Jelena Rnjak-Kovacina

List of Publications by Year
in descending order

63 papers	4,493 citations	136885 32 h-index	128225 60 g-index
64 all docs	64 docs citations	64 times ranked	5952 citing authors

#	Article	IF	Citations
1	The Biomedical Use of Silk: Past, Present, Future. Advanced Healthcare Materials, 2019, 8, e1800465.	3.9	522
2	Highly Tunable Elastomeric Silk Biomaterials. Advanced Functional Materials, 2014, 24, 4615-4624.	7.8	338
3	Tailoring the porosity and pore size of electrospun synthetic human elastin scaffolds for dermal tissue engineering. Biomaterials, 2011, 32, 6729-6736.	5.7	272
4	Increasing the Pore Size of Electrospun Scaffolds. Tissue Engineering - Part B: Reviews, 2011, 17, 365-372.	2.5	227
5	Elastin-based materials. Chemical Society Reviews, 2010, 39, 3371.	18.7	214
6	pHâ€Dependent Anticancer Drug Release from Silk Nanoparticles. Advanced Healthcare Materials, 2013, 2, 1606-1611.	3.9	192
7	Corneal Tissue Engineering: Recent Advances and Future Perspectives. Tissue Engineering - Part B: Reviews, 2015, 21, 278-287.	2.5	146
8	Lyophilized Silk Sponges: A Versatile Biomaterial Platform for Soft Tissue Engineering. ACS Biomaterials Science and Engineering, 2015, 1, 260-270.	2.6	146
9	Biomaterials derived from silkâ€“tropoelastin protein systems. Biomaterials, 2010, 31, 8121-8131.	5.7	141
10	Electrospun synthetic human elastin:collagen composite scaffolds for dermal tissue engineering. Acta Biomaterialia, 2012, 8, 3714-3722.	4.1	137
11	Vascularization of hollow channel-modified porous silk scaffolds with endothelial cells for tissue regeneration. Biomaterials, 2015, 56, 68-77.	5.7	132
12	Robust bioengineered 3D functional human intestinal epithelium. Scientific Reports, 2015, 5, 13708.	1.6	131
13	A silk-based scaffold platform with tunable architecture for engineering critically-sized tissue constructs. Biomaterials, 2012, 33, 9214-9224.	5.7	114
14	Synthetic human elastin microfibers: Stable cross-linked tropoelastin and cell interactive constructs for tissue engineering applications. Acta Biomaterialia, 2010, 6, 354-359.	4.1	110
15	Tropoelastin: A versatile, bioactive assembly module. Acta Biomaterialia, 2014, 10, 1532-1541.	4.1	110
16	Corneal stromal bioequivalents secreted on patterned silk substrates. Biomaterials, 2014, 35, 3744-3755.	5.7	97
17	Ice Templating Soft Matter: Fundamental Principles and Fabrication Approaches to Tailor Pore Structure and Morphology and Their Biomedical Applications. Advanced Materials, 2021, 33, e2100091.	11.1	97
18	Rapid Photocrosslinking of Silk Hydrogels with High Cell Density and Enhanced Shape Fidelity. Advanced Healthcare Materials, 2020, 9, e1901667.	3.9	96

