Kibret Mequanint

List of Publications by Year
in descending order

100 papers	3,143 citations	172207 29 h-index	174990 52 g-index
103 all docs	103 docs citations	103 times ranked	4142 citing authors

#	Article	IF	Citations
1	Small-diameter vascular tissue engineering. Nature Reviews Cardiology, 2013, 10, 410-421.	6.1	386
2	Elastin biosynthesis: The missing link in tissue-engineered blood vessels. Cardiovascular Research, 2006, 71, 40-49.	1.8	279
3	Bioactive and Biodegradable Nanocomposites and Hybrid Biomaterials for Bone Regeneration. Journal of Functional Biomaterials, 2012, 3, 432-463.	1.8	117
4	Synthesis and Electrospinning of Îµ-Polycaprolactone-Bioactive Glass Hybrid Biomaterials via a Solâˆ'Gel Process. Langmuir, 2010, 26, 18340-18348.	1.6	113
5	Snake extractâ€"laden hemostatic bioadhesive gel cross-linked by visible light. Science Advances, 2021, 7, .	4.7	96
6	Biomedical Applications of Layerâ€byâ€Layer Selfâ€Assembly for Cell Encapsulation: Current Status and Future Perspectives. Advanced Healthcare Materials, 2019, 8, e1800939.	3.9	93
7	Prosthetic aortic heart valves: Modeling and design. Medical Engineering and Physics, 2011, 33, 131-147.	0.8	91
8	Injectable and conductive cardiac patches repair infarcted myocardium in rats and minipigs. Nature Biomedical Engineering, 2021, 5, 1157-1173.	11.6	89
9	Synthesis, Swelling Behavior, and Biocompatibility of Novel Physically Cross-Linked Polyurethane-block-Poly(glycerol methacrylate) Hydrogels. Biomacromolecules, 2006, 7, 883-891.	2.6	86
10	Polyurethane biomaterials for fabricating 3D porous scaffolds and supporting vascular cells. Journal of Biomedical Materials Research - Part A, 2007, 82A, 802-809.	2.1	70
11	Versatile Biodegradable Poly(ester amide)s Derived from Î±-Amino Acids for Vascular Tissue Engineering. Materials, 2010, 3, 2346-2368.	1.3	65
12	Tissue engineering scaffolds containing embedded fluorinated-zeolite oxygen vectors. Acta Biomaterialia, 2011, 7, 3670-3678.	4.1	59
13	Blends and Nanocomposite Biomaterials for Articular Cartilage Tissue Engineering. Materials, 2014, 7, 5327-5355.	1.3	59
14	Hydroxyapatite Formation on Solâ€"Gel Derived Poly(Îµ-Caprolactone)/Bioactive Glass Hybrid Biomaterials. ACS Applied Materials & Interfaces, 2012, 4, 3148-3156.	4.0	56
15	Strategies in Functional Poly(ester amide) Syntheses to Study Human Coronary Artery Smooth Muscle Cell Interactions. Biomacromolecules, 2011, 12, 2475-2487.	2.6	54
16	Advances in Growth Factor Delivery for Therapeutic Angiogenesis. Journal of Vascular Research, 2013, 50, 35-51.	0.6	51
17	Design and fabrication of drugâ€delivery systems toward adjustable release profiles for personalized treatment. View, 2021, 2, 20200126.	2.7	49
18	Biodegradable Polyphosphazene Biomaterials for Tissue Engineering and Delivery of Therapeutics. BioMed Research International, 2014, 2014, 1-16.	0.9	47

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19	Bone Repair and Regenerative Biomaterials: Towards Recapitulating the Microenvironment. Polymers, 2019, 11, 1437.	2.0	46
20	Syntheses, characterization, and functionalization of poly(ester amide)s with pendant amine functional groups. Journal of Polymer Science Part A, 2008, 46, 6376-6392.	2.5	43
21	Biomimetic l-aspartic acid-derived functional poly(ester amide)s for vascular tissue engineering. Acta Biomaterialia, 2014, 10, 3484-3496.	4.1	42
