Smadar Cohen

List of Publications by Year
in descending order

135 papers	13,685 citations	26630 56 h-index	21540 114 g-index
136 all docs	136 docs citations	136 times ranked	14284 citing authors

#	Article	IF	Citations
1	Degradable biomaterials based on magnesium corrosion. Current Opinion in Solid State and Materials Science, 2008, 12, 63-72.	11.5	1,537
2	Controlled delivery systems for proteins based on poly(lactic/glycolic acid) microspheres. Pharmaceutical Research, 1991, 08, 713-720.	3.5	774
3	Novel alginate sponges for cell culture and transplantation. Biomaterials, 1997, 18, 583-590.	11.4	463
4	Effect of Injectable Alginate Implant on Cardiac Remodeling and Function After Recent and Old Infarcts in Rat. Circulation, 2008, 117, 1388-1396.	1.6	406
5	Enhancing the vascularization of threeâ€dimensional porous alginate scaffolds by incorporating controlled release basic fibroblast growth factor microspheres. Journal of Biomedical Materials Research Part B, 2003, 65A, 489-497.	3.1	395
6	Optimization of cardiac cell seeding and distribution in 3D porous alginate scaffolds. Biotechnology and Bioengineering, 2002, 80, 305-312.	3.3	363
7	Hepatocyte behavior within three-dimensional porous alginate scaffolds. , 2000, 67, 344-353.		342
8	Prevascularization of cardiac patch on the omentum improves its therapeutic outcome. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 14990-14995.	7.1	325
9	Intracoronary Injection of In Situ Forming Alginate Hydrogel Reverses Left Ventricular Remodeling After Myocardial Infarction in Swine. Journal of the American College of Cardiology, 2009, 54, 1014-1023.	2.8	308
10	Modulation of cardiac macrophages by phosphatidylserine-presenting liposomes improves infarct repair. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 1827-1832.	7.1	301
11	The effect of sulfation of alginate hydrogels on the specific binding and controlled release of heparin-binding proteins. Biomaterials, 2008, 29, 3260-3268.	11.4	294
12	Modeling mass transfer in hepatocyte spheroids via cell viability, spheroid size, and hepatocellular functions. Biotechnology and Bioengineering, 2004, 86, 672-680.	3.3	292
13	Tailoring the pore architecture in 3-D alginate scaffolds by controlling the freezing regime during fabrication. Biomaterials, 2002, 23, 4087-4094.	11.4	280
14	The promotion of myocardial repair by the sequential delivery of IGF-1 and HGF from an injectable alginate biomaterial in a model of acute myocardial infarction. Biomaterials, 2011, 32, 565-578.	11.4	260
15	The influence of the sequential delivery of angiogenic factors from affinity-binding alginate scaffolds on vascularization. Biomaterials, 2009, 30, 2122-2131.	11.4	240
16	Liver Tissue Engineering within Alginate Scaffolds: Effects of Cell-Seeding Density on Hepatocyte Viability, Morphology, and Function. Tissue Engineering, 2003, 9, 757-766.	4.6	234
17	Alginate biomaterial for the treatment of myocardial infarction: Progress, translational strategies, and clinical outlook. Advanced Drug Delivery Reviews, 2016, 96, 54-76.	13.7	232
18	A novel in situ-forming ophthalmic drug delivery system from alginates undergoing gelation in the eye. Journal of Controlled Release, 1997, 44, 201-208.	9.9	231

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19	Bioreactor cultivation enhances the efficiency of human embryoid body (hEB) formation and differentiation. Biotechnology and Bioengineering, 2004, 86, 493-502.	3.3	224
20	Macrophage Subpopulations Are Essential for Infarct Repair With and Without Stem Cell Therapy. Journal of the American College of Cardiology, 2013, 62, 1890-1901.	2.8	215
21	Poly(L-lactic acid)/Pluronic blends: characterization of phase separation behavior, degradation, and morphology and use as protein-releasing matrixes. Macromolecules, 1992, 25, 116-122.	4.8	214
