Teruo Okano

List of Publications by Year
in descending order

624 papers	55,674 citations	807 118 h-index	1928 207 g-index
636 all docs	636 docs citations	636 times ranked	29226 citing authors

#	Article	IF	Citations
1	Corneal Reconstruction with Tissue-Engineered Cell Sheets Composed of Autologous Oral Mucosal Epithelium. New England Journal of Medicine, 2004, 351, 1187-1196.	13.9	1,386
2	Comb-type grafted hydrogels with rapid deswelling response to temperature changes. Nature, 1995, 374, 240-242.	13.7	1,216
3	Monolayered mesenchymal stem cells repair scarred myocardium after myocardial infarction. Nature Medicine, 2006, 12, 459-465.	15.2	1,128
4	Diverse Applications of Nanomedicine. ACS Nano, 2017, 11, 2313-2381.	7.3	976
5	A novel recovery system for cultured cells using plasma-treated polystyrene dishes grafted with poly(N-isopropylacrylamide). Journal of Biomedical Materials Research Part B, 1993, 27, 1243-1251.	3.0	927
6	Thermo-responsive polymeric surfaces; control of attachment and detachment of cultured cells. Die Makromolekulare Chemie Rapid Communications, 1990, 11, 571-576.	1.1	904
7	Fabrication of Pulsatile Cardiac Tissue Grafts Using a Novel 3-Dimensional Cell Sheet Manipulation Technique and Temperature-Responsive Cell Culture Surfaces. Circulation Research, 2002, 90, e40.	2.0	860
8	Mechanism of cell detachment from temperature-modulated, hydrophilic-hydrophobic polymer surfaces. Biomaterials, 1995, 16, 297-303.	5.7	838
9	Polymeric micelles as new drug carriers. Advanced Drug Delivery Reviews, 1996, 21, 107-116.	6.6	645
10	Cell sheet engineering for myocardial tissue reconstruction. Biomaterials, 2003, 24, 2309-2316.	5.7	638
11	Cell sheet engineering: Recreating tissues without biodegradable scaffolds. Biomaterials, 2005, 26, 6415-6422.	5.7	571
12	Temperature dependence of swelling of crosslinked poly(N,Nâ€²-alkyl substituted acrylamides) in water. Journal of Polymer Science, Part B: Polymer Physics, 1990, 28, 923-936.	2.4	538
13	Pulsatile drug release control using hydrogels. Advanced Drug Delivery Reviews, 2002, 54, 53-77.	6.6	533
14	Thermo-sensitive polymers as on-off switches for drug release. Die Makromolekulare Chemie Rapid Communications, 1987, 8, 481-485.	1.1	524
15	Functional bioengineered corneal epithelial sheet grafts from corneal stem cells expanded ex vivo on a temperature-responsive cell culture surface. Transplantation, 2004, 77, 379-385.	0.5	521
16	Ultrathin Poly(N-isopropylacrylamide) Grafted Layer on Polystyrene Surfaces for Cell Adhesion/Detachment Control. Langmuir, 2004, 20, 5506-5511.	1.6	506
17	Engineering functional two- and three-dimensional liver systems in vivo using hepatic tissue sheets. Nature Medicine, 2007, 13, 880-885.	15.2	479
18	Decrease in culture temperature releases monolayer endothelial cell sheets together with deposited fibronectin matrix from temperature-responsive culture surfaces. , 1999, 45, 355-362.		457

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19	Polysurgery of cell sheet grafts overcomes diffusion limits to produce thick, vascularized myocardial tissues. FASEB Journal, 2006, 20, 708-710.	0.2	457
20	Reconstruction of functional tissues with cell sheet engineering. Biomaterials, 2007, 28, 5033-5043.	5.7	444
21	Prevention of Esophageal Stricture After Endoscopic Submucosal Dissection Using Tissue-Engineered Cell Sheets. Gastroenterology, 2012, 143, 582-588.e2.	0.6	437
22	Thermo-Responsive Culture Dishes Allow the Intact Harvest of Multilayered Keratinocyte Sheets without Dispase by Reducing Temperature. Tissue Engineering, 2001, 7, 473-480.	4.9	431
