insulin delivery via the paracellular pathway. Nanotechnology, 2007, 18, 105102.	1.3	82
92	A self-doping conductive polymer hydrogel that can restore electrical impulse propagation at myocardial infarct to prevent cardiac arrhythmia and preserve ventricular function. Biomaterials, 2020, 231, 119672.	5.7	82
93	Enhancement of cell retention and functional benefits in myocardial infarction using human amniotic-fluid stem-cell bodies enriched with endogenous ECM. Biomaterials, 2011, 32, 5558-5567.	5.7	81
94	Release of indomethacin from a novel chitosan microsphere prepared by a naturally occurring crosslinker: Examination of crosslinking and polycation-anionic drug interaction. Journal of Applied Polymer Science, 2001, 81, 1700-1711.	1.3	80
95	Intracellularly monitoring/imaging the release of doxorubicin from pH-responsive nanoparticles using FÃ¶rster resonance energy transfer. Biomaterials, 2011, 32, 2586-2592.	5.7	80
96	Spherically Symmetric Mesenchymal Stromal Cell Bodies Inherent with Endogenous Extracellular Matrices for Cellular Cardiomyoplasty. Stem Cells, 2009, 27, 724-732.	1.4	79
97	Cross-linking characteristics of biological tissues fixed with monofunctional or multifunctional epoxy compounds. Biomaterials, 1996, 17, 1405-1410.	5.7	78
98	Cardiac repair with injectable cell sheet fragments of human amniotic fluid stem cells in an immune-suppressed rat model. Biomaterials, 2010, 31, 6444-6453.	5.7	78
99	Paclitaxel-Loaded Poly(Î³-glutamic acid)-poly(lactide) Nanoparticles as a Targeted Drug Delivery System against Cultured HepG2 Cells. Bioconjugate Chemistry, 2006, 17, 291-299.	1.8	77
100	H₂O₂-Depleting and O₂-Generating Selenium Nanoparticles for Fluorescence Imaging and Photodynamic Treatment of Proinflammatory-Activated Macrophages. ACS Applied Materials & Interfaces, 2017, 9, 5158-5172.	4.0	77
101	A nanoscale drug-entrapment strategy for hydrogel-based systems for the delivery of poorly soluble drugs. Biomaterials, 2009, 30, 2102-2111.	5.7	76
102	Pulsatile Drug Release from PLGA Hollow Microspheres by Controlling the Permeability of Their Walls with a Magnetic Field. Small, 2012, 8, 3584-3588.	5.2	74
103	Elucidating the signaling mechanism of an epithelial tight-junction opening induced by chitosan. Biomaterials, 2012, 33, 6254-6263.	5.7	74
104	Gelatin-derived bioadhesives for closing skin wounds: An in vivo study. Journal of Biomaterials Science, Polymer Edition, 1999, 10, 751-771.	1.9	73
105	The characteristics and in vivo suppression of neointimal formation with sirolimus-eluting polymeric stents. Biomaterials, 2009, 30, 79-88.	5.7	73
106	Effects of pH on molecular mechanisms of chitosanâ€"integrin interactions and resulting tight-junction disruptions. Biomaterials, 2013, 34, 784-793.	5.7	72
107	Uniform Beads with Controllable Pore Sizes for Biomedical Applications. Small, 2010, 6, 1492-1498.	5.2	70
108	The use of cationic microbubbles to improve ultrasound-targeted gene delivery to the ischemic myocardium. Biomaterials, 2013, 34, 2107-2116.	5.7	70

#	Article	IF	Citations
109	Nanoparticle-induced tight-junction opening for the transport of an anti-angiogenic sulfated polysaccharide across Caco-2 cell monolayers. Acta Biomaterialia, 2013, 9, 7449-7459.	4.1	69
110	In vitro hemodynamic characteristics of tissue bioprostheses in the aortic position. Journal of Thoracic and Cardiovascular Surgery, 1986, 92, 198-209.	0.4	67
111	Effects of heparin immobilization on the surface characteristics of a biological tissue fixed with a naturally occurring crosslinking agent (genipin): an in vitro study. Biomaterials, 2001, 22, 523-533.	5.7	67
