Michael Butler

List of Publications by Year
in descending order

129	5,385	76196	95083
papers	citations	40 h-index	68 g-index

134	134	134	4144
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Animal cell cultures: recent achievements and perspectives in the production of biopharmaceuticals. Applied Microbiology and Biotechnology, 2005, 68, 283-291.	1.7	415
2	Expression systems for therapeutic glycoprotein production. Current Opinion in Biotechnology, 2009, 20, 700-707.	3.3	350
3	Growth inhibition in animal cell culture. Applied Biochemistry and Biotechnology, 1991, 30, 29-41.	1.4	227
4	Recent advances in technology supporting biopharmaceutical production from mammalian cells. Applied Microbiology and Biotechnology, 2012, 96, 885-894.	1.7	161
5	Review of dengue virus and the development of a vaccine. Biotechnology Advances, 2011, 29, 239-247.	6.0	151
6	The choice of mammalian cell host and possibilities for glycosylation engineering. Current Opinion in Biotechnology, 2014, 30, 107-112.	3.3	144
7	Dissolved oxygen concentration in serum-free continuous culture affects N-linked glycosylation of a monoclonal antibody. Journal of Biotechnology, 1998, 62, 55-71.	1.9	139
8	Optimisation of the Cellular Metabolism of Glycosylation for Recombinant Proteins Produced by Mammalian Cell Systems. Cytotechnology, 2006, 50, 57-76.	0.7	139
9	Detailed glycan analysis of serum glycoproteins of patients with congenital disorders of glycosylation indicates the specific defective glycan processing step and provides an insight into pathogenesis. Glycobiology, 2003, 13, 601-622.	1.3	138
10	Enhanced Production of Monomeric Interferon-Î² by CHO Cells through the Control of Culture Conditions. Biotechnology Progress, 2008, 21, 22-30.	1.3	135
11	Effects of Ammonia and Glucosamine on the Heterogeneity of Erythropoietin Glycoforms. Biotechnology Progress, 2002, 18, 129-138.	1.3	110
12	Strategies for the enhancement of recombinant protein production from mammalian cells by growth arrest. Biotechnology Advances, 2010, 28, 385-394.	6.0	105
13	Glucose and glutamine metabolism of a murine B-lymphocyte hybridoma grown in batch culture. Applied Biochemistry and Biotechnology, 1993, 43, 93-116.	1.4	103
14	The availability of glucose to CHO cells affects the intracellular lipid-linked oligosaccharide distribution, site occupancy and the N-glycosylation profile of a monoclonal antibody. Journal of Biotechnology, 2014, 170, 17-27.	1.9	100
15	Mammalian cell culture for production of recombinant proteins: A review of the critical steps in their biomanufacturing. Biotechnology Advances, 2020, 43, 107552.	6.0	99
16	The effects of glutamine utilisation and ammonia production on the growth of BHK cells in microcarrier cultures. Journal of Biotechnology, 1984, 1, 187-196.	1.9	89
17	The effect of dissolved oxygen on the production and the glycosylation profile of recombinant human erythropoietin produced from CHO cells. Biotechnology and Bioengineering, 2006, 94, 481-494.	1.7	89
18	Nutritional aspects of the growth of animal cells in culture. Journal of Biotechnology, 1989, 12, 97-110.	1.9	88