23	Feasibility, Safety, and Therapeutic Efficacy of Human Induced Pluripotent Stem Cell-Derived Cardiomyocyte Sheets in a Porcine Ischemic Cardiomyopathy Model. Circulation, 2012, 126, S29-37.	1.6	421
24	Temperature-Responsive Chromatography Using Poly(N-isopropylacrylamide)-Modified Silica. Analytical Chemistry, 1996, 68, 100-105.	3.2	414
25	Cell sheet engineering. Materials Today, 2004, 7, 42-47.	8.3	406
26	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
27	Intelligent thermoresponsive polymeric stationary phases for aqueous chromatography of biological compounds. Progress in Polymer Science, 2002, 27, 1165-1193.	11.8	393
28	In vitro fabrication of functional three-dimensional tissues with perfusable blood vessels. Nature Communications, 2013, 4, 1399.	5.8	387
29	Endothelial Cell Coculture Within Tissue-Engineered Cardiomyocyte Sheets Enhances Neovascularization and Improves Cardiac Function of Ischemic Hearts. Circulation, 2008, 118, S145-52.	1.6	357
30	Preparation and Characterization of the Micelle-Forming Polymeric Drug Indomethacin-Incorporated Sciences, 1996, 85, 85-90.	1.6	352
31	Inner core segment design for drug delivery control of thermo-responsive polymeric micelles. Journal of Controlled Release, 2000, 65, 93-103.	4.8	352
32	Molecular design of biodegradable polymeric micelles for temperature-responsive drug release. Journal of Controlled Release, 2006, 115, 46-56.	4.8	352
33	Dynamic Contact Angle Measurement of Temperature-Responsive Surface Properties for Poly(N-isopropylacrylamide) Grafted Surfaces. Macromolecules, 1994, 27, 6163-6166.	2.2	341
34	Rapid Deswelling Response of Poly(N-isopropylacrylamide) Hydrogels by the Formation of Water Release Channels Using Poly(ethylene oxide) Graft Chains. Macromolecules, 1998, 31, 6099-6105.	2.2	339
35	Periodontal regeneration with multi-layered periodontal ligament-derived cell sheets in a canine model. Biomaterials, 2009, 30, 2716-2723.	5.7	335
36	Fabrication of functional three-dimensional tissues by stacking cell sheets in vitro. Nature Protocols, 2012, 7, 850-858.	5.5	334

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37	Thermally responsive polymer-grafted surfaces facilitate patterned cell seeding and co-culture. Biomaterials, 2002, 23, 561-567.	5.7	318
38	Repair of impaired myocardium by means of implantation of engineered autologous myoblast sheets. Journal of Thoracic and Cardiovascular Surgery, 2005, 130, 1333-1341.	0.4	317
39	Novel Cardiac Precursor-Like Cells from Human Menstrual Blood-Derived Mesenchymal Cells. Stem Cells, 2008, 26, 1695-1704.	1.4	298
40	Tissue engineered myoblast sheets improved cardiac function sufficiently to discontinue LVAS in a patient with DCM: report of a case. Surgery Today, 2012, 42, 181-184.	0.7	298
41	Poly(N-isopropylacrylamide)-based thermoresponsive surfaces provide new types of biomedical applications. Biomaterials, 2018, 153, 27-48.	5.7	297
42	Design of prevascularized three-dimensional cell-dense tissues using a cell sheet stacking manipulation technology. Biomaterials, 2010, 31, 1646-1654.	5.7	281
43	Preparation of thermoresponsive polymer brush surfaces and their interaction with cells. Biomaterials, 2008, 29, 2073-2081.	5.7	276
44	Human Periodontal Ligament Cell Sheets Can Regenerate Periodontal Ligament Tissue in an Athymic Rat Model. Tissue Engineering, 2005, 11, 469-478.	4.9	272
45	Preparation and characterization of thermally responsive block copolymer micelles comprising poly(N-isopropylacrylamide-b-dl-lactide). Journal of Controlled Release, 1998, 55, 87-98.	4.8	266
46	Application of periodontal ligament cell sheet for periodontal regeneration: a pilot study in beagle dogs. Journal of Periodontal Research, 2005, 40, 245-251.	1.4	264