112	Enhancement of efficiencies of the cellular uptake and gene silencing of chitosan/siRNA complexes via the inclusion of a negatively charged poly(Î³-glutamic acid). Biomaterials, 2010, 31, 8780-8788.	5.7	67
113	Engineering a Nanoscale Alâ€MOFâ€Armored Antigen Carried by a â€œTrojan Horseâ€â€Like Platform for Oral Vaccination to Induce Potent and Longâ€Lasting Immunity. Advanced Functional Materials, 2019, 29, 1904828.	7.8	67
114	Effects of the nanostructure of dendrimer/DNA complexes on their endocytosis and gene expression. Biomaterials, 2010, 31, 5660-5670.	5.7	65
115	Mechanistic study of transfection of chitosan/DNA complexes coated by anionic poly(Î³-glutamic acid). Biomaterials, 2012, 33, 3306-3315.	5.7	63
116	Calcium depletion-mediated protease inhibition and apical-junctional-complex disassembly via an EGTA-conjugated carrier for oral insulin delivery. Journal of Controlled Release, 2013, 169, 296-305.	4.8	61
117	A FRET-guided, NIR-responsive bubble-generating liposomal system for inÂvivo targeted therapy with spatially and temporally precise controlled release. Biomaterials, 2016, 93, 48-59.	5.7	61
118	Photosynthesis-inspired H2 generation using a chlorophyll-loaded liposomal nanoplatform to detect and scavenge excess ROS. Nature Communications, 2020, 11, 534.	5.8	61
119	Injectable PLGA porous beads cellularized by hAFSCs for cellular cardiomyoplasty. Biomaterials, 2012, 33, 4069-4077.	5.7	60
120	Crosslinking characteristics of an epoxy-fixed porcine tendon: Effects of pH, temperature, and fixative concentration. , 1996, 31, 511-518.		59
121	Mechanical properties, drug eluting characteristics and in vivo performance of a genipin-crosslinked chitosan polymeric stent. Biomaterials, 2009, 30, 5560-5571.	5.7	59
122	Cellular Cardiomyoplasty with Human Amniotic Fluid Stem Cells: <i>In Vitro</i> and <i>In Vivo</i> Studies. Tissue Engineering - Part A, 2010, 16, 1925-1936.	1.6	59
123	Physicochemical, Antimicrobial, and Cytotoxic Characteristics of a Chitosan Film Cross-Linked by a Naturally Occurring Cross-Linking Agent, Aglycone Geniposidic Acid. Journal of Agricultural and Food Chemistry, 2006, 54, 3290-3296.	2.4	58
124	In vitro surface characterization of a biological patch fixed with a naturally occurring crosslinking agent. Biomaterials, 2000, 21, 1353-1362.	5.7	57
125	A genetically-encoded KillerRed protein as an intrinsically generated photosensitizer for photodynamic therapy. Biomaterials, 2014, 35, 500-508.	5.7	56
126	Synthesis of a Novel Glycoconjugated Chitosan and Preparation of Its Derived Nanoparticles for Targeting HepG2 Cells. Biomacromolecules, 2007, 8, 892-898.	2.6	54

#	Article	IF	Citations
127	Gelatin microspheres encapsulated with a nonpeptide angiogenic agent, ginsenoside Rg1, for intramyocardial injection in a rat model with infarcted myocardium. Journal of Controlled Release, 2007, 120, 27-34.	4.8	54
128	Porous tissue grafts sandwiched with multilayered mesenchymal stromal cell sheets induce tissue regeneration for cardiac repair. Cardiovascular Research, 2008, 80, 88-95.	1.8	54
129	Construction of varying porous structures in acellular bovine pericardia as a tissue-engineering extracellular matrix. Biomaterials, 2005, 26, 1905-1913.	5.7	53
130	Porous acellular bovine pericardia seeded with mesenchymal stem cells as a patch to repair a myocardial defect in a syngeneic rat model. Biomaterials, 2006, 27, 5409-5419.	5.7	52
131	A conductive cell-delivery construct as a bioengineered patch that can improve electrical propagation and synchronize cardiomyocyte contraction for heart repair. Journal of Controlled Release, 2020, 320, 73-82.	4.8	51