22	The effect of immobilized RGD peptide in alginate scaffolds on cardiac tissue engineering. Acta Biomaterialia, 2011, 7, 152-162.	8.3	211
23	Determinants of release rate of tetanus vaccine from polyester microspheres. Pharmaceutical Research, 1993, 10, 945-953.	3.5	207
24	Magnetic nanoparticle-based approaches to locally target therapy and enhance tissue regeneration<i>in vivo</i>. Nanomedicine, 2012, 7, 1425-1442.	3.3	196
25	Human embryonic stem cell transplantation to repair the infarcted myocardium. Heart, 2007, 93, 1278-1284.	2.9	183
26	Three-dimensional porous alginate scaffolds provide a conducive environment for generation of well-vascularized embryoid bodies from human embryonic stem cells. Biotechnology and Bioengineering, 2004, 88, 313-320.	3.3	182
27	The effect of immobilized RGD peptide in macroporous alginate scaffolds on TGFÎ²1-induced chondrogenesis of human mesenchymal stem cells. Biomaterials, 2010, 31, 6746-6755.	11.4	171
28	Nanoparticle Delivery of miRNA-21 Mimic to Cardiac Macrophages Improves Myocardial Remodeling after Myocardial Infarction. Nano Letters, 2018, 18, 5885-5891.	9.1	168
29	Integration of multiple cell-matrix interactions into alginate scaffolds for promoting cardiac tissue regeneration. Biomaterials, 2011, 32, 1838-1847.	11.4	154
30	Human Embryonic Stem Cells as an In Vitro Model for Human Vascular Development and the Induction of Vascular Differentiation. Laboratory Investigation, 2003, 83, 1811-1820.	3.7	153
31	The effects of controlled HGF delivery from an affinity-binding alginate biomaterial on angiogenesis and blood perfusion in a hindlimb ischemia model. Biomaterials, 2010, 31, 4573-4582.	11.4	148
32	Ionically crosslinkable polyphosphazene: a novel polymer for microencapsulation. Journal of the American Chemical Society, 1990, 112, 7832-7833.	13.7	142
33	The effects of peptide-based modification of alginate on left ventricular remodeling and function after myocardial infarction. Biomaterials, 2009, 30, 189-195.	11.4	136
34	A Novel Perfusion Bioreactor Providing a Homogenous Milieu for Tissue Regeneration. Tissue Engineering, 2006, 12, 2843-2852.	4.6	125
35	Surface Analysis of Nanocomplexes by X-ray Photoelectron Spectroscopy (XPS). ACS Biomaterials Science and Engineering, 2017, 3, 882-889.	5.2	119
36	Enhancing the Drug Metabolism Activities of C3Aâ€" A Human Hepatocyte Cell Lineâ€"By Tissue Engineering Within Alginate Scaffolds. Tissue Engineering, 2006, 12, 1357-1368.	4.6	118

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37	Design of synthetic polymeric structures for cell transplantation and tissue engineering. Clinical Materials, 1993, 13, 3-10.	0.5	116
38	Chondrogenesis of hMSC in affinity-bound TGF-beta scaffolds. Biomaterials, 2012, 33, 751-761.	11.4	115
39	The promotion of inÂvitro vessel-like organization of endothelial cells in magnetically responsive alginate scaffolds. Biomaterials, 2012, 33, 4100-4109.	11.4	107
40	Activation of the ERK1/2 Cascade via Pulsatile Interstitial Fluid Flow Promotes Cardiac Tissue Assembly. Tissue Engineering, 2007, 13, 2185-2193.	4.6	106
41	Increased Paracrine Immunomodulatory Potential of Mesenchymal Stromal Cells in Three-Dimensional Culture. Tissue Engineering - Part B: Reviews, 2016, 22, 322-329.	4.8	106
42	Simultaneous regeneration of articular cartilage and subchondral bone induced by spatially presented TGF-beta and BMP-4 in a bilayer affinity binding system. Acta Biomaterialia, 2012, 8, 3283-3293.	8.3	105
43	Characterization of PLGA microspheres for the controlled delivery of IL-1Î± for tumor immunotherapy. Journal of Controlled Release, 1997, 43, 261-272.	9.9	102