47	Comparison of different tissue-derived stem cell sheets for periodontal regeneration in a canine 1-wall defect model. Biomaterials, 2011, 32, 5819-5825.	5.7	263
48	In Vitro Engineering of Vascularized Tissue Surrogates. Scientific Reports, 2013, 3, 1316.	1.6	255
49	Cardiac Cell Sheet Transplantation Improves Damaged Heart Function via Superior Cell Survival in Comparison with Dissociated Cell Injection. Tissue Engineering - Part A, 2011, 17, 2973-2980.	1.6	251
50	Two-Dimensional Manipulation of Cardiac Myocyte Sheets Utilizing Temperature-Responsive Culture Dishes Augments the Pulsatile Amplitude. Tissue Engineering, 2001, 7, 141-151.	4.9	248
51	Nanostructured designs of biomedical materials: applications of cell sheet engineering to functional regenerative tissues and organs. Journal of Controlled Release, 2005, 101, 69-84.	4.8	248
52	Temperature-responsive cell culture surfaces for regenerative medicine with cell sheet engineering. Progress in Polymer Science, 2007, 32, 1123-1133.	11.8	243
53	Creation of Designed Shape Cell Sheets That Are Noninvasively Harvested and Moved onto Another Surface. Biomacromolecules, 2000, 1, 377-381.	2.6	236
54	Human iPS cell-engineered cardiac tissue sheets with cardiomyocytes and vascular cells for cardiac regeneration. Scientific Reports, 2014, 4, 6716.	1.6	235

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55	Gene expression control by temperature with thermo-responsive polymeric gene carriers. Journal of Controlled Release, 2000, 69, 127-137.	4.8	234
56	Temperature-Responsive Liquid Chromatography. 2. Effects of Hydrophobic Groups inN-Isopropylacrylamide Copolymer-Modified Silica. Analytical Chemistry, 1997, 69, 823-830.	3.2	233
57	Controlled formation of heterotypic hepatic micro-organoids in anisotropic hydrogel microfibers for long-term preservation of liver-specific functions. Biomaterials, 2012, 33, 8304-8315.	5.7	227
58	Thermo-responsive swelling and drug release switching of interpenetrating polymer networks composed of poly(acrylamide-co-butyl methacrylate) and poly (acrylic acid). Journal of Controlled Release, 1991, 16, 215-227.	4.8	222
59	Rapid cell sheet detachment from Poly(N-isopropylacrylamide)-grafted porous cell culture membranes. , 2000, 50, 82-89.		221
60	Pre-vascularization of in vitro three-dimensional tissues created by cell sheet engineering. Biomaterials, 2010, 31, 3903-3909.	5.7	220
61	Novel approach for achieving double-layered cell sheets co-culture: overlaying endothelial cell sheets onto monolayer hepatocytes utilizing temperature-responsive culture dishes. Journal of Biomedical Materials Research Part B, 2002, 62, 464-470.	3.0	217
62	Cell sheet engineering for heart tissue repair. Advanced Drug Delivery Reviews, 2008, 60, 277-285.	6.6	217
63	Temperature-responsive intelligent interfaces for biomolecular separation and cell sheet engineering. Journal of the Royal Society Interface, 2009, 6, S293-309.	1.5	214
64	Temperature-responsive bioconjugates. 2. Molecular design for temperature-modulated bioseparations. Bioconjugate Chemistry, 1993, 4, 341-346.	1.8	213
65	Effect of hydrophilic and hydrophobic microdomains on mode of interaction between block polymer and blood platelets. Journal of Biomedical Materials Research Part B, 1981, 15, 393-402.	3.0	210
66	Long-Term Survival and Growth of Pulsatile Myocardial Tissue Grafts Engineered by the Layering of Cardiomyocyte Sheets. Tissue Engineering, 2006, 12, 499-507.	4.9	206
67	Transplantation of cardiac progenitor cells ameliorates cardiac dysfunction after myocardial infarction in mice. Journal of Clinical Investigation, 2009, 119, 2204-17.	3.9	205
