

# Abhay Pandit

## List of Publications by Citations

**Source:** <https://exaly.com/author-pdf/5407179/abhay-pandit-publications-by-citations.pdf>

**Version:** 2024-04-28

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

363  
papers

13,039  
citations

59  
h-index

95  
g-index

399  
ext. papers

15,194  
ext. citations

8  
avg, IF

6.84  
L-index

#	Paper	IF	Citations
363	Fabrication methods of porous metals for use in orthopaedic applications. <i>Biomaterials</i> , <b>2006</b> , 27, 2651-70	15.6	1032
362	A biomaterials approach to peripheral nerve regeneration: bridging the peripheral nerve gap and enhancing functional recovery. <i>Journal of the Royal Society Interface</i> , <b>2012</b> , 9, 202-21	4.1	384
361	The Collagen Suprafamily: From Biosynthesis to Advanced Biomaterial Development. <i>Advanced Materials</i> , <b>2019</b> , 31, e1801651	24	287
360	Biomimetic approaches in bone tissue engineering: Integrating biological and physicochemical strategies. <i>Advanced Drug Delivery Reviews</i> , <b>2015</b> , 84, 1-29	18.5	286
359	Porous titanium scaffolds fabricated using a rapid prototyping and powder metallurgy technique. <i>Biomaterials</i> , <b>2008</b> , 29, 3625-3635	15.6	281
358	Controlling dispersion of axonal regeneration using a multichannel collagen nerve conduit. <i>Biomaterials</i> , <b>2010</b> , 31, 5789-97	15.6	163
357	To cross-link or not to cross-link? Cross-linking associated foreign body response of collagen-based devices. <i>Tissue Engineering - Part B: Reviews</i> , <b>2015</b> , 21, 298-313	7.9	162
356	An injectable vehicle for nucleus pulposus cell-based therapy. <i>Biomaterials</i> , <b>2011</b> , 32, 2862-70	15.6	161
355	Physical, Chemical, and Biological Structures based on ROS-Sensitive Moieties that are Able to Respond to Oxidative Microenvironments. <i>Advanced Materials</i> , <b>2016</b> , 28, 5553-85	24	148
354	Challenges and strategies in the repair of ruptured annulus fibrosus. <i>European Cells and Materials</i> , <b>2013</b> , 25, 1-21	4.3	148
353	Regeneration and repair of tendon and ligament tissue using collagen fibre biomaterials. <i>Acta Biomaterialia</i> , <b>2011</b> , 7, 3237-47	10.8	142
352	Tissue-engineering approach to regenerating the intervertebral disc. <i>Tissue Engineering</i> , <b>2007</b> , 13, 1927-54		132
351	The influence of size and charge of chitosan/polyglutamic acid hollow spheres on cellular internalization, viability and blood compatibility. <i>Biomaterials</i> , <b>2010</b> , 31, 8188-97	15.6	128
350	Bioreactors for cardiovascular cell and tissue growth: a review. <i>Annals of Biomedical Engineering</i> , <b>2003</b> , 31, 1017-30	4.7	128
349	Polymer gene delivery: overcoming the obstacles. <i>Drug Discovery Today</i> , <b>2013</b> , 18, 1090-8	8.8	124
348	The past, present and future in scaffold-based tendon treatments. <i>Advanced Drug Delivery Reviews</i> , <b>2015</b> , 84, 257-77	18.5	120
347	Effect of functionalized micropatterned PLGA on guided neurite growth. <i>Acta Biomaterialia</i> , <b>2009</b> , 5, 580-8	10.8	118

346	An injectable cross-linked scaffold for nucleus pulposus regeneration. <i>Biomaterials</i> , <b>2008</b> , 29, 438-47	15.6	117
345	Recent Advances in Host-Guest Self-Assembled Cyclodextrin Carriers: Implications for Responsive Drug Delivery and Biomedical Engineering. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1909049	15.6	116
344	Macromolecular crowding meets tissue engineering by self-assembly: a paradigm shift in regenerative medicine. <i>Advanced Materials</i> , <b>2014</b> , 26, 3024-34	24	114
343	Progress in cell-based therapies for tendon repair. <i>Advanced Drug Delivery Reviews</i> , <b>2015</b> , 84, 240-56	18.5	114
342	Fibrin as a delivery system for therapeutic drugs and biomolecules. <i>Tissue Engineering - Part B: Reviews</i> , <b>2009</b> , 15, 201-14	7.9	111
341	A collagen-glycosaminoglycan co-culture model for heart valve tissue engineering applications. <i>Biomaterials</i> , <b>2006</b> , 27, 2233-46	15.6	110
340	Type II collagen-hyaluronan hydrogel--a step towards a scaffold for intervertebral disc tissue engineering. <i>European Cells and Materials</i> , <b>2010</b> , 20, 134-48	4.3	102
339	Living artificial heart valve alternatives: a review. <i>European Cells and Materials</i> , <b>2003</b> , 6, 28-45; discussion 45	4.3	96
338	Performance of an in situ formed bioactive hydrogel dressing from a PEG-based hyperbranched multifunctional copolymer. <i>Acta Biomaterialia</i> , <b>2014</b> , 10, 2076-85	10.8	95
337	Non-viral polyplexes: Scaffold mediated delivery for gene therapy. <i>Progress in Polymer Science</i> , <b>2010</b> , 35, 441-458	29.6	90
336	The ability of a collagen/calcium phosphate scaffold to act as its own vector for gene delivery and to promote bone formation via transfection with VEGF(165). <i>Biomaterials</i> , <b>2010</b> , 31, 2893-902	15.6	89
335	The osteochondral junction and its repair via bi-phasic tissue engineering scaffolds. <i>Tissue Engineering - Part B: Reviews</i> , <b>2009</b> , 15, 55-73	7.9	88
334	Current trends in biologics delivery to restore intervertebral disc anabolism. <i>Advanced Drug Delivery Reviews</i> , <b>2015</b> , 84, 146-58	18.5	84
333	Collagen: finding a solution for the source. <i>Tissue Engineering - Part A</i> , <b>2013</b> , 19, 1491-4	3.9	84
332	Topical administration of allogeneic mesenchymal stromal cells seeded in a collagen scaffold augments wound healing and increases angiogenesis in the diabetic rabbit ulcer. <i>Diabetes</i> , <b>2013</b> , 62, 2588-94	0.9	84
331	Enzymatic stabilization of gelatin-based scaffolds. <i>Journal of Biomedical Materials Research Part B</i> , <b>2005</b> , 72, 37-42		84
330	Orienting neurite growth in electrospun fibrous neural conduits. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2009</b> , 90, 483-91	3.5	82
329	A highly effective gene delivery vector--hyperbranched poly(2-(dimethylamino)ethyl methacrylate) from in situ deactivation enhanced ATRP. <i>Chemical Communications</i> , <b>2010</b> , 46, 4698-700	5.8	81

328	Glycosylation and Integrin Regulation in Cancer. <i>Trends in Cancer</i> , <b>2018</b> , 4, 537-552	12.5	81
327	P11.61 Development of a novel preclinical GBM model and therapeutic impact of IRE1 inhibition. <i>Neuro-Oncology</i> , <b>2019</b> , 21, iii57-iii58	1	78
326	"One-step" preparation of thiol-ene clickable PEG-based thermoresponsive hyperbranched copolymer for in situ crosslinking hybrid hydrogel. <i>Macromolecular Rapid Communications</i> , <b>2012</b> , 33, 1204-8	4.8	76
325	Polymer capsules as micro-/nanoreactors for therapeutic applications: Current strategies to control membrane permeability. <i>Progress in Materials Science</i> , <b>2017</b> , 90, 325-357	42.2	75
324	Bioresponsive drug delivery systems in intestinal inflammation: State-of-the-art and future perspectives. <i>Advanced Drug Delivery Reviews</i> , <b>2019</b> , 146, 248-266	18.5	74
323	A collagen-based scaffold delivering exogenous microRNA-29B to modulate extracellular matrix remodeling. <i>Molecular Therapy</i> , <b>2014</b> , 22, 786-96	11.7	74
322	Macromolecularly crowded in vitro microenvironments accelerate the production of extracellular matrix-rich supramolecular assemblies. <i>Scientific Reports</i> , <b>2015</b> , 5, 8729	4.9	72
321	Single cyclized molecule versus single branched molecule: a simple and efficient 3D "knot" polymer structure for nonviral gene delivery. <i>Journal of the American Chemical Society</i> , <b>2012</b> , 134, 4782-9	16.4	71
320	RNA interference therapy via functionalized scaffolds. <i>Advanced Drug Delivery Reviews</i> , <b>2011</b> , 63, 197-208	8.5	70
319	3D single cyclized polymer chain structure from controlled polymerization of multi-vinyl monomers: beyond Flory-Stockmayer theory. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 13130-7	16.4	70
318	Characterizing nanoscale topography of the aortic heart valve basement membrane for tissue engineering heart valve scaffold design. <i>Tissue Engineering</i> , <b>2006</b> , 12, 413-21		69
317	Tunable elastin-like polypeptide hollow sphere as a high payload and controlled delivery gene depot. <i>Journal of Controlled Release</i> , <b>2011</b> , 152, 382-92	11.7	68
316	Silicon gel sheeting for preventing and treating hypertrophic and keloid scars. <i>Cochrane Database of Systematic Reviews</i> , <b>2006</b> , CD003826		67
315	The reduction in immunogenicity of neurotrophin overexpressing stem cells after intra-striatal transplantation by encapsulation in an in situ gelling collagen hydrogel. <i>Biomaterials</i> , <b>2013</b> , 34, 9420-9	15.6	65
314	Identification of cell surface-specific markers to target human nucleus pulposus cells: expression of carbonic anhydrase XII varies with age and degeneration. <i>Arthritis and Rheumatism</i> , <b>2011</b> , 63, 3876-86		64
313	A matrix reservoir for improved control of non-viral gene delivery. <i>Journal of Controlled Release</i> , <b>2009</b> , 136, 220-5	11.7	64
312	Towards development of a dermal rudiment for enhanced wound healing response. <i>Biomaterials</i> , <b>2008</b> , 29, 857-68	15.6	64
311	A shape-controlled tuneable microgel platform to modulate angiogenic paracrine responses in stem cells. <i>Biomaterials</i> , <b>2014</b> , 35, 8757-8766	15.6	63