132	A Dual-Emission FÃ¶rster Resonance Energy Transfer Nanoprobe for Sensing/Imaging pH Changes in the Biological Environment. ACS Nano, 2010, 4, 7467-7474.	7.3	50
133	In situ depot comprising phase-change materials that can sustainably release a gasotransmitter H2S to treat diabetic wounds. Biomaterials, 2017, 145, 1-8.	5.7	50
134	Construction and characterization of fragmented mesenchymal-stem-cell sheets for intramuscular injection. Biomaterials, 2007, 28, 4643-4651.	5.7	49
135	Noninvasive imaging oral absorption of insulin delivered by nanoparticles and its stimulated glucose utilization in controlling postprandial hyperglycemia during OGTT in diabetic rats. Journal of Controlled Release, 2013, 172, 513-522.	4.8	49
136	Combination therapy via oral co-administration of insulin- and exendin-4-loaded nanoparticles to treat type 2 diabetic rats undergoing OGTT. Biomaterials, 2013, 34, 7994-8001.	5.7	49
137	Stability of angiogenic agents, ginsenoside Rg1 and Re, isolated from Panax ginseng: In vitro and in vivo studies. International Journal of Pharmaceutics, 2007, 328, 168-176.	2.6	47
138	Pore-Filling Nanoporous Templates from Degradable Block Copolymers for Nanoscale Drug Delivery. ACS Nano, 2009, 3, 2660-2666.	7.3	47
139	Two-dimensional velocity measurements in a pulsatile flow model of the normal abdominal aorta simulating different hemodynamic conditions. Journal of Biomechanics, 1993, 26, 1237-1247.	0.9	46
140	Single-injecting, bioinspired nanocomposite hydrogel that can recruit host immune cells in situ to elicit potent and long-lasting humoral immune responses. Biomaterials, 2019, 216, 119268.	5.7	46
141	An Inâ€…Situ Depot for Continuous Evolution of Gaseous H₂ Mediated by a Magnesium Passivation/Activation Cycle for Treating Osteoarthritis. Angewandte Chemie - International Edition, 2018, 57, 9875-9879.	7.2	46
142	Complete destruction of deep-tissue buried tumors via combination of gene silencing and gold nanoechinus-mediated photodynamic therapy. Biomaterials, 2015, 62, 13-23.	5.7	45
143	The conductive function of biopolymer corrects myocardial scar conduction blockage and resynchronizes contraction to prevent heart failure. Biomaterials, 2020, 258, 120285.	5.7	45
144	Reconstruction of the right ventricular outflow tract with a bovine jugular vein graft fixed with a naturally occurring crosslinking agent (genipin) in a canine model. Journal of Thoracic and Cardiovascular Surgery, 2001, 122, 1208-1218.	0.4	44

#	Article	IF	Citations
145	Novel Method of Forming Human Embryoid Bodies in a Polystyrene Dish Surface-Coated with a Temperature-Responsive Methylcellulose Hydrogel. Biomacromolecules, 2007, 8, 2746-2752.	2.6	44
146	Fabrication of chondroitin sulfate-chitosan composite artificial extracellular matrix for stabilization of fibroblast growth factor. Journal of Biomedical Materials Research - Part A, 2006, 76A, 1-15.	2.1	43
147	The use of MMP2 antibody-conjugated cationic microbubble to target the ischemic myocardium, enhance Timp3 gene transfection and improve cardiac function. Biomaterials, 2014, 35, 1063-1073.	5.7	43
148	Three-dimensional cell aggregates composed of HUVECs and cbMSCs for therapeutic neovascularization in a mouse model of hindlimb ischemia. Biomaterials, 2013, 34, 1995-2004.	5.7	42
149	Recent advances in CO2 bubble-generating carrier systems for localized controlled release. Biomaterials, 2017, 133, 154-164.	5.7	42
150	A Novel Method for the Synthesis of the PEG-Crosslinked Chitosan with a pH-Independent Swelling Behavior. Macromolecular Bioscience, 2005, 5, 925-928.	2.1	39
