Ioannis V Yannas

List of Publications by Year
in descending order

104 papers	13,707 citations	25034 57 h-index	51608 86 g-index
105 all docs	105 docs citations	105 times ranked	9846 citing authors

#	Article	IF	Citations
1	The effect of pore size on cell adhesion in collagen-GAG scaffolds. Biomaterials, 2005, 26, 433-441.	11.4	1,144
2	Successful Use of a Physiologically Acceptable Artificial Skin in the Treatment of Extensive Burn Injury. Annals of Surgery, 1981, 194, 413-428.	4.2	1,088
3	Design of an artificial skin. I. Basic design principles. Journal of Biomedical Materials Research Part B, 1980, 14, 65-81.	3.1	917
4	Synthesis and characterization of a model extracellular matrix that induces partial regeneration of adult mammalian skin.. Proceedings of the National Academy of Sciences of the United States of America, 1989, 86, 933-937.	7.1	847
5	Influence of freezing rate on pore structure in freeze-dried collagen-GAG scaffolds. Biomaterials, 2004, 25, 1077-1086.	11.4	647
6	Wound tissue can utilize a polymeric template to synthesize a functional extension of skin. Science, 1982, 215, 174-176.	12.6	597
7	Design of an artificial skin. II. Control of chemical composition. Journal of Biomedical Materials Research Part B, 1980, 14, 107-132.	3.1	528
8	Cellular materials as porous scaffolds for tissue engineering. Progress in Materials Science, 2001, 46, 273-282.	32.8	505
9	Matrix collagen type and pore size influence behaviour of seeded canine chondrocytes. Biomaterials, 1997, 18, 769-776.	11.4	376
10	Design of an artificial skin. Part III. Control of pore structure. Journal of Biomedical Materials Research Part B, 1980, 14, 511-528.	3.1	325
11	Tensional homeostasis in dermal fibroblasts: Mechanical responses to mechanical loading in three-dimensional substrates. Journal of Cellular Physiology, 1998, 175, 323-332.	4.1	322
12	Microarchitecture of Three-Dimensional Scaffolds Influences Cell Migration Behavior via Junction Interactions. Biophysical Journal, 2008, 95, 4013-4024.	0.5	313
13	The effect of pore size on permeability and cell attachment in collagen scaffolds for tissue engineering. Technology and Health Care, 2006, 15, 3-17.	1.2	286
14	Tissue Engineering and Developmental Biology: Going Biomimetic. Tissue Engineering, 2006, 12, 3265-3283.	4.6	273
15	Canine chondrocytes seeded in type I and type II collagen implants investigated In Vitro. Journal of Biomedical Materials Research Part B, 1997, 38, 95-104.	3.1	239
16	Chondrocyte-seeded collagen matrices implanted in a chondral defect in a canine model. Biomaterials, 1998, 19, 2313-2328.	11.4	237
17	Cross-linking of Gelatine by Dehydration. Nature, 1967, 215, 509-510.	27.8	212
18	Fibroblast contraction of a collagenâ€“GAG matrix. Biomaterials, 2001, 22, 2883-2891.	11.4	146

