

Clemens van Blitterswijk

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ext. papers

37,018
ext. citations

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L-index

#	Paper	IF	Citations
493	Engineering vascularized skeletal muscle tissue. <i>Nature Biotechnology</i> , 2005 , 23, 879-84	44.5	1016
492	Vascularization in tissue engineering. <i>Trends in Biotechnology</i> , 2008 , 26, 434-41	15.1	890
491	Spheroid culture as a tool for creating 3D complex tissues. <i>Trends in Biotechnology</i> , 2013 , 31, 108-15	15.1	639
490	Design of porous scaffolds for cartilage tissue engineering using a three-dimensional fiber-deposition technique. <i>Biomaterials</i> , 2004 , 25, 4149-61	15.6	532
489	Osteoinductive ceramics as a synthetic alternative to autologous bone grafting. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 13614-9	11.5	519
488	Cationic polymers and their therapeutic potential. <i>Chemical Society Reviews</i> , 2012 , 41, 7147-94	58.5	490
487	3D microenvironment as essential element for osteoinduction by biomaterials. <i>Biomaterials</i> , 2005 , 26, 3565-75	15.6	476
486	3D fiber-deposited scaffolds for tissue engineering: influence of pores geometry and architecture on dynamic mechanical properties. <i>Biomaterials</i> , 2006 , 27, 974-85	15.6	395
485	Injectable chitosan-based hydrogels for cartilage tissue engineering. <i>Biomaterials</i> , 2009 , 30, 2544-51	15.6	377
484	Biomimetic Hydroxyapatite Coating on Metal Implants. <i>Journal of the American Ceramic Society</i> , 2004 , 85, 517-522	3.8	376
483	Enzyme-catalyzed crosslinkable hydrogels: emerging strategies for tissue engineering. <i>Biomaterials</i> , 2012 , 33, 1281-90	15.6	373
482	Osteoinductive biomaterials: current knowledge of properties, experimental models and biological mechanisms. <i>European Cells and Materials</i> , 2011 , 21, 407-29; discussion 429	4.3	337
481	An algorithm-based topographical biomaterials library to instruct cell fate. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 16565-70	11.5	310
480	A calcium-induced signaling cascade leading to osteogenic differentiation of human bone marrow-derived mesenchymal stromal cells. <i>Biomaterials</i> , 2012 , 33, 3205-15	15.6	304
479	Bone ingrowth in porous titanium implants produced by 3D fiber deposition. <i>Biomaterials</i> , 2007 , 28, 2810-20	15.2	294
478	Endothelial cells assemble into a 3-dimensional prevascular network in a bone tissue engineering construct. <i>Tissue Engineering</i> , 2006 , 12, 2685-93		278
477	Effects of the architecture of tissue engineering scaffolds on cell seeding and culturing. <i>Acta Biomaterialia</i> , 2010 , 6, 4208-17	10.8	275