44	Periostin in cardiovascular disease and development: a tale of two distinct roles. Basic Research in Cardiology, 2018, 113, 1.	5.9	101
45	A continuous delivery system of ILâ€1 receptor antagonist reduces angiogenesis and inhibits tumor development. FASEB Journal, 2004, 18, 161-163.	0.5	91
46	Electric Field Stimulation Integrated into Perfusion Bioreactor for Cardiac Tissue Engineering. Tissue Engineering - Part C: Methods, 2010, 16, 1417-1426.	2.1	87
47	Vascular Endothelial Growth Factor-Releasing Scaffolds Enhance Vascularization and Engraftment of Hepatocytes Transplanted on Liver Lobes. Tissue Engineering, 2005, 11, 715-722.	4.6	86
48	Targeting of polymeric nanoparticles to lung metastases by surface-attachment of YIGSR peptide from laminin. Biomaterials, 2011, 32, 152-161.	11.4	82
49	Myocardial Tissue Engineering: Creating a Muscle Patch for a Wounded Heart. Annals of the New York Academy of Sciences, 2004, 1015, 312-319.	3.8	74
50	In vitro evaluation of polymerized liposomes as an oral drug delivery system. Pharmaceutical Research, 1995, 12, 576-582.	3.5	71
51	Cardiac tissue engineering, ex-vivo: design principles in biomaterials and bioreactors. Heart Failure Reviews, 2003, 8, 271-276.	3.9	66
52	Controlled release using ionotropic polyphosphazene hydrogels. Journal of Controlled Release, 1993, 27, 69-77.	9.9	64
53	Controlled protein release from polyethyleneimine-coated poly(L-lactic acid)/pluronic blend matrices. Pharmaceutical Research, 1992, 09, 37-39.	3.5	59
54	A multi-shear perfusion bioreactor for investigating shear stress effects in endothelial cell constructs. Lab on A Chip, 2012, 12, 2696.	6.0	59

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55	Cardiac tissue engineering in magnetically actuated scaffolds. Nanotechnology, 2014, 25, 014009.	2.6	58
56	Magnetically actuated tissue engineered scaffold: insights into mechanism of physical stimulation. Nanoscale, 2016, 8, 3386-3399.	5.6	57
57	Induced differentiation and maturation of newborn liver cells into functional hepatic tissue in macroporous alginate scaffolds. FASEB Journal, 2008, 22, 1440-1449.	0.5	56
58	Novel Approaches to Controlled-Release Antigen Delivery. International Journal of Technology Assessment in Health Care, 1994, 10, 121-130.	0.5	54
59	Bioengineered Cardiac Grafts. Circulation, 2000, 102, .	1.6	54
60	Human adipose-derived stromal cells in a clinically applicable injectable alginate hydrogel: Phenotypic and immunomodulatory evaluation. Cytotherapy, 2015, 17, 1104-1118.	0.7	49
61	Selective separation ofcis-trans geometrical isomers of ?-carotene via CO2 supercritical fluid extraction. Biotechnology and Bioengineering, 2002, 80, 169-174.	3.3	48
62	Ultrastructural and Functional Investigations of Adult Hepatocyte Spheroids duringin VitroCultivation. Tissue Engineering, 2004, 10, 1806-1817.	4.6	46
63	Sustained delivery of IL-1Ra from biodegradable microspheres reduces the number of murine B16 melanoma lung metastases. Journal of Controlled Release, 2007, 123, 123-130.	9.9	46
64	Renovation of the injured heart with myocardial tissue engineering. Expert Review of Cardiovascular Therapy, 2006, 4, 239-252.	1.5	43
65	Rebuilding Broken Hearts. Scientific American, 2004, 291, 44-51.	1.0	42
66	Effects of mechanical stimulation induced by compression and medium perfusion on cardiac tissue engineering. Biotechnology Progress, 2012, 28, 1551-1559.	2.6	42
67	Microfabrication of channel arrays promotes vessel-like network formation in cardiac cell construct and vascularization <i>in vivo</i>. Biofabrication, 2014, 6, 024102.	7.1	42
68	Articular cartilage regeneration using acellular bioactive affinity-binding alginate hydrogel: A 6-month study in a mini-pig model of osteochondral defects. Journal of Orthopaedic Translation, 2019, 16, 40-52.	3.9	42