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19	Production of Î±2,6-sialylated IgG1 in CHO cells. MAbs, 2015, 7, 571-583.	2.6	84
20	The effect of pH on the toxicity of ammonia to a murine hybridoma. Journal of Biotechnology, 1990, 15, 91-100.	1.9	82
21	Pluronic Enhances the Robustness and Reduces the Cell Attachment of Mammalian Cells. Molecular Biotechnology, 2008, 39, 167-177.	1.3	81
22	Mechanisms of copper tolerance in the marine fouling alga Ectocarpus siliculosus ? Evidence for an exclusion mechanism. Marine Biology, 1979, 54, 195-199.	0.7	79
23	Effect of Ammonia on the Glycosylation of Human Recombinant Erythropoietin in Culture. Biotechnology Progress, 2000, 16, 751-759.	1.3	75
24	Comparisons of the Glycosylation of a Monoclonal Antibody Produced under Nominally Identical Cell Culture Conditions in Two Different Bioreactors. Biotechnology Progress, 2000, 16, 462-470.	1.3	73
25	Animal Cell Culture and Technology. , 0, , .		73
26	High immunogenic enterovirus 71 strain and its production using serum-free microcarrier Vero cell culture. Vaccine, 2007, 25, 19-24.	1.7	70
27	Erythropoietin production from CHO cells grown by continuous culture in a fluidized-bed bioreactor. Biotechnology and Bioengineering, 2002, 77, 194-203.	1.7	69
28	Application of the StrOligo algorithm for the automated structure assignment of complex N-linked glycans from glycoproteins using tandem mass spectrometry. Rapid Communications in Mass Spectrometry, 2003, 17, 2713-2720.	0.7	68
29	Profile of energy metabolism in a murine hybridoma: Glucose and glutamine utilization. Journal of Cellular Physiology, 1994, 161, 71-76.	2.0	66
30	Microwave frequency sensor for detection of biological cells in microfluidic channels. Biomicrofluidics, 2009, 3, 034103.	1.2	64
31	CHO cells adapted to hypothermic growth produce high yields of recombinant Î²â€interferon. Biotechnology Progress, 2008, 24, 898-906.	1.3	62
32	High productivity of human recombinant beta-interferon from a low-temperature perfusion culture. Journal of Biotechnology, 2010, 150, 509-518.	1.9	56
33	Effect of temperature on nucleotide pools and monoclonal antibody production in a mouse hybridoma. Biotechnology and Bioengineering, 1994, 44, 1235-1245.	1.7	52
34	Glutamine-based dipeptides are utilized in mammalian cell culture by extracellular hydrolysis catalyzed by a specific peptidase. Journal of Biotechnology, 1994, 37, 277-290.	1.9	51
35	Application of a Serum-Free Medium for the Growth of Vero Cells and the Production of Reovirus. Biotechnology Progress, 2000, 16, 854-858.	1.3	50
36	Fedâ€batch CHO cell tâ€PA production and feed glutamine replacement to reduce ammonia production. Biotechnology Progress, 2013, 29, 165-175.	1.3	48

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37	The changing dielectric properties of CHO cells can be used to determine early apoptotic events in a bioprocess. Biotechnology and Bioengineering, 2013, 110, 2902-2914.	1.7	46
38	A Study of Immunoglobulin G Glycosylation in Monoclonal and Polyclonal Species by Electrospray and Matrix-Assisted Laser Desorption/Ionization Mass Spectrometry. Analytical Biochemistry, 2002, 305, 16-31.	1.1	45
39	Low glucose depletes glycan precursors, reduces site occupancy and galactosylation of a monoclonal antibody in CHO cell culture. Biotechnology Journal, 2015, 10, 1051-1066.	1.8	45
40	Copper tolerance in the green alga, Chlorella vulgaris.. Plant, Cell and Environment, 1980, 3, 119-126.	2.8	43
41	Production and Glycosylation of Recombinant Î²-Interferon in Suspension and Cytopore Microcarrier Cultures of CHO Cells. Biotechnology Progress, 2008, 21, 31-39.	1.3	43
42	Fragmentation of negative ions from Nâ€linked carbohydrates, Part 4. Fragmentation of complex glycans lacking substitution on the 6â€antenna. Journal of Mass Spectrometry, 2010, 45, 528-535.	0.7	42
43	Differential electronic detector to monitor apoptosis using dielectrophoresis-induced translation of flowing cells (dielectrophoresis cytometry). Biomicrofluidics, 2013, 7, 024101.	1.2	39
44	Different Immunity Elicited by Recombinant H5N1 Hemagglutinin Proteins Containing Pauci-Mannose, High-Mannose, or Complex Type N-Glycans. PLoS ONE, 2013, 8, e66719.	1.1	37
45	Characterization of glutamine metabolism in two related murine hybridomas. Journal of Biotechnology, 1992, 23, 167-182.	1.9	35
46	Copper tolerance in the green alga, Chlorella vulgaris. Plant, Cell and Environment, 1980, 3, 119-126.	2.8	34
47	Glycosylation of an immunoglobulin produced from a murine hybridoma cell line: The effect of culture mode and the anti-apoptotic gene,bcl-2. Biotechnology and Bioengineering, 2007, 97, 156-169.	1.7	33
48	Inhibition of glutamineâ€dependent autophagy increases tâ€PA production in CHO Cell fedâ€batch processes. Biotechnology and Bioengineering, 2012, 109, 1228-1238.	1.7	33
49	Development of an Assay for the Measurement of the Surfactant Pluronic F-68 in Mammalian Cell Culture Medium. Analytical Biochemistry, 1998, 262, 39-44.	1.1	32
50	Enhanced erythropoietin heterogeneity in a CHO culture is caused by proteolytic degradation and can be eliminated by a high glutamine level. , 2000, 34, 83-99.		30
51	The effect of glucose and glutamine on the intracellular nucleotide pool and oxygen uptake rate of a murine hybridoma. , 2000, 34, 47-57.		26
52	The bioactivity and fractionation of peptide hydrolysates in cultures of CHO cells. Biotechnology Progress, 2014, 30, 584-593.	1.3	26
53	Intracellular ATP and total adenylate concentrations are critical predictors of reovirus productivity from Vero cells. Biotechnology and Bioengineering, 2006, 94, 667-679.	1.7	25
54	Tuning a MAb glycan profile in cell culture: Supplementing N-acetylglucosamine to favour G0 glycans without compromising productivity and cell growth. Journal of Biotechnology, 2015, 214, 105-112.	1.9	25