476	Osteoconduction and osteoinduction of low-temperature 3D printed bioceramic implants. <i>Biomaterials</i> , 2008 , 29, 944-53	15.6	274
475	Oxygen gradients in tissue-engineered PEGT/PBT cartilaginous constructs: measurement and modeling. <i>Biotechnology and Bioengineering</i> , 2004 , 86, 9-18	4.9	256
474	Bone regeneration: molecular and cellular interactions with calcium phosphate ceramics. <i>International Journal of Nanomedicine</i> , 2006 , 1, 317-32	7.3	256
473	Donor variation and loss of multipotency during in vitro expansion of human mesenchymal stem cells for bone tissue engineering. <i>Journal of Orthopaedic Research</i> , 2007 , 25, 1029-41	3.8	237
472	Synthesis and characterization of hyaluronic acid-poly(ethylene glycol) hydrogels via Michael addition: An injectable biomaterial for cartilage repair. <i>Acta Biomaterialia</i> , 2010 , 6, 1968-77	10.8	236
471	Effect of fibroblasts on epidermal regeneration. <i>British Journal of Dermatology</i> , 2002 , 147, 230-43	4	236
470	Influence of ionic strength and carbonate on the Ca-P coating formation from SBFx5 solution. <i>Biomaterials</i> , 2002 , 23, 1921-30	15.6	236
469	Cell-based bone tissue engineering. <i>PLoS Medicine</i> , 2007 , 4, e9	11.6	229
468	Polymer scaffolds fabricated with pore-size gradients as a model for studying the zonal organization within tissue-engineered cartilage constructs. <i>Tissue Engineering</i> , 2005 , 11, 1297-311		229
467	Effects of Wnt signaling on proliferation and differentiation of human mesenchymal stem cells. <i>Tissue Engineering</i> , 2004 , 10, 393-401		229
466	Enzymatically-crosslinked injectable hydrogels based on biomimetic dextran-hyaluronic acid conjugates for cartilage tissue engineering. <i>Biomaterials</i> , 2010 , 31, 3103-13	15.6	228
465	Osteoinduction by biomaterials--physicochemical and structural influences. <i>Journal of Biomedical Materials Research - Part A</i> , 2006 , 77, 747-62	5.4	227
464	Nucleation of biomimetic Ca-P coatings on ti6A14V from a SBF x 5 solution: influence of magnesium. <i>Biomaterials</i> , 2002 , 23, 2211-20	15.6	219
463	Blastocyst-like structures generated solely from stem cells. <i>Nature</i> , 2018 , 557, 106-111	50.4	216
462	The effect of calcium phosphate microstructure on bone-related cells in vitro. <i>Biomaterials</i> , 2008 , 29, 3306-16	15.6	214
461	Therapeutic applications of mesenchymal stromal cells: paracrine effects and potential improvements. <i>Tissue Engineering - Part B: Reviews</i> , 2012 , 18, 101-15	7.9	213
460	Trophic effects of mesenchymal stem cells increase chondrocyte proliferation and matrix formation. <i>Tissue Engineering - Part A</i> , 2011 , 17, 1425-36	3.9	212
459	Fiber diameter and texture of electrospun PEOT/PBT scaffolds influence human mesenchymal stem cell proliferation and morphology, and the release of incorporated compounds. <i>Biomaterials</i> , 2006 , 27, 4911-22	15.6	207

458	The effect of PEGT/PBT scaffold architecture on the composition of tissue engineered cartilage. <i>Biomaterials</i> , 2005 , 26, 63-72	15.6	206
457	Endochondral bone tissue engineering using embryonic stem cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 6840-5	11.5	204
456	Biomimetic calcium phosphate coatings on Ti6Al4V: a crystal growth study of octacalcium phosphate and inhibition by Mg ²⁺ and HCO ₃ ⁻ . <i>Bone</i> , 1999 , 25, 107S-111S	4.7	201
455	Wnt signaling inhibits osteogenic differentiation of human mesenchymal stem cells. <i>Bone</i> , 2004 , 34, 818-26	15.6	195
454	Osteogenicity of octacalcium phosphate coatings applied on porous metal implants. <i>Journal of Biomedical Materials Research - Part A</i> , 2003 , 66, 779-88	5.4	186
453	Chitosan/poly(epsilon-caprolactone) blend scaffolds for cartilage repair. <i>Biomaterials</i> , 2011 , 32, 1068-79	15.6	182
452	Biological performance of uncoated and octacalcium phosphate-coated Ti6Al4V. <i>Biomaterials</i> , 2005 , 26, 23-36	15.6	182
451	cAMP/PKA pathway activation in human mesenchymal stem cells in vitro results in robust bone formation in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 7281-6	11.5	180
450	Porous Ti6Al4V scaffold directly fabricating by rapid prototyping: preparation and in vitro experiment. <i>Biomaterials</i> , 2006 , 27, 1223-35	15.6	179
449	A comparison of the osteoinductive potential of two calcium phosphate ceramics implanted intramuscularly in goats. <i>Journal of Materials Science: Materials in Medicine</i> , 2002 , 13, 1271-5	4.5	179
448	Bone tissue-engineered implants using human bone marrow stromal cells: effect of culture conditions and donor age. <i>Tissue Engineering</i> , 2002 , 8, 911-20		178
447	Viable osteogenic cells are obligatory for tissue-engineered ectopic bone formation in goats. <i>Tissue Engineering</i> , 2003 , 9, 327-36		177
446	Biocompatibility testing of novel starch-based materials with potential application in orthopaedic surgery: a preliminary study. <i>Biomaterials</i> , 2001 , 22, 2057-64	15.6	177
445	Macropore tissue ingrowth: a quantitative and qualitative study on hydroxyapatite ceramic. <i>Biomaterials</i> , 1986 , 7, 137-43	15.6	177
444	Advanced biomaterials for skeletal tissue regeneration: Instructive and smart functions. <i>Materials Science and Engineering Reports</i> , 2008 , 59, 38-71	30.9	174
443	Surface modification of nano-apatite by grafting organic polymer. <i>Biomaterials</i> , 1998 , 19, 1067-72	15.6	173
442	Bone induction by porous glass ceramic made from Bioglass (45S5). <i>Journal of Biomedical Materials Research Part B</i> , 2001 , 58, 270-6		172
441	Integrating novel technologies to fabricate smart scaffolds. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2008 , 19, 543-72	3.5	168

