Ze Zhang

List of Publications by Citations

100 papers	2,754 citations	29 h-index	49 g-index
106 ext. papers	3,055 ext. citations	5.7 avg, IF	4.9 L-index

#	Paper	IF	Citations
100	A novel electrically conductive and biodegradable composite made of polypyrrole nanoparticles and polylactide. *Biomaterials*, **2004**, 25, 2477-88	15.6	295
99	Electrically conductive biodegradable polymer composite for nerve regeneration: electricity-stimulated neurite outgrowth and axon regeneration. *Artificial Organs*, **2007**, 31, 13-22	2.6	180
98	The regulation of cell functions electrically using biodegradable polypyrrole-polylactide conductors. *Biomaterials*, **2008**, 29, 3792-8	15.6	122
97	Tissue reaction to polypyrrole-coated polyester fabrics: an in vivo study in rats. *Tissue Engineering*, **2002**, 8, 635-47		117
96	Pore size, tissue ingrowth, and endothelialization of small-diameter microporous polyurethane vascular prostheses. *Biomaterials*, **2004**, 25, 177-87	15.6	112
95	In vitro biocompatibility study of electrically conductive polypyrrole-coated polyester fabrics. *Journal of Biomedical Materials Research Part B*, **2001**, 57, 63-71		107
94	Electrical stimulation promotes wound healing by enhancing dermal fibroblast activity and promoting myofibroblast transdifferentiation. *PLoS ONE*, **2013**, 8, e71660	3.7	85
93	Accelerated osteoblast mineralization on a conductive substrate by multiple electrical stimulation. *Journal of Bone and Mineral Metabolism*, **2011**, 29, 535-44	2.9	78
92	Electrical stimulation enhances viability of human cutaneous fibroblasts on conductive biodegradable substrates. *Journal of Biomedical Materials Research - Part A*, **2008**, 84, 1026-37	5.4	74
91	Electrical stimulation modulates osteoblast proliferation and bone protein production through heparin-bioactivated conductive scaffolds. *Bioelectromagnetics*, **2013**, 34, 189-99	1.6	69
90	In vitro cellular response to polypyrrole-coated woven polyester fabrics: potential benefits of electrical conductivity. *Journal of Biomedical Materials Research Part B*, **1998**, 41, 519-26		61
89	A comparative study of bovine and porcine pericardium to highlight their potential advantages to manufacture percutaneous cardiovascular implants. *Journal of Biomaterials Applications*, **2013**, 28, 552-65	2.9	60
88	A biodegradable electrical bioconductor made of polypyrrole nanoparticle/poly(D,L-lactide) composite: A preliminary in vitro biostability study. *Journal of Biomedical Materials Research Part B*, **2003**, 66, 738-46		59
87	Heparin dopant increases the electrical stability, cell adhesion, and growth of conducting polypyrrole/poly(L,L-lactide) composites. *Journal of Biomedical Materials Research - Part A*, **2008**, 87, 332-44	5.4	56
86	In vivo evaluation of a novel electrically conductive polypyrrole/poly(D,L-lactide) composite and polypyrrole-coated poly(D,L-lactide-co-glycolide) membranes. *Journal of Biomedical Materials Research Part B*, **2004**, 70, 28-38		56
85	A novel collagen/hydroxyapatite/poly(lactide-co-ε-caprolactone) biodegradable and bioactive 3D porous scaffold for bone regeneration. *Journal of Biomedical Materials Research - Part A*, **2011**, 96, 693-704	5.4	52
84	Vascugraft polyurethane arterial prosthesis as femoro-popliteal and femoro-peroneal bypasses in humans: pathological, structural and chemical analyses of four excised grafts. *Biomaterials*, **1997**, 18, 113-24	15.6	50

83	Selection of a polyurethane membrane for the manufacture of ventricles for a totally implantable artificial heart: blood compatibility and biocompatibility studies. *Artificial Organs*, **2000**, 24, 879-88	2.6	50
