Brian Aguado

List of Publications by Year in Descending Order

217 papers	11,438 citations	57 h-index	100 g-index
232 ext. papers	13,578 ext. citations	10.3 avg, IF	6.99 L-index

#	Paper	IF	Citations
217	Genes that Escape X Chromosome Inactivation Modulate Sex Differences in Valve Myofibroblasts.. *Circulation*, **2022**,	16.7	2
216	Masked Delivery of Allergen in Nanoparticles Safely Attenuates Anaphylactic Response in Murine Models of Peanut Allergy.. *Frontiers in Allergy*, **2022**, 3, 829605	0	0
215	Tissue geometry drives deterministic organoid patterning.. *Science*, **2022**, 375, eaaw9021	33.3	22
214	Network modeling predicts personalized gene expression and drug responses in valve myofibroblasts cultured with patient sera.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119,	11.5	2
213	Kinetic Analysis of Degradation in Thioester Cross-linked Hydrogels as a Function of Thiol Concentration, pKa, and Presentation. *Macromolecules*, **2022**, 55, 2123-2129	5.5	1
212	In Situ Super-Resolution Imaging of Organoids and Extracellular Matrix Interactions via Phototransfer by Allyl Sulfide Exchange-Expansion Microscopy (PhASE-ExM).. *Advanced Materials*, **2022**, e2109252	24	1
211	Neutrophil and natural killer cell imbalances prevent muscle stem cell-mediated regeneration following murine volumetric muscle loss.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2111445119	11.5	1
210	Hydrogel cultures reveal Transient Receptor Potential Vanilloid 4 regulation of myofibroblast activation and proliferation in valvular interstitial cells.. *FASEB Journal*, **2022**, 36, e22306	0.9	1
209	Mechanistic contributions of Kupffer cells and liver sinusoidal endothelial cells in nanoparticle-induced antigen-specific immune tolerance.. *Biomaterials*, **2022**, 283, 121457	15.6	0
208	Stress Relaxation and Composition of Hydrazone-Crosslinked Hybrid Biopolymer-Synthetic Hydrogels Determine Spreading and Secretory Properties of MSCs.. *Advanced Healthcare Materials*, **2022**, e2200393	10.1	1
207	Impact of Collagen Triple Helix Structure on Melanoma Cell Invadopodia Formation and Matrix Degradation upon BRAF Inhibitor Treatment. *Advanced Healthcare Materials*, **2021**, e2101592	10.1	
206	Implications of TGF Signaling and CDK Inhibition for the Treatment of Breast Cancer. *Cancers*, **2021**, 13,	6.6	1
205	Mesenchymal stem cell-inspired microgel scaffolds to control macrophage polarization. *Bioengineering and Translational Medicine*, **2021**, 6, e10217	14.8	6
204	Injury-mediated stiffening persistently activates muscle stem cells through YAP and TAZ mechanotransduction. *Science Advances*, **2021**, 7,	14.3	19
203	Mechanobiological Interactions between Dynamic Compressive Loading and Viscoelasticity on Chondrocytes in Hydrazone Covalent Adaptable Networks for Cartilage Tissue Engineering. *Advanced Healthcare Materials*, **2021**, 10, e2002030	10.1	7
202	Nuclear mechanosensing drives chromatin remodelling in persistently activated fibroblasts. *Nature Biomedical Engineering*, **2021**,	19	18
201	IL-10 lentivirus-laden hydrogel tubes increase spinal progenitor survival and neuronal differentiation after spinal cord injury. *Biotechnology and Bioengineering*, **2021**, 118, 2609-2625	4.9	4

