Stephanie Michelle Willerth

List of Publications by Year
in descending order

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92 papers	4,045 citations	147801 31 h-index	118850 62 g-index
98 all docs	98 docs citations	98 times ranked	5041 citing authors

#	Article	IF	Citations
1	The differentiation of embryonic stem cells seeded on electrospun nanofibers into neural lineages. Biomaterials, 2009, 30, 354-362.	11.4	420
2	Approaches to neural tissue engineering using scaffolds for drug delivery. Advanced Drug Delivery Reviews, 2007, 59, 325-338.	13.7	325
3	Emerging Biofabrication Strategies for Engineering Complex Tissue Constructs. Advanced Materials, 2017, 29, 1606061.	21.0	307
4	Conductive Coreâ€“Sheath Nanofibers and Their Potential Application in Neural Tissue Engineering. Advanced Functional Materials, 2009, 19, 2312-2318.	14.9	305
5	Optimization of fibrin scaffolds for differentiation of murine embryonic stem cells into neural lineage cells. Biomaterials, 2006, 27, 5990-6003.	11.4	232
6	Metal additive manufacturing: Technology, metallurgy and modelling. Journal of Manufacturing Processes, 2020, 57, 978-1003.	5.9	179
7	3D Printing of Neural Tissues Derived from Human Induced Pluripotent Stem Cells Using a Fibrin-Based Bioink. ACS Biomaterials Science and Engineering, 2019, 5, 234-243.	5.2	114
8	Extrusion and Microfluidicâ€Based Bioprinting to Fabricate Biomimetic Tissues and Organs. Advanced Materials Technologies, 2020, 5, 1901044.	5.8	110
9	The effect of controlled growth factor delivery on embryonic stem cell differentiation inside fibrin scaffolds. Stem Cell Research, 2008, 1, 205-218.	0.7	107
10	The Effects of Soluble Growth Factors on Embryonic Stem Cell Differentiation Inside of Fibrin Scaffolds. Stem Cells, 2007, 25, 2235-2244.	3.2	101
11	Cell therapy for spinal cord regeneration. Advanced Drug Delivery Reviews, 2008, 60, 263-276.	13.7	97
12	3D Bioprinting Pluripotent Stem Cell Derived Neural Tissues Using a Novel Fibrin Bioink Containing Drug Releasing Microspheres. Frontiers in Bioengineering and Biotechnology, 2020, 8, 57.	4.1	97
13	Natural Biomaterials and Their Use as Bioinks for Printing Tissues. Bioengineering, 2021, 8, 27.	3.5	93
14	Biomaterial-based drug delivery systems for the controlled release of neurotrophic factors. Biomedical Materials (Bristol), 2013, 8, 022001.	3.3	87
15	Bioprinting a novel glioblastoma tumor model using a fibrin-based bioink for drug screening. Materials Today Chemistry, 2019, 12, 78-84.	3.5	85
16	Rationally designed peptides for controlled release of nerve growth factor from fibrin matrices. Journal of Biomedical Materials Research - Part A, 2007, 80A, 13-23.	4.0	74
17	A Visible Light-Cross-Linkable, Fibrinâ€“Gelatin-Based Bioprinted Construct with Human Cardiomyocytes and Fibroblasts. ACS Biomaterials Science and Engineering, 2019, 5, 4551-4563.	5.2	72
18	Fabrication of poly (Ïµ-caprolactone) microfiber scaffolds with varying topography and mechanical properties for stem cell-based tissue engineering applications. Journal of Biomaterials Science, Polymer Edition, 2014, 25, 1-17.	3.5	68