310	Characterization of a microbial transglutaminase cross-linked type II collagen scaffold. <i>Tissue Engineering</i> , <b>2006</b> , 12, 1467-74		63
309	The biophysical, biochemical, and biological toolbox for tenogenic phenotype maintenance in vitro. <i>Trends in Biotechnology</i> , <b>2014</b> , 32, 474-82	15.1	62
308	In vitro characterization of a collagen scaffold enzymatically cross-linked with a tailored elastin-like polymer. <i>Tissue Engineering - Part A</i> , <b>2009</b> , 15, 887-99	3.9	62
307	Liposomal gene delivery mediated by tissue-engineered scaffolds. <i>Trends in Biotechnology</i> , <b>2010</b> , 28, 28-36	15.1	61
306	Nano-textured self-assembled aligned collagen hydrogels promote directional neurite guidance and overcome inhibition by myelin associated glycoprotein. <i>Soft Matter</i> , <b>2011</b> , 7, 2770	3.6	60
305	Stereological methods to assess tissue response for tissue-engineered scaffolds. <i>Biomaterials</i> , <b>2007</b> , 28, 175-86	15.6	60
304	Multichanneled collagen conduits for peripheral nerve regeneration: design, fabrication, and characterization. <i>Tissue Engineering - Part C: Methods</i> , <b>2010</b> , 16, 1585-96	2.9	59
303	The effect of TGF-beta delivered through a collagen scaffold on wound healing. <i>Journal of Investigative Surgery</i> , <b>1999</b> , 12, 89-100	1.2	59
302	Engineering in vitro microenvironments for cell based therapies and drug discovery. <i>Drug Discovery Today</i> , <b>2013</b> , 18, 1099-108	8.8	58
301	Hyaluronic Acid Based Hydrogels Attenuate Inflammatory Receptors and Neurotrophins in Interleukin-1 $\beta$ Induced Inflammation Model of Nucleus Pulposus Cells. <i>Biomacromolecules</i> , <b>2015</b> , 16, 1714-25	6.9	56
300	The effect of intraluminal contact mediated guidance signals on axonal mismatch during peripheral nerve repair. <i>Biomaterials</i> , <b>2012</b> , 33, 6660-71	15.6	56
299	An injectable, in situ forming type II collagen/hyaluronic acid hydrogel vehicle for chondrocyte delivery in cartilage tissue engineering. <i>Drug Delivery and Translational Research</i> , <b>2014</b> , 4, 149-58	6.2	56
298	Biofilm formation to inhibition: Role of zinc oxide-based nanoparticles. <i>Materials Science and Engineering C</i> , <b>2020</b> , 108, 110319	8.3	56
297	Recovery of cardiac function mediated by MSC and interleukin-10 plasmid functionalised scaffold. <i>Biomaterials</i> , <b>2012</b> , 33, 1303-14	15.6	53
296	Amine functionalization of collagen matrices with multifunctional polyethylene glycol systems. <i>Biomacromolecules</i> , <b>2010</b> , 11, 3093-101	6.9	53
295	Exacerbations of asthma and chronic obstructive pulmonary disease (COPD): focus on virus induced exacerbations. <i>Current Pharmaceutical Design</i> , <b>2007</b> , 13, 73-97	3.3	53
294	Substrate topography: A valuable in vitro tool, but a clinical red herring for in vivo tenogenesis. <i>Acta Biomaterialia</i> , <b>2015</b> , 27, 3-12	10.8	52
293	Electric field-guided neuron migration: a novel approach in neurogenesis. <i>Tissue Engineering - Part B: Reviews</i> , <b>2011</b> , 17, 143-53	7.9	52

292	Approaches to heart valve tissue engineering scaffold design. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2007</b> , 83, 16-43	3.5	52
291	The use of therapeutic gene eNOS delivered via a fibrin scaffold enhances wound healing in a compromised wound model. <i>Biomaterials</i> , <b>2008</b> , 29, 3143-51	15.6	52
290	Preferential tendon stem cell response to growth factor supplementation. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2016</b> , 10, 783-98	4.4	51
289	Encapsulation of primary dopaminergic neurons in a GDNF-loaded collagen hydrogel increases their survival, re-innervation and function after intra-striatal transplantation. <i>Scientific Reports</i> , <b>2017</b> , 7, 16033	4.9	49
288	Biomaterial-mediated modification of the local inflammatory environment. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2015</b> , 3, 67	5.8	49
287	Methods for three-dimensional geometric characterization of the arterial vasculature. <i>Annals of Biomedical Engineering</i> , <b>2007</b> , 35, 1368-81	4.7	49
286	An injectable elastin-based gene delivery platform for dose-dependent modulation of angiogenesis and inflammation for critical limb ischemia. <i>Biomaterials</i> , <b>2015</b> , 65, 126-39	15.6	47
285	Implantation of hyaluronic acid hydrogel prevents the pain phenotype in a rat model of intervertebral disc injury. <i>Science Advances</i> , <b>2018</b> , 4, eaaq0597	14.3	47
284	Macromolecular crowding meets oxygen tension in human mesenchymal stem cell culture - A step closer to physiologically relevant in vitro organogenesis. <i>Scientific Reports</i> , <b>2016</b> , 6, 30746	4.9	47
283	Harnessing Hierarchical Nano- and Micro-Fabrication Technologies for Musculoskeletal Tissue Engineering. <i>Advanced Healthcare Materials</i> , <b>2015</b> , 4, 2488-99	10.1	46
282	Assessment of cell viability in a three-dimensional enzymatically cross-linked collagen scaffold. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2007</b> , 18, 1991-2001	4.5	46
281	Fibrin scaffold as an effective vehicle for the delivery of acidic fibroblast growth factor (FGF-1). <i>Journal of Biomaterials Applications</i> , <b>2000</b> , 14, 229-42	2.9	46
280	Stimulation of angiogenesis by FGF-1 delivered through a modified fibrin scaffold. <i>Growth Factors</i> , <b>1998</b> , 15, 113-23	1.6	46
279	Biomimetic Lipid-Based Nanosystems for Enhanced Dermal Delivery of Drugs and Bioactive Agents. <i>ACS Biomaterials Science and Engineering</i> , <b>2017</b> , 3, 1262-1272	5.5	45
278	Improved axonal regeneration of transected spinal cord mediated by multichannel collagen conduits functionalized with neurotrophin-3 gene. <i>Gene Therapy</i> , <b>2013</b> , 20, 1149-57	4	45
277	Structural variants of biodegradable polyesterurethane in vivo evoke a cellular and angiogenic response that is dictated by architecture. <i>Acta Biomaterialia</i> , <b>2009</b> , 5, 29-42	10.8	45
276	Hyaluronic acid decreases IL-6 and IL-8 secretion and permeability in an inflammatory model of interstitial cystitis. <i>Acta Biomaterialia</i> , <b>2015</b> , 19, 66-75	10.8	44
275	Assessment of stem cell carriers for tendon tissue engineering in pre-clinical models. <i>Stem Cell Research and Therapy</i> , <b>2014</b> , 5, 38	8.3	44