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19	Tendon cell contraction of collagenâ€“GAG matrices in vitro: effect of cross-linking. Biomaterials, 2000, 21, 1607-1619.	11.4	134
20	Dependence of stress-strain nonlinearity of connective tissues on the geometry of collagen fibres. Journal of Biomechanics, 1976, 9, 427-433.	2.1	133
21	Meniscus cells seeded in type I and type II collagenâ€“GAG matrices in vitro. Biomaterials, 1999, 20, 701-709.	11.4	124
22	Recent advances in tissue synthesis in vivo by use of collagen-glycosaminoglycan copolymers. Biomaterials, 1996, 17, 291-299.	11.4	123
23	Near-terminus axonal structure and function following rat sciatic nerve regeneration through a collagen-GAG matrix in a ten-millimeter gap. , 2000, 60, 666-677.		122
24	Design of a multiphase osteochondral scaffold III: Fabrication of layered scaffolds with continuous interfaces. Journal of Biomedical Materials Research - Part A, 2010, 92A, 1078-1093.	4.0	121
25	Biologically active collagen-based scaffolds: advances in processing and characterization. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 2123-2139.	3.4	119
26	Common features of optimal collagen scaffolds that disrupt wound contraction and enhance regeneration both in peripheral nerves and in skin. Biomaterials, 2012, 33, 4783-4791.	11.4	119
27	Optimal Degradation Rate for Collagen Chambers Used for Regeneration of Peripheral Nerves over Long Gaps. Cells Tissues Organs, 2004, 176, 153-165.	2.3	115
28	Fabricating tubular scaffolds with a radial pore size gradient by a spinning technique. Biomaterials, 2006, 27, 866-874.	11.4	115
29	Collagenâ€based matrices with axially oriented pores. Journal of Biomedical Materials Research - Part A, 2008, 85A, 757-767.	4.0	114
30	Early peripheral nerve healing in collagen and silicone tube implants: Myofibroblasts and the cellular response. Biomaterials, 1998, 19, 1393-1403.	11.4	111
31	Fibroblast Contractile Force Is Independent of the Stiffness Which Resists the Contraction. Experimental Cell Research, 2002, 272, 153-162.	2.6	111
32	Tissue regeneration by use of collagen-glycosaminoglycan copolymers. Clinical Materials, 1992, 9, 179-187.	0.5	110
33	Emerging rules for inducing organ regeneration. Biomaterials, 2013, 34, 321-330.	11.4	106
34	Mechanochemical studies of enzymatic degradation of insoluble collagen fibers. Journal of Biomedical Materials Research Part B, 1977, 11, 137-154.	3.1	103
35	Organized Skin Structure Is Regenerated In Vivo from Collagen-GAG Matrices Seeded with Autologous Keratinocytes. Journal of Investigative Dermatology, 1998, 110, 908-916.	0.7	100
36	The effect of pore size on permeability and cell attachment in collagen scaffolds for tissue engineering. Technology and Health Care, 2007, 15, 3-17.	1.2	100

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37	Degradation of a collagenâ€“chondroitin-6-sulfate matrix by collagenase and by chondroitinase. Biomaterials, 2004, 25, 473-482.	11.4	99
38	Selection of biomaterials for peripheral nerve regeneration using data from the nerve chamber model. Biomaterials, 2004, 25, 1593-1600.	11.4	96
39	Design of a multiphase osteochondral scaffold. II. Fabrication of a mineralized collagenâ€“glycosaminoglycan scaffold. Journal of Biomedical Materials Research - Part A, 2010, 92A, 1066-1077.	4.0	92
40	Biologically Active Analogues of the Extracellular Matrix: Artificial Skin and Nerves. Angewandte Chemie International Edition in English, 1990, 29, 20-35.	4.4	91
41	Template for Skin Regeneration. Plastic and Reconstructive Surgery, 2011, 127, 60S-70S.	1.4	84
42	Formation of Lung Alveolar-Like Structures in Collagenâ€“Glycosaminoglycan Scaffolds in Vitro. Tissue Engineering, 2005, 11, 1436-1448.	4.6	82
43	Evidence for sequential utilization of fibronectin, vitronectin, and collagen during fibroblast-mediated collagen contraction. Wound Repair and Regeneration, 2002, 10, 397-408.	3.0	76
44	Correlation ofin vivo collagen degradation rate within vitro measurements. Journal of Biomedical Materials Research Part B, 1975, 9, 623-628.	3.1	75
45	Micromechanics of Fibroblast Contraction of a Collagenâ€“GAG Matrix. Experimental Cell Research, 2001, 269, 140-153.	2.6	75
46	Collagen banded fibril structure and the collagen-platelet reaction. Thrombosis Research, 1989, 55, 135-148.	1.7	73
47	Vascularized Collagen-Glycosaminoglycan Matrix Provides a Dermal Substrate and Improves Take of Cultured Epithelial Autografts. Plastic and Reconstructive Surgery, 1998, 102, 423-429.	1.4	73
48	Connective tissue response to tubular implants for peripheral nerve regeneration: The role of myofibroblasts. , 2000, 417, 415-430.		72
49	Studies on the biological activity of the dermal regeneration template. Wound Repair and Regeneration, 1998, 6, 518-523.	3.0	71
50	Similarities and differences between induced organ regeneration in adults and early foetal regeneration. Journal of the Royal Society Interface, 2005, 2, 403-417.	3.4	70
51	Regeneration of injured skin and peripheral nerves requires control of wound contraction, not scar formation. Wound Repair and Regeneration, 2017, 25, 177-191.	3.0	70
52	Scattering of Light from Histologic Sections: A New Method for the Analysis of Connective Tissue. Journal of Investigative Dermatology, 1993, 100, 710-716.	0.7	68
53	Effect of Passage Number and Collagen Type on the Proliferative, Biosynthetic, and Contractile Activity of Adult Canine Articular Chondrocytes in Type I and II Collagen-Glycosaminoglycan Matrices in Vitro. Tissue Engineering, 2004, 10, 119-127.	4.6	68
54	The Far-Infrared Spectrum of Collagen. Macromolecules, 1974, 7, 954-956.	4.8	67