200	Photoclick Chemistry: A Bright Idea. *Chemical Reviews*, **2021**, 121, 6915-6990	68.1	37
199	Cardiac Fibroblasts Mediate a Sexually Dimorphic Fibrotic Response to Adrenergic Stimulation. *Journal of the American Heart Association*, **2021**, 10, e018876	6	6
198	Impact of Release Kinetics on Efficacy of Locally Delivered Parathyroid Hormone for Bone Regeneration Applications. *Tissue Engineering - Part A*, **2021**, 27, 246-255	3.9	1
197	Lentiviral Interleukin-10 Gene Therapy Preserves Fine Motor Circuitry and Function After a Cervical Spinal Cord Injury in Male and Female Mice. *Neurotherapeutics*, **2021**, 18, 503-514	6.4	7
196	Collagen networks within 3D PEG hydrogels support valvular interstitial cell matrix mineralization. *Acta Biomaterialia*, **2021**, 119, 197-210	10.8	6
195	Disease-induced immunomodulation at biomaterial scaffolds detects early pancreatic cancer in a spontaneous model. *Biomaterials*, **2021**, 269, 120632	15.6	4
194	Tumor necrosis factor- promotes and exacerbates calcification in heart valve myofibroblast populations. *FASEB Journal*, **2021**, 35, e21382	0.9	3
193	Engineering the MSC Secretome: A Hydrogel Focused Approach. *Advanced Healthcare Materials*, **2021**, 10, e2001948	10.1	21
192	Cargo-free immunomodulatory nanoparticles combined with anti-PD-1 antibody for treating metastatic breast cancer. *Biomaterials*, **2021**, 269, 120666	15.6	8
191	3D printing of sacrificial thioester elastomers using digital light processing for templating 3D organoid structures in soft biomatrices. *Biofabrication*, **2021**, 13,	10.5	3
190	Restoring normal islet mass and function in type 1 diabetes through regenerative medicine and tissue engineering. *Lancet Diabetes and Endocrinology,the*, **2021**, 9, 708-724	18.1	3
189	Myoblast mechanotransduction and myotube morphology is dependent on BAG3 regulation of YAP and TAZ. *Biomaterials*, **2021**, 277, 121097	15.6	1
188	Matters of the heart: Cellular sex differences. *Journal of Molecular and Cellular Cardiology*, **2021**, 160, 42-55	5.8	10
187	Adrenergic Blockade Promotes Maintenance of Dormancy in Prostate Cancer Through Upregulation of GAS6. *Translational Oncology*, **2020**, 13, 100781	4.9	7
186	Porous Silicon Nanoparticles Embedded in Poly(lactic--glycolic acid) Nanofiber Scaffolds Deliver Neurotrophic Payloads to Enhance Neuronal Growth. *Advanced Functional Materials*, **2020**, 30, 2002560	15.6	11
185	Engineered Niches to Analyze Mechanisms of Metastasis and Guide Precision Medicine. *Cancer Research*, **2020**, 80, 3786-3794	10.1	10
184	Towards systems tissue engineering: Elucidating the dynamics, spatial coordination, and individual cells driving emergent behaviors. *Biomaterials*, **2020**, 255, 120189	15.6	4
183	Bioorthogonal click chemistries enable simultaneous spatial patterning of multiple proteins to probe synergistic protein effects on fibroblast function. *Biomaterials*, **2020**, 255, 120205	15.6	13

182	The Effect of Thiol Structure on Allyl Sulfide Photodegradable Hydrogels and their Application as a Degradable Scaffold for Organoid Passaging. *Advanced Materials*, **2020**, 32, e1905366	24	26
181	Neutrophils preferentially phagocytose elongated particles-An opportunity for selective targeting in acute inflammatory diseases. *Science Advances*, **2020**, 6, eaba1474	14.3	33
180	Phototunable Viscoelasticity in Hydrogels Through Thioester Exchange. *Annals of Biomedical Engineering*, **2020**, 48, 2053-2063	4.7	11
179	Polycistronic Delivery of IL-10 and NT-3 Promotes Oligodendrocyte Myelination and Functional Recovery in a Mouse Spinal Cord Injury Model. *Tissue Engineering - Part A*, **2020**, 26, 672-682	3.9	14
178	Gliadin Nanoparticles Induce Immune Tolerance to Gliadin in Mouse Models of Celiac Disease. *Gastroenterology*, **2020**, 158, 1667-1681.e12	13.3	43
177	Ligands, Receptors, and Transcription Factors that Mediate Inter-Cellular and Intra-Cellular Communication during Ovarian Follicle Development. *Reproductive Sciences*, **2020**, 27, 690-703	3	7
176	Relaxation of Extracellular Matrix Forces Directs Crypt Formation and Architecture in Intestinal Organoids. *Advanced Healthcare Materials*, **2020**, 9, e1901214	10.1	34
175	Metastatic Conditioning of Myeloid Cells at a Subcutaneous Synthetic Niche Reflects Disease Progression and Predicts Therapeutic Outcomes. *Cancer Research*, **2020**, 80, 602-612	10.1	17
174	Thiol-ene Hydrogels for Local Delivery of PTH for Bone Regeneration in Critical Size defects. *Journal of Orthopaedic Research*, **2020**, 38, 536-544	3.8	6
173	Microporous scaffolds loaded with immunomodulatory lentivirus to study the contribution of immune cell populations to tumor cell recruitment in vivo. *Biotechnology and Bioengineering*, **2020**, 117, 210-222	4.9	6
172	Porous bio-click microgel scaffolds control hMSC interactions and promote their secretory properties. *Biomaterials*, **2020**, 232, 119725	15.6	20
171	Designing Microgels for Cell Culture and Controlled Assembly of Tissue Microenvironments. *Advanced Functional Materials*, **2020**, 30, 1907670	15.6	18
170	Cyclin E overexpression confers resistance to trastuzumab through noncanonical phosphorylation of SMAD3 in HER2+ breast cancer. *Cancer Biology and Therapy*, **2020**, 21, 994-1004	4.6	2
169	Modulating lung immune cells by pulmonary delivery of antigen-specific nanoparticles to treat autoimmune disease. *Science Advances*, **2020**, 6,	14.3	17
168	Engineered immunological niches to monitor disease activity and treatment efficacy in relapsing multiple sclerosis. *Nature Communications*, **2020**, 11, 3871	17.4	6
167	Regulation of adipose tissue inflammation and systemic metabolism in murine obesity by polymer implants loaded with lentiviral vectors encoding human interleukin-4. *Biotechnology and Bioengineering*, **2020**, 117, 3891-3901	4.9	2
166	Building a virtual community to support and celebrate the success of Latinx scientists. *Nature Reviews Materials*, **2020**, 1-3	73.3	0
165	Secreted Factors From Proinflammatory Macrophages Promote an Osteoblast-Like Phenotype in Valvular Interstitial Cells. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2020**, 40, e296-e308	9.4	22