68	Temperature-Responsive Cell Culture Surfaces Enable â€œOnâ^'Offâ€•Affinity Control between Cell Integrins and RGDS Ligands. Biomacromolecules, 2004, 5, 505-510.	2.6	204
69	Cell sheet approach for tissue engineering and regenerative medicine. Journal of Controlled Release, 2014, 190, 228-239.	4.8	203
70	Functional human corneal endothelial cell sheets harvested from temperatureâ€responsive culture surfaces. FASEB Journal, 2006, 20, 392-394.	0.2	201
71	Cell delivery in regenerative medicine: The cell sheet engineering approach. Journal of Controlled Release, 2006, 116, 193-203.	4.8	197
72	Human limbal epithelium contains side population cells expressing the ATP-binding cassette transporter ABCG2. FEBS Letters, 2004, 565, 6-10.	1.3	195

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73	Bioengineered cardiac cell sheet grafts have intrinsic angiogenic potential. Biochemical and Biophysical Research Communications, 2006, 341, 573-582.	1.0	192
74	Tissue Cardiomyoplasty Using Bioengineered Contractile Cardiomyocyte Sheets to Repair Damaged Myocardium: Their Integration with Recipient Myocardium. Transplantation, 2005, 80, 1586-1595.	0.5	191
75	Electrically communicating three-dimensional cardiac tissue mimic fabricated by layered cultured cardiomyocyte sheets. Journal of Biomedical Materials Research Part B, 2002, 60, 110-117.	3.0	190
76	The use of patterned dual thermoresponsive surfaces for the collective recovery as co-cultured cell sheets. Biomaterials, 2005, 26, 1885-1893.	5.7	185
77	Copolymerization of 2-Carboxyisopropylacrylamide withN-Isopropylacrylamide Accelerates Cell Detachment from Grafted Surfaces by Reducing Temperature. Biomacromolecules, 2003, 4, 344-349.	2.6	177
78	Cellular control of tissue architectures using a three-dimensional tissue fabrication technique. Biomaterials, 2007, 28, 4939-4946.	5.7	177
79	Enhanced Survival of Transplanted Human Induced Pluripotent Stem Cellâ€“Derived Cardiomyocytes by the Combination of Cell Sheets With the Pedicled Omental Flap Technique in a Porcine Heart. Circulation, 2013, 128, S87-94.	1.6	175
80	Electrical coupling of cardiomyocyte sheets occurs rapidly via functional gap junction formation. Biomaterials, 2006, 27, 4765-4774.	5.7	174
81	Graft Architectural Effects on Thermoresponsive Wettability Changes of Poly(N-isopropylacrylamide)-Modified Surfaces. Langmuir, 1998, 14, 4657-4662.	1.6	173
82	Validation of human periodontal ligamentâ€derived cells as a reliable source for cytotherapeutic use. Journal of Clinical Periodontology, 2010, 37, 1088-1099.	2.3	172
83	Controlled Chain Length and Graft Density of Thermoresponsive Polymer Brushes for Optimizing Cell Sheet Harvest. Biomacromolecules, 2010, 11, 1991-1999.	2.6	172
84	Tissue factor triggers procoagulation in transplanted mesenchymal stem cells leading to thromboembolism. Biochemical and Biophysical Research Communications, 2013, 431, 203-209.	1.0	171
85	Temperature-responsive polymeric micelles for optimizing drug targeting to solid tumors. Journal of Controlled Release, 2014, 193, 2-8.	4.8	171
86	Pulsatile Cardiac Tissue Grafts Using a Novel Three-Dimensional Cell Sheet Manipulation Technique Functionally Integrates With the Host Heart, In Vivo. Circulation Research, 2006, 98, 705-712.	2.0	167
87	"On-off" thermocontrol of solute transport. I. Temperature dependence of swelling of N-isopropylacrylamide networks modified with hydrophobic components in water. Pharmaceutical Research, 1991, 08, 531-537.	1.7	164
88	Polymer Terminal Group Effects on Properties of Thermoresponsive Polymeric Micelles with Controlled Outer-Shell Chain Lengths. Biomacromolecules, 2005, 6, 2320-2327.	2.6	164