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55	Unsaturated fatty acids enhance cell yields and perturb the energy metabolism of an antibody-secreting hybridoma. Biochemical Journal, 1997, 322, 615-623.	1.7	24
56	Enhanced Production of Human Recombinant Proteins from CHO cells Grown to High Densities in Macroporous Microcarriers. Molecular Biotechnology, 2011, 49, 263-276.	1.3	24
57	Influenza Virus Hemagglutinin Glycoproteins with Different N-Glycan Patterns Activate Dendritic Cells In Vitro. Journal of Virology, 2016, 90, 6085-6096.	1.5	23
58	Multi-Frequency DEP Cytometer Employing a Microwave Sensor for Dielectric Analysis of Single Cells. IEEE Transactions on Microwave Theory and Techniques, 2016, , 1-9.	2.9	23
59	Adaptation of mammalian cells to non-ammoniagenic media. Cytotechnology, 1994, 15, 87-94.	0.7	22
60	High yields of monomeric recombinant Î²â€interferon from macroporous microcarrier cultures under hypothermic conditions. Biotechnology Progress, 2008, 24, 832-838.	1.3	22
61	Increased CHO cell fed-batch monoclonal antibody production using the autophagy inhibitor 3-MA or gradually increasing osmolality. Biochemical Engineering Journal, 2014, 91, 37-45.	1.8	22
62	A systematic study of glycopeptide esterification for the semiâ€quantitative determination of sialylation in antibodies. Rapid Communications in Mass Spectrometry, 2015, 29, 1817-1826.	0.7	22
63	The effect of fatty acids on hybridoma cell growth and antibody productivity in serum-free cultures. Journal of Biotechnology, 1995, 39, 165-173.	1.9	21
64	The effect of alternative carbohydrates on the growth and antibody production of a murine hybridoma. Applied Biochemistry and Biotechnology, 1996, 59, 93-104.	1.4	21
65	Preparative separation of monoclonal antibody aggregates by cation-exchange laterally-fed membrane chromatography. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2017, 1055-1056, 158-164.	1.2	20
66	Monitoring Cell Growth, Viability, and Apoptosis. Methods in Molecular Biology, 2014, 1104, 169-192.	0.4	19
67	Quantitative Model for Ion Transport and Cytoplasm Conductivity of Chinese Hamster Ovary Cells. Scientific Reports, 2018, 8, 17818.	1.6	19
68	Purification of chimeric heavy chain monoclonal antibody EG2â€hFc using hydrophobic interaction membrane chromatography: An alternative to proteinâ€A affinity chromatography. Biotechnology and Bioengineering, 2014, 111, 1139-1149.	1.7	18
69	Components of yeast (Sacchromyces cervisiae) extract as defined media additives that support the growth and productivity of CHO cells. Journal of Biotechnology, 2016, 233, 129-142.	1.9	18
70	Improved therapeutic efficacy of mammalian expressed-recombinant interferon gamma against ovarian cancer cells. Experimental Cell Research, 2017, 359, 20-29.	1.2	18
71	Isolation and quantification of N-glycans from immunoglobulin G antibodies for quantitative glycosylation analysis. Journal of Biological Methods, 2015, 2, e19.	1.0	18
72	Progression of change in membrane capacitance and cytoplasm conductivity of cells during controlled starvation using dual-frequency DEP cytometry. Analytica Chimica Acta, 2019, 1059, 59-67.	2.6	16