22	Three-Dimensional Topography of Synthetic Scaffolds Induces Elastin Synthesis by Human Coronary Artery Smooth Muscle Cells. Tissue Engineering - Part A, 2011, 17, 1561-1571.	1.6	40
23	A versatile approach for the syntheses of poly(ester amide)s with pendant functional groups. Journal of Polymer Science Part A, 2009, 47, 3757-3772.	2.5	39
24	The role of endothelial cell-bound Jagged1 in Notch3-induced human coronary artery smooth muscle cell differentiation. Biomaterials, 2012, 33, 2462-2472.	5.7	38
25	Ultralight Conductive and Elastic Aerogel for Skeletal Muscle Atrophy Regeneration. Advanced Functional Materials, 2019, 29, 1806200.	7.8	36
26	Role of Bioactive 3D Hybrid Fibrous Scaffolds on Mechanical Behavior and Spatiotemporal Osteoblast Gene Expression. ACS Applied Materials & Interfaces, 2013, 5, 7574-7583.	4.0	35
27	Regulation of Vascular Smooth Muscle Cell Phenotype in Three-Dimensional Coculture System by Jagged1-Selective Notch3 Signaling. Tissue Engineering - Part A, 2014, 20, 1175-1187.	1.6	34
28	Hydrogel Biomaterials. , 0, , .		32
29	Preparation and characterization of electrospun rGO-poly(ester amide) conductive scaffolds. Materials Science and Engineering C, 2019, 98, 324-332.	3.8	31
30	Gelation of highly entangled hydrophobic macromolecular fluid for ultrastrong underwater in situ fast tissue adhesion. Science Advances, 2022, 8, .	4.7	31
31	Novel Physically Crosslinked Polyurethane-block-Poly(vinyl pyrrolidone) Hydrogel Biomaterials. Macromolecular Bioscience, 2007, 7, 727-737.	2.1	30
32	Fabrication of highly porous tissue-engineering scaffolds using selective spherical porogens. Bio-Medical Materials and Engineering, 2010, 20, 107-118.	0.4	28
33	Interactions of coronary artery smooth muscle cells with 3D porous polyurethane scaffolds. Journal of Biomedical Materials Research - Part A, 2009, 89A, 293-303.	2.1	26
34	Bioreactor-induced mesenchymal progenitor cell differentiation and elastic fiber assembly in engineered vascular tissues. Acta Biomaterialia, 2017, 59, 200-209.	4.1	26
35	The effect of thiolation on the mechanical and protein adsorption properties of polyurethanes. European Polymer Journal, 2007, 43, 1415-1427.	2.6	25
36	Multifactorial study and kinetics of signal development in ferrousâ€“methylthymol blueâ€“gelatin gel dosimeters. Medical Physics, 2017, 44, 1948-1957.	1.6	24

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37	Controlling sensitivity and stability of ferrousâ€“xylenol orangeâ€“gelatin 3D gel dosimeters by doping with phenanthroline-type ligands and glyoxal. Physics in Medicine and Biology, 2013, 58, 1823-1838.	1.6	23
38	Controlled Delivery of Fibroblast Growth Factor-9 from Biodegradable Poly(ester amide) Fibers for Building Functional Neovasculature. Pharmaceutical Research, 2014, 31, 3335-3347.	1.7	23
39	Systematic Studies on Surface Erosion of Photocrosslinked Polyanhydride Tablets and Data Correlation with Release Kinetic Models. Polymers, 2020, 12, 1105.	2.0	23
40	Fibrous biodegradable l-alanine-based scaffolds for vascular tissue engineering. Journal of Tissue Engineering and Regenerative Medicine, 2012, 8, n/a-n/a.	1.3	22
41	Bioactive borophosphosilicate-polycaprolactone hybrid biomaterials via a non-aqueous sol gel process. RSC Advances, 2016, 6, 92824-92832.	1.7	21