89	Longer preservation of cardiac performance by sheet-shaped myoblast implantation in dilated cardiomyopathic hamsters. Cardiovascular Research, 2006, 69, 466-475.	1.8	162
90	Effects of Graft Densities and Chain Lengths on Separation of Bioactive Compounds by Nanolayered Thermoresponsive Polymer Brush Surfaces. Langmuir, 2008, 24, 511-517.	1.6	160

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91	Cell sheet engineering for regenerative medicine: Current challenges and strategies. Biotechnology Journal, 2014, 9, 904-914.	1.8	156
92	Transfection efficiency increases by incorporating hydrophobic monomer units into polymeric gene carriers. Journal of Controlled Release, 2000, 68, 1-8.	4.8	152
93	Control of adriamycin cytotoxic activity using thermally responsive polymeric micelles composed of poly(N-isopropylacrylamide-co-N,N-dimethylacrylamide)-b-poly(d,l-lactide). Colloids and Surfaces B: Biointerfaces, 1999, 16, 195-205.	2.5	151
94	Grafted skeletal myoblast sheets attenuate myocardial remodeling in pacing-induced canine heart failure model. Journal of Thoracic and Cardiovascular Surgery, 2006, 132, 918-924.	0.4	150
95	Effects of Cross-Linked Structure on Temperature-Responsive Hydrophobic Interaction of Poly(N-isopropylacrylamide) Hydrogel-Modified Surfaces with Steroids. Analytical Chemistry, 1999, 71, 1125-1130.	3.2	148
96	Allogeneic Transplantation of an Adipose-Derived Stem Cell Sheet Combined With Artificial Skin Accelerates Wound Healing in a Rat Wound Model of Type 2 Diabetes and Obesity. Diabetes, 2015, 64, 2723-2734.	0.3	148
97	Temperature-responsive bioconjugates. 1. Synthesis of temperature-responsive oligomers with reactive end groups and their coupling to biomolecules. Bioconjugate Chemistry, 1993, 4, 42-46.	1.8	146
98	Temperature-Responsive Chromatographic Separation of Amino Acid Phenylthiohydantoins Using Aqueous Media as the Mobile Phase. Analytical Chemistry, 2000, 72, 5961-5966.	3.2	146
99	Accelerated cell sheet recovery by co-grafting of PEG with PIPAAm onto porous cell culture membranes. Biomaterials, 2003, 24, 1223-1232.	5.7	146
100	Periodontal regeneration with autologous periodontal ligament-derived cell sheets â€“ A safety and efficacy study in ten patients. Regenerative Therapy, 2018, 9, 38-44.	1.4	146
101	Temperature-Induced Intracellular Uptake of Thermoresponsive Polymeric Micelles. Biomacromolecules, 2009, 10, 1331-1336.	2.6	144
102	Creation of human cardiac cell sheets using pluripotent stem cells. Biochemical and Biophysical Research Communications, 2012, 425, 321-327.	1.0	144
103	Glucose-responsive gel from phenylborate polymer and poly(vinyl alcohol): prompt response at physiological pH through the interaction of borate with amino group in the gel. Pharmaceutical Research, 1997, 14, 289-293.	1.7	143
104	Two-dimensional manipulation of confluently cultured vascular endothelial cells using temperature-responsive poly(N-isopropylacrylamide)-grafted surfaces. Journal of Biomaterials Science, Polymer Edition, 1998, 9, 1331-1348.	1.9	143
105	Interfacial Property Modulation of Thermoresponsive Polymer Brush Surfaces and Their Interaction with Biomolecules. Langmuir, 2007, 23, 9409-9415.	1.6	143
106	Cell sheet tissue engineering: Cell sheet preparation, harvesting/manipulation, and transplantation. Journal of Biomedical Materials Research - Part A, 2019, 107, 955-967.	2.1	142
107	Pluripotent Stem Cell-Engineered Cell Sheets Reassembled with Defined Cardiovascular Populations Ameliorate Reduction in Infarct Heart Function Through Cardiomyocyte-Mediated Neovascularization. Stem Cells, 2012, 30, 1196-1205.	1.4	140