274	Accelerated Development of Supramolecular Corneal Stromal-Like Assemblies from Corneal Fibroblasts in the Presence of Macromolecular Crowders. <i>Tissue Engineering - Part C: Methods</i> , <b>2015</b> , 21, 660-70	2.9	44
273	Investigation of acidic fibroblast growth factor delivered through a collagen scaffold for the treatment of full-thickness skin defects in a rabbit model. <i>Plastic and Reconstructive Surgery</i> , <b>1998</b> , 101, 766-75	2.7	43
272	Critical aspects and challenges for intervertebral disc repair and regeneration-Harnessing advances in tissue engineering. <i>JOR Spine</i> , <b>2018</b> , 1, e1029	3.7	42
271	Essential modification of the Sircol Collagen Assay for the accurate quantification of collagen content in complex protein solutions. <i>Acta Biomaterialia</i> , <b>2010</b> , 6, 3146-51	10.8	41
270	Influence of sterilisation methods on collagen-based devices stability and properties. <i>Expert Review of Medical Devices</i> , <b>2014</b> , 11, 305-14	3.5	40
269	DNA immobilization and detection on cellulose paper using a surface grown cationic polymer via ATRP. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2012</b> , 4, 826-31	9.5	40
268	Nanocellulose reinforced gellan-gum hydrogels as potential biological substitutes for annulus fibrosus tissue regeneration. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , <b>2018</b> , 14, 897-908	6	40
267	Antioxidant functionalized polymer capsules to prevent oxidative stress. <i>Acta Biomaterialia</i> , <b>2018</b> , 67, 21-31	10.8	40
266	Dual stimuli responsive PEG based hyperbranched polymers. <i>Polymer Chemistry</i> , <b>2010</b> , 1, 827	4.9	39
265	Use of templates to fabricate nanoscale spherical structures for defined architectural control. <i>Small</i> , <b>2010</b> , 6, 488-98	11	39
264	Scaffold with a natural mesh-like architecture: isolation, structural, and in vitro characterization. <i>Biomacromolecules</i> , <b>2007</b> , 8, 928-36	6.9	39
263	How do Jains get toxoplasma infection?. <i>Lancet, The</i> , <b>1999</b> , 354, 486-7	4.0	39
262	The influence of anisotropic nano- to micro-topography on in vitro and in vivo osteogenesis. <i>Nanomedicine</i> , <b>2015</b> , 10, 693-711	5.6	37
261	Progress in Corneal Stromal Repair: From Tissue Grafts and Biomaterials to Modular Supramolecular Tissue-Like Assemblies. <i>Advanced Materials</i> , <b>2016</b> , 28, 5381-99	24	37
260	Use of a fibrin-based system for enhancing angiogenesis and modulating inflammation in the treatment of hyperglycemic wounds. <i>Biomaterials</i> , <b>2014</b> , 35, 2001-10	15.6	37
259	Characterization of a slowly degrading biodegradable polyester-urethane for tissue engineering scaffolds. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2007</b> , 82, 669-79	5.4	37
258	Optimization of a fibrin scaffold for sustained release of an adenoviral gene vector. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2006</b> , 78, 702-8	5.4	37
257	Modulation of inflammation and angiogenesis and changes in ECM GAG-activity via dual delivery of nucleic acids. <i>Biomaterials</i> , <b>2015</b> , 69, 133-47	15.6	36



256	Endothelial cell response to biomechanical forces under simulated vascular loading conditions. <i>Journal of Biomechanics</i> , <b>2007</b> , 40, 3146-54	2.9	36
255	Preferential cell response to anisotropic electro-spun fibrous scaffolds under tension-free conditions. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2012</b> , 23, 137-48	4.5	35
254	Electromechanical properties of dried tendon and isoelectrically focused collagen hydrogels. <i>Acta Biomaterialia</i> , <b>2012</b> , 8, 3073-9	10.8	35
253	Thermoresponsive hyperbranched copolymer with multi acrylate functionality for in situ cross-linkable hyaluronic acid composite semi-IPN hydrogel. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2012</b> , 23, 25-35	4.5	34
252	The neurotoxicity of gene vectors and its amelioration by packaging with collagen hollow spheres. <i>Biomaterials</i> , <b>2013</b> , 34, 2130-41	15.6	34
251	Fibrin scaffold promotes adenoviral gene transfer and controlled vector delivery. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2009</b> , 89, 876-84	5.4	34
250	Polymer-antibody fragment conjugates for biomedical applications. <i>Progress in Polymer Science</i> , <b>2014</b> , 39, 308-329	29.6	33
249	Integration of TiO <sub>2</sub> into the diatom <i>Thalassiosira weissflogii</i> during frustule synthesis. <i>Scientific Reports</i> , <b>2013</b> , 3, 3205	4.9	33
248	Functionalized scaffold-mediated interleukin 10 gene delivery significantly improves survival rates of stem cells in vivo. <i>Molecular Therapy</i> , <b>2011</b> , 19, 969-78	11.7	33
247	Amine functionalization of cholecyst-derived extracellular matrix with generation 1 PAMAM dendrimer. <i>Biomacromolecules</i> , <b>2008</b> , 9, 528-36	6.9	33
246	In vivo wound healing response to a modified degradable fibrin scaffold. <i>Journal of Biomaterials Applications</i> , <b>1998</b> , 12, 222-36	2.9	33
245	Fibrin Scaffold as an Effective Vehicle for the Delivery of Acidic Fibroblast Growth Factor (FGF-1)*. <i>Journal of Biomaterials Applications</i> , <b>2000</b> , 14, 229-242	2.9	33
244	In Vitro Enzymatic Degradation of Tissue Grafts and Collagen Biomaterials by Matrix Metalloproteinases: Improving the Collagenase Assay. <i>ACS Biomaterials Science and Engineering</i> , <b>2017</b> , 3, 1922-1932	5.5	32
243	Glycosaminoglycans in Tendon Physiology, Pathophysiology, and Therapy. <i>Bioconjugate Chemistry</i> , <b>2015</b> , 26, 1237-51	6.3	32
242	Fibrin-genipin annulus fibrosus sealant as a delivery system for anti-TNF $\alpha$ drug. <i>Spine Journal</i> , <b>2015</b> , 15, 2045-54	4	32
241	Effects of Polydopamine Functionalization on Boron Nitride Nanotube Dispersion and Cytocompatibility. <i>Bioconjugate Chemistry</i> , <b>2015</b> , 26, 2025-37	6.3	32
240	Microgel microenvironment primes adipose-derived stem cells towards an NP cells-like phenotype. <i>Advanced Healthcare Materials</i> , <b>2014</b> , 3, 2012-22	10.1	32
239	Multi-modal delivery of therapeutics using biomaterial scaffolds. <i>Journal of Materials Chemistry B</i> , <b>2014</b> , 2, 6692-6707	7.3	32



238	Hyperbranched PEGmethacrylate linear pDMAEMA block copolymer as an efficient non-viral gene delivery vector. <i>International Journal of Pharmaceutics</i> , <b>2012</b> , 434, 99-105	6.5	32
237	Gene Expression Profiling Identifies Interferon Signalling Molecules and IGFBP3 in Human Degenerative Annulus Fibrosus. <i>Scientific Reports</i> , <b>2015</b> , 5, 15662	4.9	32
236	A protective extracellular matrix-based gene delivery reservoir fabricated by electrostatic charge manipulation. <i>Molecular Pharmaceutics</i> , <b>2012</b> , 9, 3099-106	5.6	32
235	Low, but not too low, oxygen tension and macromolecular crowding accelerate extracellular matrix deposition in human dermal fibroblast culture. <i>Acta Biomaterialia</i> , <b>2016</b> , 44, 221-31	10.8	32
234	Responsive triggering systems for delivery in chronic wound healing. <i>Advanced Drug Delivery Reviews</i> , <b>2018</b> , 129, 169-193	18.5	31
233	Low oxygen tension and macromolecular crowding accelerate extracellular matrix deposition in human corneal fibroblast culture. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2018</b> , 12, 6-18 <sup>4.4</sup>	4.4	31
232	Toward Customized Extracellular Niche Engineering: Progress in Cell-Entrapment Technologies. <i>Advanced Materials</i> , <b>2018</b> , 30, 1703948	24	31
231	GDNF gene delivery via a 2-(dimethylamino)ethyl methacrylate based cyclized knot polymer for neuronal cell applications. <i>ACS Chemical Neuroscience</i> , <b>2013</b> , 4, 540-6	5.7	30
230	A novel hyperbranched polyester made from aconitic acid (B3) and di(ethylene glycol) (A2). <i>Polymer International</i> , <b>2011</b> , 60, 630-634	3.3	30
229	Effect of oxygen treatment and dressing oxygen permeability on wound healing. <i>Wound Repair and Regeneration</i> , <b>1994</b> , 2, 130-7	3.6	30
228	Bioactive potential of natural biomaterials: identification, retention and assessment of biological properties. <i>Signal Transduction and Targeted Therapy</i> , <b>2021</b> , 6, 122	21	30
227	Polyhydroxyalkanoate/carbon nanotube nanocomposites: flexible electrically conducting elastomers for neural applications. <i>Nanomedicine</i> , <b>2016</b> , 11, 2547-63	5.6	29
226	A chondromimetic microsphere for in situ spatially controlled chondrogenic differentiation of human mesenchymal stem cells. <i>Journal of Controlled Release</i> , <b>2014</b> , 179, 42-51	11.7	29
225	Assembly of protein-based hollow spheres encapsulating a therapeutic factor. <i>ACS Chemical Neuroscience</i> , <b>2013</b> , 4, 1297-304	5.7	29
224	Fibrin-lipoplex system for controlled topical delivery of multiple genes. <i>Biomacromolecules</i> , <b>2009</b> , 10, 1650-4	6.9	29
223	Snail1 down-regulation using small interfering RNA complexes delivered through collagen scaffolds. <i>Bioconjugate Chemistry</i> , <b>2009</b> , 20, 2262-9	6.3	29
222	Characterization of tissue response and in vivo degradation of cholecyst-derived extracellular matrix. <i>Biomacromolecules</i> , <b>2007</b> , 8, 3439-51	6.9	29
221	Scaffold and scaffold-free self-assembled systems in regenerative medicine. <i>Biotechnology and Bioengineering</i> , <b>2016</b> , 113, 1155-63	4.9	29