82	Mechanism and rate of degradation of polyhydroxyoctanoate films in aqueous media: A long-term in vitro study. *Journal of Biomedical Materials Research Part B*, **2000**, 49, 216-24		38
81	Totally implantable artificial hearts and left ventricular assist devices: selecting impermeable polycarbonate urethane to manufacture ventricles. *Journal of Biomedical Materials Research Part B*, **1999**, 48, 13-23		36
80	Pulsed electrical stimulation benefits wound healing by activating skin fibroblasts through the TGF1/ERK/NF-B axis. *Biochimica Et Biophysica Acta - General Subjects*, **2016**, 1860, 1551-9	4	36
79	Polymerization and surface analysis of electrically-conductive polypyrrole on surface-activated polyester fabrics for biomedical applications. *Journal of Biomaterials Science, Polymer Edition*, **2000**, 11, 87-99	3.5	34
78	Blood compatible phospholipid-containing polyurethanes: synthesis characterization and blood compatibility evaluation. *Journal of Biomaterials Applications*, **1997**, 12, 167-91	2.9	33
77	Expanded polytetrafluoroethylene arterial prostheses in humans: chemical analysis of 79 explanted specimens. *Biomaterials*, **1993**, 14, 694-704	15.6	33
76	In vivo biocompatibility and degradation studies of polyhydroxyoctanoate in the rat: a new sealant for the polyester arterial prosthesis. *Tissue Engineering*, **1999**, 5, 369-86		31
75	An electrically conductive 3D scaffold based on a nonwoven web of poly(L-lactic acid) and conductive poly(3,4-ethylenedioxythiophene). *Journal of Biomedical Materials Research - Part A*, **2015**, 103, 2635-44	5.4	30
74	Bioactivating electrically conducting polypyrrole with fibronectin and bovine serum albumin. *Journal of Biomedical Materials Research - Part A*, **2010**, 92, 221-31	5.4	30
73	Evaluation of biodegradable synthetic scaffold coated on arterial prostheses implanted in rat subcutaneous tissue. *Biomaterials*, **2005**, 26, 7387-401	15.6	30
72	A new generation of polyurethane vascular prostheses: rara avis or ignis fatuus?. *Journal of Biomedical Materials Research Part B*, **1999**, 48, 546-58		30
71	The benefits of fluoropassivation of polyester arterial prostheses as observed in a canine model. *ASAIO Journal*, **1994**, 40, M870-9	3.6	28
70	Pulsed electrical stimulation modulates fibroblastsTbehaviour through the Smad signalling pathway. *Journal of Tissue Engineering and Regenerative Medicine*, **2017**, 11, 1110-1121	4.4	27
69	Five types of polyurethane vascular grafts in dogs: the importance of structural design and material selection. *Journal of Biomaterials Science, Polymer Edition*, **2010**, 21, 1239-64	3.5	27
68	Electrical Stimulation Modulates the Expression of Multiple Wound Healing Genes in Primary Human Dermal Fibroblasts. *Tissue Engineering - Part A*, **2015**, 21, 1982-90	3.9	26
67	Assessing the resistance to calcification of polyurethane membranes used in the manufacture of ventricles for a totally implantable artificial heart. *Journal of Biomedical Materials Research Part B*, **1999**, 48, 648-59		24
66	Novel genipin-collagen immobilization of polylactic acid (PLA) fibers for use as tissue engineering scaffolds. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2015**, 103, 1188-97	3.5	23

65	Hydrolytic and enzymatic incubation of polyhydroxyoctanoate (PHO): a short-term in vitro study of a degradable bacterial polyester. *Journal of Biomaterials Science, Polymer Edition*, **1999**, 10, 483-99	3.5	22
64	Tissue reactions to polypyrrole-coated polyesters: A magnetic resonance relaxometry study. *Artificial Organs*, **1999**, 23, 910-9	2.6	22
63	PPy-coated PET fabrics and electric pulse-stimulated fibroblasts. *Journal of Materials Chemistry B*, **2013**, 1, 3789-3796	7.3	21