108	Novel bifunctional polymer with reactivity and temperature sensitivity. Journal of Biomaterials Science, Polymer Edition, 2000, 11, 101-110.	1.9	138

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109	Micropatterned Thermoresponsive Polymer Brush Surfaces for Fabricating Cell Sheets with Well-Controlled Orientational Structures. Biomacromolecules, 2011, 12, 1414-1418.	2.6	138
110	Preserved liver-specific functions of hepatocytes in 3D co-culture with endothelial cell sheets. Biomaterials, 2012, 33, 1406-1413.	5.7	135
111	Signal transduction and cytoskeletal reorganization are required for cell detachment from cell culture surfaces grafted with a temperature-responsive polymer. , 1999, 44, 44-52.		134
112	Temperature-responsive culture dishes allow nonenzymatic harvest of differentiated Madin-Darby canine kidney (MDCK) cell sheets. , 2000, 51, 216-223.		133
113	On-chip cell migration assay using microfluidic channels. Biomaterials, 2007, 28, 4017-4022.	5.7	132
114	N-Cadherin Is Expressed by Putative Stem/Progenitor Cells and Melanocytes in the Human Limbal Epithelial Stem Cell Niche. Stem Cells, 2007, 25, 289-296.	1.4	132
115	Cartilage repair in transplanted scaffold-free chondrocyte sheets using a minipig model. Biomaterials, 2012, 33, 3846-3851.	5.7	130
116	A thermoresponsive, microtextured substrate for cell sheet engineering with defined structural organization. Biomaterials, 2008, 29, 2565-2572.	5.7	127
117	Aqueous Chromatography Utilizing pH-/Temperature-Responsive Polymer Stationary Phases To Separate Ionic Bioactive Compounds. Analytical Chemistry, 2001, 73, 2027-2033.	3.2	126
118	Periodontal ligament cell sheet promotes periodontal regeneration in athymic rats. Journal of Clinical Periodontology, 2008, 35, 1066-1072.	2.3	126
119	Cell sheet engineering and its application for periodontal regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2015, 9, 343-356.	1.3	126
120	Structural characterization of bioengineered human corneal endothelial cell sheets fabricated on temperature-responsive culture dishes. Biomaterials, 2006, 27, 607-614.	5.7	125
121	Ocular Surface Reconstruction Using Autologous Rabbit Oral Mucosal Epithelial Sheets Fabricated Ex Vivo on a Temperature-Responsive Culture Surface. , 2005, 46, 1632.		124
122	Composite Cell Sheets. Circulation, 2010, 122, S118-23.	1.6	121
123	The use of anisotropic cell sheets to control orientation during the self-organization of 3D muscle tissue. Biomaterials, 2013, 34, 7372-7380.	5.7	121
124	Engineered small diameter vascular grafts by combining cell sheet engineering and electrospinning technology. Acta Biomaterialia, 2015, 16, 14-22.	4.1	121
125	Introducing Reactive Carboxyl Side Chains Retains Phase Transition Temperature Sensitivity inN-Isopropylacrylamide Copolymer Gels. Macromolecules, 2000, 33, 8312-8316.	2.2	120
126	Preparation of Thermoresponsive Cationic Copolymer Brush Surfaces and Application of the Surface to Separation of Biomolecules. Biomacromolecules, 2008, 9, 1340-1347.	2.6	119

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127	Impaired Myocardium Regeneration With Skeletal Cell Sheetsâ€"A Preclinical Trial for Tissue-Engineered Regeneration Therapy. Transplantation, 2010, 90, 364-372.	0.5	118
128	Release of adsorbed fibronectin from temperature-responsive culture surfaces requires cellular activity. Biomaterials, 2000, 21, 981-986.	5.7	117
129	Limbal Epithelial Side-Population Cells Have Stem Cell-Like Properties, Including Quiescent State. Stem Cells, 2006, 24, 86-94.	1.4	117
130	Pulsatile Myocardial Tubes Fabricated With Cell Sheet Engineering. Circulation, 2006, 114, I-87-I-93.	1.6	117
