Steven G Wise

List of Publications by Year
in descending order

86 papers	3,874 citations	109321 35 h-index	128289 60 g-index
89 all docs	89 docs citations	89 times ranked	4521 citing authors

#	Article	IF	Citations
1	Tailoring the porosity and pore size of electrospun synthetic human elastin scaffolds for dermal tissue engineering. Biomaterials, 2011, 32, 6729-6736.	11.4	272
2	A multilayered synthetic human elastin/polycaprolactone hybrid vascular graft with tailored mechanical properties. Acta Biomaterialia, 2011, 7, 295-303.	8.3	253
3	Elastin-based materials. Chemical Society Reviews, 2010, 39, 3371.	38.1	214
4	Tropoelastin. International Journal of Biochemistry and Cell Biology, 2009, 41, 494-497.	2.8	200
5	A review of biomimetic surface functionalization for bone-integrating orthopedic implants: Mechanisms, current approaches, and future directions. Progress in Materials Science, 2019, 106, 100588.	32.8	147
6	Electrospun synthetic human elastin:collagen composite scaffolds for dermal tissue engineering. Acta Biomaterialia, 2012, 8, 3714-3722.	8.3	137
7	Covalent immobilisation of tropoelastin on a plasma deposited interface for enhancement of endothelialisation on metal surfaces. Biomaterials, 2009, 30, 1675-1681.	11.4	118
8	Elastin signaling in wound repair. Birth Defects Research Part C: Embryo Today Reviews, 2012, 96, 248-257.	3.6	115
9	Tropoelastin: A versatile, bioactive assembly module. Acta Biomaterialia, 2014, 10, 1532-1541.	8.3	110
10	The immobilization of recombinant human tropoelastin on metals using a plasma-activated coating to improve the biocompatibility of coronary stents. Biomaterials, 2010, 31, 8332-8340.	11.4	96
11	Elastin as a Nonthrombogenic Biomaterial. Tissue Engineering - Part B: Reviews, 2011, 17, 93-99.	4.8	96
12	Rapid Photocrosslinking of Silk Hydrogels with High Cell Density and Enhanced Shape Fidelity. Advanced Healthcare Materials, 2020, 9, e1901667.	7.6	96
13	Severe Burn Injuries and the Role of Elastin in the Design of Dermal Substitutes. Tissue Engineering - Part B: Reviews, 2011, 17, 81-91.	4.8	88
14	Primary human dermal fibroblast interactions with open weave three-dimensional scaffolds prepared from synthetic human elastin. Biomaterials, 2009, 30, 6469-6477.	11.4	87
15	Engineered Tropoelastin and Elastin-Based Biomaterials. Advances in Protein Chemistry and Structural Biology, 2009, 78, 1-24.	2.3	86
16	Specificity in the coacervation of tropoelastin: solvent exposed lysines. Journal of Structural Biology, 2005, 149, 273-281.	2.8	68
17	Tropoelastin â€" A multifaceted naturally smart material. Advanced Drug Delivery Reviews, 2013, 65, 421-428.	13.7	66
18	Biocompatibility of silk-tropoelastin protein polymers. Biomaterials, 2014, 35, 5138-5147.	11.4	60

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19	Coacervation Is Promoted by Molecular Interactions between the PF2 Segment of Fibrillin-1 and the Domain 4 Region of Tropoelastin. Biochemistry, 2005, 44, 10271-10281.	2.5	59
20	InÂvivo biocompatibility of a plasma-activated, coronary stent coating. Biomaterials, 2012, 33, 7984-7992.	11.4	57
21	Induced pluripotent stem cell-derived endothelial cells promote angiogenesis and accelerate wound closure in a murine excisional wound healing model. Bioscience Reports, 2018, 38, .	2.4	57
22	A model two-component system for studying the architecture of elastin assembly in vitro. Journal of Structural Biology, 2005, 149, 282-289.	2.8	56
23	Plasma activated coatings with dual action against fungi and bacteria. Applied Materials Today, 2018, 12, 72-84.	4.3	52
24	Tropoelastin bridge region positions the cell-interactive C terminus and contributes to elastic fiber assembly. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 2878-2883.	7.1	51
25	Rapid Endothelialization of Off-the-Shelf Small Diameter Silk Vascular Grafts. JACC Basic To Translational Science, 2018, 3, 38-53.	4.1	51
26	Stages in tropoelastin coalescence during synthetic elastin hydrogel formation. Micron, 2010, 41, 268-272.	2.2	49
27	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.	5.5	47
28	Simulating Inflammation in a Wound Microenvironment Using a Dermal Woundâ€onâ€aâ€Chip Model. Advanced Healthcare Materials, 2019, 8, e1801307.	7.6	46
29	Mechanical Properties of Plasma Immersion Ion Implanted PEEK for Bioactivation of Medical Devices. ACS Applied Materials & Interfaces, 2015, 7, 23029-23040.	8.0	44
30	Subtle balance of tropoelastin molecular shape and flexibility regulates dynamics and hierarchical assembly. Science Advances, 2016, 2, e1501145.	10.3	43
31	Plasma-based biofunctionalization of vascular implants. Nanomedicine, 2012, 7, 1907-1916.	3.3	40
32	Biocompatibility of Coronary Stents. Materials, 2014, 7, 769-786.	2.9	40
33	Elastin sequences trigger transient proinflammatory responses by human dermal fibroblasts. FASEB Journal, 2013, 27, 3455-3465.	0.5	38
34	Altered processing enhances the efficacy of small-diameter silk fibroin vascular grafts. Scientific Reports, 2019, 9, 17461.	3.3	38
35	The use of plasma-activated covalent attachment of early domains of tropoelastin to enhance vascular compatibility of surfaces. Biomaterials, 2013, 34, 7584-7591.	11.4	37
36	Radical-functionalized plasma polymers: Stable biomimetic interfaces for bone implant applications. Applied Materials Today, 2019, 16, 456-473.	4.3	37