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55	Delivery of Plasmid DNA to Articular Chondrocytes via Novel Collagenâ€“Glycosaminoglycan Matrices. Human Gene Therapy, 2002, 13, 791-802.	2.7	66
56	Tissue and Organ Regeneration in Adults. , 2015, , .		65
57	Comparison of cultured and uncultured keratinocytes seeded into a collagenâ€“GAG matrix for skin replacements. Journal of Plastic, Reconstructive and Aesthetic Surgery, 1999, 52, 127-132.	1.1	64
58	Growth Factor Regulation of Smooth Muscle Actin Expression and Contraction of Human Articular Chondrocytes and Meniscal Cells in a Collagenâ€“GAG Matrix. Experimental Cell Research, 2001, 270, 21-31.	2.6	64
59	Myofibroblasts in the healing lapine medial collateral ligament: Possible mechanisms of contraction. Journal of Orthopaedic Research, 1996, 14, 228-237.	2.3	62
60	Neural stem cell delivery via porous collagen scaffolds promotes neuronal differentiation and locomotion recovery in spinal cord injury. Npj Regenerative Medicine, 2020, 5, 12.	5.2	60
61	Effect of Keratinocyte Seeding of Collagen-Glycosaminoglycan Membranes on the Regeneration of Skin in a Porcine Model. Plastic and Reconstructive Surgery, 1998, 101, 1572-1579.	1.4	56
62	Standardized criterion to analyze and directly compare various materials and models for peripheral nerve regeneration. Journal of Biomaterials Science, Polymer Edition, 2007, 18, 943-966.	3.5	55
63	Contractile forces generated by articular chondrocytes in collagen-glycosaminoglycan matrices. Biomaterials, 2004, 25, 1299-1308.	11.4	50
64	Design of a multiphase osteochondral scaffold. I. Control of chemical composition. Journal of Biomedical Materials Research - Part A, 2010, 92A, 1057-1065.	4.0	49
65	Wound contraction and scar synthesis during development of the amphibian Rana catesbeiana. Wound Repair and Regeneration, 1996, 4, 29-39.	3.0	48
66	3D-resolved fluorescence and phosphorescence lifetime imaging using temporal focusing wide-field two-photon excitation. Optics Express, 2012, 20, 26219.	3.4	44
67	Applications of ECM analogs in surgery. Journal of Cellular Biochemistry, 1994, 56, 188-191.	2.6	40
68	Early Fetal Healing as a Model for Adult Organ Regeneration. Tissue Engineering, 2007, 13, 1789-1798.	4.6	39
69	Use of the parabiotic model in studies of cutaneous wound healing to define the participation of circulating cells. Wound Repair and Regeneration, 2010, 18, 426-432.	3.0	39
70	Vitrification Temperature of Water. Science, 1968, 160, 298-299.	12.6	38
71	Contraction of collagenâ€“glycosaminoglycan matrices by peripheral nerve cells in vitro. Biomaterials, 2001, 22, 1085-1093.	11.4	34
72	Peripheral Nerve Regeneration. Advances in Biochemical Engineering/Biotechnology, 2005, 94, 67-89.	1.1	31