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73	Linoleic acid improves the robustness of cells in agitated cultures. Cytotechnology, 1999, 30, 27-36.	0.7	15
74	Solidâ€Phase Enzymatic Remodeling Produces High Yields of Single Glycoform Antibodies. Biotechnology Journal, 2018, 13, e1700381.	1.8	15
75	The relationship between intracellular UDP-N-acetyl hexosamine nucleotide pool and monoclonal antibody production in a mouse hybridoma. Journal of Biotechnology, 1998, 60, 67-80.	1.9	14
76	Measurement of hydrophobic interactions of mammalian cells grown in culture. Journal of Biotechnology, 2002, 95, 39-48.	1.9	14
77	Glycanâ€masking hemagglutinin antigens from stable CHO cell clones for H5N1 avian influenza vaccine development. Biotechnology and Bioengineering, 2019, 116, 598-609.	1.7	14
78	Effects of cysteine, asparagine, or glutamine limitations in Chinese hamster ovary cell batch and fedâ€batch cultures. Biotechnology Progress, 2020, 36, e2946.	1.3	14
79	High Genetic Stability of Dengue Virus Propagated in MRC-5 Cells as Compared to the Virus Propagated in Vero Cells. PLoS ONE, 2008, 3, e1810.	1.1	14
80	Cell Counting and Viability Measurements. Methods in Biotechnology, 2007, , 205-222.	0.2	13
81	Dielectric Properties of Single Cells Subjected to Heat Shock Using DEP Cytometry. IEEE Transactions on Microwave Theory and Techniques, 2018, 66, 5933-5940.	2.9	13
82	Single cell dielectrophoresis study of apoptosis progression induced by controlled starvation. Bioelectrochemistry, 2018, 124, 73-79.	2.4	13
83	An integrated approach to analyze EG2-hFc monoclonal antibody N-glycosylation by MALDI-MS. Canadian Journal of Chemistry, 2015, 93, 754-763.	0.6	12
84	CMOS single cell dielectrophoresis cytometer. Sensors and Actuators B: Chemical, 2017, 249, 246-255.	4.0	12
85	Serum and Protein Free Media. Cell Engineering, 2015, , 223-236.	0.4	11
86	A low redox potential affects monoclonal antibody assembly and glycosylation in cell culture. Journal of Biotechnology, 2017, 246, 71-80.	1.9	11
87	Inhibition of glycosylation on a camelid antibody uniquely affects its FcÎ³RI binding activity. European Journal of Pharmaceutical Sciences, 2017, 96, 428-439.	1.9	11
88	A semi-empirical glycosylation model of a camelid monoclonal antibody under hypothermia cell culture conditions. Journal of Industrial Microbiology and Biotechnology, 2017, 44, 1005-1020.	1.4	10
89	THE EFFECT OF METABOLIC BY-PRODUCTS ON ANIMAL CELLS IN CULTURE. , 1991, , 226-228.		9
90	Using recombinant DNA technology for the development of live-attenuated dengue vaccines. Enzyme and Microbial Technology, 2012, 51, 67-72.	1.6	8

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91	The role of protein hydrolysates in prolonging viability and enhancing antibody production of CHO cells. Applied Microbiology and Biotechnology, 2021, 105, 3115-3129.	1.7	8
92	High-throughput and high-sensitivity N-Glycan profiling: A platform for biopharmaceutical development and disease biomarker discovery. Analytical Biochemistry, 2021, 623, 114205.	1.1	8
93	Serum-free media: standardizing cell culture system. Pharmaceutical Bioprocessing, 2013, 1, 315-318.	0.8	7
94	Cytoplasmic conductivity as a marker for bioprocess monitoring: Study of Chinese hamster ovary cells under nutrient deprivation and reintroduction. Biotechnology and Bioengineering, 2019, 116, 2896-2905.	1.7	7
95	Comparison of two glycoengineering strategies to control the fucosylation of a monoclonal antibody. Journal of Biotechnology, 2020, 324, 100015.	1.9	7
96	Strategic feeding of NS0 and CHO cell cultures to control glycan profiles and immunogenic epitopes of monoclonal antibodies. Journal of Biotechnology, 2021, 333, 49-62.	1.9	7
97	Effect of Culture Conditions on Glycosylation of Recombinant beta-Interferon in CHO Cells. , 2007, , 71-85.		7
98	HDX-MS and MD Simulations Provide Evidence for Stabilization of the IgG1â€”FcÎ³RIa (CD64a) Immune Complex Through Intermolecular Glycoprotein Bonds. Journal of Molecular Biology, 2022, 434, 167391.	2.0	7
99	Construction of an InstantPC-derivatized glycan glucose unit database: A foundation work for high-throughput and high-sensitivity glycomic analysis. Glycobiology, 2022, 32, 289-303.	1.3	7
100	The inhibitory effect of glutamate on the growth of a murine hybridoma is caused by competitive inhibition of the x(-) (C) transport system required for cystine utilization. , 2000, 32, 31-43.		6
101	The Role of Glycosylation in Therapeutic Antibodies. Cell Engineering, 2011, , 251-292.	0.4	6
102	Glycosylation in Cell Culture. Cell Engineering, 2015, , 237-258.	0.4	6
103	Parallel singleâ€cell optical transit dielectrophoresis cytometer. Electrophoresis, 2020, 41, 720-728.	1.3	6
104	Full Beta-Dispersion Region Dielectric Spectra and Dielectric Models of Viable and Non-Viable CHO Cells. IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology, 2021, 5, 70-77.	2.3	6
105	Electroporation and dielectrophoresis of single cells using a microfluidic system employing a microwave interferometric sensor. , 2013, , .		5
106	Glycosylation analysis of Chinese hamster ovary produced glycoproteins. Pharmaceutical Bioprocessing, 2014, 2, 449-468.	0.8	5
107	A compact microwave frequency reflectometer with attoFarad sensitivity: A path towards an integrated dielectrophoresis cytometer. Sensors and Actuators A: Physical, 2015, 232, 132-140.	2.0	5
108	Mass spectrometric analysis of products of metabolic glycan engineering with azido-modification of sialic acids. Analytical and Bioanalytical Chemistry, 2015, 407, 8945-8958.	1.9	5