42	Smooth Muscle Î±-Actin and Calponin Expression and Extracellular Matrix Production of Human Coronary Artery Smooth Muscle Cells in 3D Scaffolds. Tissue Engineering - Part A, 2009, 15, 3001-3011.	1.6	20
43	Type I Collagen Cleavage Is Essential for Effective Fibrotic Repair after Myocardial Infarction. American Journal of Pathology, 2011, 179, 2189-2198.	1.9	20
44	Focal Contact Formation of Vascular Smooth Muscle Cells on Langmuirâ€“Blodgett and Solvent-Cast Films of Biodegradable Poly(ester amide)s. ACS Applied Materials & Interfaces, 2012, 4, 1303-1312.	4.0	20
45	Computational aspects in mechanical modeling of the articular cartilage tissue. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2013, 227, 402-420.	1.0	20
46	Mechanically-competent and cytocompatible polycaprolactone-borophosphosilicate hybrid biomaterials. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 75, 180-189.	1.5	20
47	Fortifying Angiogenesis in Ischemic Muscle with FGF9â€Loaded Electrospun Poly(Ester Amide) Fibers. Advanced Healthcare Materials, 2019, 8, e1801294.	3.9	19
48	Hydrolytic stability of nano-particle polyurethane dispersions: Implications to their long-term use. European Polymer Journal, 2006, 42, 1145-1153.	2.6	18
49	Engineering 3D Cellularized Collagen Gels for Vascular Tissue Regeneration. Journal of Visualized Experiments, 2015, , e52812.	0.2	18
50	Porous and biodegradable polycaprolactone-borophosphosilicate hybrid scaffolds for osteoblast infiltration and stem cell differentiation. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 92, 162-171.	1.5	18
51	Syntheses and characterization of physically crosslinked hydrogels from dithiocarbamateâ€derived polyurethane macroiniferter. Journal of Polymer Science Part A, 2008, 46, 6272-6284.	2.5	17
52	The role of Ras-ERK-IL-1Î² signaling pathway in upregulation of elastin expression by human coronary artery smooth muscle cells cultured in 3D scaffolds. Biomaterials, 2012, 33, 7047-7056.	5.7	17
53	3D scaffolds in tissue engineering and regenerative medicine: beyond structural templates?. Pharmaceutical Bioprocessing, 2013, 1, 267-281.	0.8	17
54	Concurrent and Sustained Delivery of FGF2 and FGF9 from Electrospun Poly(ester amide) Fibrous Mats for Therapeutic Angiogenesis. Tissue Engineering - Part A, 2016, 22, 584-596.	1.6	17

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55	Designing Biomaterials to Modulate Notch Signaling in Tissue Engineering and Regenerative Medicine. Tissue Engineering - Part B: Reviews, 2021, 27, 383-410.	2.5	15
56	Carbon-based electrically conductive materials for bone repair and regeneration. Materials Advances, 2022, 3, 5186-5206.	2.6	15
57	The kinetics of dithiocarbamate-mediated polyurethane-block-poly(methyl methacrylate) polymers. Polymer, 2009, 50, 4464-4470.	1.8	14
58	Tetrazolium salt monomers for gel dosimetry I: Principles. Journal of Physics: Conference Series, 2017, 847, 012048.	0.3	13
59	Viscoelastic properties of multi-layered cellularized vascular tissues fabricated from collagen gel. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 80, 155-163.	1.5	13
60	Gellan gum-based gels with tunable relaxation properties for MRI phantoms. Magnetic Resonance Imaging, 2019, 57, 40-49.	1.0	12
61	Embryonic Mesenchymal Multipotent Cell Differentiation on Electrospun Biodegradable Poly(ester) Tj ETQq1 1 0.784314 rgBT /Overlo 980-991.	1.3	12