220	Influence of porosity and pore shape on structural, mechanical and biological properties of poly $\epsilon$ -caprolactone electro-spun fibrous scaffolds. <i>Nanomedicine</i> , <b>2016</b> , 11, 1031-40	5.6	29
219	Fibrin-based microsphere reservoirs for delivery of neurotrophic factors to the brain. <i>Nanomedicine</i> , <b>2015</b> , 10, 765-83	5.6	28
218	Mannosylated polyethyleneimine-hyaluronan nanohybrids for targeted gene delivery to macrophage-like cell lines. <i>Bioconjugate Chemistry</i> , <b>2012</b> , 23, 1138-48	6.3	28
217	Preparation of chitosan/polyglutamic acid spheres based on the use of polystyrene template as a nonviral gene carrier. <i>Tissue Engineering - Part C: Methods</i> , <b>2009</b> , 15, 605-13	2.9	28
216	The effect of laminin peptide gradient in enzymatically cross-linked collagen scaffolds on neurite growth. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2010</b> , 92, 484-92	5.4	28
215	Acute thyrotoxic neuropathy--Basedow's paraplegia revisited. <i>Journal of the Neurological Sciences</i> , <b>1998</b> , 155, 211-4	3.2	28
214	Orbit image analysis machine learning software can be used for the histological quantification of acute ischemic stroke blood clots. <i>PLoS ONE</i> , <b>2019</b> , 14, e0225841	3.7	28
213	Glucosamine loaded injectable silk-in-silk integrated system modulate mechanical properties in bovine ex-vivo degenerated intervertebral disc model. <i>Biomaterials</i> , <b>2015</b> , 55, 64-83	15.6	27
212	Functionalization of the living diatom <i>Thalassiosira weissflogii</i> with thiol moieties. <i>Nature Communications</i> , <b>2013</b> , 4, 2683	17.4	27
211	Functionalised collagen spheres reduce HO mediated apoptosis by scavenging overexpressed ROS. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , <b>2018</b> , 14, 2397-2405	6	26
210	A temporal gene delivery system based on fibrin microspheres. <i>Molecular Pharmaceutics</i> , <b>2011</b> , 8, 439-46	5.6	26
209	Exogenous miR-29B Delivery Through a Hyaluronan-Based Injectable System Yields Functional Maintenance of the Infarcted Myocardium. <i>Tissue Engineering - Part A</i> , <b>2018</b> , 24, 57-67	3.9	25
208	Analysis of the mechanical behavior of a titanium scaffold with a repeating unit-cell substructure. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2009</b> , 90, 894-906	3.5	25
207	Injectable hyaluronic acid down-regulates interferon signaling molecules, IGFBP3 and IFIT3 in the bovine intervertebral disc. <i>Acta Biomaterialia</i> , <b>2017</b> , 52, 118-129	10.8	24
206	An academic, clinical and industrial update on electrospun, additive manufactured and imprinted medical devices. <i>Expert Review of Medical Devices</i> , <b>2015</b> , 12, 601-12	3.5	24
205	Untying a nanoscale knotted polymer structure to linear chains for efficient gene delivery in vitro and to the brain. <i>Nanoscale</i> , <b>2014</b> , 6, 7526-33	7.7	24
204	The Multifaceted Potential of Electro-spinning in Regenerative Medicine. <i>Pharmaceutical Nanotechnology</i> , <b>2014</b> , 2, 23-34	4	24
203	In vitro evaluation of Ficoll-enriched and genipin-stabilised collagen scaffolds. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2014</b> , 8, 233-41	4.4	24

202	Transfection of macrophages by collagen hollow spheres loaded with polyplexes: a step towards modulating inflammation. <i>Acta Biomaterialia</i> , <b>2012</b> , 8, 4208-14	10.8	24
201	Reference models for mitral valve tissue engineering based on valve cell phenotype and extracellular matrix analysis. <i>Cells Tissues Organs</i> , <b>2006</b> , 183, 12-23	2.1	24
200	Co-transfection of decorin and interleukin-10 modulates pro-fibrotic extracellular matrix gene expression in human tenocyte culture. <i>Scientific Reports</i> , <b>2016</b> , 6, 20922	4.9	24
199	Elastin-like recombinamers-based hydrogel modulates post-ischemic remodeling in a non-transmural myocardial infarction in sheep. <i>Science Translational Medicine</i> , <b>2021</b> , 13,	17.5	24
198	Encapsulation of young donor age dopaminergic grafts in a GDNF-loaded collagen hydrogel further increases their survival, reinnervation, and functional efficacy after intrastriatal transplantation in hemi-Parkinsonian rats. <i>European Journal of Neuroscience</i> , <b>2019</b> , 49, 487-496	3.5	23
197	Hyperglycemia acts in synergy with hypoxia to maintain the pro-inflammatory phenotype of macrophages. <i>PLoS ONE</i> , <b>2019</b> , 14, e0220577	3.7	23
196	Ageing affects chondroitin sulfates and their synthetic enzymes in the intervertebral disc. <i>Signal Transduction and Targeted Therapy</i> , <b>2017</b> , 2, 17049	21	23
195	Standardization of models and methods used to assess nanoparticles in cardiovascular applications. <i>Small</i> , <b>2011</b> , 7, 705-17	11	23
194	The influence of poly(ethylene glycol) ether tetrasuccinimidyl glutarate on the structural, physical, and biological properties of collagen fibers. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2016</b> , 104, 914-22	3.5	23
193	Recent Advances in the Design and Sensing Applications of Hemin/Coordination Polymer-Based Nanocomposites. <i>Advanced Materials</i> , <b>2021</b> , 33, e2003883	24	23
192	Single cyclized molecule structures from RAFT homopolymerization of multi-vinyl monomers. <i>Chemical Communications</i> , <b>2012</b> , 48, 3085-7	5.8	22
191	Spinal cord injury in vitro: modelling axon growth inhibition. <i>Drug Discovery Today</i> , <b>2010</b> , 15, 436-43	8.8	22
190	Assessment of wound healing in the alloxan-induced diabetic rabbit ear model. <i>Journal of Investigative Surgery</i> , <b>2008</b> , 21, 261-9	1.2	22
189	A sustained release formulation of novel quininib-hyaluronan microneedles inhibits angiogenesis and retinal vascular permeability in vivo. <i>Journal of Controlled Release</i> , <b>2016</b> , 233, 198-207	11.7	22
188	Autologous circulating angiogenic cells treated with osteopontin and delivered via a collagen scaffold enhance wound healing in the alloxan-induced diabetic rabbit ear ulcer model. <i>Stem Cell Research and Therapy</i> , <b>2013</b> , 4, 158	8.3	21
187	Biaxial mechanical evaluation of cholecyst-derived extracellular matrix: a weakly anisotropic potential tissue engineered biomaterial. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2007</b> , 81, 250-6	5.4	21
186	Rerouting mesenchymal stem cell trajectory towards epithelial lineage by engineering cellular niche. <i>Biomaterials</i> , <b>2018</b> , 156, 28-44	15.6	21
185	Nerve growth factor released from collagen scaffolds protects axotomized cholinergic neurons of the basal nucleus of Meynert in organotypic brain slices. <i>Journal of Neuroscience Methods</i> , <b>2018</b> , 295, 77-86	3	21