440	The effect of PEGT/PBT scaffold architecture on oxygen gradients in tissue engineered cartilaginous constructs. <i>Biomaterials</i> , 2004 , 25, 5773-80	15.6	168
439	Biomimetic coprecipitation of calcium phosphate and bovine serum albumin on titanium alloy. <i>Journal of Biomedical Materials Research Part B</i> , 2001 , 57, 327-35		168
438	Comparative in vivo study of six hydroxyapatite-based bone graft substitutes. <i>Journal of Orthopaedic Research</i> , 2008 , 26, 1363-70	3.8	167
437	3D Fiber-Deposited Electrospun Integrated Scaffolds Enhance Cartilage Tissue Formation. <i>Advanced Functional Materials</i> , 2008 , 18, 53-60	15.6	167
436	Cytocompatibility and response of osteoblastic-like cells to starch-based polymers: effect of several additives and processing conditions. <i>Biomaterials</i> , 2001 , 22, 1911-7	15.6	166
435	Evaluation of hydroxylapatite/poly(L-lactide) composites: mechanical behavior. <i>Journal of Biomedical Materials Research Part B</i> , 1992 , 26, 1277-96		163
434	Evaluation of photocrosslinked Lutrol hydrogel for tissue printing applications. <i>Biomacromolecules</i> , 2009 , 10, 1689-96	6.9	162
433	In vitro and in vivo degradation of biomimetic octacalcium phosphate and carbonate apatite coatings on titanium implants. <i>Journal of Biomedical Materials Research - Part A</i> , 2003 , 64, 378-87	5.4	161
432	Trophic effects of mesenchymal stem cells in chondrocyte co-cultures are independent of culture conditions and cell sources. <i>Tissue Engineering - Part A</i> , 2012 , 18, 1542-51	3.9	158
431	Cell based bone tissue engineering in jaw defects. <i>Biomaterials</i> , 2008 , 29, 3053-61	15.6	158
430	Bioreactions at the tissue/hydroxyapatite interface. <i>Biomaterials</i> , 1985 , 6, 243-51	15.6	156
429	Nano-scale study of the nucleation and growth of calcium phosphate coating on titanium implants. <i>Biomaterials</i> , 2004 , 25, 2901-10	15.6	153
428	A perfusion bioreactor system capable of producing clinically relevant volumes of tissue-engineered bone: in vivo bone formation showing proof of concept. <i>Biomaterials</i> , 2006 , 27, 315-23	15.6	152
427	Design and fabrication of standardized hydroxyapatite scaffolds with a defined macro-architecture by rapid prototyping for bone-tissue-engineering research. <i>Journal of Biomedical Materials Research Part B</i> , 2004 , 68, 123-32		149
426	Zero-order release of lysozyme from poly(ethylene glycol)/poly(butylene terephthalate) matrices. <i>Journal of Controlled Release</i> , 2000 , 64, 179-92	11.7	146
425	A rapid and efficient method for expansion of human mesenchymal stem cells. <i>Tissue Engineering</i> , 2007 , 13, 3-9		145
424	The effects of inorganic additives to calcium phosphate on in vitro behavior of osteoblasts and osteoclasts. <i>Biomaterials</i> , 2010 , 31, 2976-89	15.6	144
423	Tissue engineering of ligaments: a comparison of bone marrow stromal cells, anterior cruciate ligament, and skin fibroblasts as cell source. <i>Tissue Engineering</i> , 2004 , 10, 893-903		144