#	Article	IF	Citations
19	Severe Burn Injuries and the Role of Elastin in the Design of Dermal Substitutes. Tissue Engineering - Part B: Reviews, 2011, 17, 81-91.	2.5	88
20	Primary human dermal fibroblast interactions with open weave three-dimensional scaffolds prepared from synthetic human elastin. Biomaterials, 2009, 30, 6469-6477.	5.7	87
21	Arrayed Hollow Channels in Silkâ€Based Scaffolds Provide Functional Outcomes for Engineering Critically Sized Tissue Constructs. Advanced Functional Materials, 2014, 24, 2188-2196.	7.8	78
22	The Effect of Sterilization on Silk Fibroin Biomaterial Properties. Macromolecular Bioscience, 2015, 15, 861-874.	2.1	69
23	Biocompatibility of silk-tropoelastin protein polymers. Biomaterials, 2014, 35, 5138-5147.	5.7	60
24	Microchannels in Development, Survival, and Vascularisation of Tissue Analogues for Regenerative Medicine. Trends in Biotechnology, 2019, 37, 1189-1201.	4.9	58
25	Silk as a biocohesive sacrificial binder in the fabrication of hydroxyapatite load bearing scaffolds. Biomaterials, 2014, 35, 6941-6953.	5.7	57
26	Glycosaminoglycan and Proteoglycanâ€Based Biomaterials: Current Trends and Future Perspectives. Advanced Healthcare Materials, 2018, 7, e1701042.	3.9	53
27	Rapid Endothelialization of Off-the-Shelf Small Diameter Silk Vascular Grafts. JACC Basic To Translational Science, 2018, 3, 38-53.	1.9	51
28	Integration of induced pluripotent stem cell-derived endothelial cells with polycaprolactone/gelatin-based electrospun scaffolds for enhanced therapeutic angiogenesis. Stem Cell Research and Therapy, 2018, 9, 70.	2.4	47
29	Accelerated In Vitro Degradation of Optically Clear Low<i>Î²</i>-Sheet Silk Films by Enzyme-Mediated Pretreatment. Translational Vision Science and Technology, 2013, 2, 2.	1.1	41
30	The multifaceted roles of perlecan in fibrosis. Matrix Biology, 2018, 68-69, 150-166.	1.5	40
31	Altered processing enhances the efficacy of small-diameter silk fibroin vascular grafts. Scientific Reports, 2019, 9, 17461.	1.6	38
32	Plasma Ion Implantation of Silk Biomaterials Enabling Direct Covalent Immobilization of Bioactive Agents for Enhanced Cellular Responses. ACS Applied Materials & Interfaces, 2018, 10, 17605-17616.	4.0	36
33	Bioengineering artificial blood vessels from natural materials. Trends in Biotechnology, 2022, 40, 693-707.	4.9	36
34	3D bioprinting of dual-crosslinked nanocellulose hydrogels for tissue engineering applications. Journal of Materials Chemistry B, 2021, 9, 6163-6175.	2.9	31
35	Development and Characterization of Gelatinâ€Norbornene Bioink to Understand the Interplay between Physical Architecture and Microâ€Capillary Formation in Biofabricated Vascularized Constructs. Advanced Healthcare Materials, 2022, 11, e2101873.	3.9	28
36	Visible light mediated PVA-tyramine hydrogels for covalent incorporation and tailorable release of functional growth factors. Biomaterials Science, 2020, 8, 5005-5019.	2.6	27