131	Bioengineering of a functional sheet of islet cells for the treatment of diabetes mellitus. Biomaterials, 2009, 30, 5943-5949.	5.7	115
132	Drug release from electric current sensitive polymers. Journal of Controlled Release, 1991, 17, 149-156.	4.8	111
133	Microfluidic devices for size-dependent separation of liver cells. Biomedical Microdevices, 2007, 9, 637-645.	1.4	110
134	Creation of myocardial tubes using cardiomyocyte sheets and an in vitro cell sheet-wrapping device. Biomaterials, 2007, 28, 3508-3516.	5.7	110
135	Process design for efficient and controlled drug incorporation into polymeric micelle carrier systems. Journal of Controlled Release, 2002, 78, 155-163.	4.8	109
136	Characterization of Ultraâ€Thin Temperatureâ€Responsive Polymer Layer and Its Polymer Thickness Dependency on Cell Attachment/Detachment Properties. Macromolecular Bioscience, 2010, 10, 1117-1129.	2.1	109
137	PLGA artificial nerve conduits with dental pulp cells promote facial nerve regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2011, 5, 823-830.	1.3	108
138	The influence of hydrophilic and hydrophobic domains on water wettability of 2-hydroxyethyl methacrylate-styrene copolymers. Journal of Applied Polymer Science, 1978, 22, 369-377.	1.3	106
139	Surface-modulated skin layers of thermal responsive hydrogels as on-off switches: II. Drug permeation. Journal of Biomaterials Science, Polymer Edition, 1992, 3, 243-252.	1.9	106
140	Cell Sheet-Based Myocardial Tissue Engineering: New Hope for Damaged Heart Rescue. Current Pharmaceutical Design, 2009, 15, 2807-2814.	0.9	106
141	Bio-functionalized thermoresponsive interfaces facilitating cell adhesion and proliferation. Biomaterials, 2006, 27, 5069-5078.	5.7	105
142	Cell sheet engineering and other novel cellâ€based approaches to periodontal regeneration. Periodontology 2000, 2009, 51, 220-238.	6.3	104
143	Two-dimensional cell sheet manipulation of heterotypically co-cultured lung cells utilizing temperature-responsive culture dishes results in long-term maintenance of differentiated epithelial cell functions. Biomaterials, 2002, 23, 1121-1130.	5.7	102
144	Fabrication of transferable micropatterned-co-cultured cell sheets with microcontact printing. Biomaterials, 2009, 30, 5427-5432.	5.7	101

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145	Temperature-responsive glass coverslips with an ultrathin poly(N-isopropylacrylamide) layer. Acta Biomaterialia, 2009, 5, 470-476.	4.1	101
146	Assessment of cell sheets derived from human periodontal ligament cells: a pre-clinical study. Cell and Tissue Research, 2010, 341, 397-404.	1.5	100
147	Novel thermally reversible hydrogel as detachable cell culture substrate. , 1998, 40, 631-639.		98
148	Temperature-responsive polymeric carriers incorporating hydrophobic monomers for effective transfection in small doses. Journal of Controlled Release, 2004, 95, 343-355.	4.8	98
149	Cell micropatterning using photopolymerization with a liquid crystal device commercial projector. Biomaterials, 2004, 25, 2047-2053.	5.7	98
150	Title is missing!. Die Makromolekulare Chemie, 1989, 190, 2041-2054.	1.1	97
151	Two-dimensional manipulation of differentiated Madin-Darby canine kidney (MDCK) cell sheets: The noninvasive harvest from temperature-responsive culture dishes and transfer to other surfaces. Journal of Biomedical Materials Research Part B, 2001, 54, 37-46.	3.0	97
152	Control of cell adhesion and detachment using temperature and thermoresponsive copolymer grafted culture surfaces. Journal of Biomedical Materials Research Part B, 2004, 69A, 70-78.	3.0	97
153	Heterotypic cell interactions on a dually patterned surface. Biochemical and Biophysical Research Communications, 2006, 348, 937-944.	1.0	97