4 ²²	Biomimetic coatings on titanium: a crystal growth study of octacalcium phosphate. <i>Journal of Materials Science: Materials in Medicine</i> , 2001 , 12, 529-34	4.5	138
4 ²¹	Effects of scaffold composition and architecture on human nasal chondrocyte redifferentiation and cartilaginous matrix deposition. <i>Biomaterials</i> , 2005 , 26, 2479-89	15.6	137
4 ²⁰	Endothelial differentiation of mesenchymal stromal cells. <i>PLoS ONE</i> , 2012 , 7, e46842	3.7	136
4 ¹⁹	Cross-species comparison of ectopic bone formation in biphasic calcium phosphate (BCP) and hydroxyapatite (HA) scaffolds. <i>Tissue Engineering</i> , 2006 , 12, 1607-15		131
4 ¹⁸	Structural arrangements at the interface between plasma sprayed calcium phosphates and bone. <i>Biomaterials</i> , 1994 , 15, 543-50	15.6	131
4 ¹⁷	Engineering vascularised tissues in vitro. <i>European Cells and Materials</i> , 2008 , 15, 27-40	4.3	127
4 ¹⁶	Chitosan scaffolds containing hyaluronic acid for cartilage tissue engineering. <i>Tissue Engineering - Part C: Methods</i> , 2011 , 17, 717-30	2.9	125
4 ¹⁵	Relevance of osteoinductive biomaterials in critical-sized orthotopic defect. <i>Journal of Orthopaedic Research</i> , 2006 , 24, 867-76	3.8	125
4 ¹⁴	Influence of octacalcium phosphate coating on osteoinductive properties of biomaterials. <i>Journal of Materials Science: Materials in Medicine</i> , 2004 , 15, 373-80	4.5	125
4 ¹³	Osteoclastic resorption of biomimetic calcium phosphate coatings in vitro. <i>Journal of Biomedical Materials Research Part B</i> , 2001 , 56, 208-15		124
4 ¹²	Gene expression profiling of dedifferentiated human articular chondrocytes in monolayer culture. <i>Osteoarthritis and Cartilage</i> , 2013 , 21, 599-603	6.2	122
4 ¹¹	Expansion of bovine chondrocytes on microcarriers enhances redifferentiation. <i>Tissue Engineering</i> , 2003 , 9, 939-48		118
4 ¹⁰	Initial bone matrix formation at the hydroxyapatite interface in vivo. <i>Journal of Biomedical Materials Research Part B</i> , 1995 , 29, 89-99		118
4 ⁰⁹	Expansion of human nasal chondrocytes on macroporous microcarriers enhances redifferentiation. <i>Biomaterials</i> , 2003 , 24, 5153-61	15.6	115
4 ⁰⁸	A novel porous Ti6Al4V: characterization and cell attachment. <i>Journal of Biomedical Materials Research - Part A</i> , 2005 , 73, 223-33	5.4	115
4 ⁰⁷	Chondrogenesis in injectable enzymatically crosslinked heparin/dextran hydrogels. <i>Journal of Controlled Release</i> , 2011 , 152, 186-95	11.7	111
4 ⁰⁶	Co-culture in cartilage tissue engineering. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2007 , 1, 170-8	4.4	111
4 ⁰⁵	Bone tissue engineering in a critical size defect compared to ectopic implantations in the goat. <i>Journal of Orthopaedic Research</i> , 2004 , 22, 544-51	3.8	110

