

Michael S Kallos

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

78
papers

2,064
citations

26
h-index

44
g-index

82
ext. papers

2,344
ext. citations

4.6
avg, IF

4.84
L-index

#	Paper	IF	Citations
78	Expansion of undifferentiated murine embryonic stem cells as aggregates in suspension culture bioreactors. <i>Tissue Engineering</i> , 2006 , 12, 3233-45		136
77	Large-scale expansion of pluripotent human embryonic stem cells in stirred-suspension bioreactors. <i>Tissue Engineering - Part C: Methods</i> , 2010 , 16, 573-82	2.9	130
76	Embryonic stem cells remain highly pluripotent following long term expansion as aggregates in suspension bioreactors. <i>Journal of Biotechnology</i> , 2007 , 129, 421-32	3.7	114
75	Mass transfer limitations in embryoid bodies during human embryonic stem cell differentiation. <i>Cells Tissues Organs</i> , 2012 , 196, 34-47	2.1	111
74	Inoculation and growth conditions for high-cell-density expansion of mammalian neural stem cells in suspension bioreactors. <i>Biotechnology and Bioengineering</i> , 1999 , 63, 473-83	4.9	96
73	Enzyme responsive GAG-based natural-synthetic hybrid hydrogel for tunable growth factor delivery and stem cell differentiation. <i>Biomaterials</i> , 2016 , 87, 104-117	15.6	93
72	A review of pyrolysis, aquathermolysis, and oxidation of Athabasca bitumen. <i>Fuel Processing Technology</i> , 2015 , 131, 270-289	7.2	76
71	Effects of Hydrodynamics on Cultures of Mammalian Neural Stem Cell Aggregates in Suspension Bioreactors. <i>Industrial & Engineering Chemistry Research</i> , 2001 , 40, 5350-5357	3.9	68
70	Improved expansion of human bone marrow-derived mesenchymal stem cells in microcarrier-based suspension culture. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2014 , 8, 210-25	4.4	66
69	Expansion of mammalian neural stem cells in bioreactors: effect of power input and medium viscosity. <i>Developmental Brain Research</i> , 2002 , 134, 103-13		63
68	Scaled-up production of mammalian neural precursor cell aggregates in computer-controlled suspension bioreactors. <i>Biotechnology and Bioengineering</i> , 2006 , 94, 783-92	4.9	57
67	Expansion and long-term maintenance of induced pluripotent stem cells in stirred suspension bioreactors. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2012 , 6, 462-72	4.4	53
66	Extended serial passaging of mammalian neural stem cells in suspension bioreactors. <i>Biotechnology and Bioengineering</i> , 1999 , 65, 589-99	4.9	51
65	Large-scale expansion of mammalian neural stem cells: a review. <i>Medical and Biological Engineering and Computing</i> , 2003 , 41, 271-82	3.1	50
64	Reduced differentiation efficiency of murine embryonic stem cells in stirred suspension bioreactors. <i>Stem Cells and Development</i> , 2010 , 19, 989-98	4.4	48
63	Factorial experimental design for the culture of human embryonic stem cells as aggregates in stirred suspension bioreactors reveals the potential for interaction effects between bioprocess parameters. <i>Tissue Engineering - Part C: Methods</i> , 2014 , 20, 76-89	2.9	45
62	Biocomposite nanofiber matrices to support ECM remodeling by human dermal progenitors and enhanced wound closure. <i>Scientific Reports</i> , 2017 , 7, 10291	4.9	45