154	Articular Cartilage Regeneration Using Cell Sheet Technology. Anatomical Record, 2014, 297, 36-43.	0.8	96
155	Construction of three-dimensional vascularized cardiac tissue with cell sheet engineering. Journal of Controlled Release, 2015, 205, 83-88.	4.8	96
156	Aqueous chromatography utilizing hydrophobicity-modified anionic temperature-responsive hydrogel for stationary phases. Journal of Chromatography A, 2002, 958, 109-119.	1.8	95
157	Temperature-Responsive Polymer Modified Surface for Cell Sheet Engineering. Polymers, 2012, 4, 1478-1498.	2.0	95
158	Effect of Molecular Architecture of Poly(N-isopropylacrylamide)â^'Trypsin Conjugates on Their Solution and Enzymatic Properties. Bioconjugate Chemistry, 1996, 7, 96-101.	1.8	94
159	Cross-Linked Thermoresponsive Anionic Polymer-Grafted Surfaces To Separate Bioactive Basic Peptides. Analytical Chemistry, 2003, 75, 3244-3249.	3.2	94
160	Thermoresponsive-polymer-based materials for temperature-modulated bioanalysis and bioseparations. Journal of Materials Chemistry B, 2016, 4, 6381-6397.	2.9	94
161	Layered implantation of myoblast sheets attenuates adverse cardiac remodeling of the infarcted heart. Journal of Thoracic and Cardiovascular Surgery, 2009, 138, 985-993.	0.4	93
162	Creation of mouse embryonic stem cell-derived cardiac cell sheets. Biomaterials, 2011, 32, 7355-7362.	5.7	92

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163	Novel patterned cell coculture utilizing thermally responsive grafted polymer surfaces. Journal of Biomedical Materials Research Part B, 2001, 55, 137-140.	3.0	90
164	Transplantable Urothelial Cell Sheets Harvested Noninvasively from Temperature-Responsive Culture Surfaces by Reducing Temperature. Tissue Engineering, 2003, 9, 1005-1012.	4.9	90
165	Enhanced Therapeutic Effects of Human iPS Cell Derived-Cardiomyocyte by Combined Cell-Sheets with Omental Flap Technique in Porcine Ischemic Cardiomyopathy Model. Scientific Reports, 2017, 7, 8824.	1.6	90
166	Newly designed hydrogel with both sensitive thermoresponse and biodegradability. Journal of Polymer Science Part A, 2003, 41, 779-787.	2.5	88
167	Tissue Engineered Epithelial Cell Sheets for the Creation of a Bioartificial Trachea. Tissue Engineering, 2006, 12, 1275-1283.	4.9	87
168	Patterned biofunctional designs of thermoresponsive surfaces for spatiotemporally controlled cell adhesion, growth, and thermally induced detachment. Biomaterials, 2007, 28, 3632-3643.	5.7	86
169	Middle ear mucosal regeneration by tissue-engineered cell sheet transplantation. Npj Regenerative Medicine, 2017, 2, 6.	2.5	86
170	Combined surgery and chondrocyte cell-sheet transplantation improves clinical and structural outcomes in knee osteoarthritis. Npj Regenerative Medicine, 2019, 4, 4.	2.5	86
171	Cell Attachmentâ€“Detachment Control on Temperature-Responsive Thin Surfaces for Novel Tissue Engineering. Annals of Biomedical Engineering, 2010, 38, 1977-1988.	1.3	85
172	Thermoâ€Responsive Polymer Brushes as Intelligent Biointerfaces: Preparation via ATRP and Characterization. Macromolecular Bioscience, 2011, 11, 400-409.	2.1	85
173	Interaction between Plasma Protein and Microphase Separated Structure of Copolymers. Polymer Journal, 1978, 10, 223-228.	1.3	84
174	Fabricated autologous epidermal cell sheets for the prevention of esophageal stricture after circumferential ESD in a porcine model. Gastrointestinal Endoscopy, 2012, 76, 873-881.	0.5	84
175	Thermally-triggered fabrication of cell sheets for tissue engineering and regenerative medicine. Advanced Drug Delivery Reviews, 2019, 138, 276-292.	6.6	84
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