164	Acute Implantation of Aligned Hydrogel Tubes Supports Delayed Spinal Progenitor Implantation. *ACS Biomaterials Science and Engineering*, **2020**, 6, 5771-5784	5.5	9
163	Defining the Cardiac Fibroblast Secretome in a Fibrotic Microenvironment. *Journal of the American Heart Association*, **2020**, 9, e017025	6	18
162	Calcium Signaling Regulates Valvular Interstitial Cell Alignment and Myofibroblast Activation in Fast-Relaxing Boronate Hydrogels. *Macromolecular Bioscience*, **2020**, 20, e2000268	5.5	11
161	Integration of Islet/Beta-Cell Transplants with Host Tissue Using Biomaterial Platforms. *Endocrinology*, **2020**, 161,	4.8	2
160	Hydrogel and neural progenitor cell delivery supports organotypic fetal spinal cord development in an model of prenatal spina bifida repair. *Journal of Tissue Engineering*, **2020**, 11, 2041731420943833	7.5	2
159	Three-dimensional encapsulation of adult mouse cardiomyocytes in hydrogels with tunable stiffness. *Progress in Biophysics and Molecular Biology*, **2020**, 154, 71-79	4.7	16
158	High Frequency Spectral Ultrasound Imaging to Detect Metastasis in Implanted Biomaterial Scaffolds. *Annals of Biomedical Engineering*, **2020**, 48, 477-489	4.7	4
157	Design of biodegradable nanoparticles to modulate phenotypes of antigen-presenting cells for antigen-specific treatment of autoimmune disease. *Biomaterials*, **2019**, 222, 119432	15.6	34
156	Transcatheter aortic valve replacements alter circulating serum factors to mediate myofibroblast deactivation. *Science Translational Medicine*, **2019**, 11,	17.5	26
155	PEG‐Anthracene Hydrogels as an On-Demand Stiffening Matrix To Study Mechanobiology. *Angewandte Chemie*, **2019**, 131, 10017-10021	3.6	14
154	Dynamic genome-scale cell-specific metabolic models reveal novel inter-cellular and intra-cellular metabolic communications during ovarian follicle development. *BMC Bioinformatics*, **2019**, 20, 307	3.6	9
153	PEG-Anthracene Hydrogels as an On-Demand Stiffening Matrix To Study Mechanobiology. *Angewandte Chemie - International Edition*, **2019**, 58, 9912-9916	16.4	50
152	Optimizing PLG nanoparticle-peptide delivery platforms for transplantation tolerance using an allogeneic skin transplant model. *Biomaterials*, **2019**, 210, 70-82	15.6	11
151	Gold Nanoparticle-Functionalized Reverse Thermal Gel for Tissue Engineering Applications. *ACS Applied Materials & Interfaces*, **2019**, 11, 18671-18680	9.5	29
150	Biomaterial Scaffolds Recruit an Aggressive Population of Metastatic Tumor Cells. *Cancer Research*, **2019**, 79, 2042-2053	10.1	19
149	Adaptable boronate ester hydrogels with tunable viscoelastic spectra to probe timescale dependent mechanotransduction. *Biomaterials*, **2019**, 223, 119430	15.6	35
148	Quantifying heart valve interstitial cell contractile state using highly tunable poly(ethylene glycol) hydrogels. *Acta Biomaterialia*, **2019**, 96, 354-367	10.8	13
147	Cargo-less nanoparticles program innate immune cell responses to toll-like receptor activation. *Biomaterials*, **2019**, 218, 119333	15.6	26