61	Shear stress influences the pluripotency of murine embryonic stem cells in stirred suspension bioreactors. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2014 , 8, 268-78	4.4	45
60	Optimizing gelling parameters of gellan gum for fibrocartilage tissue engineering. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2011 , 98, 238-45	3.5	45
59	Passaging protocols for mammalian neural stem cells in suspension bioreactors. <i>Biotechnology Progress</i> , 2002 , 18, 337-45	2.8	36
58	Large-scale production of murine embryonic stem cell-derived osteoblasts and chondrocytes on microcarriers in serum-free media. <i>Biomaterials</i> , 2011 , 32, 6006-16	15.6	35
57	New tissue dissociation protocol for scaled-up production of neural stem cells in suspension bioreactors. <i>Tissue Engineering</i> , 2004 , 10, 904-13		35
56	Efficient suspension bioreactor expansion of murine embryonic stem cells on microcarriers in serum-free medium. <i>Biotechnology Progress</i> , 2011 , 27, 811-23	2.8	33
55	Large-scale expansion of mammary epithelial stem cell aggregates in suspension bioreactors. <i>Biotechnology Progress</i> , 2005 , 21, 984-93	2.8	31
54	Bioreactor expansion of human neural precursor cells in serum-free media retains neurogenic potential. <i>Biotechnology and Bioengineering</i> , 2010 , 105, 823-33	4.9	27
53	Potential for hydrogen generation from in situ combustion of Athabasca bitumen. <i>Fuel</i> , 2011 , 90, 2254-2265	2.6	26
52	Cell cycle kinetics of expanding populations of neural stem and progenitor cells in vitro. <i>Biotechnology and Bioengineering</i> , 2004 , 88, 332-47	4.9	26
51	Scale-up of embryonic stem cell aggregate stirred suspension bioreactor culture enabled by computational fluid dynamics modeling. <i>Biochemical Engineering Journal</i> , 2018 , 133, 157-167	4.2	25
50	A new reaction model for aquathermolysis of Athabasca bitumen. <i>Canadian Journal of Chemical Engineering</i> , 2013 , 91, 475-482	2.3	25
49	Practical process design for in situ gasification of bitumen. <i>Applied Energy</i> , 2013 , 107, 281-296	10.7	23
48	Non-viral engineering of skin precursor-derived Schwann cells for enhanced NT-3 production in adherent and microcarrier culture. <i>Current Medicinal Chemistry</i> , 2012 , 19, 5572-9	4.3	22
47	New thermal-reactive reservoir engineering model predicts hydrogen sulfide generation in Steam Assisted Gravity Drainage. <i>Journal of Petroleum Science and Engineering</i> , 2012 , 94-95, 100-111	4.4	21
46	A new kinetic model for pyrolysis of Athabasca bitumen. <i>Canadian Journal of Chemical Engineering</i> , 2013 , 91, 889-901	2.3	19
45	Production of islet-like structures from neonatal porcine pancreatic tissue in suspension bioreactors. <i>Biotechnology Progress</i> , 2006 , 22, 561-7	2.8	19
44	Characterization of human islet-like structures generated from pancreatic precursor cells in culture. <i>Biotechnology and Bioengineering</i> , 2006 , 93, 980-8	4.9	18

43	Serum-free scaled up expansion and differentiation of murine embryonic stem cells to osteoblasts in suspension bioreactors. <i>Biotechnology and Bioengineering</i> , 2010 , 106, 829-40	4.9	17
42	Properties of murine embryonic stem cells maintained on human foreskin fibroblasts without LIF. <i>Molecular Reproduction and Development</i> , 2008 , 75, 614-22	2.6	17
41	Reservoir Simulation of Steam Fracturing in Early-Cycle Cyclic Steam Stimulation. <i>SPE Reservoir Evaluation and Engineering</i> , 2012 , 15, 676-687	2.3	16
40	Dynamic behavior of cells within neurospheres in expanding populations of neural precursors. <i>Brain Research</i> , 2006 , 1107, 82-96	3.7	16
39	Optimized serial expansion of human induced pluripotent stem cells using low-density inoculation to generate clinically relevant quantities in vertical-wheel bioreactors. <i>Stem Cells Translational Medicine</i> , 2020 , 9, 1036-1052	6.9	16
38	New gas material balance to quantify biogenic gas generation rates from shallow organic-matter-rich shales. <i>Fuel</i> , 2013 , 104, 443-451	7.1	15
37	Non-Newtonian rheology in suspension cell cultures significantly impacts bioreactor shear stress quantification. <i>Biotechnology and Bioengineering</i> , 2018 , 115, 2101-2113	4.9	14
36	Using computational fluid dynamics (CFD) modeling to understand murine embryonic stem cell aggregate size and pluripotency distributions in stirred suspension bioreactors. <i>Journal of Biotechnology</i> , 2019 , 304, 16-27	3.7	13
35	Large-scale expansion of human skin-derived precursor cells (hSKPs) in stirred suspension bioreactors. <i>Biotechnology and Bioengineering</i> , 2016 , 113, 2725-2738	4.9	13
34	Overcoming bioprocess bottlenecks in the large-scale expansion of high-quality hiPSC aggregates in vertical-wheel stirred suspension bioreactors. <i>Stem Cell Research and Therapy</i> , 2021 , 12, 55	8.3	12
33	Enhanced Expansion and Sustained Inductive Function of Skin-Derived Precursor Cells in Computer-Controlled Stirred Suspension Bioreactors. <i>Stem Cells Translational Medicine</i> , 2017 , 6, 434-443	6.9	11
32	Challenges and Solutions for Commercial Scale Manufacturing of Allogeneic Pluripotent Stem Cell Products. <i>Bioengineering</i> , 2020 , 7,	5.3	8
31	A Comprehensive Kinetic Theory to Model Thermolysis, Aquathermolysis, Gasification, Combustion, and Oxidation of Athabasca Bitumen 2010 ,		8
30	Serum-free bioprocessing of adult human and rodent skin-derived Schwann cells: implications for cell therapy in nervous system injury. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2017 , 11, 3385-3397	4.4	7
29	Fluid Flow Modulation of Murine Embryonic Stem Cell Pluripotency Gene Expression in the Absence of LIF. <i>Cellular and Molecular Bioengineering</i> , 2013 , 6, 335-345	3.9	6
28	Reactive Reservoir Simulation of Biogenic Shallow Shale Gas Systems Enabled by Experimentally Determined Methane Generation Rates. <i>Energy & Fuels</i> , 2013 , 27, 2413-2421	4.1	6
27	Reactive Thermal Reservoir Simulation: Hydrogen Sulphide Production in SAGD 2011 ,		6
26	Potential for Hydrogen Generation during In Situ Combustion of Bitumen 2009 ,		5