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73	Nonlinear viscoelasticity of solid polymers (in uniaxial tensile loading). Journal of Polymer Science Macromolecular Reviews, 1974, 9, 163-190.	1.9	28
74	Synthesis of Tissues and Organs. ChemBioChem, 2004, 5, 26-39.	2.6	28
75	Canine chondrocytes seeded in type I and type II collagen implants investigated in vitro. Journal of Biomedical Materials Research Part B, 1997, 38, 95-104.	3.1	27
76	Characteristics of Articular Chondrocytes Seeded in Collagen Matrices in Vitro. Tissue Engineering, 1998, 4, 175-183.	4.6	25
77	Glycosaminoglycan inhibition of collagen induced platelet aggregation. Thrombosis Research, 1978, 13, 267-277.	1.7	24
78	In Situ Quantification of Surface Chemistry in Porous Collagen Biomaterials. Annals of Biomedical Engineering, 2016, 44, 803-815.	2.5	23
79	Specific effects of glycosaminoglycans in an analog of extracellular matrix that delays wound contraction and induces regeneration. Wound Repair and Regeneration, 1994, 2, 270-276.	3.0	21
80	Models of Organ Regeneration Processes Induced by Templates. Annals of the New York Academy of Sciences, 1997, 831, 280-293.	3.8	19
81	Mammals fail to regenerate organs when wound contraction drives scar formation. Npj Regenerative Medicine, 2021, 6, 39.	5.2	18
82	Electrophysiological Study of Recovery of Peripheral Nerves Regenerated by a Collagen-Glycosaminoglycan Copolymer Matrix. , 1990, , 107-120.		18
83	Facts and Theories of Induced Organ Regeneration. Advances in Biochemical Engineering/Biotechnology, 2005, 93, 1-38.	1.1	17
84	Design of an artificial skin. IV. Use of island graft to isolate organ regeneration from scar synthesis and other processes leading to skin wound closure. , 1998, 39, 531-535.		13
85	An optical method to quantify the density of ligands for cell adhesion receptors in three-dimensional matrices. Journal of the Royal Society Interface, 2010, 7, S649-61.	3.4	11
86	Spectral-resolved multifocal multiphoton microscopy with multianode photomultiplier tubes. Optics Express, 2014, 22, 21368.	3.4	9
87	Regeneration mechanism for skin and peripheral nerves clarified at the organ and molecular scales. Current Opinion in Biomedical Engineering, 2018, 6, 1-7.	3.4	9
88	In Vivo Synthesis of Tissues and Organs. , 2014, , 325-355.		7
89	Hesitant steps from the artificial skin to organ regeneration. International Journal of Energy Production and Management, 2018, 5, 189-195.	3.7	6
90	In Vivo SYNTHESIS OF TISSUES AND ORGANS. , 2000, , 167-178.		5

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91	Biologisch aktive Analoga der extrazellulÃren Matrix â€“ kÃ¼nstliche Haut und Nerven. Angewandte Chemie, 1990, 102, 21-36.	2.0	3
92	In Vivo Synthesis of Tissues and Organs. , 2007, , 219-238.		3
93	Preliminary Evaluation of a Technique for Inhibiting Intimal Hyperplasia: Implantation of a Resorbable Luminal Collagen Membrane. Annals of Vascular Surgery, 1995, 9, 135-139.	0.9	1
94	Design of an artificial skin. IV. Use of island graft to isolate organ regeneration from scar synthesis and other processes leading to skin wound closure. Journal of Biomedical Materials Research Part B, 1998, 39, 531-535.	3.1	1
95	Classes of Materials Used in Medicine. , 1996, , 67-I.		1
96	Thrombosis research , (No. 2, August): pp. 267â€“277, 1978. Thrombosis Research, 1978, 13, 583.	1.7	0
97	Synthesis of Tissues and Organs. ChemInform, 2004, 35, no.	0.0	0
98	Induced Regeneration of Skin and Peripheral Nerves in the Adult. , 2012, , 163-183.		0
99	Image informatics for studying signal transduction in cells interacting with 3D matrices. Proceedings of SPIE, 2014, , .	0.8	0
100	Quantifying the surface chemistry of 3D matrices in situ. , 2014, , .		0
101	Dermal Regeneration and Induction of Wound Closure in Diabetic Wounds. Contemporary Diabetes, 2018, , 155-172.	0.0	0
102	Early Fetal Healing As a Model for Adult Organ Regeneration. Tissue Engineering, 2007, .	4.6	0
103	Tissue Regeneration by Use of Analogs of Extracellular Matrix. , 1996, , 415-429.		0
104	Induced Regeneration of Skin and Peripheral Nerves. , 2006, , 83-103.		0