62	Biostability of electrically conductive polyester fabrics: an in vitro study. *Journal of Biomedical Materials Research Part B*, **2002**, 62, 507-13		21
61	Biostability, inflammatory response, and healing characteristics of a fluoropassivated polyester-knit mesh in the repair of experimental abdominal hernias. *Artificial Organs*, **2000**, 24, 533-43	2.6	21
60	Removing fresh tissue from explanted polyurethane prostheses: which approach facilitates physico-chemical analysis?. *Biomaterials*, **1995**, 16, 369-80	15.6	21
59	Correlation between structural changes and acute thrombogenicity in transcatheter pericardium valves after crimping and balloon deployment. *Morphologie*, **2017**, 101, 19-32	0.9	20
58	In vitro exposure of a novel polyesterurethane graft to enzymes: a study of the biostability of the Vascugraft arterial prosthesis. *Biomaterials*, **1994**, 15, 1129-44	15.6	19
57	In vivo characterization of a fluoropassivated gelatin-impregnated polyester mesh for hernia repair. *Journal of Biomedical Materials Research Part B*, **1996**, 32, 293-305		18
56	Conductive Polymer Waving in Liquid Nitrogen. *ACS Nano*, **2017**, 11, 10409-10416	16.7	16
55	In vivo performance of the polyesterurethane Vascugraft prosthesis implanted as a thoraco-abdominal bypass in dogs: an exploratory study. *Biomaterials*, **1994**, 15, 1099-112	15.6	16
54	Synthesis of polycarbonate urethanes with functional poly(ethylene glycol) side chains intended for bioconjugates. *Polymer*, **2013**, 54, 5363-5373	3.9	15
53	Fluoropassivation and gelatin sealing of polyester arterial prostheses to skip preclotting and constrain the chronic inflammatory response. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2010**, 93, 497-509	3.5	15
52	Vascugraft microporous polyesterurethane arterial prosthesis as a thoraco-abdominal bypass in dogs. *Biomaterials*, **1996**, 17, 1289-1300	15.6	15
51	Stent fabric fatigue of grafts supported by Z-stents versus ringed stents: an in vitro buckling test. *Journal of Biomaterials Applications*, **2014**, 28, 965-77	2.9	14
50	Biocompatibility studies of the Anaconda stent-graft and observations of nitinol corrosion resistance. *Journal of Endovascular Therapy*, **2004**, 11, 385-403	2.5	14
49	Transmural communication at a subcellular level may play a critical role in the fallout based-endothelialization of dacron vascular prostheses in canine. *Journal of Biomedical Materials Research - Part A*, **2007**, 81, 877-87	5.4	13
48	Quantitative analysis of the surface morphology and textile structure of the polyurethane Vascugraft arterial prosthesis using image and statistical analyses. *Biomaterials*, **1994**, 15, 621-7	15.6	13

47	Antimicrobial activity and biocompatibility of slow-release hyaluronic acid-antibiotic conjugated particles. *International Journal of Pharmaceutics*, **2020**, 576, 119024	6.5	12
46	CoreValve prosthesis causes anterior mitral leaflet perforation resulting in severe mitral regurgitation. *Canadian Journal of Cardiology*, **2014**, 30, 1108.e11-3	3.8	12
45	Surfactant-templated crystalline polygon nanoparticles of heterocyclic polypyrrole prepared with Fenton's reagent. *Synthetic Metals*, **2010**, 160, 116-122	3.6	12
44	Effect of sterilization on the physical and structural characteristics of polyhydroxyoctanoate (PHO). *Journal of Biomaterials Science, Polymer Edition*, **1999**, 10, 469-82	3.5	12
43	Electrically Activated Primary Human Fibroblasts Improve In Vitro and In Vivo Skin Regeneration. *Journal of Cellular Physiology*, **2016**, 231, 1814-21	7	12
42	Flexible and free-standing pristine polypyrrole membranes with a nanotube structure for repeatable Cr(VI) ion removal. *Separation and Purification Technology*, **2021**, 258, 117981	8.3	12