404	Biocompatibility of a biodegradable matrix used as a skin substitute: an in vivo evaluation. <i>Journal of Biomedical Materials Research Part B</i> , 1994 , 28, 545-52		108
403	Fabrication of three-dimensional bioplotting hydrogel scaffolds for islets of Langerhans transplantation. <i>Biofabrication</i> , 2015 , 7, 025009	10.5	107
402	Tissue assembly and organization: developmental mechanisms in microfabricated tissues. <i>Biomaterials</i> , 2009 , 30, 4851-8	15.6	107
401	Tissue deformation spatially modulates VEGF signaling and angiogenesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 6886-91	11.5	107
400	Incorporation of bovine serum albumin in calcium phosphate coating on titanium. <i>Journal of Biomedical Materials Research Part B</i> , 1999 , 46, 245-52		107
399	Hydrogels that listen to cells: a review of cell-responsive strategies in biomaterial design for tissue regeneration. <i>Materials Horizons</i> , 2017 , 4, 1020-1040	14.4	106
398	Effects of five different barrier materials on postsurgical adhesion formation in the rat. <i>Human Reproduction</i> , 2000 , 15, 1358-63	5.7	105
397	Hydroxylapatite/poly(L-lactide) composites: an animal study on push-out strengths and interface histology. <i>Journal of Biomedical Materials Research Part B</i> , 1993 , 27, 433-44		105
396	The biocompatibility of hydroxyapatite ceramic: a study of retrieved human middle ear implants. <i>Journal of Biomedical Materials Research Part B</i> , 1990 , 24, 433-53		105
395	Gradients in pore size enhance the osteogenic differentiation of human mesenchymal stromal cells in three-dimensional scaffolds. <i>Scientific Reports</i> , 2016 , 6, 22898	4.9	105
394	The size of surface microstructures as an osteogenic factor in calcium phosphate ceramics. <i>Acta Biomaterialia</i> , 2014 , 10, 3254-63	10.8	103
393	A comparison of bone formation in biphasic calcium phosphate (BCP) and hydroxyapatite (HA) implanted in muscle and bone of dogs at different time periods. <i>Journal of Biomedical Materials Research - Part A</i> , 2006 , 78, 139-47	5.4	103
392	The ultrastructure of the bone-hydroxyapatite interface in vitro. <i>Journal of Biomedical Materials Research Part B</i> , 1992 , 26, 1365-82		103
391	Gremlin 1, frizzled-related protein, and Dkk-1 are key regulators of human articular cartilage homeostasis. <i>Arthritis and Rheumatism</i> , 2012 , 64, 3302-12		101
390	Enzymatically crosslinked dextran-tyramine hydrogels as injectable scaffolds for cartilage tissue engineering. <i>Tissue Engineering - Part A</i> , 2010 , 16, 2429-40	3.9	101
389	Supply of nutrients to cells in engineered tissues. <i>Biotechnology and Genetic Engineering Reviews</i> , 2010 , 26, 163-78	4.1	98
388	The use of endothelial progenitor cells for prevascularized bone tissue engineering. <i>Tissue Engineering - Part A</i> , 2009 , 15, 2015-27	3.9	98
387	Nano-apatite/polymer composites: mechanical and physicochemical characteristics. <i>Biomaterials</i> , 1997 , 18, 1263-70	15.6	98

386	Scaffolds for tissue engineering of cartilage. <i>Critical Reviews in Eukaryotic Gene Expression</i> , 2002 , 12, 209-36	1.3	98
385	Fabrication, characterization and cellular compatibility of poly(hydroxy alkanoate) composite nanofibrous scaffolds for nerve tissue engineering. <i>PLoS ONE</i> , 2013 , 8, e57157	3.7	95
384	Bone tissue engineering on amorphous carbonated apatite and crystalline octacalcium phosphate-coated titanium discs. <i>Biomaterials</i> , 2005 , 26, 5231-9	15.6	95
383	Nanostructured 3D constructs based on chitosan and chondroitin sulphate multilayers for cartilage tissue engineering. <i>PLoS ONE</i> , 2013 , 8, e55451	3.7	95
382	Materiomics: an -omics approach to biomaterials research. <i>Advanced Materials</i> , 2013 , 25, 802-24	24	90
381	Cartilage Tissue Engineering: Controversy in the Effect of Oxygen. <i>Critical Reviews in Biotechnology</i> , 2003 , 23, 175-194	9.4	90
380	Layer-by-layer tissue microfabrication supports cell proliferation in vitro and in vivo. <i>Tissue Engineering - Part C: Methods</i> , 2012 , 18, 62-70	2.9	88
379	Calcium phosphate coated electrospun fiber matrices as scaffolds for bone tissue engineering. <i>Langmuir</i> , 2010 , 26, 7380-7	4	87
378	Development and analysis of multi-layer scaffolds for tissue engineering. <i>Biomaterials</i> , 2009 , 30, 6228-39	5.6	87
377	Composite biomaterials with chemical bonding between hydroxyapatite filler particles and PEG/PBT copolymer matrix. <i>Journal of Biomedical Materials Research Part B</i> , 1998 , 40, 490-7		87
376	A controlled release system for proteins based on poly(ether ester) block-copolymers: polymer network characterization. <i>Journal of Controlled Release</i> , 1999 , 62, 393-405	11.7	87
375	Raman imaging of PLGA microsphere degradation inside macrophages. <i>Journal of the American Chemical Society</i> , 2004 , 126, 13226-7	16.4	86
374	Metabolic programming of mesenchymal stromal cells by oxygen tension directs chondrogenic cell fate. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 13954-9	11.5	85
373	Wettability influences cell behavior on superhydrophobic surfaces with different topographies. <i>Biointerphases</i> , 2012 , 7, 46	1.8	84
372	The homing of bone marrow MSCs to non-osseous sites for ectopic bone formation induced by osteoinductive calcium phosphate. <i>Biomaterials</i> , 2013 , 34, 2167-76	15.6	83
371	Towards 4D printed scaffolds for tissue engineering: exploiting 3D shape memory polymers to deliver time-controlled stimulus on cultured cells. <i>Biofabrication</i> , 2017 , 9, 031001	10.5	83
370	The osteochondral interface as a gradient tissue: from development to the fabrication of gradient scaffolds for regenerative medicine. <i>Birth Defects Research Part C: Embryo Today Reviews</i> , 2015 , 105, 34-52		81
369	Bone induction by implants coated with cultured osteogenic bone marrow cells. <i>Advances in Dental Research</i> , 1999 , 13, 74-81	2.3	80