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37	Bioengineering artificial blood vessels from natural materials. Trends in Biotechnology, 2022, 40, 693-707.	9.3	36
38	A multifaceted biomimetic interface to improve the longevity of orthopedic implants. Acta Biomaterialia, 2020, 110, 266-279.	8.3	34
39	Bioactive Materials Facilitating Targeted Local Modulation of Inflammation. JACC Basic To Translational Science, 2019, 4, 56-71.	4.1	33
40	Mechanically Robust Plasma-Activated Interfaces Optimized for Vascular Stent Applications. ACS Applied Materials & Interfaces, 2016, 8, 9635-9650.	8.0	31
41	Exposure of tropoelastin to peroxynitrous acid gives high yields of nitrated tyrosine residues, di-tyrosine cross-links and altered protein structure and function. Free Radical Biology and Medicine, 2018, 115, 219-231.	2.9	29
42	Substrate-Regulated Growth of Plasma-Polymerized Films on Carbide-Forming Metals. Langmuir, 2016, 32, 10835-10843.	3.5	27
43	Multifunctional Protein-Immobilized Plasma Polymer Films for Orthopedic Applications. ACS Biomaterials Science and Engineering, 2018, 4, 4084-4094.	5.2	27
44	Bio-Activation of Polyether Ether Ketone Using Plasma Immersion Ion Implantation: A Kinetic Model. Plasma Processes and Polymers, 2015, 12, 180-193.	3.0	24
45	A Negatively Charged Residue Stabilizes the Tropoelastin N-terminal Region for Elastic Fiber Assembly. Journal of Biological Chemistry, 2014, 289, 34815-34826.	3.4	22
46	Cellular responses to radical propagation from ion-implanted plasma polymer surfaces. Applied Surface Science, 2018, 456, 701-710.	6.1	21
47	Plasma Synthesis of Carbon-Based Nanocarriers for Linker-Free Immobilization of Bioactive Cargo. ACS Applied Nano Materials, 2018, 1, 580-594.	5.0	20
48	Plasma Ion Activated Expanded Polytetrafluoroethylene Vascular Grafts with a Covalently Immobilized Recombinant Human Tropoelastin Coating Reducing Neointimal Hyperplasia. ACS Biomaterials Science and Engineering, 2016, 2, 1286-1297.	5.2	19
49	Macrophage Polarization as a Novel Therapeutic Target for Endovascular Intervention in Peripheral Artery Disease. JACC Basic To Translational Science, 2021, 6, 693-704.	4.1	19
50	Resolving Nitrogen-15 and Proton Chemical Shifts for Mobile Segments of Elastin with Two-dimensional NMR Spectroscopy. Journal of Biological Chemistry, 2012, 287, 18201-18209.	3.4	18
51	Extracellular Matrix Molecules Facilitating Vascular Biointegration. Journal of Functional Biomaterials, 2012, 3, 569-587.	4.4	18
52	Î²³-Tripeptides Coassemble into Fluorescent Hydrogels for Serial Monitoring in Vivo. ACS Biomaterials Science and Engineering, 2018, 4, 3843-3847.	5.2	18
53	Plasma polymerized nanoparticles effectively deliver dual siRNA and drug therapy in vivo. Scientific Reports, 2020, 10, 12836.	3.3	18
54	Immobilisation of a fibrillin-1 fragment enhances the biocompatibility of PTFE. Colloids and Surfaces B: Biointerfaces, 2014, 116, 544-552.	5.0	17