151	Cell-free xenogenic vascular grafts fixed with glutaraldehyde or genipin: In vitro and in vivo studies. Journal of Biotechnology, 2005, 120, 207-219.	1.9	39
152	A translational approach in using cell sheet fragments of autologous bone marrow-derived mesenchymal stem cells for cellular cardiomyoplasty in a porcine model. Biomaterials, 2013, 34, 4582-4591.	5.7	39
153	A Noninvasive Gutâ€toâ€Brain Oral Drug Delivery System for Treating Brain Tumors. Advanced Materials, 2021, 33, e2100701.	11.1	38
154	A natural compound (reuterin) produced by Lactobacillus reuteri for biological-tissue fixation. Biomaterials, 2003, 24, 1335-1347.	5.7	37
155	Acellular Biological Tissues Containing Inherent Glycosaminoglycans for Loading Basic Fibroblast Growth Factor Promote Angiogenesis and Tissue Regeneration. Tissue Engineering, 2006, 12, 2499-2508.	4.9	37
156	Engineering Nanoâ€•and Microparticles as Oral Delivery Vehicles to Promote Intestinal Lymphatic Drug Transport. Advanced Materials, 2021, 33, e2104139.	11.1	37
157	Thiol-Modified Chitosan Sulfate Nanoparticles for Protection and Release of Basic Fibroblast Growth Factor. Bioconjugate Chemistry, 2010, 21, 28-38.	1.8	36
158	CD44-specific nanoparticles for redox-triggered reactive oxygen species production and doxorubicin release. Acta Biomaterialia, 2016, 35, 280-292.	4.1	36
159	Degradation potential of biological tissues fixed with various fixatives: Anin vitro study. , 1997, 35, 147-155.		35
160	pH-sensitive behavior of two-component hydrogels composed of N,O-carboxymethyl chitosan and alginate. Journal of Biomaterials Science, Polymer Edition, 2005, 16, 1333-1345.	1.9	35
161	Tissue regeneration observed in a basic fibroblast growth factorâ€"loaded porous acellular bovine pericardium populated with mesenchymal stem cells. Journal of Thoracic and Cardiovascular Surgery, 2007, 134, 65-73.e4.	0.4	34
162	Hypoxia-induced therapeutic neovascularization in a mouse model of an ischemic limb using cell aggregates composed of HUVECs and cbMSCs. Biomaterials, 2013, 34, 9441-9450.	5.7	34

#	Article	IF	Citations
163	FRET-Based Dual-Emission and pH-Responsive Nanocarriers for Enhanced Delivery of Protein Across Intestinal Epithelial Cell Barrier. ACS Applied Materials & Interfaces, 2014, 6, 18275-18289.	4.0	34
164	Enhancement of cell adhesion, retention, and survival of HUVEC/cbMSC aggregates that are transplanted in ischemic tissues by concurrent delivery of an antioxidant for therapeutic angiogenesis. Biomaterials, 2016, 74, 53-63.	5.7	34
165	Crosslinking characteristics of porcine tendons: Effects of fixation with glutaraldehyde or epoxy. , 1996, 30, 361-367.		33
166	Self-organized nanoparticles prepared by guanidine- and disulfide-modified chitosan as a gene delivery carrier. Journal of Materials Chemistry, 2011, 21, 16918.	6.7	33
167	In Situ Selfâ€Assembling Micellar Depots that Can Actively Trap and Passively Release NO with Longâ€Lasting Activity to Reverse Osteoporosis. Advanced Materials, 2018, 30, e1705605.	11.1	33
168	Strategies for improving diabetic therapy via alternative administration routes that involve stimuli-responsive insulin-delivering systems. Advanced Drug Delivery Reviews, 2019, 139, 71-82.	6.6	33
169	Coreâ€"shell cell bodies composed of human cbMSCs and HUVECs for functional vasculogenesis. Biomaterials, 2011, 32, 8446-8455.	5.7	32
170	Nanoparticle- and biomaterials-mediated oral delivery for drug, gene, and immunotherapy. Advanced Drug Delivery Reviews, 2013, 65, 757-758.	6.6	32