368	Three-dimensional fiber-deposited PEOT/PBT copolymer scaffolds for tissue engineering: influence of porosity, molecular network mesh size, and swelling in aqueous media on dynamic mechanical properties. <i>Journal of Biomedical Materials Research - Part A</i> , 2005 , 75, 957-65	5.4	79
367	Microspheres for protein delivery prepared from amphiphilic multiblock copolymers. 2. Modulation of release rate. <i>Journal of Controlled Release</i> , 2000 , 67, 249-60	11.7	79
366	Cell-seeding and in vitro biocompatibility evaluation of polymeric matrices of PEO/PBT copolymers and PLLA. <i>Biomaterials</i> , 1993 , 14, 598-604	15.6	78
365	Regeneration-on-a-chip? The perspectives on use of microfluidics in regenerative medicine. <i>Lab on A Chip</i> , 2013 , 13, 3512-28	7.2	76
364	Molecular mechanisms of biomaterial-driven osteogenic differentiation in human mesenchymal stromal cells. <i>Integrative Biology (United Kingdom)</i> , 2013 , 5, 920-31	3.7	76
363	Thermoforming of film-based biomedical microdevices. <i>Advanced Materials</i> , 2011 , 23, 1311-29	24	76
362	Analysis of ectopic and orthotopic bone formation in cell-based tissue-engineered constructs in goats. <i>Biomaterials</i> , 2007 , 28, 1798-805	15.6	75
361	Low oxygen tension stimulates the redifferentiation of dedifferentiated adult human nasal chondrocytes. <i>Osteoarthritis and Cartilage</i> , 2004 , 12, 306-13	6.2	75
360	The use of PEGT/PBT as a dermal scaffold for skin tissue engineering. <i>Biomaterials</i> , 2004 , 25, 2987-96	15.6	75
359	Surface modification of hydroxyapatite to introduce interfacial bonding with polyactive™ 70/30 in a biodegradable composite. <i>Journal of Materials Science: Materials in Medicine</i> , 1996 , 7, 551-557	4.5	75
358	In vitro and in vivo bioactivity assessment of a polylactic acid/hydroxyapatite composite for bone regeneration. <i>Biomatter</i> , 2014 , 4, e27664		73
357	Effect of implantation site on phagocyte/polymer interaction and fibrous capsule formation. <i>Biomaterials</i> , 1988 , 9, 14-23	15.6	73
356	Covalent bonding of PMMA, PBMA, and poly(HEMA)to hydroxyapatite particles. <i>Journal of Biomedical Materials Research Part B</i> , 1998 , 40, 257-63		72
355	A study on the grafting reaction of isocyanates with hydroxyapatite particles. <i>Journal of Biomedical Materials Research Part B</i> , 1998 , 40, 358-64		72
354	The regulation of expanded human nasal chondrocyte re-differentiation capacity by substrate composition and gas plasma surface modification. <i>Biomaterials</i> , 2006 , 27, 1043-53	15.6	72
353	Polymer hollow fiber three-dimensional matrices with controllable cavity and shell thickness. <i>Biomaterials</i> , 2006 , 27, 5918-26	15.6	72
352	Relation between in vitro and in vivo osteogenic potential of cultured human bone marrow stromal cells. <i>Journal of Materials Science: Materials in Medicine</i> , 2004 , 15, 1123-8	4.5	72
351	Influencing chondrogenic differentiation of human mesenchymal stromal cells in scaffolds displaying a structural gradient in pore size. <i>Acta Biomaterialia</i> , 2016 , 36, 210-9	10.8	71