41	Polypyrrole as Electrically Conductive Biomaterials: Synthesis, Biofunctionalization, Potential Applications and Challenges. *Advances in Experimental Medicine and Biology*, **2018**, 1078, 347-370	3.6	12
40	Ultra-low temperature flexible supercapacitor based on hierarchically structured pristine polypyrrole membranes. *Chemical Engineering Journal*, **2021**, 420, 129712	14.7	12
39	In Vitro Laser Fenestration of Aortic Stent-Grafts: A Qualitative Analysis Under Scanning Electron Microscope. *Artificial Organs*, **2016**, 40, E241-E252	2.6	11
38	Laser Fenestration of Aortic Stent-Grafts Followed by Noncompliant vs Cutting Balloon Dilation: A Scanning Electron Microscopy Study. *Journal of Endovascular Therapy*, **2018**, 25, 397-407	2.5	10
37	Electrical field directed electropolymerization of free-standing film of polypyrrole and poly(1-(2-carboxyethyl)pyrrole at the air/liquid interface. *Synthetic Metals*, **2011**, 161, 724-730	3.6	9
36	Electrical stimulation promotes the proliferation of human keratinocytes, increases the production of keratin 5 and 14, and increases the phosphorylation of ERK1/2 and p38 MAP kinases. *Journal of Tissue Engineering and Regenerative Medicine*, **2020**, 14, 909-919	4.4	8
35	Comparison of tensile properties of xenopericardium from three animal species and finite element analysis for bioprosthetic heart valve tissue. *Artificial Organs*, **2020**, 44, 278-287	2.6	8
34	The marvel of percutaneous cardiovascular devices in the elderly. *Annals of the New York Academy of Sciences*, **2010**, 1197, 188-99	6.5	7
33	Ex Vivo Assay of Electrical Stimulation to Rat Sciatic Nerves: Cell Behaviors and Growth Factor Expression. *Journal of Cellular Physiology*, **2016**, 231, 1301-12	7	6
32	Donkey pericardium compares favorably with commercial xenopericardia used in the manufacture of transcatheter heart valves. *Artificial Organs*, **2019**, 43, 976-987	2.6	5
31	One-step reactivity-driven synthesis of core-shell structured electrically conducting particles for biomedical applications. *Journal of Materials Chemistry B*, **2016**, 4, 5429-5436	7.3	5
30	Are intraaortic balloons suitable for reuse? A survey study of 112 used intraaortic balloons. *Artificial Organs*, **1997**, 21, 121-30	2.6	5

29	Transrenal deployment of a modular stent graft to repair AAAs with short necks: experiments in dogs. *Artificial Cells, Blood Substitutes, and Biotechnology*, **2008**, 36, 310-39		5
28	In vitro homogeneous and heterogeneous degradation of poly(epsilon-caprolactone/polyethylene glycol/L-lactide): The absence of autocatalysis and the role of enzymes. *Journal of Biomedical Materials Research - Part A*, **2006**, 79, 6-15	5.4	5
27	Chemical and morphological analysis of explanted polyurethane vascular prostheses: the challenge of removing fixed adhering tissue. *Biomaterials*, **1996**, 17, 1843-8	15.6	5
26	Cuspal dehiscence at a post and along the stent cloth in a bovine pericardium heart valve implanted for seven years. *Journal of Long-Term Effects of Medical Implants*, **2012**, 22, 95-111	0.2	5
25	A biocompatible polypyrrole membrane for biomedical applications.. *RSC Advances*, **2021**, 11, 16996-17006	3.9	5
24	Prenatal developmental safety of functional polyurethanes for cardiovascular implants. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2016**, 104, 606-14	3.5	4
23	Soybean-derived phospholipids complexed poly (lactic-co-glycolic acid) nanofibrous scaffolds for tissue engineering applications. *Materials and Design*, **2021**, 205, 109737	8.1	4
22	Surface modification by assembling: a modular approach based on the match in nanostructures. *Journal of Materials Chemistry B*, **2019**, 7, 755-762	7.3	3