#	Article	IF	Citations
37	Towards engineering heart tissues from bioprinted cardiac spheroids. Biofabrication, 2021, 13, 045009.	3.7	27
38	Microchannels Are an Architectural Cue That Promotes Integration and Vascularization of Silk Biomaterials in Vivo. ACS Biomaterials Science and Engineering, 2020, 6, 1476-1486.	2.6	26
39	In situ formation of poly(vinyl alcohol)â€“heparin hydrogels for mild encapsulation and prolonged release of basic fibroblast growth factor and vascular endothelial growth factor. Journal of Tissue Engineering, 2016, 7, 204173141667713.	2.3	25
40	Silk biomaterials functionalized with recombinant domain V of human perlecan modulate endothelial cell and platelet interactions for vascular applications. Colloids and Surfaces B: Biointerfaces, 2016, 148, 130-138.	2.5	25
41	Dry Surface Treatments of Silk Biomaterials and Their Utility in Biomedical Applications. ACS Biomaterials Science and Engineering, 2020, 6, 5431-5452.	2.6	24
42	A Biomimetic Approach toward Enhancing Angiogenesis: Recombinantly Expressed Domain V of Human Perlecan Is a Bioactive Molecule That Promotes Angiogenesis and Vascularization of Implanted Biomaterials. Advanced Science, 2020, 7, 2000900.	5.6	24
43	Bioengineered human heparin with anticoagulant activity. Metabolic Engineering, 2016, 38, 105-114.	3.6	21
44	Tropoelastin modulates TGF-Î²1-induced expression of VEGF and CTGF in airway smooth muscle cells. Matrix Biology, 2013, 32, 407-413.	1.5	17
45	Degradation of Silk Films in Multipocket Corneal Stromal Rabbit Models. Journal of Applied Biomaterials and Functional Materials, 2016, 14, e266-e276.	0.7	17
46	Recombinant Domain V of Human Perlecan Is a Bioactive Vascular Proteoglycan. Biotechnology Journal, 2017, 12, 1700196.	1.8	17
47	Biomimetic silk biomaterials: Perlecan-functionalized silk fibroin for use in blood-contacting devices. Acta Biomaterialia, 2021, 132, 162-175.	4.1	16
48	Multifunctional Silkï£¿Tropoelastin Biomaterial Systems. Israel Journal of Chemistry, 2013, 53, 777-786.	1.0	14
49	Vascular Pedicle and Microchannels: Simple Methods Toward Effective In Vivo Vascularization of 3D Scaffolds. Advanced Healthcare Materials, 2019, 8, 1901106.	3.9	13
50	Silk fibroin photo-lyogels containing microchannels as a biomaterial platform for <i>in situ</i> tissue engineering. Biomaterials Science, 2020, 8, 7093-7105.	2.6	13
51	Silk Fibroin Scaffold Architecture Regulates Inflammatory Responses and Engraftment of Bone Marrowâ€Mononuclear Cells. Advanced Healthcare Materials, 2021, 10, e2100615.	3.9	10
52	Strategies for inclusion of growth factors into 3D printed bone grafts. Essays in Biochemistry, 2021, 65, 569-585.	2.1	9
53	Effect of plasma ion immersion implantation on physiochemical and biological properties of silk towards creating a versatile biomaterial platform. Materials Today Advances, 2022, 13, 100212.	2.5	9
54	Bioengineering silk into blood vessels. Biochemical Society Transactions, 2021, 49, 2271-2286.	1.6	7

#	Article	IF	Citations
55	Bone tissue engineering using 3D silk scaffolds and human dental pulp stromal cells epigenetic reprogrammed with the selective histone deacetylase inhibitor MI192. Cell and Tissue Research, 2022, 388, 565-581.	1.5	7
56	Current serological possibilities for the diagnosis of arthritis with special focus on proteins and proteoglycans from the extracellular matrix. Expert Review of Molecular Diagnostics, 2015, 15, 77-95.	1.5	6
57	3D Bioprinting of Cardiovascular Tissues for In Vivo and In Vitro Applications Using Hybrid Hydrogels Containing Silk Fibroin: State of the Art and Challenges. Current Tissue Microenvironment Reports, 2020, 1, 261-276.	1.3	6
58	The Role of Elastin in Wound Healing and Dermal Substitute Design. , 2013, , 57-66.		6
59	Effect of Recombinant Human Perlecan Domain V Tethering Method on Protein Orientation and Blood Contacting Activity on Polyvinyl Chloride. Advanced Healthcare Materials, 2021, 10, 2100388.	3.9	3
60	A One Step Procedure toward Conductive Suspensions of Liposomeâ€Polyaniline Complexes. Macromolecular Bioscience, 2020, 20, 2000103.	2.1	2
61	Impact of Sterilization on a Conjugated Polymer-Based Bioelectronic Patch. ACS Applied Polymer Materials, 2021, 3, 2541-2552.	2.0	2
62	2.18 Elastin Biopolymers â˜†. , 2017, , 412-437.		0
63	Bioengineering Proteoglycanâ€based Matrices For Blood Contacting Applications. FASEB Journal, 2016, 30, 622.2.	0.2	0