171	Phaseâ€Changeable Nanoemulsions for Oral Delivery of a Therapeutic Peptide: Toward Targeting the Pancreas for Antidiabetic Treatments Using Lymphatic Transport. Advanced Functional Materials, 2019, 29, 1809015.	7.8	32
172	Engineering an integrated electroactive dressing to accelerate wound healing and monitor noninvasively progress of healing. Nano Energy, 2022, 99, 107393.	8.2	32
173	Influence of Abdominal Aortic Curvature and Resting Versus Exercise Conditions on Velocity Fields in the Normal Abdominal Aortic Bifurcation. Journal of Biomechanical Engineering, 1994, 116, 347-354.	0.6	31
174	Loading of a Novel Angiogenic Agent, Ginsenoside Rg1 in an Acellular Biological Tissue for Tissue Regeneration. Tissue Engineering, 2005, 11, 835-846.	4.9	31
175	Rapidly in situ forming hydrophobically-modified chitosan hydrogels via pH-responsive nanostructure transformation. Soft Matter, 2009, 5, 962.	1.2	31
176	Cellular Organelle-Dependent Cytotoxicity of Iron Oxide Nanoparticles and Its Implications for Cancer Diagnosis and Treatment: A Mechanistic Investigation. Chemistry of Materials, 2016, 28, 9017-9025.	3.2	31
177	Safety and efficacy of self-assembling bubble carriers stabilized with sodium dodecyl sulfate for oral delivery of therapeutic proteins. Journal of Controlled Release, 2017, 259, 168-175.	4.8	31
178	Vascularization and restoration of heart function in rat myocardial infarction using transplantation of human cbMSC/HUVEC core-shell bodies. Biomaterials, 2012, 33, 2127-2136.	5.7	30
179	Enhancement of efficiency of chitosan-based complexes for gene transfection with poly(Î³-glutamic) Tj ETQq1 1 0.784314 rgBT /Overlo 2014, 193, 304-315.	4.8	30
180	A self-powered battery-driven drug delivery device that can function as a micromotor and galvanically actuate localized payload release. Nano Energy, 2019, 66, 104120.	8.2	30

#	Article	IF	Citations
181	Tissue regeneration observed in a porous acellular bovine pericardium used to repair a myocardial defect in the right ventricle of a rat model. Journal of Thoracic and Cardiovascular Surgery, 2005, 130, 705.e1-705.e10.	0.4	29
182	Columnar Mesophases of the Complexes of DNA with Low-Generation Poly(amido amine) Dendrimers. Biomacromolecules, 2009, 10, 773-783.	2.6	29
183	Inflammationâ€Induced Drug Release by using a pHâ€Responsive Gasâ€Generating Hollowâ€Microsphere System for the Treatment of Osteomyelitis. Advanced Healthcare Materials, 2014, 3, 1854-1861.	3.9	29
184	Injectable Cell Constructs Fabricated via Culture on a Thermoresponsive Methylcellulose Hydrogel System for the Treatment of Ischemic Diseases. Advanced Healthcare Materials, 2014, 3, 1133-1148.	3.9	29
185	Feasibility study using a natural compound (reuterin) produced byLactobacillus reuteri in sterilizing and crosslinking biological tissues. Journal of Biomedical Materials Research Part B, 2002, 61, 360-369.	3.0	28
186	Acellular Bovine Pericardia with Distinct Porous Structures Fixed with Genipin as an Extracellular Matrix. Tissue Engineering, 2004, 10, 881-892.	4.9	28
187	Chitosan: Its Applications in Drug-Eluting Devices. Advances in Polymer Science, 2011, , 185-230.	0.4	28
188	Oral Nonviral Gene Delivery for Chronic Protein Replacement Therapy. Advanced Science, 2018, 5, 1701079.	5.6	28
189	In situ self-spray coating system that can uniformly disperse a poorly water-soluble H2S donor on the colorectal surface to treat inflammatory bowel diseases. Biomaterials, 2018, 182, 289-298.	5.7	28
190	Stimuli-responsive materials prepared from carboxymethyl chitosan and poly(Î³-glutamic acid) for protein delivery. Carbohydrate Polymers, 2012, 87, 531-536.	5.1	27