146	Intravascular innate immune cells reprogrammed via intravenous nanoparticles to promote functional recovery after spinal cord injury. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 14947-14954	11.5	42
145	Microporous scaffolds support assembly and differentiation of pancreatic progenitors into β cell clusters. *Acta Biomaterialia*, **2019**, 96, 111-122	10.8	17
144	PLG Bridge Implantation in Chronic SCI Promotes Axonal Elongation and Myelination. *ACS Biomaterials Science and Engineering*, **2019**, 5, 6679-6690	5.5	2
143	Precision health for breast cancer metastasis: biomaterial scaffolds as an engineered metastatic niche to define, study, and monitor metastatic progression. *Oncoscience*, **2019**, 6, 380-382	0.8	2
142	Designing drug-free biodegradable nanoparticles to modulate inflammatory monocytes and neutrophils for ameliorating inflammation. *Journal of Controlled Release*, **2019**, 300, 185-196	11.7	42
141	Combinatorial lentiviral gene delivery of pro-oligodendrogenic factors for improving myelination of regenerating axons after spinal cord injury. *Biotechnology and Bioengineering*, **2019**, 116, 155-167	4.9	9
140	Hydrazone covalent adaptable networks modulate extracellular matrix deposition for cartilage tissue engineering. *Acta Biomaterialia*, **2019**, 83, 71-82	10.8	56
139	Localized immune tolerance from FasL-functionalized PLG scaffolds. *Biomaterials*, **2019**, 192, 271-281	15.6	13
138	Immunofunctional photodegradable poly(ethylene glycol) hydrogel surfaces for the capture and release of rare cells. *Colloids and Surfaces B: Biointerfaces*, **2019**, 174, 483-492	6	22
137	Aligned hydrogel tubes guide regeneration following spinal cord injury. *Acta Biomaterialia*, **2019**, 86, 312-322	10.8	49
136	Overcoming challenges in treating autoimmuntity: Development of tolerogenic immune-modifying nanoparticles. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2019**, 18, 282-291	6	46
135	Biomaterial Scaffolds as Pre-metastatic Niche Mimics Systemically Alter the Primary Tumor and Tumor Microenvironment. *Advanced Healthcare Materials*, **2018**, 7, e1700903	10.1	20
134	Microporous Polymer Scaffolds for the Transplantation of Embryonic Stem Cell Derived Pancreatic Progenitors to a Clinically Translatable Site for the Treatment of Type I Diabetes. *ACS Biomaterials Science and Engineering*, **2018**, 4, 1770-1778	5.5	20
133	Photopolymerized dynamic hydrogels with tunable viscoelastic properties through thioester exchange. *Biomaterials*, **2018**, 178, 496-503	15.6	90
132	Engineering precision biomaterials for personalized medicine. *Science Translational Medicine*, **2018**, 10,	17.5	99
131	Reversible Control of Network Properties in Azobenzene-Containing Hyaluronic Acid-Based Hydrogels. *Bioconjugate Chemistry*, **2018**, 29, 905-913	6.3	94
130	Tolerogenic Ag-PLG nanoparticles induce tregs to suppress activated diabetogenic CD4 and CD8 T cells. *Journal of Autoimmunity*, **2018**, 89, 112-124	15.5	56
129	Local Immunomodulation with Anti-inflammatory Cytokine-Encoding Lentivirus Enhances Functional Recovery after Spinal Cord Injury. *Molecular Therapy*, **2018**, 26, 1756-1770	11.7	31

128	Retrievable hydrogels for ovarian follicle transplantation and oocyte collection. *Biotechnology and Bioengineering*, **2018**, 115, 2075-2086	4.9	25
127	Synthesis of microgel sensors for spatial and temporal monitoring of protease activity. *ACS Biomaterials Science and Engineering*, **2018**, 4, 378-387	5.5	21
126	Embryonic stem cell secreted factors decrease invasiveness of triple-negative breast cancer cells through regulome modulation. *Cancer Biology and Therapy*, **2018**, 19, 271-281	4.6	4
125	Partial flocculation for spray drying of spherical mixed metal oxide particles. *Journal of the American Ceramic Society*, **2018**, 101, 4452-4457	3.8	5
124	Dynamic microRNA activity identifies therapeutic targets in trastuzumab-resistant HER2 breast cancer. *Biotechnology and Bioengineering*, **2018**, 115, 2613-2623	4.9	9
123	A Reversible and Repeatable Thiol-Ene Bioconjugation for Dynamic Patterning of Signaling Proteins in Hydrogels. *ACS Central Science*, **2018**, 4, 909-916	16.8	95
122	Evaluation of biomaterial scaffold delivery of IL-33 as a localized immunomodulatory agent to support cell transplantation in adipose tissue. *Journal of Immunology and Regenerative Medicine*, **2018**, 1, 1-12	2.8	17
121	It's All in the Delivery: Designing Hydrogels for Cell and Non-viral Gene Therapies. *Molecular Therapy*, **2018**, 26, 2087-2106	11.7	48
120	Evaluation of encapsulating and microporous nondegradable hydrogel scaffold designs on islet engraftment in rodent models of diabetes. *Biotechnology and Bioengineering*, **2018**, 115, 2356-2364	4.9	14
119	Pre-Metastatic Niche: Biomaterial Scaffolds as Pre-metastatic Niche Mimics Systemically Alter the Primary Tumor and Tumor Microenvironment (Adv. Healthcare Mater. 10/2018). *Advanced Healthcare Materials*, **2018**, 7, 1870040	10.1	
118	Feasibility study on mouse live imaging after spinal cord injury and poly(lactide-co-glycolide) bridge implantation. *Journal of Biomedical Optics*, **2018**, 23, 1-6	3.5	4
117	Conjugation of Transforming Growth Factor Beta to Antigen-Loaded Poly(lactide- co-glycolide) Nanoparticles Enhances Efficiency of Antigen-Specific Tolerance. *Bioconjugate Chemistry*, **2018**, 29, 813-823	6.3	43
116	Epithelial-mesenchymal crosstalk influences cellular behavior in a 3D alveolus-fibroblast model system. *Biomaterials*, **2018**, 155, 124-134	15.6	25
115	Reducing inflammation through delivery of lentivirus encoding for anti-inflammatory cytokines attenuates neuropathic pain after spinal cord injury. *Journal of Controlled Release*, **2018**, 290, 88-101	11.7	32
114	Synergy of Paracrine Signaling During Early-Stage Mouse Ovarian Follicle Development. *Cellular and Molecular Bioengineering*, **2018**, 11, 435-450	3.9	8
113	Spinal Progenitor-Laden Bridges Support Earlier Axon Regeneration Following Spinal Cord Injury. *Tissue Engineering - Part A*, **2018**, 24, 1588-1602	3.9	11
112	Secondary Photocrosslinking of Click Hydrogels To Probe Myoblast Mechanotransduction in Three Dimensions. *Journal of the American Chemical Society*, **2018**, 140, 11585-11588	16.4	47
111	Design of Large-Scale Reporter Construct Arrays for Dynamic, Live Cell Systems Biology. *ACS Synthetic Biology*, **2018**, 7, 2063-2073	5.7	3