184	Recreating complex pathophysiologicals in vitro with extracellular matrix surrogates for anticancer therapeutics screening. <i>Drug Discovery Today</i> , <b>2016</b> , 21, 1521-1531	8.8	20
183	Controlled release of plasmid DNA from hyaluronan nanoparticles. <i>Current Drug Delivery</i> , <b>2011</b> , 8, 354-63,2	3.2	20
182	Enhancing amine terminals in an amine-deprived collagen matrix. <i>Langmuir</i> , <b>2008</b> , 24, 11752-61	4	20
181	Design of tunable gelatin-dopamine based bioadhesives. <i>International Journal of Biological Macromolecules</i> , <b>2020</b> , 164, 1384-1391	7.9	20
180	The reverse of polymer degradation: in situ crosslinked gel formation through disulfide cleavage. <i>Chemical Communications</i> , <b>2012</b> , 48, 585-7	5.8	19
179	Temporal changes guided by mesenchymal stem cells on a 3D microgel platform enhance angiogenesis in vivo at a low-cell dose. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 19033-19044	11.5	19
178	Bioengineered three-dimensional diseased intervertebral disc model revealed inflammatory crosstalk. <i>Biomaterials</i> , <b>2017</b> , 123, 127-141	15.6	18
177	Attenuated Glial Reactivity on Topographically Functionalized Poly(3,4-Ethylenedioxythiophene):P-Toluene Sulfonate (PEDOT:PTS) Neuroelectrodes Fabricated by Microimprint Lithography. <i>Small</i> , <b>2018</b> , 14, e1800863	11	18
176	Biomaterial approaches to gene therapies for neurodegenerative disorders of the CNS. <i>Biomaterials Science</i> , <b>2013</b> , 1, 556-576	7.4	18
175	The Functional Response of Mesenchymal Stem Cells to Electron-Beam Patterned Elastomeric Surfaces Presenting Micrometer to Nanoscale Heterogeneous Rigidity. <i>Advanced Materials</i> , <b>2017</b> , 29, 1702119	24	18
174	Tethering a laminin peptide to a crosslinked collagen scaffold for biofunctionality. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2009</b> , 89, 1001-10	5.4	18
173	Salmonella osteomyelitis of the thoracic spine: an unusual presentation. <i>Postgraduate Medical Journal</i> , <b>2004</b> , 80, 110-1	2	18
172	An Orally Administrated Hyaluronan Functionalized Polymeric Hybrid Nanoparticle System for Colon-Specific Drug Delivery. <i>Nanomaterials</i> , <b>2019</b> , 9,	5.4	17
171	Improved gene transfection efficacy and cytocompatibility of multifunctional polyamidoamine-cross-linked hyaluronan particles. <i>Macromolecular Bioscience</i> , <b>2015</b> , 15, 682-90	5.5	17
170	Multi-channelled collagen-calcium phosphate scaffolds: their physical properties and human cell response. <i>Tissue Engineering - Part C: Methods</i> , <b>2009</b> , 15, 265-73	2.9	17
169	A window into the brain: Tools to assess pre-clinical efficacy of biomaterials-based therapies on central nervous system disorders. <i>Advanced Drug Delivery Reviews</i> , <b>2019</b> , 148, 68-145	18.5	16
168	Per-pass analysis of acute ischemic stroke clots: impact of stroke etiology on extracted clot area and histological composition. <i>Journal of NeuroInterventional Surgery</i> , <b>2021</b> , 13, 1111-1116	7.8	16
167	Adipose tissue depot-specific intracellular and extracellular cues contributing to insulin resistance in obese individuals. <i>FASEB Journal</i> , <b>2020</b> , 34, 7520-7539	0.9	16

166	Pharmacological activity of ibuprofen released from mesoporous silica. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2012</b> , 23, 73-80	4.5	16
165	Nano-structured polymer-silica composite derived from a marine diatom via deactivation enhanced atom transfer radical polymerization grafting. <i>Small</i> , <b>2014</b> , 10, 469-73	11	16
164	Encouraging undergraduate engineering students towards civic engagement. <i>European Journal of Engineering Education</i> , <b>2009</b> , 34, 141-148	1.5	16
163	The effect of cholecyst-derived extracellular matrix on the phenotypic behaviour of valvular endothelial and valvular interstitial cells. <i>Biomaterials</i> , <b>2007</b> , 28, 1461-9	15.6	16
162	Generating an ex vivo vascular model. <i>ASAIO Journal</i> , <b>2005</b> , 51, 426-33	3.6	16
161	Advanced Functional Materials and Cell-Based Therapies for the Treatment of Ischemic Stroke and Postischemic Stroke Effects. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1906283	15.6	16
160	Platelet-rich emboli are associated with von Willebrand factor levels and have poorer revascularization outcomes. <i>Journal of NeuroInterventional Surgery</i> , <b>2020</b> , 12, 557-562	7.8	16
159	Recent advances and prospects of hyaluronan as a multifunctional therapeutic system. <i>Journal of Controlled Release</i> , <b>2021</b> , 336, 598-620	11.7	16
158	Biologically inspired micro- and nanoengineering systems for functional and complex tissues. <i>Tissue Engineering - Part A</i> , <b>2014</b> , 20, 2127-30	3.9	15
157	Synthesis and characterization of hyaluronic acid coated manganese dioxide microparticles that act as ROS scavengers. <i>Colloids and Surfaces B: Biointerfaces</i> , <b>2017</b> , 159, 30-38	6	15
156	Therapeutic Effect of Neurotrophin-3 Treatment in an Injectable Collagen Scaffold Following Rat Spinal Cord Hemisection Injury. <i>ACS Biomaterials Science and Engineering</i> , <b>2017</b> , 3, 1287-1295	5.5	15
155	Acetal-linked branched poly(dimethyl-aminoethyl methacrylate) as an acid cleavable gene vector with reduced cytotoxicity. <i>Chemical Communications</i> , <b>2014</b> , 50, 15565-8	5.8	15
154	Tailored laminin-332 alpha3 sequence is tethered through an enzymatic linker to a collagen scaffold to promote cellular adhesion. <i>Acta Biomaterialia</i> , <b>2009</b> , 5, 2441-50	10.8	15
153	Tailoring the properties of cholecyst-derived extracellular matrix using carbodiimide cross-linking. <i>Journal of Biomaterials Science, Polymer Edition</i> , <b>2009</b> , 20, 1049-63	3.5	15
152	Geometric variability of the abdominal aorta and its major peripheral branches. <i>Annals of Biomedical Engineering</i> , <b>2010</b> , 38, 824-40	4.7	15
151	Buttressing staples with cholecyst-derived extracellular matrix (CEM) reinforces staple lines in an ex vivo peristaltic inflation model. <i>Obesity Surgery</i> , <b>2008</b> , 18, 1418-23	3.7	15
150	Design of surgical meshes: An engineering perspective. <i>Technology and Health Care</i> , <b>2004</b> , 12, 51-65	1.1	15
149	Variability in Endogenous Perfusion Recovery of Immunocompromised Mouse Models of Limb Ischemia. <i>Tissue Engineering - Part C: Methods</i> , <b>2016</b> , 22, 370-81	2.9	15