62	Intrinsically fluorescent bioactive glass-poly(ester amide) hybrid microparticles for dual drug delivery and bone repair. Materials Science and Engineering C, 2021, 128, 112288.	3.8	12
63	The Effects of Fabrication Strategies on 3D Scaffold Morphology, Porosity, and Vascular Smooth Muscle Cell Response. Journal of Biomaterials and Tissue Engineering, 2013, 3, 300-311.	0.0	12
64	Preparation and Characterization of Glycol Chitosan-Fe₃O₄ Coreâ€“Shell Magnetic Nanoparticles for Controlled Delivery of Progesterone. Journal of Biomaterials and Tissue Engineering, 2017, 7, 561-570.	0.0	12
65	Protein adsorption and platelet adhesion onto ion-containing polyurethanes. Journal of Biomaterials Science, Polymer Edition, 2007, 18, 1195-1210.	1.9	9
66	Poly(ester amide)â€“Bioactive Glass Hybrid Biomaterials for Bone Regeneration and Biomolecule Delivery. ACS Applied Bio Materials, 2020, 3, 3621-3630.	2.3	9
67	A systematic study of cellulose-reactive anionic dye removal using a sustainable bioadsorbent. Chemosphere, 2022, 303, 135024.	4.2	9
68	Vascular Grafting Strategies in Coronary Intervention. Frontiers in Materials, 2014, 1, .	1.2	8
69	Tetrazolium salt monomers for gel dosimetry II: Dosimetric characterization of the ClearViewâ„¢ 3D dosimeter. Journal of Physics: Conference Series, 2017, 847, 012049.	0.3	8
70	Emerging Strategies for Stem Cell Lineage Commitment in Tissue Engineering and Regenerative Medicine. ACS Biomaterials Science and Engineering, 2018, 4, 3644-3657.	2.6	8
71	Fabrication and In Situ Cross-Linking of Carboxylic-Acid-Functionalized Poly(Ester Amide) Scaffolds for Tissue Engineering. ACS Applied Polymer Materials, 2019, 1, 2360-2369.	2.0	8
72	Proposed percutaneous aortic valve prosthesis made of cryogel. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2019, 233, 515-524.	1.0	8

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73	Gellan gum gel tissue phantoms and gel dosimeters with tunable electrical, mechanical and dosimetric properties. International Journal of Biological Macromolecules, 2021, 180, 332-338.	3.6	8
74	An Inverse Numerical Approach for Modeling Aortic Heart Valve Leaflet Tissue Oxygenation. Cardiovascular Engineering and Technology, 2012, 3, 73-79.	0.7	7
75	Cyclodextrin Inclusion Complexes as Potential Oxygen Delivery Vehicles in Tissue Engineering. Journal of Biomaterials and Tissue Engineering, 2014, 4, 957-966.	0.0	7
76	Ultraviolet (UV) curing of phosphated polyurethane-acrylic dispersions. Macromolecular Symposia, 2003, 193, 169-186.	0.4	6
77	Comparative Studies of Fibrin-Based Engineered Vascular Tissues and Notch Signaling from Progenitor Cells. ACS Biomaterials Science and Engineering, 2020, 6, 2696-2706.	2.6	6
78	Fabrication of Vascular Tissue Engineering Scaffolds with Enhanced Oxygen Diffusivity and Cell Infiltration. Journal of Biomaterials and Tissue Engineering, 2012, 2, 280-291.	0.0	6
79	EFFECT OF STRESS INTENSITY FACTOR IN EVALUATION OF INSTABILITY OF ATHEROSCLEROTIC PLAQUE. Journal of Mechanics in Medicine and Biology, 2014, 14, 1450072.	0.3	5
80	Activation of Transcription Factor <i>GAX</i> and Concomitant Downregulation of IL-1Î² and ERK1/2 Modulate Vascular Smooth Muscle Cell Phenotype in 3D Fibrous Scaffolds. Tissue Engineering - Part A, 2015, 21, 2356-2365.	1.6	5