69	THERMODYNAMICS OF PORPHYRIN BINDING TO SERUM ALBUMIN: EFFECTS OF TEMPERATURE, OF PORPHYRIN SPECIES and OF ALBUMIN-CARRIED FATTY ACIDS. Photochemistry and Photobiology, 1987, 46, 689-693.	2.5	37
70	Myocardial repair: from salvage to tissue reconstruction. Expert Review of Cardiovascular Therapy, 2008, 6, 669-686.	1.5	37
71	Highly efficient osteogenic differentiation of human mesenchymal stem cells by eradication of STAT3 signaling. International Journal of Biochemistry and Cell Biology, 2010, 42, 1823-1830.	2.8	37
72	â€œDesignerâ€•scaffolds for tissue engineering and regeneration. Israel Journal of Chemistry, 2005, 45, 487-494.	2.3	36

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73	Characterization of microencapsulated liposome systems for the controlled delivery of liposome-associated macromolecules. Journal of Controlled Release, 1997, 43, 35-45.	9.9	34
74	Alginateâ€coated magnetic nanoparticles for noninvasive MRI of extracellular calcium. NMR in Biomedicine, 2014, 27, 774-783.	2.8	33
75	A Novel Synthetic Method for Hybridoma Cell Encapsulation. Nature Biotechnology, 1991, 9, 468-471.	17.5	32
76	Calciumâ€“siRNA nanocomplexes: What reversibility is all about. Journal of Controlled Release, 2015, 203, 150-160.	9.9	32
77	Reconstruction of the ovary microenvironment utilizing macroporous scaffold with affinity-bound growth factors. Biomaterials, 2019, 205, 11-22.	11.4	32
78	Evaluation of a Peritoneal-Generated Cardiac Patch in a Rat Model of Heterotopic Heart Transplantation. Cell Transplantation, 2009, 18, 275-282.	2.5	31
79	Alginate scaffold for organ culture of cryopreserved-thawed human ovarian cortical follicles. Journal of Assisted Reproduction and Genetics, 2011, 28, 761-769.	2.5	31
80	Bioengineering the Infarcted Heart by Applying Bio-inspired Materials. Journal of Cardiovascular Translational Research, 2011, 4, 559-574.	2.4	30
81	Mechanisms of cellular uptake and endosomal escape of calcium-siRNA nanocomplexes. International Journal of Pharmaceutics, 2016, 515, 46-56.	5.2	30
82	Inducing Endogenous Cardiac Regeneration: Can Biomaterials Connect the Dots?. Frontiers in Bioengineering and Biotechnology, 2020, 8, 126.	4.1	30
83	Perfusion Cell Seeding and Cultivation Induce the Assembly of Thick and Functional Hepatocellular Tissue-like Construct. Tissue Engineering - Part A, 2009, 15, 751-760.	3.1	29
84	Reduced liver cell death using an alginate scaffold bandage: A novel approach for liver reconstruction after extended partial hepatectomy. Acta Biomaterialia, 2014, 10, 3209-3216.	8.3	28
85	Spontaneous Coassembly of Biologically Active Nanoparticles via Affinity Binding of Heparin-Binding Proteins to Alginate-Sulfate. Nano Letters, 2016, 16, 883-888.	9.1	27
86	MACROPHAGE ACTIVATION FOR THE PRODUCTION OF IMMUNOSTIMULATORY CYTOKINES BY DELIVERING INTERLEUKIN 1 VIA BIODEGRADABLE MICROSPHERES. Cytokine, 2000, 12, 1683-1690.	3.2	26
87	Magnetic Induction of Multiscale Anisotropy in Macroporous Alginate Scaffolds. Nano Letters, 2018, 18, 7314-7322.	9.1	26
88	High throughput microfluidic system with multiple oxygen levels for the study of hypoxia in tumor spheroids. Biofabrication, 2021, 13, 035037.	7.1	26
89	Controlled release of peptides and proteins from biodegradable polyester microspheres: an approach for treating infectious diseases and malignancies. Reactive & Functional Polymers, 1995, 25, 177-187.	0.8	22
90	Rapid Endâ€Group Modification of Polysaccharides for Biomaterial Applications in Regenerative Medicine. Macromolecular Rapid Communications, 2014, 35, 1754-1762.	3.9	22

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91	Local Delivery of IL-1Î± Polymeric Microspheres for the Immunotherapy of an Experimental Fibrosarcoma. Cancer Investigation, 2003, 21, 720-728.	1.3	21