191	Preservation of conductive propagation after surgical repair of cardiac defects with a bio-engineered conductive patch. Journal of Heart and Lung Transplantation, 2018, 37, 912-924.	0.3	27
192	Magnetically Directed Self-Assembly of Electrospun Superparamagnetic Fibrous Bundles to Form Three-Dimensional Tissues with a Highly Ordered Architecture. Tissue Engineering - Part C: Methods, 2011, 17, 651-661.	1.1	26
193	Self-assembling bubble carriers for oral protein delivery. Biomaterials, 2015, 64, 115-124.	5.7	26
194	A strategy for fabrication of a three-dimensional tissue construct containing uniformly distributed embryoid body-derived cells as a cardiac patch. Biomaterials, 2010, 31, 6218-6227.	5.7	25
195	Heparinization on pericardial substitutes can reduce adhesion and epicardial inflammation in the dog. Journal of Thoracic and Cardiovascular Surgery, 1998, 115, 1111-1120.	0.4	24
196	Tissue regeneration patterns in acellular bovine pericardia implanted in a canine model as a vascular patch. Journal of Biomedical Materials Research Part B, 2004, 69A, 323-333.	3.0	24
197	An Intestinal â€œTransformersâ€like Nanocarrier System for Enhancing the Oral Bioavailability of Poorly Water-Soluble Drugs. ACS Nano, 2018, 12, 6389-6397.	7.3	24
198	The effect of galectin 1 on 3T3 cell proliferation on chitosan membranes. Biomaterials, 2004, 25, 3603-3611.	5.7	22

#	Article	IF	Citations
199	Development of NS3/4A Protease-Based Reporter Assay Suitable for Efficiently Assessing Hepatitis C Virus Infection. Antimicrobial Agents and Chemotherapy, 2009, 53, 4825-4834.	1.4	22
200	Peritoneal Regeneration Induced by an Acellular Bovine Pericardial Patch in the Repair of Abdominal Wall Defects. Journal of Surgical Research, 2005, 127, 85-92.	0.8	21
201	Multimodality noninvasive imaging for assessing therapeutic effects of exogenously transplanted cell aggregates capable of angiogenesis on acute myocardial infarction. Biomaterials, 2015, 73, 12-22.	5.7	21
202	A bubble bursting-mediated oral drug delivery system that enables concurrent delivery of lipophilic and hydrophilic chemotherapeutics for treating pancreatic tumors in rats. Biomaterials, 2020, 255, 120157.	5.7	21
203	Engineering a biomimetic bone scaffold that can regulate redox homeostasis and promote osteogenesis to repair large bone defects. Biomaterials, 2022, 286, 121574.	5.7	21
204	Biomimetic Engineering of a Scavengerâ€Free Nitric Oxideâ€Generating/Delivering System to Enhance Radiation Therapy. Small, 2020, 16, e2000655.	5.2	19
205	Localized sequence-specific release of a chemopreventive agent and an anticancer drug in a time-controllable manner to enhance therapeutic efficacy. Biomaterials, 2016, 101, 241-250.	5.7	18
206	Effects of various chemical sterilization methods on the crosslinking and enzymatic degradation characteristics of an epoxy-fixed biological tissue. , 1997, 37, 376-383.		17
207	Anti-Microbial Activity and Film Characterization of Thiazolidinone Derivatives of Chitosan. Macromolecular Bioscience, 2005, 5, 490-493.	2.1	17
208	Mesothelium regeneration on acellular bovine pericardia loaded with an angiogenic agent (ginsenoside Rg1) successfully reduces postsurgical pericardial adhesions. Journal of Thoracic and Cardiovascular Surgery, 2006, 132, 867-874.e3.	0.4	17
209	Dendrimer-induced DNA bending. Soft Matter, 2011, 7, 61-63.	1.2	17
210	Bioinspired Engineering of a Bacteriumâ€Like Metalâ€"Organic Framework for Cancer Immunotherapy. Advanced Functional Materials, 2020, 30, 2003764.	7.8	17
211	Pollen-Mimetic Metalâ€"Organic Frameworks with Tunable Spike-Like Nanostructures That Promote Cell Interactions to Improve Antigen-Specific Humoral Immunity. ACS Nano, 2021, 15, 7596-7607.	7.3	17