148	Wound healing using plasma modified collagen. <i>Clinical Plasma Medicine</i> , <b>2018</b> , 12, 23-32	2.8	15
147	Encapsulated cells for long-term secretion of soluble VEGF receptor 1: Material optimization and simulation of ocular drug response. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , <b>2015</b> , 95, 387-97	5.7	14
146	Efficacy of crosslinking on tailoring in vivo biodegradability of fibro-porous decellularized extracellular matrix and restoration of native tissue structure: a quantitative study using stereology methods. <i>Macromolecular Bioscience</i> , <b>2014</b> , 14, 244-56	5.5	14
145	Non-viral gene therapy for spinal cord regeneration. <i>Drug Discovery Today</i> , <b>2012</b> , 17, 998-1005	8.8	14
144	NGF release from thermo-responsive collagen-polyNIPAAm polymer networks supports neuronal cell growth and differentiation. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2010</b> , 94, 457-65	5.4	14
143	An insight into morphometric descriptors of cell shape that pertain to regenerative medicine. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , <b>2016</b> , 10, 539-53	4.4	14
142	Twenty-five years of nano-bio-materials: have we revolutionized healthcare?. <i>Nanomedicine</i> , <b>2016</b> , 11, 985-7	5.6	14
141	Biomaterial based strategies to reconstruct the nigrostriatal pathway in organotypic slice co-cultures. <i>Acta Biomaterialia</i> , <b>2021</b> , 121, 250-262	10.8	14
140	Synthetic/ECM-inspired hybrid platform for hollow microcarriers with ROS-triggered nanoporation hallmarks. <i>Scientific Reports</i> , <b>2017</b> , 7, 13138	4.9	13
139	Engineered systems for therapeutic angiogenesis. <i>Current Opinion in Pharmacology</i> , <b>2017</b> , 36, 34-43	5.1	13
138	A fluorescently labeled, hyperbranched polymer synthesized from DE-ATRP for the detection of DNA hybridization. <i>Polymer Chemistry</i> , <b>2012</b> , 3, 332-334	4.9	13
137	Non-viral gene therapy for myocardial engineering. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , <b>2010</b> , 2, 232-48	9.2	13
136	Unique glycosignature for intervertebral disc and articular cartilage cells and tissues in immaturity and maturity. <i>Scientific Reports</i> , <b>2016</b> , 6, 23062	4.9	13
135	Biophysical and biological characterisation of collagen/resilin-like protein composite fibres. <i>Biomedical Materials (Bristol)</i> , <b>2015</b> , 10, 065005	3.5	12
134	Preparation of Cytocompatible ITO Neuroelectrodes with Enhanced Electrochemical Characteristics Using a Facile Anodic Oxidation Process. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1605035	15.6	12
133	Reactive Oxygen Species: Physical, Chemical, and Biological Structures based on ROS-Sensitive Moieties that are Able to Respond to Oxidative Microenvironments (Adv. Mater. 27/2016). <i>Advanced Materials</i> , <b>2016</b> , 28, 5334	24	12
132	Low polydispersity (N-ethyl pyrrolidine methacrylamide-co-1-vinylimidazole) linear oligomers for gene therapy applications. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , <b>2012</b> , 82, 465-74	5.7	12
131	In vivo effects of tailored laminin-332 B conjugated scaffolds enhances wound healing: a histomorphometric analysis. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2013</b> , 101, 2788-95	5.4	12



130	Porous EH and EH-PEG scaffolds as gene delivery vehicles to skeletal muscle. <i>Pharmaceutical Research</i> , <b>2011</b> , 28, 1306-16	4.5	12
129	Local intracerebral inhibition of IRE1 by MKC8866 sensitizes glioblastoma to irradiation/chemotherapy in vivo. <i>Cancer Letters</i> , <b>2020</b> , 494, 73-83	9.9	12
128	The administration of rtPA before mechanical thrombectomy in acute ischemic stroke patients is associated with a significant reduction of the retrieved clot area but it does not influence revascularization outcome. <i>Journal of Thrombosis and Thrombolysis</i> , <b>2021</b> , 51, 545-551	5.1	12
127	Scavenging Nanoreactors that Modulate Inflammation. <i>Advanced Biology</i> , <b>2018</b> , 2, 1800086	3.5	11
126	Hyaluronic Acid Microgels Modulate Inflammation and Key Matrix Molecules toward a Regenerative Signature in the Injured Annulus Fibrosus. <i>Advanced Biology</i> , <b>2017</b> , 1, e1700077	3.5	11
125	Three-Dimensional Microgel Platform for the Production of Cell Factories Tailored for the Nucleus Pulposus. <i>Bioconjugate Chemistry</i> , <b>2015</b> , 26, 1297-306	6.3	11
124	End functionalized polymeric system derived from pyrrolidine provide high transfection efficiency. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , <b>2011</b> , 79, 485-94	5.7	11
123	Surface microstructures on planar substrates and textile fibers guide neurite outgrowth: a scaffold solution to push limits of critical nerve defect regeneration?. <i>PLoS ONE</i> , <b>2012</b> , 7, e50714	3.7	11
122	Characterization of biomaterials intended for use in the nucleus pulposus of degenerated intervertebral discs. <i>Acta Biomaterialia</i> , <b>2020</b> , 114, 1-15	10.8	11
121	2D imprinted substrates and 3D electrospun scaffolds revolutionize biomedicine. <i>Nanomedicine</i> , <b>2016</b> , 11, 989-92	5.6	11
120	An acetal-based polymeric crosslinker with controlled pH-sensitivity. <i>RSC Advances</i> , <b>2016</b> , 6, 9604-9611	3.7	10
119	An antibody fragment functionalized dendritic PEGylated poly(2-(dimethylamino)ethyl diacrylate) as a vehicle of exogenous microRNA. <i>Drug Delivery and Translational Research</i> , <b>2012</b> , 2, 406-14	6.2	10
118	Cells and Biomaterials for Intervertebral Disc Regeneration <b>2010</b> , 2, 1-104		10
117	Cell Membrane-Coated Mimics: A Methodological Approach for Fabrication, Characterization for Therapeutic Applications, and Challenges for Clinical Translation. <i>ACS Nano</i> , <b>2021</b> ,	16.7	10
116	Distinct glycosylation in membrane proteins within neonatal versus adult myocardial tissue. <i>Matrix Biology</i> , <b>2020</b> , 85-86, 173-188	11.4	10
115	Isolation and characterisation of a recombinant antibody fragment that binds NCAM1-expressing intervertebral disc cells. <i>PLoS ONE</i> , <b>2013</b> , 8, e83678	3.7	9
114	Monitoring mRNA in living cells in a 3D in vitro model using TAT-peptide linked molecular beacons. <i>Lab on A Chip</i> , <b>2011</b> , 11, 3908-14	7.2	9
113	A reliable method for detecting complexed DNA in vitro. <i>Nanoscale</i> , <b>2010</b> , 2, 2718-23	7.7	9



112	Use of tissue transglutaminase and fibronectin to influence osteoblast responses to tricalcium phosphate scaffolds. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2009</b> , 20, 113-22	4.5	9
111	Stress distribution in the intervertebral disc correlates with strength distribution in subdiscal trabecular bone in the porcine lumbar spine. <i>Clinical Biomechanics</i> , <b>2008</b> , 23, 859-69	2.2	9
110	Using computed tomography scans to develop an ex-vivo gastric model. <i>World Journal of Gastroenterology</i> , <b>2007</b> , 13, 1372-7	5.6	9
109	Morphological and biomechanical effects of annulus fibrosus injury and repair in an ovine cervical model. <i>JOR Spine</i> , <b>2020</b> , 3, e1074	3.7	8
108	Influence of Nonsulfated Polysaccharides on the Properties of Electrospun Poly(lactic-glycolic acid) Fibers. <i>ACS Biomaterials Science and Engineering</i> , <b>2017</b> , 3, 1304-1312	5.5	8
107	Skin Tissue Engineering <b>2011</b> , 467-499		8
106	Biomaterial constructs for delivery of multiple therapeutic genes: a spatiotemporal evaluation of efficacy using molecular beacons. <i>PLoS ONE</i> , <b>2013</b> , 8, e65749	3.7	8
105	Region-Specific Characterization of -Glycans in the Striatum and Substantia Nigra of an Adult Rodent Brain. <i>Analytical Chemistry</i> , <b>2020</b> , 92, 12842-12851	7.8	8
104	A clinically relevant in vivo model for the assessment of scaffold efficacy in abdominal wall reconstruction. <i>Journal of Tissue Engineering</i> , <b>2017</b> , 8, 2041731416686532	7.5	7
103	A worm gel-based 3D model to elucidate the paracrine interaction between multiple myeloma and mesenchymal stem cells. <i>Materials Today Bio</i> , <b>2020</b> , 5, 100040	9.9	7
102	Fabrication of nanopatterned polymeric microparticles using a diatom as a sacrificial template. <i>RSC Advances</i> , <b>2014</b> , 4, 44418-44422	3.7	7
101	Complete spatial characterisation of N-glycosylation upon striatal neuroinflammation in the rodent brain. <i>Journal of Neuroinflammation</i> , <b>2021</b> , 18, 116	10.1	7
100	Enabling MedTech Translation in Academia: Redefining Value Proposition with Updated Regulations. <i>Advanced Healthcare Materials</i> , <b>2021</b> , 10, e2001237	10.1	7
99	Does prior administration of rtPA influence acute ischemic stroke clot composition? Findings from the analysis of clots retrieved with mechanical thrombectomy from the RESTORE registry. <i>Journal of Neurology</i> , <b>2021</b> , 1	5.5	7
98	A Self-Powered Piezo-Bioelectric Device Regulates Tendon Repair-Associated Signaling Pathways through Modulation of Mechanosensitive Ion Channels. <i>Advanced Materials</i> , <b>2021</b> , 33, e2008788	24	7
97	Therapies to prevent post-infarction remodelling: From repair to regeneration. <i>Biomaterials</i> , <b>2021</b> , 275, 120906	15.6	7
96	Design of surgical meshes - an engineering perspective. <i>Technology and Health Care</i> , <b>2004</b> , 12, 51-65	1.1	7
95	A novel medical device coating prevents <i>Staphylococcus aureus</i> biofilm formation on medical device surfaces. <i>FEMS Microbiology Letters</i> , <b>2019</b> , 366,	2.9	6