110	Amplified Photodegradation of Cell-Laden Hydrogels via an Addition-Fragmentation Chain Transfer Reaction. *Advanced Materials*, **2017**, 29, 1605001	24	68
109	Peptide-Conjugated Nanoparticles Reduce Positive Co-stimulatory Expression and T Cell Activity to Induce Tolerance. *Molecular Therapy*, **2017**, 25, 1676-1685	11.7	57
108	In vivo reprogramming of immune cells: Technologies for induction of antigen-specific tolerance. *Advanced Drug Delivery Reviews*, **2017**, 114, 240-255	18.5	70
107	Clickable Microgel Scaffolds as Platforms for 3D Cell Encapsulation. *Advanced Healthcare Materials*, **2017**, 6, 1700254	10.1	53
106	Phosphate regulates chondrogenesis in a biphasic and maturation-dependent manner. *Differentiation*, **2017**, 95, 54-62	3.5	4
105	Vasculogenic hydrogel enhances islet survival, engraftment, and function in leading extrahepatic sites. *Science Advances*, **2017**, 3, e1700184	14.3	95
104	Engineering the pre-metastatic niche. *Nature Biomedical Engineering*, **2017**, 1,	19	73
103	Systems analysis of dynamic transcription factor activity identifies targets for treatment in Olaparib resistant cancer cells. *Biotechnology and Bioengineering*, **2017**, 114, 2085-2095	4.9	10
102	Myofibroblastic activation of valvular interstitial cells is modulated by spatial variations in matrix elasticity and its organization. *Biomaterials*, **2017**, 131, 131-144	15.6	53
101	Advances in islet encapsulation technologies. *Nature Reviews Drug Discovery*, **2017**, 16, 338-350	64.1	214
100	PEG-peptide hydrogels reveal differential effects of matrix microenvironmental cues on melanoma drug sensitivity. *Integrative Biology (United Kingdom)*, **2017**, 9, 76-87	3.7	21
99	Reproducible Dendronized PEG Hydrogels via SPAAC Cross-Linking. *Biomacromolecules*, **2017**, 18, 4054-4059	6.9	27
98	Injectable Carbon Nanotube-Functionalized Reverse Thermal Gel Promotes Cardiomyocytes Survival and Maturation. *ACS Applied Materials & Interfaces*, **2017**, 9, 31645-31656	9.5	39
97	Cell Culture: Clickable Microgel Scaffolds as Platforms for 3D Cell Encapsulation (Adv. Healthcare Mater. 15/2017). *Advanced Healthcare Materials*, **2017**, 6,	10.1	1
96	Hydrogels with Reversible Mechanics to Probe Dynamic Cell Microenvironments. *Angewandte Chemie - International Edition*, **2017**, 56, 12132-12136	16.4	165
95	Hydrogels with Reversible Mechanics to Probe Dynamic Cell Microenvironments. *Angewandte Chemie*, **2017**, 129, 12300-12304	3.6	15
94	An antigen-encapsulating nanoparticle platform for T1/17 immune tolerance therapy. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2017**, 13, 191-200	6	66
93	Controlled Delivery of Single or Multiple Antigens in Tolerogenic Nanoparticles Using Peptide-Polymer Bioconjugates. *Molecular Therapy*, **2017**, 25, 1655-1664	11.7	53