212	Hemoglobin Polymerized with a Naturally Occurring Crosslinking Agent as a Blood Substitute: In Vitro and In Vivo Studies. Artificial Cells, Blood Substitutes, and Biotechnology, 2004, 32, 243-262.	0.9	16
213	Synthesis and characterization of a novel glycoconjugated macromolecule. Polymer, 2006, 47, 4348-4358.	1.8	16
214	Advances in Prosthetic Heart Valves: Fluid Mechanics of Aortic Valve Designs. Journal of Biomaterials Applications, 1987, 2, 579-614.	1.2	15
215	Evaluation of an epoxy-fixed biological patch with ionically bound heparin as a pericardial substitute. Biomaterials, 1996, 17, 1693-1701.	5.7	15
216	Physical properties of a porcine internal thoracic artery fixed with an epoxy compound. Biomaterials, 1996, 17, 2357-2365.	5.7	15

#	Article	IF	Citations
217	Fixation of Various Porcine Arteries with an Epoxy Compound. Artificial Organs, 1997, 21, 50-58.	1.0	15
218	Injectable Microbeads with a Thermoâ€Responsive Shell and a pHâ€Responsive Core as a Dualâ€Switchâ€Controlled Release System. Small, 2014, 10, 4100-4105.	5.2	15
219	An Inâ€…Situ Depot for Continuous Evolution of Gaseous H₂ Mediated by a Magnesium Passivation/Activation Cycle for Treating Osteoarthritis. Angewandte Chemie, 2018, 130, 10023-10027.	1.6	15
220	An in situ slow-releasing H2S donor depot with long-term therapeutic effects for treating ischemic diseases. Materials Science and Engineering C, 2019, 104, 109954.	3.8	14
221	Biocompatibility study of biological tissues fixed by a natural compound (reuterin) produced by Lactobacillus reuteri. Biomaterials, 2002, 23, 3203-3214.	5.7	13
222	Disulfide bond-conjugated dual PEGylated siRNAs for prolonged multiple gene silencing. Biomaterials, 2013, 34, 6930-6937.	5.7	13
223	Treatment of chemotherapy-induced neutropenia in a rat model by using multiple daily doses of oral administration of G-CSF-containing nanoparticles. Biomaterials, 2014, 35, 3641-3649.	5.7	13
224	A Novel Method for the Preparation of Nanoaggregates of Methoxy Polyethyleneglycol Linked Chitosan. Journal of Nanoscience and Nanotechnology, 2006, 6, 2867-2873.	0.9	12
225	Nanomedicine for diabetes treatment. Nanomedicine, 2011, 6, 1297-1300.	1.7	12
226	Quantitative Approaches to Color Doppler Flow Mapping of Intracardiac Blood Flow: A Review of In Vitro Methods. Echocardiography, 1989, 6, 371-383.	0.3	11
227	Studies on epoxy compound fixation. , 1996, 33, 177-186.		11
228	XTT-Colorimetric Assay as a Marker of Viability in Cryoprocessed Cardiac Valve. Journal of Molecular and Cellular Cardiology, 1997, 29, 1189-1194.	0.9	10
229	A natural compound (reuterin) produced byLactobacillus reuteri for hemoglobin polymerization as a blood substitute. Biotechnology and Bioengineering, 2004, 87, 34-42.	1.7	10
230	A fast and facile platform for fabricating phase-change materials-based drug carriers powered by chemical Marangoni effect. Biomaterials, 2021, 271, 120748.	5.7	10
231	Injectable conductive hydrogel can reduce pacing threshold and enhance efficacy of cardiac pacemaker. Theranostics, 2021, 11, 3948-3960.	4.6	10
232	Axial flow velocity patterns in a pulmonary artery model with varying degrees of valvular pulmonic stenosis: Pulsatile in vitro studies. Journal of Biomechanics, 1990, 23, 563-578.	0.9	9
233	Natural antimicrobial agent (reuterin) produced bylactobacillus reuteri for sanitization of biological tissues inoculated withpseudomonas aeruginosa. Biotechnology and Bioengineering, 2003, 84, 233-239.	1.7	8
234	Can cardiac catheterization accurately assess the severity of aortic stenosis? AnIn Vitro pulsatile flow study. Annals of Biomedical Engineering, 1997, 25, 896-905.	1.3	6