#	ARTICLE	IF	CITATIONS
19	Combining Stem Cells and Biomaterial Scaffolds for Constructing Tissues and Cell Delivery. StemJournal, 2019, 1, 1-25.	0.6	62
20	Electrospun biomaterial scaffolds with varied topographies for neuronal differentiation of humanâ€induced pluripotent stem cells. Journal of Biomedical Materials Research - Part A, 2015, 103, 2591-2601.	4.0	61
21	Development of a Low Bias Method for Characterizing Viral Populations Using Next Generation Sequencing Technology. PLoS ONE, 2010, 5, e13564.	2.5	58
22	3D Bioprinting Stem Cell Derived Tissues. Cellular and Molecular Bioengineering, 2018, 11, 219-240.	2.1	58
23	3D Bioprinting Human Induced Pluripotent Stem Cell-Derived Neural Tissues Using a Novel Lab-on-a-Printer Technology. Applied Sciences (Switzerland), 2018, 8, 2414.	2.5	57
24	3-D Bioprinting of Neural Tissue for Applications in Cell Therapy and Drug Screening. Frontiers in Bioengineering and Biotechnology, 2017, 5, 69.	4.1	56
25	Neural tissue engineering using embryonic and induced pluripotent stem cells. Stem Cell Research and Therapy, 2011, 2, 17.	5.5	55
26	Engineering personalized neural tissue by combining induced pluripotent stem cells with fibrin scaffolds. Biomaterials Science, 2015, 3, 401-413.	5.4	48
27	Fibrin hydrogels induce mixed dorsal/ventral spinal neuron identities during differentiation of human induced pluripotent stem cells. Acta Biomaterialia, 2017, 51, 237-245.	8.3	47
28	Mechanically stable fibrin scaffolds promote viability and induce neurite outgrowth in neural aggregates derived from human induced pluripotent stem cells. Scientific Reports, 2017, 7, 6250.	3.3	47
29	Biomaterial Strategies for Delivering Stem Cells as a Treatment for Spinal Cord Injury. Cells Tissues Organs, 2016, 202, 42-51.	2.3	39
30	Direct Reprogramming of Glioblastoma Cells into Neurons Using Small Molecules. ACS Chemical Neuroscience, 2018, 9, 3175-3185.	3.5	39
31	3D bioprinting models of neural tissues: The current state of the field and future directions. Brain Research Bulletin, 2019, 150, 240-249.	3.0	32
32	Development of a glial cell-derived neurotrophic factor-releasing artificial dura for neural tissue engineering applications. Journal of Materials Chemistry B, 2015, 3, 7974-7985.	5.8	31
33	Recent advances in the design of microfluidic technologies for the manufacture of drug releasing particles. Journal of Controlled Release, 2021, 333, 258-268.	9.9	30
34	Preparation of 3D Fibrin Scaffolds for Stem Cell Culture Applications. Journal of Visualized Experiments, 2012, , e3641.	0.3	26
35	3D Printing Breast Tissue Models: A Review of Past Work and Directions for Future Work. Micromachines, 2019, 10, 501.	2.9	24
36	Incorporation of Retinoic Acid Releasing Microspheres into Pluripotent Stem Cell Aggregates for Inducing Neuronal Differentiation. Cellular and Molecular Bioengineering, 2015, 8, 307-319.	2.1	23