94	Non-viral xylosyltransferase-1 siRNA delivery as an effective alternative to chondroitinase in an in vitro model of reactive astrocytes. <i>Neuroscience</i> , <b>2016</b> , 339, 267-275	3.9	6
93	Targeted Approaches to Inhibit Sialylation of Multiple Myeloma in the Bone Marrow Microenvironment. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2019</b> , 7, 252	5.8	6
92	Interference: an alternative therapy following acute myocardial infarction. <i>Trends in Pharmacological Sciences</i> , <b>2012</b> , 33, 635-45	13.2	6
91	Tendons: Engineering of Functional Tissues <b>2011</b> , 537-572		6
90	The Effect on Wound Healing by a Modified Fibrin Scaffold Delivering Acidic Fibroblast Growth Factor (FGF-1). <i>Journal of Bioactive and Compatible Polymers</i> , <b>1997</b> , 12, 99-111	2	6
89	Differential Role of Anterior Cingulate Cortical Glutamatergic Neurons in Pain-Related Aversion Learning and Nociceptive Behaviors in Male and Female Rats. <i>Frontiers in Behavioral Neuroscience</i> , <b>2020</b> , 14, 139	3.5	6
88	Large Artery Atherosclerotic Clots are Larger than Clots of other Stroke Etiologies and have Poorer Recanalization rates. <i>Journal of Stroke and Cerebrovascular Diseases</i> , <b>2021</b> , 30, 105463	2.8	6
87	Synergistic effect of pendant hydroxypropyl and pyrrolidine moieties randomly distributed along polymethacrylamide backbones on in vitro DNA-transfection. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , <b>2015</b> , 90, 38-43	5.7	5
86	Glycan-Functionalized Collagen Hydrogels Modulate the Glycoenvironment of a Neuronal Primary Culture. <i>Biomacromolecules</i> , <b>2020</b> , 21, 2681-2694	6.9	5
85	Titanium and Nitinol (NiTi) <b>2013</b> , 120-124		5
84	Engineering recombinant antibodies for polymer biofunctionalization. <i>Polymers for Advanced Technologies</i> , <b>2015</b> , 26, 1394-1401	3.2	5
83	Fibrin As a Scaffold for Delivery of GDNF Overexpressing Stem Cells to the Adult Rat Brain. <i>ACS Biomaterials Science and Engineering</i> , <b>2015</b> , 1, 559-566	5.5	5
82	Cohesion mechanisms for bioadhesives.. <i>Bioactive Materials</i> , <b>2022</b> , 13, 105-118	16.7	5
81	The role of extracellular matrix in tumour angiogenesis: the throne has NOx servants. <i>Biochemical Society Transactions</i> , <b>2020</b> , 48, 2539-2555	5.1	5
80	The Role of Hyaluronic Acid in Intervertebral Disc Regeneration. <i>Applied Sciences (Switzerland)</i> , <b>2020</b> , 10, 6257	2.6	5
79	Therapeutic Applications of Phytoplankton, with an Emphasis on Diatoms and Coccolithophores. <i>Advanced Therapeutics</i> , <b>2019</b> , 2, 1800099	4.9	5
78	A Review on Production, Characterization and Application of Bacterial Cellulose and Its Biocomposites. <i>Journal of Polymers and the Environment</i> , <b>2021</b> , 29, 2738-2755	4.5	5
77	Synthesis of polymer-silica hybrid microparticles with defined geometry using surface initiated atom transfer radical polymerization. <i>Polymer Chemistry</i> , <b>2015</b> , 6, 3014-3017	4.9	4

76	A Glycotherapeutic Approach to Functionalize Biomaterials-Based Systems. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1910031	15.6	4
75	Spatial Differences in Cellular and Molecular Responses as a Function of the Material Used in Conduit-Mediated Repair and Autograft Treatment of Peripheral Nerve Injuries. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1702170	15.6	4
74	Polymeric Gene Carriers Bearing Pendant $\beta$ -Cyclodextrin: The Relevance of Glycoside Permethylation on the "In Vitro" Cell Response. <i>Macromolecular Rapid Communications</i> , <b>2016</b> , 37, 575-834.8	4.8	4
73	Regeneration of the limb: opinions on the reality. <i>Journal of Materials Science: Materials in Medicine</i> , <b>2013</b> , 24, 2627-33	4.5	4
72	Developing research competencies through a project-based tissue-engineering module in the biomedical engineering undergraduate curriculum. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , <b>2009</b> , 223, 443-8	1.7	4
71	Role and therapeutic implications of protein glycosylation in neuroinflammation.. <i>Trends in Molecular Medicine</i> , <b>2022</b> ,	11.5	4
70	Modulation of Gut Barrier Functions in Ulcerative Colitis by Hyaluronic Acid System. <i>Advanced Science</i> , <b>2021</b> , e2103189	13.6	4
69	An Injectable Hyaluronic Acid Hydrogel Promotes Intervertebral Disc Repair in a Rabbit Model. <i>Spine</i> , <b>2021</b> , 46, E810-E816	3.3	4
68	Sweet tailoring of glyco-modulatory extracellular matrix-inspired biomaterials to target neuroinflammation. <i>Cell Reports Physical Science</i> , <b>2021</b> , 2, 100321	6.1	4
67	Tissue Engineering: Biomaterials for Disc Repair. <i>Current Molecular Biology Reports</i> , <b>2018</b> , 4, 161-172	2	4
66	Localized temporal co-delivery of interleukin 10 and decorin genes using a mediated by collagen-based biphasic scaffold modulates the expression of TGF- $\beta$ 1/ $\beta$ 2 in a rabbit ear hypertrophic scarring model. <i>Biomaterials Science</i> , <b>2021</b> , 9, 3136-3149	7.4	4
65	Intervertebral Disc Degeneration: Biomaterials and Tissue Engineering Strategies Towards Precision Medicine.. <i>Advanced Healthcare Materials</i> , <b>2022</b> , e2102530	10.1	4
64	Controlled Delivery of Tissue Inductive Factors in a Cardiovascular Hybrid Biomaterial Scaffold. <i>ACS Biomaterials Science and Engineering</i> , <b>2017</b> , 3, 1350-1358	5.5	3
63	Engineering Anisotropic 2D and 3D Structures for Tendon Repair and Regeneration <b>2015</b> , 225-242		3
62	An ex-vivo multiple sclerosis model of inflammatory demyelination using hyperbranched polymer. <i>Biomaterials</i> , <b>2013</b> , 34, 5872-82	15.6	3
61	Xenogenic Tissues and Biomaterials for the Skeletal System <b>2011</b> , 387-404		3
60	PEG based hyperbranched polymeric hollow nanospheres. <i>Nanotechnology</i> , <b>2011</b> , 22, 065604	3.4	3
59	Influence of clinical application on bioresorbability: Host response <b>2008</b> , 267-318		3

58	Concealed intrapulmonary shunting in liver disease. <i>Respiratory Medicine</i> , <b>1994</b> , 88, 545-7	4.6	3
57	Abstract TP54: Machine-Learned Characterization of Acute Ischemic Stroke Clots Reveals a Correlation Between Clot Composition and Density on CT. <i>Stroke</i> , <b>2018</b> , 49,	6.7	3
56	Artificial Cornea: Past, Current, and Future Directions. <i>Frontiers in Medicine</i> , <b>2021</b> , 8, 770780	4.9	3
55	Public & patient involvement to guide research in wound care in an Irish context. A round table report. <i>Journal of Tissue Viability</i> , <b>2020</b> , 29, 7-11	3.2	3
54	Preclinical models of vertebral osteomyelitis and associated infections: Current models and recommendations for study design. <i>JOR Spine</i> , <b>2021</b> , 4, e1142	3.7	3
53	The -Glycome of Human Nigrostriatal Tissue and Its Alteration in Parkinson's Disease. <i>Journal of Proteome Research</i> , <b>2021</b> , 20, 3913-3924	5.6	3
52	Correlation between acute ischaemic stroke clot length before mechanical thrombectomy and extracted clot area: Impact of thrombus size on number of passes for clot removal and final recanalization. <i>European Stroke Journal</i> , <b>2021</b> , 6, 254-261	5.6	3
51	A high molecular weight hyaluronic acid biphasic dispersion as potential therapeutics for interstitial cystitis. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , <b>2021</b> , 109, 864-876	3.5	3
50	Exosomes: Cellular capsules for drug delivery in Parkinson's disease <b>2018</b> , 91-151		3
49	Data on in vitro and in vivo cell orientation on substrates with different topographies. <i>Data in Brief</i> , <b>2015</b> , 5, 379-82	1.2	2
48	Macromolecular Crowding: The Next Frontier in Tissue Engineering. <i>Advances in Science and Technology</i> , <b>2014</b> , 96, 1-8	0.1	2
47	Inflammation-specific targeted carriers for local drug delivery to inflammatory bowel disease.. <i>Biomaterials</i> , <b>2022</b> , 281, 121364	15.6	2
46	HATMSC Secreted Factors in the Hydrogel as a Potential Treatment for Chronic Wounds-In Vitro Study. <i>International Journal of Molecular Sciences</i> , <b>2021</b> , 22,	6.3	2
45	Novel IRE1-dependent proinflammatory signaling controls tumor infiltration by myeloid cells		2
44	Effect of Glycosaminoglycan Replacement on Markers of Interstitial Cystitis. <i>Frontiers in Pharmacology</i> , <b>2020</b> , 11, 575043	5.6	2
43	The role of altered glycosylation in human nucleus pulposus cells in inflammation and degeneration. <i>European Cells and Materials</i> , <b>2021</b> , 41, 401-420	4.3	2
42	An engineered coccolith-based hybrid that transforms light into swarming motion. <i>Cell Reports Physical Science</i> , <b>2021</b> , 2, 100373	6.1	2
41	Plasma & Microwaves as Greener Options for Nanodiamond Purification: Insight Into Cytocompatibility. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2021</b> , 9, 637587	5.8	2