#	Article	IF	Citations
235	Advanced Drug Delivery Systems for Therapeutic Applications. Advanced Healthcare Materials, 2014, 3, 1130-1132.	3.9	5
236	Synthesis and characterization of a novel chitosanâ€based network prepared using naturally occurring crosslinker. Journal of Polymer Science Part A, 2000, 38, 2804-2814.	2.5	5
237	Hemodynamic assessment of carbomedics bileaflet heart valves by ultrasound: Studies in the aortic and mitral positions. Ultrasound in Medicine and Biology, 1996, 22, 421-430.	0.7	4
238	Pulmonary artery hemodynamics with varying degrees of valvular stenosis: an in vitro study. Journal of Biomechanics, 1998, 31, 1153-1161.	0.9	3
239	Evaluation of gelatin hydrogel crosslinked with various crosslinking agents as bioadhesives: In vitro study. , 1999, 46, 520.		3
240	Aglycone geniposidic acid, a naturally occurring crosslinking agent, and its application for the fixation of collagenous tissues. Journal of Biomedical Materials Research - Part A, 2007, 83A, 667-673.	2.1	2
241	Fabrication of Novel Wound Dressing. Advanced Materials Research, 2010, 123-125, 979-982.	0.3	2
242	Photothermal Agents: Effective Photothermal Killing of Pathogenic Bacteria by Using Spatially Tunable Colloidal Gels with Nano-Localized Heating Sources (Adv. Funct. Mater. 5/2015). Advanced Functional Materials, 2015, 25, 720-720.	7.8	2
243	Response to Comment on â€œA Liposomal System Capable of Generating CO₂ Bubbles to Induce Transient Cavitation, Lysosomal Rupturing and Cell Necrosisâ€• Angewandte Chemie - International Edition, 2017, 56, 11690-11692.	7.2	2
244	Stability of a biological tissue fixed with a naturally occurring crosslinking agent (genipin). , 2001, 55, 538.		2
245	Synthesis and characterization of a novel chitosan-based network prepared using naturally occurring crosslinker. , 2000, 38, 2804.		2
246	Biological materials fixed with an epoxy compound: Comparison of the effects with or without ionically bound heparin. Journal of Applied Biomaterials: an Official Journal of the Society for Biomaterials, 1995, 6, 185-190.	1.1	1
247	In vitro study of enzymatic degradation of biological tissues fixed by glutaraldehyde or epoxy compound. Journal of Biomaterials Science, Polymer Edition, 1997, 8, 587-600.	1.9	1
248	Feasibility study of a natural crosslinking reagent for biological tissue fixation. , 1998, 42, 560.		1
249	In vitro evaluation of the genotoxicity of a naturally occurring crosslinking agent (genipin) for biologic tissue fixation. , 2000, 52, 58.		1
250	Response to Comment on â€œA Liposomal System Capable of Generating CO₂ Bubbles to Induce Transient Cavitation, Lysosomal Rupturing and Cell Necrosisâ€• Angewandte Chemie, 2017, 129, 11850-11852.	1.6	0
251	Radiation Therapy: Biomimetic Engineering of a Scavengerâ€Free Nitric Oxideâ€Generating/Delivering System to Enhance Radiation Therapy (Small 23/2020). Small, 2020, 16, 2070126.	5.2	0
252	A naturally occurring crosslinking agent extracted from gardenia fruit and its applications in tissue engineering. , 2003, , 437-445.		0

#	Article	IF	Citations
253	Acellular Biological Tissues Containing Inherent Glycosaminoglycans for Loading Basic Fibroblast Growth Factor Promote Angiogenesis and Tissue Regeneration. Tissue Engineering, 2006, .	4.9	0
254	Acellular Biological Tissues Containing Inherent Glycosaminoglycans for Loading Basic Fibroblast Growth Factor Promote Angiogenesis and Tissue Regeneration. Tissue Engineering, 2006, .	4.9	0
255	Myocardial Tissue Regeneration Observed in Stem-Cell Seeded Bioengineered Scaffolds. , 2008, , 203-221.		0