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109	Change in the dielectric response of single cells induced by nutrient deprivation over a wide frequency range. , 2017, , .		5
110	Modulating antibodyâ€dependent cellular cytotoxicity of epidermal growth factor receptorâ€specific heavyâ€chain antibodies through hinge engineering. Immunology and Cell Biology, 2019, 97, 526-537.	1.0	5
111	Multi-frequency DEP cytometer employing a microwave interferometer for the dielectric analysis of micro-particles. , 2015, , .		4
112	Recombinant hemagglutinin proteins formulated in a novel PELC/CpG adjuvant for H7N9 subunit vaccine development. Antiviral Research, 2017, 146, 213-220.	1.9	4
113	Mass spectrometric analysis of core fucosylation and sequence variation in a humanâ€“camelid monoclonal antibody. Molecular Omics, 2020, 16, 221-230.	1.4	4
114	Specific activities of glycosyltransferase enzymes vary with monoclonal antibody productivity in murine hybridomas. Biotechnology Letters, 1993, 15, 553-558.	1.1	3
115	In-flow dielectric characterization of single biological cells using a wideband DEP cytometer. , 2016, , .		3
116	Microwave Near-Field Detection of Single Biological Cells and Nanoparticles. , 2018, , .		3
117	Purification of rabies virus glycoprotein produced in <scp>Drosophila melanogaster S2</scp> cells: An efficient immunoaffinity method. Biotechnology Progress, 2020, 36, e3046.	1.3	3
118	Evaluation of Quenching and Extraction Methods for Nucleotide/Nucleotide Sugar Analysis. Methods in Molecular Biology, 2015, 1321, 361-372.	0.4	3
119	The effect of the catalytic topoisomerase II inhibitor dexrazoxane (ICRF-187) on CC9C10 hybridoma viability and productivity. Cytotechnology, 2001, 37, 107-117.	0.7	2
120	Microfluidic device for simultaneous pulsed electric field electroporation and dielectrophoresis studies of single biological cells. , 2013, , .		2
121	Production of IgGs with a human-like sialylation in CHO cells. BMC Proceedings, 2015, 9, .	1.8	2
122	DEP Measurement of the Dielectric Properties of Single CHO Cells Under Thermal Stress. , 2018, , .		2
123	Cell Free Remodeling of Glycosylation of Antibodies. Methods in Molecular Biology, 2022, 2370, 117-146.	0.4	2
124	Semi-automated detection of single cell signatures from a dielectrophoretic cytometer. , 2013, , .		1
125	Two-frequency dielectrophoresis analysis of viable/non-viable single CHO cells employing a microwave cytometer. , 2016, , .		1
126	Dataset from HDX-MS Studies of IgG1 Glycoforms and Their Interactions with the FcÎ³RIa (CD64) Receptor. Journal of Research of the National Institute of Standards and Technology, 2021, 126, .	0.4	1

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127	5.1 Physiology and Metabolism of Animal Cells for Production. , 2014, , 301-325.		0
128	Dielectrophoresis study of electroporation effects on Chinese hamster ovary cells. , 2014, , .		0
129	The differential polarizability of CHO cells can be used to monitor changes in metabolism. BMC Proceedings, 2015, 9, P47.	1.8	0