25	Improved expansion of equine cord blood derived mesenchymal stromal cells by using microcarriers in stirred suspension bioreactors. <i>Journal of Biological Engineering</i> , 2019 , 13, 25	6.3	4
24	Inter-microcarrier transfer and phenotypic stability of stem cell-derived Schwann cells in stirred suspension bioreactor culture. <i>Biotechnology and Bioengineering</i> , 2016 , 113, 393-402	4.9	4
23	An Integrated Approach toward the Biomanufacturing of Engineered Cell Therapy Products in a Stirred-Suspension Bioreactor. <i>Molecular Therapy - Methods and Clinical Development</i> , 2018 , 9, 376-389	6.4	4
22	Towards the Development of Bitumen Carbonates: An Integrated Analysis of Grosmont Steam Pilots. <i>Oil and Gas Science and Technology</i> , 2015 , 70, 983-1005	1.9	3
21	Fluid shear stress promotes embryonic stem cell pluripotency via interplay between E-catenin and vinculin in bioreactor culture. <i>Stem Cells</i> , 2021 , 39, 1166-1177	5.8	3
20	Bioreactor Expansion of Skin-Derived Precursor Schwann Cells. <i>Methods in Molecular Biology</i> , 2016 , 1502, 103-10	1.4	3
19	Flowable Polyethylene Glycol Hydrogels Support the in Vitro Survival and Proliferation of Dermal Progenitor Cells in a Mechanically Dependent Manner. <i>ACS Biomaterials Science and Engineering</i> , 2019 , 5, 950-958	5.5	3
18	Computational fluid dynamic characterization of vertical-wheel bioreactors used for effective scale-up of human induced pluripotent stem cell aggregate culture. <i>Canadian Journal of Chemical Engineering</i> , 2021 , 99, 2536	2.3	3
17	Inoculation and growth conditions for high-cell-density expansion of mammalian neural stem cells in suspension bioreactors 1999 , 63, 473		3
16	Large-scale expansion of feeder-free mouse embryonic stem cells serially passaged in stirred suspension bioreactors at low inoculation densities directly from cryopreservation. <i>Biotechnology and Bioengineering</i> , 2020 , 117, 1316-1328	4.9	2
15	Biogenic Gas Generation From Shallow Organic-Matter-Rich Shales 2010 ,		2
14	Induced pluripotency in the context of stem cell expansion bioprocess development, optimization, and manufacturing: a roadmap to the clinic. <i>Npj Regenerative Medicine</i> , 2021 , 6, 72	15.8	2
13	Stirred suspension bioreactors maintain naïve pluripotency of human pluripotent stem cells. <i>Communications Biology</i> , 2020 , 3, 492	6.7	2
12	Reservoir Simulation of Steam Fracturing in Early Cycle Cyclic Steam Stimulation 2010 ,		1
11	Measurement of intrinsic rates for homogeneous gas-phase reactions at high temperatures. <i>Canadian Journal of Chemical Engineering</i> , 2002 , 80, 513-517	2.3	1
10	Cell Therapy in Veterinary Medicine as a Proof-of-Concept for Human Therapies: Perspectives From the North American Veterinary Regenerative Medicine Association.. <i>Frontiers in Veterinary Science</i> , 2021 , 8, 779109	3.1	1
9	Expansion of Undifferentiated Murine Embryonic Stem Cells as Aggregates in Suspension Culture Bioreactors. <i>Tissue Engineering</i> , 2006 , 061017080728002		1
8	Bioengineering Protocols for Neural Precursor Cell Expansion. <i>Springer Protocols</i> , 2009 , 105-123	0.3	1

7	Research contributions of Leo A. Behie to chemical and biomedical engineering. <i>Canadian Journal of Chemical Engineering</i> , 2021 , 99, 2262	2.3	1
6	Cell Culture Process Scale-Up Challenges for Commercial-Scale Manufacturing of Allogeneic Pluripotent Stem Cell Products.. <i>Bioengineering</i> , 2022 , 9,	5.3	1
5	Control of dissolved oxygen significantly increases the yield of skin-derived Schwann cells during expansion in stirred suspension bioreactors. <i>Engineering Reports</i> ,e12421	1.2	0
4	Preface to the special issue honouring Professor Leo A. Behie. <i>Canadian Journal of Chemical Engineering</i> , 2021 , 99, 2259	2.3	0
3	Image Analysis Method for Evaluating Heterogeneous Growth and Differentiation of Embryonic Stem Cell Cultures. <i>ACS Symposium Series</i> , 2013 , 165-181	0.4	
2	Bioreactor Protocols for the Expansion and Differentiation of Human Neural Precursor Cells in Targeting the Treatment of Neurodegenerative Disorders 2018 , 97-134		
1	Neural Stem Cells: Bioprocess Engineering1		