350	A link between the accumulation of DNA damage and loss of multi-potency of human mesenchymal stromal cells. <i>Journal of Cellular and Molecular Medicine</i> , 2010 , 14, 2729-38	5.6	71
349	Self-attaching and cell-attracting in-situ forming dextran-tyramine conjugates hydrogels for arthroscopic cartilage repair. <i>Biomaterials</i> , 2012 , 33, 3164-74	15.6	70
348	A Wnt/ β -catenin negative feedback loop inhibits interleukin-1-induced matrix metalloproteinase expression in human articular chondrocytes. <i>Arthritis and Rheumatism</i> , 2012 , 64, 2589-600		70
347	Ultraviolet light crosslinking of poly(trimethylene carbonate) for elastomeric tissue engineering scaffolds. <i>Biomaterials</i> , 2010 , 31, 8696-705	15.6	70
346	Critical size defect in the goat β os ilium. A model to evaluate bone grafts and substitutes. <i>Clinical Orthopaedics and Related Research</i> , 1999 , 231-9	2.2	70
345	Direct Writing Electrospinning of Scaffolds with Multidimensional Fiber Architecture for Hierarchical Tissue Engineering. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 38187-38200	9.5	68
344	Clinical application of human mesenchymal stromal cells for bone tissue engineering. <i>Stem Cells International</i> , 2010 , 2010, 215625	5	68
343	Inhibition of histone acetylation as a tool in bone tissue engineering. <i>Tissue Engineering</i> , 2006 , 12, 2927-37		68
342	High-throughput screening approaches and combinatorial development of biomaterials using microfluidics. <i>Acta Biomaterialia</i> , 2016 , 34, 1-20	10.8	66
341	Dual release of proteins from porous polymeric scaffolds. <i>Journal of Controlled Release</i> , 2006 , 111, 95-106	11.7	66
340	Synthetic scaffold morphology controls human dermal connective tissue formation. <i>Journal of Biomedical Materials Research - Part A</i> , 2005 , 74, 523-32	5.4	65
339	The effect of platelet lysate supplementation of a dextran-based hydrogel on cartilage formation. <i>Biomaterials</i> , 2012 , 33, 3651-61	15.6	64
338	Tailoring surface nanoroughness of electrospun scaffolds for skeletal tissue engineering. <i>Acta Biomaterialia</i> , 2017 , 59, 82-93	10.8	64
337	Microspheres for protein delivery prepared from amphiphilic multiblock copolymers. 1. Influence of preparation techniques on particle characteristics and protein delivery. <i>Journal of Controlled Release</i> , 2000 , 67, 233-48	11.7	64
336	Biocompatibility of a polyether urethane, polypropylene oxide, and a polyether polyester copolymer. A qualitative and quantitative study of three alloplastic tympanic membrane materials in the rat middle ear. <i>Journal of Biomedical Materials Research Part B</i> , 1990 , 24, 489-515		64
335	Cartilage Tissue Engineering: Controversy in the Effect of Oxygen		64
334	The effect of cell-based bone tissue engineering in a goat transverse process model. <i>Biomaterials</i> , 2006 , 27, 5099-106	15.6	63
333	Osteoclastic resorption of calcium phosphates is potentiated in postosteogenic culture conditions. <i>Journal of Biomedical Materials Research Part B</i> , 1994 , 28, 105-12		63

332	Bone formation by mesenchymal progenitor cells cultured on dense and microporous hydroxyapatite particles. <i>Tissue Engineering</i> , 2003 , 9, 1179-88		62
331	Cell sources for articular cartilage repair strategies: shifting from monocultures to cocultures. <i>Tissue Engineering - Part B: Reviews</i> , 2013 , 19, 31-40	7.9	61
330	Towards an in vitro model mimicking the foreign body response: tailoring the surface properties of biomaterials to modulate extracellular matrix. <i>Scientific Reports</i> , 2014 , 4, 6325	4.9	60
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