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37	Guggulsterone-releasing microspheres direct the differentiation of human induced pluripotent stem cells into neural phenotypes. Biomedical Materials (Bristol), 2018, 13, 034104.	3.3	23
38	Novel N-cadherin antagonist causes glioblastoma cell death in a 3D bioprinted co-culture model. Biochemical and Biophysical Research Communications, 2020, 529, 162-168.	2.1	20
39	Controlled release of glial cell line-derived neurotrophic factor from poly(Îµ-caprolactone) microspheres. Drug Delivery and Translational Research, 2014, 4, 159-170.	5.8	17
40	Optimizing Differentiation Protocols for Producing Dopaminergic Neurons from Human Induced Pluripotent Stem Cells for Tissue Engineering Applications. Biomarker Insights, 2015, 10s1, BMI.S20064.	2.5	17
41	Smart Bioinks for the Printing of Human Tissue Models. Biomolecules, 2022, 12, 141.	4.0	17
42	Physical and Mechanical Characterization of Fibrin-Based Bioprinted Constructs Containing Drug-Releasing Microspheres for Neural Tissue Engineering Applications. Processes, 2021, 9, 1205.	2.8	16
43	Functionalizing Ascl1 with Novel Intracellular Protein Delivery Technology for Promoting Neuronal Differentiation of Human Induced Pluripotent Stem Cells. Stem Cell Reviews and Reports, 2016, 12, 476-483.	5.6	15
44	Engineering Neural Tissue from Human Pluripotent Stem Cells Using Novel Small Molecule Releasing Microspheres. Advanced Biology, 2018, 2, 1800133.	3.0	15
45	The Use of Patient-Derived Induced Pluripotent Stem Cells for Alzheimerâ€™s Disease Modeling. Progress in Neurobiology, 2020, 192, 101804.	5.7	15
46	3D Bioprinting Humanâ€Induced Pluripotent Stem Cells and Drugâ€Releasing Microspheres to Produce Responsive Neural Tissues. Advanced NanoBiomed Research, 2021, 1, 2000077.	3.6	15
47	3D Bioprinting Mesenchymal Stem Cell-Derived Neural Tissues Using a Fibrin-Based Bioink. Biomolecules, 2021, 11, 1250.	4.0	15
48	Kinetic Analysis of Neurotrophin-3â€“Mediated Differentiation of Embryonic Stem Cells into Neurons. Tissue Engineering - Part A, 2009, 15, 307-318.	3.1	13
49	CRISPR, Prime Editing, Optogenetics, and DREADDs: New Therapeutic Approaches Provided by Emerging Technologies in the Treatment of Spinal Cord Injury. Molecular Neurobiology, 2020, 57, 2085-2100.	4.0	13
50	Multifunctional Electrospun Scaffolds for Promoting Neuronal Differentiation of Induced Pluripotent Stem Cells. Journal of Biomaterials and Tissue Engineering, 2014, 4, 906-914.	0.1	13
51	Three-dimensional bioprinting healthy and diseased models of the brain tissue using stem cells. Current Opinion in Biomedical Engineering, 2020, 14, 25-33.	3.4	12
52	Transdifferentiating Astrocytes Into Neurons Using ASCL1 Functionalized With a Novel Intracellular Protein Delivery Technology. Frontiers in Bioengineering and Biotechnology, 2018, 6, 173.	4.1	11
53	Using mathematical modeling to control topographical properties of poly (Îµ-caprolactone) melt electrospun scaffolds. Journal of Micromechanics and Microengineering, 2014, 24, 065009.	2.6	10
54	3D Tissue Models as an Effective Tool for Studying Viruses and Vaccine Development. Frontiers in Materials, 2021, 8, .	2.4	10

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55	Characterizing the Mechanical Performance of a Bare-Metal Stent with an Auxetic Cell Geometry. Applied Sciences (Switzerland), 2022, 12, 910.	2.5	10
56	A Novel Toolkit for Characterizing the Mechanical and Electrical Properties of Engineered Neural Tissues. Biosensors, 2019, 9, 51.	4.7	9
57	Modeling the Effects of Yoga on the Progression of Alzheimerâ€™s Disease in a Dish. Cells Tissues Organs, 2018, 206, 263-271.	2.3	8
58	Mathematical model for predicting topographical properties of poly (<i>Îµ</i>-caprolactone) melt electrospun scaffolds including the effects of temperature and linear transitional speed. Journal of Micromechanics and Microengineering, 2015, 25, 045018.	2.6	7
59	3D Printing for Medical Applications: Current State of the Art and Perspectives during the COVID-19 Crisis. Surgeries, 2021, 2, 244-259.	0.6	7
60	Using clinically derived human tissue to 3-dimensionally bioprint personalized testicular tubules for inÂvitro culturing: first report. F&S Science, 2022, 3, 130-139.	0.9	7
61	Bioprinting neural tissues using stem cells as a tool for screening drug targets for Alzheimerâ€™s disease. Journal of 3D Printing in Medicine, 2018, 2, 163-165.	2.0	6
62	Effect of bioactive Biosilicate^{Â®}/F18 glass scaffolds on osteogenic differentiation of human adipose stem cells. Journal of Biomedical Materials Research - Part A, 2021, 109, 1293-1308.	4.0	5
63	Drugâ€releasing Microspheres for Stem Cell Differentiation. Current Protocols, 2021, 1, e331.	2.9	5
64	Protocol for printing 3D neural tissues using the BIO X equipped with a pneumatic printhead. STAR Protocols, 2022, 3, 101348.	1.2	5
65	Biomimetic strategies for replicating the neural stem cell niche. Current Opinion in Chemical Engineering, 2017, 15, 8-14.	7.8	4
66	Synthetic biomaterials for engineering neural tissue from stem cells. , 2017, , 127-158.		3
67	The effect of SARS-CoV-2 on the nervous system: a review of neurological impacts caused by human coronaviruses. Reviews in the Neurosciences, 2022, 33, 257-268.	2.9	3
68	Trends in hydrogel-based encapsulation technologies for advanced cell therapies applied to limb ischemia. Materials Today Bio, 2022, 13, 100221.	5.5	3
69	Commercializing Electrospun Scaffolds For Pluripotent Stem Cell-Based Tissue Engineering Applications. Electrospinning, 2017, 2, 62-72.	1.6	2
70	Natural biomaterials for engineering neural tissue from stem cells. , 2017, , 89-125.		2
71	Advancements in Canadian Biomaterials Research in Neurotraumatic Diagnosis and Therapies. Processes, 2019, 7, 336.	2.8	2
72	How can microsphere-mediated delivery of small molecules serve as a novel tool for engineering tissues from stem cells?. Therapeutic Delivery, 2019, 10, 671-674.	2.2	2