81	The Effect of Oxidizing Agents in the Preparation of 2,3,5â€<scp>t</scp>riarylâ€2<i>H</i>â€<scp>t</scp>etrazolium Salts from 1,3,5â€<scp>t</scp>riarylformazans. Journal of Heterocyclic Chemistry, 2016, 53, 1655-1660.	1.4	5
82	One-Pot Substitution Approach for the Syntheses of Nonfunctional and Functional Poly[(amino acid) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1.7	5
83	Bioactivity, Degradation, and Mechanical Properties of Poly(vinylpyrrolidone-co-triethoxyvinylsilane)/Tertiary Bioactive Glass Hybrids. ACS Applied Bio Materials, 2018, 1, 1369-1381.	2.3	5
84	Scalable microfabrication of drug-loaded coreâ€“shell tablets from a single erodible polymer with adjustable release profiles. Biofabrication, 2020, 12, 045007.	3.7	5
85	Tissue engineering and regenerative therapeutics: The nexus of chemical engineering and translational medicine. Canadian Journal of Chemical Engineering, 2021, 99, 2069-2086.	0.9	5
86	Immobilization of Jagged1 Enhances Vascular Smooth Muscle Cells Maturation by Activating the Notch Pathway. Cells, 2021, 10, 2089.	1.8	5
87	Two-dimensional chromatography of complex polymers. 3. Full analysis of polystyrene-poly(methyl) Tj ETQq1 1 0.784314 rgBT /Overlock	1.3	4
88	MICRO-FINITE ELEMENT MODELING OF WRINKLE FORMATION FOR CELL LOCOMOTION APPLICATIONS. Journal of Mechanics in Medicine and Biology, 2013, 13, 1350019.	0.3	4
89	The effects of progenitor and differentiated cells on ectopic calcification of engineered vascular tissues. Acta Biomaterialia, 2020, 115, 288-298.	4.1	4
90	Sol-Gel Derived Tertiary Bioactive Glassâ€“Ceramic Nanorods Prepared via Hydrothermal Process and Their Composites with Poly(Vinylpyrrolidone-Co-Vinylsilane). Journal of Functional Biomaterials, 2020, 11, 35.	1.8	4

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91	Initial performance evaluation of a 3D gel dosimeter based on modified tetrazolium compounds. Journal of Physics: Conference Series, 2019, 1305, 012036.	0.3	3
92	Experimental and Modeling Studies of Oxygen Tension in Vascular Tissue Engineering With and Without an Oxygen Carrier. Journal of Biomaterials and Tissue Engineering, 2011, 1, 49-59.	0.0	3
93	A NUMERICAL TECHNIQUE TO EVALUATE THE FLEXURAL STIFFNESS OF LONG BONES AFFECTED BY CRACKS AND POROSITY. Journal of Mechanics in Medicine and Biology, 2011, 11, 131-148.	0.3	2
94	Benzothiazole-containing tetrazolium salts as radiochromic indicators in gel dosimetry. Journal of Physics: Conference Series, 2019, 1305, 012033.	0.3	2
95	Computational studies of 4-nitrophenyl- and 2-benzothiazolyl-substituted formazans and tetrazolium salts. Chemical Physics, 2020, 535, 110790.	0.9	2
96	Bioactive fluorescent hybrid microparticles as a stand-alone osteogenic differentiation inducer. Materials Today Bio, 2022, 13, 100187.	2.6	1
97	New directions for tetrazolium - gellan gum gel dosimeters. Journal of Physics: Conference Series, 2022, 2167, 012031.	0.3	1
98	Electrospun Biodegradable Î±-Amino Acid-Substituted Poly(organophosphazene) Fiber Mats for Stem Cell Differentiation towards Vascular Smooth Muscle Cells. Polymers, 2022, 14, 1555.	2.0	1
99	Swelling kinetics of physically crosslinked Polyurethane-block-polyacrylamide hydrogels. , 2009, , .		0
100	<I>A Special Issue on</I> Biomaterials, Tissue Engineering, and Regenerative Medicine Research in Canada. Journal of Biomaterials and Tissue Engineering, 2014, 4, 843-844.	0.0	0