92	Silencing of proinflammatory genes targeted to peritoneal-residing macrophages using siRNA encapsulated in biodegradable microspheres. Biomaterials, 2010, 31, 2627-2636.	11.4	21
93	GalNAc bio-functionalization of nanoparticles assembled by electrostatic interactions improves siRNA targeting to the liver. Journal of Controlled Release, 2017, 266, 310-320.	9.9	21
94	Co-assembled Ca2+ Alginate-Sulfate Nanoparticles for Intracellular Plasmid DNA Delivery. Molecular Therapy - Nucleic Acids, 2019, 16, 378-390.	5.1	21
95	TGF-Î² affinity-bound to a macroporous alginate scaffold generates local and peripheral immunotolerant responses and improves allocell transplantation. Acta Biomaterialia, 2016, 45, 196-209.	8.3	20
96	High-throughput microfluidic 3D biomimetic model enabling quantitative description of the human breast tumor microenvironment. Acta Biomaterialia, 2021, 132, 473-488.	8.3	20
97	Signal transducer and activator of transcription 3â€"A key molecular switch for human mesenchymal stem cell proliferation. International Journal of Biochemistry and Cell Biology, 2008, 40, 2606-2618.	2.8	19
98	A bridge to silencing: Co-assembling anionic nanoparticles of siRNA and hyaluronan sulfate via calcium ion bridges. Journal of Controlled Release, 2016, 232, 215-227.	9.9	18
99	Cardiac Tissue Engineering: Principles, Materials, and Applications. Synthesis Lectures on Tissue Engineering, 2012, 4, 1-200.	0.3	17
100	Magnetically Actuated Alginate Scaffold: A Novel Platform for Promoting Tissue Organization and Vascularization. Methods in Molecular Biology, 2014, 1181, 83-95.	0.9	17
101	Exploring peptideâ€functionalized alginate scaffolds for engineering cardiac tissue from human embryonic stem cellâ€derived cardiomyocytes in serumâ€free medium. Polymers for Advanced Technologies, 2019, 30, 2493-2505.	3.2	16
102	Autospecies and Postâ€"Myocardial Infarction Sera Enhance the Viability, Proliferation, and Maturation of 3D Cardiac Cell Culture. Tissue Engineering, 2006, 12, 3467-3475.	4.6	15
103	Primary Human Hepatocytes from Metabolic-Disordered Children Recreate Highly Differentiated Liver-Tissue-Like Spheroids on Alginate Scaffolds. Tissue Engineering - Part A, 2012, 18, 1443-1453.	3.1	15
104	Determinants of liposome partitioning in aqueous two-phase systems: Evaluation by means of a factorial design. , 1996, 52, 529-537.		14
105	Retention and Functional Effect of Adipose-Derived Stromal Cells Administered in Alginate Hydrogel in a Rat Model of Acute Myocardial Infarction. Stem Cells International, 2018, 2018, 1-13.	2.5	12
106	Hypoxia-sensitive drug delivery to tumors. Journal of Controlled Release, 2022, 341, 431-442.	9.9	11
107	Rebuilding broken hearts. Biologists and engineers working together in the fledgling field of tissue engineering are within reach of one of their greatest goals: constructing a living human heart patch. Scientific American, 2004, 291, 44-51.	1.0	10
108	Sustained release of IL-1Ra from biodegradable microspheres prolongs its IL-1-neutralizing effects. Israel Journal of Chemistry, 2005, 45, 457-464.	2.3	9

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109	Prevention of acetaminophen-induced liver injury by alginate. Toxicology and Applied Pharmacology, 2019, 363, 72-78.	2.8	9
110	Spectral and chemical evidence for the formation of zinc-porphyrin in aged, initially metal-free, porphyrin-ix solutions. Journal of Inorganic Biochemistry, 1985, 25, 187-195.	3.5	8
111	The influence of sustained dual-factor presentation on the expansion and differentiation of neural progenitors in affinity-binding alginate scaffolds. Journal of Tissue Engineering and Regenerative Medicine, 2015, 9, 918-929.	2.7	8