40	A multidisciplinary approach to online support for device research translation: regulatory change and clinical engagement. <i>Health Policy and Technology</i> , <b>2020</b> , 10, 95-95	4.8	2
39	Glucose-Responsive Gene Delivery at Physiological pH through Tertiary-Amine Stabilized Boronate-PVA Particles Synthesized by One-Pot Reaction. <i>Pharmaceutics</i> , <b>2021</b> , 13,	6.4	2
38	Elastin-like hydrogel stimulates angiogenesis in a severe model of critical limb ischemia (CLI): An insight into the glyco-host response. <i>Biomaterials</i> , <b>2021</b> , 269, 120641	15.6	2
37	Therapeutic Biomaterial Approaches to Alleviate Chronic Limb Threatening Ischemia. <i>Advanced Science</i> , <b>2021</b> , 8, 2003119	13.6	2
36	Additive-free Aqueous Dispersions of Two-Dimensional Materials with Glial Cell Compatibility and Enzymatic Degradability. <i>Chemistry - A European Journal</i> , <b>2021</b> , 27, 7434-7443	4.8	2
35	Microarchitectural characterization of the aortic heart valve. <i>Advances in Experimental Medicine and Biology</i> , <b>2004</b> , 553, 167-86	3.6	2
34	Storage of blood clots for histological analysis: How long is too long in saline and paraformaldehyde?. <i>Histology and Histopathology</i> , <b>2020</b> , 35, 313-320	1.4	2
33	2.15 Collagen: Materials Analysis and Implant Uses ? <b>2017</b> , 332-350		1
32	Cross-Linked Cholecyst-Derived Extracellular Matrix for Abdominal Wall Repair. <i>Tissue Engineering - Part A</i> , <b>2018</b> , 24, 1190-1206	3.9	1
31	Tissue Engineering: Toward Customized Extracellular Niche Engineering: Progress in Cell-Entrapment Technologies (Adv. Mater. 1/2018). <i>Advanced Materials</i> , <b>2018</b> , 30, 1870006	24	1
30	Biological Activity on Piezoelectric PVDF <b>2016</b> , 167-176		1
29	Special Collection: Closing the Gaps in Skin Wound Healing. <i>Tissue Engineering - Part A</i> , <b>2016</b> , 22, 401-2	3.9	1
28	Development and characterization of an immunomodulatory and injectable system composed of collagen modified with trifunctional oligourethanes and silica. <i>Biomaterials Science</i> , <b>2019</b> , 7, 4547-4557	7.4	1
27	6.20 Skin Tissue Engineering ? <b>2017</b> , 334-382		1
26	Advanced Functional Polymers Addressing the Needs of Modern Medicine. <i>Macromolecular Rapid Communications</i> , <b>2015</b> , 36, 1859-1861	4.8	1
25	Collagen-Based Biomaterials for Regenerative Medicine <b>2012</b> , 55-74		1
24	Perspective on biomaterials used in the surgical treatment of morbid obesity. <i>Obesity Reviews</i> , <b>2009</b> , 10, 324-32	10.6	1
23	Local intracerebral inhibition of IRE1 by MKC8866 sensitizes glioblastoma to irradiation/chemotherapy in vivo		1

22	Crossing the hurdles of translation—robust methodology for synthesis, characterization and GMP production of cross-linked high molecular weight hyaluronic acid particles (cHA). <i>Nano Select</i> , <b>2020</b> , 1, 353-371	3.1	1
21	The Relationship Between Cerebral Reperfusion And Regional Expression Of Matrix Metalloproteinase-9 In Rat Brain Following Focal Cerebral Ischemia. <i>Neuroscience</i> , <b>2021</b> , 453, 256-265	3.9	1
20	An optimized protocol for combined fluorescent lectin/immunohistochemistry to characterize tissue-specific glycan distribution in human or rodent tissues. <i>STAR Protocols</i> , <b>2021</b> , 2, 100237	1.4	1
19	A robust platform for high-throughput screening of therapeutic strategies for acute and chronic spinal cord injury. <i>IScience</i> , <b>2021</b> , 24, 102182	6.1	1
18	Anti-inflammatory cytokine-eluting collagen hydrogel reduces the host immune response to dopaminergic cell transplants in a rat model of Parkinson's disease. <i>Neuronal Signaling</i> , <b>2021</b> , 5, NS20210028	3.7	1
17	Characterization of the 'White' Appearing Clots that Cause Acute Ischemic Stroke. <i>Journal of Stroke and Cerebrovascular Diseases</i> , <b>2021</b> , 30, 106127	2.8	1
16	Potential Biomarkers of Acute Ischemic Stroke Etiology Revealed by Mass Spectrometry-Based Proteomic Characterization of Formalin-Fixed Paraffin-Embedded Blood Clots.. <i>Frontiers in Neurology</i> , <b>2022</b> , 13, 854846	4.1	1
15	Configuration of a Two-Phase Jet. <i>Combustion Science and Technology</i> , <b>1988</b> , 57, 71-87	1.5	0
14	Protocol for in vitro skin fibrosis model to screen the biological effects of antifibrotic compounds. <i>STAR Protocols</i> , <b>2021</b> , 2, 100387	1.4	0
13	Macromolecular modulation of a 3D hydrogel construct differentially regulates human stem cell tissue-to-tissue interface.. <i>Materials Science and Engineering C</i> , <b>2021</b> , 112611	8.3	0
12	Protein nitration induced by Hemin/NO: A complementary mechanism through the catalytic functions of hemin and NO-scavenging.. <i>Nitric Oxide - Biology and Chemistry</i> , <b>2022</b> , 124, 49-67	5	0
11	Therapeutic potential of targeting galectins [A biomaterials-focused perspective. <i>Biomaterials</i> , <b>2022</b> , 286, 121585	15.6	0
10	Neuroregeneration: Spatial Differences in Cellular and Molecular Responses as a Function of the Material Used in Conduit-Mediated Repair and Autograft Treatment of Peripheral Nerve Injuries (Adv. Funct. Mater. 12/2018). <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1870080	15.6	
9	2.21 Xenogenic Tissues and Biomaterials for the Skeletal System <b>2017</b> , 471-504		
8	7.27 Cardiac Valves: Biologic and Synthetic ? <b>2017</b> , 525-547		
7	Cardiac Valves: Biologic and Synthetic <b>2011</b> , 403-425		
6	Vibration assessment of cartilage grafts using bi-axial mechanical testing. <i>Irish Journal of Medical Science</i> , <b>2005</b> , 174, 51-51	1.9	
5	Guidelines for management of asthma <b>1990</b> , 301, 1162-1162		

4 Assessment of Tissue Responses to Tissue-Engineered Devices **2009**, 781-796

3 A Self-Powered Piezo-Bioelectric Device Regulates Tendon Repair-Associated Signaling Pathways through Modulation of Mechanosensitive Ion Channels (Adv. Mater. 40/2021). *Advanced Materials*, **2021**, 33, 2170315 24

2 Characterization of a Microbial Transglutaminase Cross-linked Type II Collagen Scaffold. *Tissue Engineering*, **2006**, 060706073730024

1 Materials Science in Ireland - Current Developments and Future Aspirations. *Advanced Materials*, **2016**, 28, 5346-8 24