92	Microarray analyses to quantify advantages of 2D and 3D hydrogel culture systems in maintaining the native valvular interstitial cell phenotype. *Biomaterials*, **2016**, 74, 31-41	15.6	68
91	Role of cell-matrix interactions on VIC phenotype and tissue deposition in 3D PEG hydrogels. *Journal of Tissue Engineering and Regenerative Medicine*, **2016**, 10, E443-E453	4.4	37
90	Enhanced Survival with Implantable Scaffolds That Capture Metastatic Breast Cancer Cells In Vivo. *Cancer Research*, **2016**, 76, 5209-18	10.1	68
89	Spatially patterned matrix elasticity directs stem cell fate. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, E4439-45	11.5	138
88	The design of reversible hydrogels to capture extracellular matrix dynamics. *Nature Reviews Materials*, **2016**, 1,	73.3	406
87	Articular cartilage generation applying PEG-LA-DM/PEGDM copolymer hydrogels. *BMC Musculoskeletal Disorders*, **2016**, 17, 245	2.8	10
86	Enhanced User-Control of Small Molecule Drug Release from a Poly(ethylene glycol) Hydrogel via Azobenzene/Cyclodextrin Complex Tethers. *Journal of Materials Chemistry B*, **2016**, 4, 1035-1039	7.3	25
85	Plakophilin-2 loss promotes TGF-β1/p38 MAPK-dependent fibrotic gene expression in cardiomyocytes. *Journal of Cell Biology*, **2016**, 212, 425-38	7.3	60
84	Extracellular matrix mediators of metastatic cell colonization characterized using scaffold mimics of the pre-metastatic niche. *Acta Biomaterialia*, **2016**, 33, 13-24	10.8	48
83	Transforming growth factor-beta 1 delivery from microporous scaffolds decreases inflammation post-implant and enhances function of transplanted islets. *Biomaterials*, **2016**, 80, 11-19	15.6	76
82	Semi-automated counting of axon regeneration in poly(lactide co-glycolide) spinal cord bridges. *Journal of Neuroscience Methods*, **2016**, 263, 15-22	3	12
81	Photoregulated Hydrazone-Based Hydrogel Formation for Biochemically Patterning 3D Cellular Microenvironments. *ACS Macro Letters*, **2016**, 5, 19-23	6.6	43
80	Combined, Independent Small Molecule Release and Shape Memory via Nanogel-Coated Thiourethane Polymer Networks. *Polymer Chemistry*, **2016**, 7, 816-825	4.9	13
79	Tolerance induction using nanoparticles bearing HY peptides in bone marrow transplantation. *Biomaterials*, **2016**, 76, 1-10	15.6	37
78	Mold-casted non-degradable, islet macro-encapsulating hydrogel devices for restoration of normoglycemia in diabetic mice. *Biotechnology and Bioengineering*, **2016**, 113, 2485-95	4.9	17
77	Three-Dimensional High-Throughput Cell Encapsulation Platform to Study Changes in Cell-Matrix Interactions. *ACS Applied Materials & Interfaces*, **2016**, 8, 21914-22	9.5	35
76	Immune Tolerance for Autoimmune Disease and Cell Transplantation. *Annual Review of Biomedical Engineering*, **2016**, 18, 181-205	12	53
75	Biodegradable antigen-associated PLG nanoparticles tolerize Th2-mediated allergic airway inflammation pre- and postsensitization. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 5059-64	11.5	61

74	Tissue Engineering Approaches to Modulate the Inflammatory Milieu following Spinal Cord Injury. *Cells Tissues Organs*, **2016**, 202, 52-66	2.1	29
73	Poly(lactide-co-glycolide) microspheres for MRI-monitored delivery of sorafenib in a rabbit VX2 model. *Biomaterials*, **2015**, 61, 299-306	15.6	34
72	Size-specific follicle selection improves mouse oocyte reproductive outcomes. *Reproduction*, **2015**, 150, 183-92	3.8	41
71	Biomaterial bridges enable regeneration and re-entry of corticospinal tract axons into the caudal spinal cord after SCI: Association with recovery of forelimb function. *Biomaterials*, **2015**, 65, 1-12	15.6	49
70	Measuring dynamic cell-material interactions and remodeling during 3D human mesenchymal stem cell migration in hydrogels. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E3757-64	11.5	121
69	Harnessing nanoparticles for immune modulation. *Trends in Immunology*, **2015**, 36, 419-27	14.4	148
68	Sponge-mediated lentivirus delivery to acute and chronic spinal cord injuries. *Journal of Controlled Release*, **2015**, 204, 1-10	11.7	19
67	Multifunctional bioscaffolds for 3D culture of melanoma cells reveal increased MMP activity and migration with BRAF kinase inhibition. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 5366-71	11.5	44
66	Cellular and molecular targeting for nanotherapeutics in transplantation tolerance. *Clinical Immunology*, **2015**, 160, 14-23	9	21
65	Engineering the ovarian cycle using in vitro follicle culture. *Human Reproduction*, **2015**, 30, 1386-95	5.7	64
64	Controlled release strategies for modulating immune responses to promote tissue regeneration. *Journal of Controlled Release*, **2015**, 219, 155-166	11.7	25
63	A Biosynthetic Scaffold that Facilitates Chondrocyte-Mediated Degradation and Promotes Articular Cartilage Extracellular Matrix Deposition. *Regenerative Engineering and Translational Medicine*, **2015**, 1, 11-21	2.4	23
62	Thiol-ene and photo-cleavage chemistry for controlled presentation of biomolecules in hydrogels. *Journal of Controlled Release*, **2015**, 219, 95-106	11.7	87
61	In vivo capture and label-free detection of early metastatic cells. *Nature Communications*, **2015**, 6, 8094	17.4	100
60	Transcriptional profiles of valvular interstitial cells cultured on tissue culture polystyrene, on 2D hydrogels, or within 3D hydrogels. *Data in Brief*, **2015**, 5, 959-62	1.2	2
59	A synthetic modular approach for modeling the role of the 3D microenvironment in tumor progression. *Scientific Reports*, **2015**, 5, 17814	4.9	37
58	In vitro follicle growth supports human oocyte meiotic maturation. *Scientific Reports*, **2015**, 5, 17323	4.9	141
57	Secretome identification of immune cell factors mediating metastatic cell homing. *Scientific Reports*, **2015**, 5, 17566	4.9	19