112	Angiogenesis PET Tracer Uptake (68Ga-NODAGA-E[(cRGDyK)]2) in Induced Myocardial Infarction and Stromal Cell Treatment in Minipigs. Diagnostics, 2018, 8, 33.	2.6	8
113	Live imaging flow bioreactor for the simulation of articular cartilage regeneration after treatment with bioactive hydrogel. Biotechnology and Bioengineering, 2018, 115, 2205-2216.	3.3	8
114	MiR-499 Responsive Lethal Construct for Removal of Human Embryonic Stem Cells after Cardiac Differentiation. Scientific Reports, 2019, 9, 14490.	3.3	8
115	Novel liposome-based formulations for prolonged delivery of proteins and vaccines. Journal of Liposome Research, 1995, 5, 813-827.	3.3	6
116	Stromal cell-induced immune regulation in a transplantable lymphoid-like cell constructs. Biomaterials, 2010, 31, 9273-9284.	11.4	6
117	Feasibility of Leadless Cardiac Pacing Using Injectable Magnetic Microparticles. Scientific Reports, 2016, 6, 24635.	3.3	6
118	Microenvironment Design for Stem Cell Fate Determination. Advances in Biochemical Engineering/Biotechnology, 2011, 126, 227-262.	1.1	5
119	Three-Dimensional Perfusion Cultivation of Human Cardiac-Derived Progenitors Facilitates Their Expansion While Maintaining Progenitor State. Tissue Engineering - Part C: Methods, 2014, 20, 886-894.	2.1	5
120	Generation and characterization of three human induced pluripotent stem cell lines (iPSC) from two family members with dilated cardiomyopathy and left ventricular noncompaction (DCM-LVNC) and one healthy heterozygote sibling. Stem Cell Research, 2021, 53, 102382.	0.7	4
121	Physicochemical studies of processes involving potential photodynamic drugs on route to their targets: Self-aggregation and membrane-binding of Zn-hematoporphyrin. Archives of Biochemistry and Biophysics, 1986, 247, 57-61.	3.0	3
122	Pulsatile Release from Microencapsulated Liposomes. Journal of Liposome Research, 1994, 4, 349-360.	3.3	3
123	Effect of heparin and peptide conjugation on structure and functional properties of alginate in solutions and hydrogels. Materials Advances, 2021, 2, 440-447.	5.4	3
124	CHAPTER 11. Applications of Magnetic-Responsive Materials for Cardiovascular Tissue Engineering. RSC Smart Materials, 0, , 290-328.	0.1	3
125	Engineering Biomaterials for Myocardial Regeneration and Repair. Israel Journal of Chemistry, 2013, 53, 695-709.	2.3	2
126	Biomaterials for Cardiac Tissue Engineering and Regeneration. , 2014, , 83-111.		2

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127	Bioreactor Engineering: Regenerating the Dynamic Cell Microenvironment. , 2008, , 517-535.		2
128	Principles of Cardiovascular Tissue Engineering. , 2014, , 627-683.		1
129	Spatiotemporal Focal Delivery of Dual Regenerating Factors for Osteochondral Defect Repair. Advances in Delivery Science and Technology, 2014, , 473-509.	0.4	1
130	Intercellular and Intracellular Targeting of Drugs. Advances in Molecular and Cell Biology, 1994, 9, 217-231.	0.1	0
131	Targeted Delivery of Immunomodulating Agents to Dendritic Cells for Treatment of Autoimmune Disease Using Biodegradable Microspheres. Clinical Immunology, 2007, 123, S145-S146.	3.2	0
132	Creating Unique Cell Microenvironments for the Engineering of a Functional Cardiac Patch. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2010, , 81-94.	1.0	0
133	Instructive Biomaterials for Myocardial Regeneration and Repair. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2011, , 289-328.	1.0	0
134	Enhancing the immunogenicity of liposomal hepatitis B surface antigen (HBsAg) by controlling its delivery from polymeric microspheres. Journal of Pharmaceutical Sciences, 2000, 89, 1550-1557.	3.3	0
135	Temporal Control over Macrophage Phenotype and the Host Response via Magnetically Actuated Scaffolds. ACS Biomaterials Science and Engineering, 2022, 8, 3526-3541.	5.2	0