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55	Non-invasive tracking of injected bone marrow mononuclear cells to injury and implanted biomaterials. Acta Biomaterialia, 2017, 53, 378-388.	8.3	17
56	Plasma mediated protein immobilisation enhances the vascular compatibility of polyurethane with tissue matched mechanical properties. Biomedical Materials (Bristol), 2017, 12, 045002.	3.3	17
57	Evaluation of synthetic vascular grafts in a mouse carotid grafting model. PLoS ONE, 2017, 12, e0174773.	2.5	17
58	Blended Polyurethane and Tropoelastin as a Novel Class of Biologically Interactive Elastomer. Tissue Engineering - Part A, 2016, 22, 524-533.	3.1	16
59	Targeted Modulation of Tropoelastin Structure and Assembly. ACS Biomaterials Science and Engineering, 2017, 3, 2832-2844.	5.2	16
60	Stability of a Therapeutic Layer of Immobilized Recombinant Human Tropoelastin on a Plasma-Activated Coated Surface. Pharmaceutical Research, 2011, 28, 1415-1421.	3.5	15
61	Highly Porous, Biocompatible Tough Hydrogels, Processable via Gel Fiber Spinning and 3D Gel Printing. Advanced Materials Interfaces, 2020, 7, 1901770.	3.7	15
62	Elastin biology and tissue engineering with adult cells. Biomolecular Concepts, 2013, 4, 173-185.	2.2	14
63	Apolipoprotein A-I Reduces In-Stent Restenosis and Platelet Activation and Alters Neointimal Cellular Phenotype. JACC Basic To Translational Science, 2018, 3, 200-209.	4.1	14
64	Substrate geometry modulates self-assembly and collection of plasma polymerized nanoparticles. Communications Physics, 2019, 2, .	5.3	14
65	Mechanically robust nitrogen-rich plasma polymers: Biofunctional interfaces for surface engineering of biomedical implants. Materials Today Advances, 2021, 12, 100188.	5.2	13
66	Characterization of Endothelial Progenitor Cell Interactions with Human Tropoelastin. PLoS ONE, 2015, 10, e0131101.	2.5	12
67	Immobilization of bioactive plasmin reduces the thrombogenicity of metal surfaces. Colloids and Surfaces B: Biointerfaces, 2015, 136, 944-954.	5.0	12
68	Immobilized Macrophage Colony-Stimulating Factor (M-CSF) Regulates the Foreign Body Response to Implanted Materials. ACS Biomaterials Science and Engineering, 2020, 6, 995-1007.	5.2	11
69	Lack of Strategic Funding and Long-Term Job Security Threaten to Have Profound Effects on Cardiovascular Researcher Retention in Australia. Heart Lung and Circulation, 2020, 29, 1588-1595.	0.4	10
70	Silk Fibroin Scaffold Architecture Regulates Inflammatory Responses and Engraftment of Bone Marrowâ€Mononuclear Cells. Advanced Healthcare Materials, 2021, 10, e2100615.	7.6	10
71	Tropoelastin enhances nitric oxide production by endothelial cells. Nanomedicine, 2016, 11, 1591-1597.	3.3	9
72	Bioactivation of Encapsulation Membranes Reduces Fibrosis and Enhances Cell Survival. ACS Applied Materials & Interfaces, 2020, 12, 56908-56923.	8.0	9

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73	Plasma activated coating immobilizes apolipoprotein A-I to stainless steel surfaces in its bioactive form and enhances biocompatibility. Nanomedicine: Nanotechnology, Biology, and Medicine, 2017, 13, 2141-2150.	3.3	7
74	Bioengineering silk into blood vessels. Biochemical Society Transactions, 2021, 49, 2271-2286.	3.4	7
75	Patient Endothelial Colony-Forming Cells to Model Coronary Artery Disease Susceptibility and Unravel the Role of Dysregulated Mitochondrial Redox Signalling. Antioxidants, 2021, 10, 1547.	5.1	7
76	Androgens Stimulate EPC-Mediated Neovascularization and Are Associated with Increased Coronary Collateralization. Endocrinology, 2020, 161, .	2.8	6
77	Comprehensive Evaluation of the Toxicity and Biosafety of Plasma Polymerized Nanoparticles. Nanomaterials, 2021, 11, 1176.	4.1	6
78	A roadmap of strategies to support cardiovascular researchers: from policy to practice. Nature Reviews Cardiology, 2022, 19, 765-777.	13.7	6
79	Truncated vascular endothelial cadherin enhances rapid endothelialization of small diameter synthetic vascular grafts. Materials Today Advances, 2022, 14, 100222.	5.2	3
80	TCT-433 Plasmin Immobilization for Reduced Thrombogenicity of Metallic Implants. Journal of the American College of Cardiology, 2014, 64, B127.	2.8	2
81	Bioengineering stents with proactive biocompatibility. Interventional Cardiology, 2015, 7, 571-584.	0.0	2
82	A Novel Elastin-coated e-PTFE Vascular Conduit. Heart Lung and Circulation, 2010, 19, 496-497.	0.4	1
83	Plasma Based Biofunctionalisation of Cardiovascular Stents. Heart Lung and Circulation, 2013, 22, S46.	0.4	1
84	Enhanced Structure and Function of Stem Cell-Derived Beta-Like Cells Cultured on Extracellular Matrix. SSRN Electronic Journal, 0, , .	0.4	1
85	Non-thrombogenic, bioactive stent platform. Heart Lung and Circulation, 2015, 24, S286.	0.4	0
86	Back Cover: Plasma Process. Polym. 2â̂•2015. Plasma Processes and Polymers, 2015, 12, 194-194.	3.0	0