56	Progress in material design for biomedical applications. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 14444-51	11.5	174
55	Dynamic stiffening of poly(ethylene glycol)-based hydrogels to direct valvular interstitial cell phenotype in a three-dimensional environment. *Biomaterials*, **2015**, 49, 47-56	15.6	148
54	Multi-modal magnetic resonance elastography for noninvasive assessment of ovarian tissue rigidity in vivo. *Acta Biomaterialia*, **2015**, 13, 295-300	10.8	32
53	Mechanical memory and dosing influence stem cell fate. *Nature Materials*, **2014**, 13, 645-52	27	727
52	Biophysically defined and cytocompatible covalently adaptable networks as viscoelastic 3D cell culture systems. *Advanced Materials*, **2014**, 26, 865-72	24	265
51	Modulation of matrix elasticity with PEG hydrogels to study melanoma drug responsiveness. *Biomaterials*, **2014**, 35, 4310-8	15.6	52
50	Sonic hedgehog and neurotrophin-3 increase oligodendrocyte numbers and myelination after spinal cord injury. *Integrative Biology (United Kingdom)*, **2014**, 6, 694-705	3.7	55
49	A peptide functionalized poly(ethylene glycol) (PEG) hydrogel for investigating the influence of biochemical and biophysical matrix properties on tumor cell migration. *Biomaterials Science*, **2014**, 2, 1024-1034	7.4	59
48	Coumarin-Based Photodegradable Hydrogel: Design, Synthesis, Gelation, and Degradation Kinetics.. *ACS Macro Letters*, **2014**, 3, 515-519	6.6	82
47	Heparin-chitosan nanoparticle functionalization of porous poly(ethylene glycol) hydrogels for localized lentivirus delivery of angiogenic factors. *Biomaterials*, **2014**, 35, 8687-93	15.6	36
46	Nanoparticle delivery of donor antigens for transplant tolerance in allogeneic islet transplantation. *Biomaterials*, **2014**, 35, 8887-8894	15.6	69
45	Roles of transforming growth factor-β1 and OB-cadherin in porcine cardiac valve myofibroblast differentiation. *FASEB Journal*, **2014**, 28, 4551-62	0.9	29
44	Design and characterization of a synthetically accessible, photodegradable hydrogel for user-directed formation of neural networks. *Biomacromolecules*, **2014**, 15, 2808-16	6.9	74
43	Modulation of leukocyte infiltration and phenotype in microporous tissue engineering scaffolds via vector induced IL-10 expression. *Biomaterials*, **2014**, 35, 2024-31	15.6	60
42	Cryotemplation for the Rapid Fabrication of Porous, Patternable Photopolymerized Hydrogels. *Journal of Materials Chemistry B*, **2014**, 2, 4521-4530	7.3	9
41	Poly(lactide-co-glycolide) microspheres for MRI-monitored transcatheter delivery of sorafenib to liver tumors. *Journal of Controlled Release*, **2014**, 184, 10-7	11.7	49
40	Osteogenic differentiation of human mesenchymal stem cells on β3 integrin binding peptide hydrogels is dependent on substrate elasticity. *Biomaterials Science*, **2014**, 2, 352-361	7.4	47
39	Quantification of particle-conjugated or particle-encapsulated peptides on interfering reagent backgrounds. *BioTechniques*, **2014**, 57, 39-44	2.5	13

38	Three-dimensional systems for in vitro follicular culture: overview of alginate-based matrices. *Reproduction, Fertility and Development*, **2014**, 26, 915-30	1.8	37
37	Cardiac valve cells and their microenvironment--insights from in vitro studies. *Nature Reviews Cardiology*, **2014**, 11, 715-27	14.8	62
36	Development of a Maleimide Amino Acid for Use as a Tool for Peptide Conjugation and Modification. *International Journal of Peptide Research and Therapeutics*, **2013**, 19, 265-274	2.1	3
35	Mechanical Properties and Degradation of Chain and Step Polymerized Photodegradable Hydrogels. *Macromolecules*, **2013**, 46,	5.5	116
34	A Diels-Alder modulated approach to control and sustain the release of dexamethasone and induce osteogenic differentiation of human mesenchymal stem cells. *Biomaterials*, **2013**, 34, 4150-4158	15.6	60
33	Monitoring degradation of matrix metalloproteinases-cleavable PEG hydrogels via multiple particle tracking microrheology. *Soft Matter*, **2013**, 9, 1570-1579	3.6	52
32	Biomaterial Scaffolds for Controlled, Localized Gene Delivery of Regenerative Factors. *Advances in Wound Care*, **2013**, 2, 100-106	4.8	26
31	Hydrogels preserve native phenotypes of valvular fibroblasts through an elasticity-regulated PI3K/AKT pathway. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 19336-41	11.5	117
30	Modeling Controlled Photodegradation in Optically Thick Hydrogels. *Journal of Polymer Science Part A*, **2013**, 51, 1899-1911	2.5	27
29	Wavelength-Controlled Photocleavage for the Orthogonal and Sequential Release of Multiple Proteins. *Angewandte Chemie*, **2013**, 125, 14048-14052	3.6	14
28	A quantitative comparison of human HT-1080 fibrosarcoma cells and primary human dermal fibroblasts identifies a 3D migration mechanism with properties unique to the transformed phenotype. *PLoS ONE*, **2013**, 8, e81689	3.7	24
27	3D Photofixation Lithography in Diels-Alder Networks. *Macromolecular Rapid Communications*, **2012**, 33, 2092-6	4.8	51
26	Small peptide functionalized thiol-ene hydrogels as culture substrates for understanding valvular interstitial cell activation and de novo tissue deposition. *Acta Biomaterialia*, **2012**, 8, 3201-9	10.8	78
25	An Instrumented Bioreactor for Mechanical Stimulation and Real-Time, Nondestructive Evaluation of Engineered Cartilage Tissue. *Journal of Medical Devices, Transactions of the ASME*, **2012**, 6,	1.3	8
24	Redirecting valvular myofibroblasts into dormant fibroblasts through light-mediated reduction in substrate modulus. *PLoS ONE*, **2012**, 7, e39969	3.7	126
23	Cytocompatible click-based hydrogels with dynamically tunable properties through orthogonal photoconjugation and photocleavage reactions. *Nature Chemistry*, **2011**, 3, 925-31	17.6	528
22	Spatial and temporal control of the alkyne-azide cycloaddition by photoinitiated Cu(II) reduction. *Nature Chemistry*, **2011**, 3, 256-59	17.6	316
21	Reaction Rates and Mechanisms for Radical, Photoinitated Addition of Thiols to Alkynes, and Implications for Thiol-Yne Photopolymerizations and Click Reactions. *Macromolecules*, **2010**, 43, 4113-4119	5.5	138