21	Conductive poly(pyrrole-co-(1-(2-carboxyethyl)pyrrole)) core-shell particles: Synthesis, characterization, and optimization. *Polymer*, **2016**, 105, 113-123	3.9	3
20	Electroactivity and stability of polylactide/polypyrrole composites. *Journal of Biomaterials Science, Polymer Edition*, **2011**, 22, 1931-46	3.5	3
19	MRI virtual biopsies: analysis of an explanted endovascular device and perspectives for the future. *Artificial Cells, Blood Substitutes, and Biotechnology*, **2006**, 34, 241-61		3
18	Effect of Electrical Stimulation on Diabetic Human Skin Fibroblast Growth and the Secretion of Cytokines and Growth Factors Involved in Wound Healing. *Biology*, **2021**, 10,	4.9	3
17	Newly developed hybrid suture without lubricant: noninvasive in vivo assessment of biocompatibility with multiparametric MR imaging. *Journal of Investigative Surgery*, **2007**, 20, 121-33	1.2	2
16	Polymethylmethacrylate (PMMA) as an embedding medium preserving tissues and foreign materials encroaching in endovascular devices. *Artificial Cells, Blood Substitutes, and Biotechnology*, **2006**, 34, 349-66		2
15	The Gelweave Valsalva Graft to Better Reconstruct the Anatomy of the Aortic Root. *Journal of Long-Term Effects of Medical Implants*, **2016**, 26, 97-121	0.2	2
14	Toward endothelialization via vascular endothelial growth factor immobilization on cell-repelling functional polyurethanes. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2019**, 107, 965-977	3.5	2
13	Facile fabrication of phospholipid-functionalized nanofiber-based barriers with enhanced anti-adhesion efficiency. *Colloids and Surfaces B: Biointerfaces*, **2021**, 203, 111728	6	2
12	Commentary: nitinol stent designs need to adhere to the 3Bs: biofunctionality, biodurability, and biocompatibility. *Journal of Endovascular Therapy*, **2014**, 21, 240-2	2.5	1

11	Can magnetic resonance imaging be the key technique to visualize and investigate endovascular biomaterials?. *Artificial Cells, Blood Substitutes, and Biotechnology*, **2004**, 32, 105-27		1
10	Innovative textile structures designed to prevent type III endoleaks in endovascular stent-grafts. *Artificial Organs*, **2021**, 45, 278-288	2.6	1
9	Commentary: Honing the Technique of In Situ Stent-Graft Fenestration. *Journal of Endovascular Therapy*, **2021**, 28, 53-55	2.5	1
8	Optimal In Situ Fenestration Technique With Laser Perforation and Balloon Dilation for Aortic Stent-Grafts. *Journal of Endovascular Therapy*, **2021**, 28, 300-308	2.5	1
7	Totally implantable artificial hearts and left ventricular assist devices: Selecting impermeable polycarbonate urethane to manufacture ventricles **1999**, 48, 13		1
6	A new generation of polyurethane vascular prostheses: Rara Avis or Ignis Fatuus? **1999**, 48, 546		1
5	Alginate-assistant nanofiber integrated with polypropylene hernia mesh for efficient anti-adhesion effects and enhanced tissue compatibility. *Composites Part B: Engineering*, **2022**, 235, 109761	10	0
4	Are Intraaortic Balloons Suitable for Reuse? A Survey Study of 112 Used Intraaortic Balloons?. *Artificial Organs*, **1998**, 22, 96-96	2.6	
3	The ROVT Elan Valved Biplex Conduits for the Reconstruction of the Right Ventricular Outflow Tract. *Journal of Long-Term Effects of Medical Implants*, **2016**, 26, 13-42	0.2	
2	The Triplex BioValsalva Prostheses To Reconstruct the Aortic Valve and the Aortic Root. *Journal of Long-Term Effects of Medical Implants*, **2016**, 26, 49-78	0.2	
1	A comparative study of different tissue materials for bioprosthetic aortic valves using experimental assays and finite element analysis.. *Computer Methods and Programs in Biomedicine*, **2022**, 220, 106813	6.9	