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73	Strategies for Delivering Online Biomedical Engineering Electives During the COVID-19 Pandemic. Biomedical Engineering Education, 2021, 1, 115-120.	0.7	2
74	Evaluation of 3D-printer settings for producing personal protective equipment. Journal of 3D Printing in Medicine, 2021, 5, .	2.0	2
75	Engineering personalized neural tissue using functionalized transcription factors. Neural Regeneration Research, 2016, 11, 1570.	3.0	2
76	Determining the mechanism behind yogaâ€™s effects on preventing the symptoms of Alzheimerâ€™s disease. Neural Regeneration Research, 2020, 15, 261.	3.0	2
77	Towards high throughput tissue engineering: development of chitosan-calcium phosphate scaffolds for engineering bone tissue from embryonic stem cells. American Journal of Stem Cells, 2012, 1, 81-9.	0.4	2
78	Design considerations when engineering neural tissue from stem cells. , 2017, , 65-88.		1
79	New technologies for engineering neural tissue from stem cells. , 2017, , 181-204.		1
80	Stem cells and their applications in repairing the damaged nervous system. , 2017, , 39-64.		1
81	Localized Tacrolimus Delivery Repairs the Damaged Central Nervous System. EBioMedicine, 2017, 26, 4-5.	6.1	1
82	An Affordable Microsphere-Based Device for Visual Assessment of Water Quality. Biosensors, 2017, 7, 31.	4.7	1
83	Modeling the behavior of human induced pluripotent stem cells seeded on melt electrospun scaffolds. Journal of Biological Engineering, 2017, 11, 38.	4.7	1
84	The need for engineering neural tissue using stem cells. , 2017, , 1-15.		0
85	Introduction to the nervous system. , 2017, , 17-38.		0
86	Drug delivery systems for engineering neural tissue. , 2017, , 159-180.		0
87	Electrospun Nanofibers for Diverse Applications. , 2019, , 275-286.		0
88	The 2019 Young Innovators of Cellular and Molecular Bioengineering. Cellular and Molecular Bioengineering, 2019, 12, 355-356.	2.1	0
89	Quantitative Analysis of the Rewiring of Signaling Pathways to Alter Cancer Cell Fate. Journal of Medical and Biological Engineering, 2020, 40, 41-52.	1.8	0
90	Editorial: Stem Cell Systems Bioengineering. Frontiers in Bioengineering and Biotechnology, 2021, 9, 693107.	4.1	0

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91	Fabrication of Highly Ordered Polycaprolactone Microspheres for In Vitro Drug Delivery Using Microfluidic Technologies. , 0, , .		0
92	Neural Tissue Engineering: Applications. , 0, , 5678-5692.		0