20	In situ elasticity modulation with dynamic substrates to direct cell phenotype. *Biomaterials*, **2010**, 31, 1-8	15.6	346
19	A Versatile Synthetic Extracellular Matrix Mimic via Thiol-Norbornene Photopolymerization. *Advanced Materials*, **2009**, 21, 5005-5010	24	478
18	Mixed Mode Thiol-Acrylate Photopolymerizations for the Synthesis of PEG-Peptide Hydrogels. *Macromolecules*, **2008**, 41, 6019-6026	5.5	149
17	Multifunctional Pancreatic Islet Encapsulation Barriers Achieved via Multilayer PEG Hydrogels. *Cell Transplantation*, **2007**, 16, 1049-1057	4	48
16	Ultrathin gradient films using thiol-ene polymerizations. *Journal of Polymer Science Part A*, **2006**, 44, 7027-7039	2.5	74
15	Integrated surface modification of fully polymeric microfluidic devices using living radical photopolymerization chemistry. *Journal of Polymer Science Part A*, **2006**, 44, 1404-1413	2.5	24
14	Living radical photopolymerization induced grafting on thiol-ene based substrates. *Journal of Polymer Science Part A*, **2005**, 43, 2134-2144	2.5	61
13	Modular design of non-viral vectors with bioactive components. *Trends in Biotechnology*, **2004**, 22, 429-31	15.1	7
12	Synthesis and Characterization of Photopolymerized Multifunctional Hydrogels: Water-Soluble Poly(Vinyl Alcohol) and Chondroitin Sulfate Macromers for Chondrocyte Encapsulation. *Macromolecules*, **2004**, 37, 6726-6733	5.5	157
11	A Methacrylated Photoiniferter as a Chemical Basis for Microlithography: Micropatterning Based on Photografting Polymerization. *Macromolecules*, **2003**, 36, 6739-6745	5.5	59
10	Synthesis of a novel methacrylic monomer iniferter and its application in surface photografting on crosslinked polymer substrates. *Journal of Polymer Science Part A*, **2002**, 40, 1885-1891	2.5	54
9	Attachment of fibronectin to poly(vinyl alcohol) hydrogels promotes NIH3T3 cell adhesion, proliferation, and migration. *Journal of Biomedical Materials Research Part B*, **2001**, 57, 217-23		245
8	Synthesis and characterization of tetrafunctional lactic acid oligomers: A potential in situ forming degradable orthopaedic biomaterial. *Journal of Polymer Science Part A*, **2001**, 39, 683-692	2.5	61
7	Predicting Controlled-Release Behavior of Degradable PLA-b-PEG-b-PLA Hydrogels. *Macromolecules*, **2001**, 34, 4630-4635	5.5	168
6	Materials for Non-Viral Gene Delivery. *Annual Review of Materials Research*, **2001**, 31, 25-46	12.8	99
5	A Generalized Bulk-Degradation Model for Hydrogel Networks Formed from Multivinyl Cross-linking Molecules. *Journal of Physical Chemistry B*, **2001**, 105, 5131-5138	3.4	61
4	A Statistical Kinetic Model for the Bulk Degradation of PLA-b-PEG-b-PLA Hydrogel Networks: Incorporating Network Non-Idealities. *Journal of Physical Chemistry B*, **2001**, 105, 8069-8076	3.4	94
3	Attachment of fibronectin to poly(vinyl alcohol) hydrogels promotes NIH3T3 cell adhesion, proliferation, and migration **2001**, 57, 217		1

2	Engineered bone development from a pre-osteoblast cell line on three-dimensional scaffolds. *Tissue Engineering*, **2000**, 6, 605-17		193
1	Controlled Degradation of Cast and 3-D Printed Photocurable Thioester Networks via Thiol–Thioester Exchange. *Macromolecules*,	5.5	3