Alessandro ButtÃ©

List of Publications by Year
in descending order

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62 papers	2,069 citations	218677 26 h-index	265206 42 g-index
67 all docs	67 docs citations	67 times ranked	1381 citing authors

#	Article	IF	Citations
1	Miniemulsion Living Free Radical Polymerization by RAFT. Macromolecules, 2001, 34, 5885-5896.	4.8	164
2	Bioprocessing in the Digital Age: The Role of Process Models. Biotechnology Journal, 2020, 15, e1900172.	3.5	147
3	Miniemulsion Living Free Radical Polymerization of Styrene. Macromolecules, 2000, 33, 3485-3487.	4.8	100
4	Machine Learning for Biologics: Opportunities for Protein Engineering, Developability, and Formulation. Trends in Pharmacological Sciences, 2021, 42, 151-165.	8.7	94
5	A new generation of predictive models: The added value of hybrid models for manufacturing processes of therapeutic proteins. Biotechnology and Bioengineering, 2019, 116, 2540-2549.	3.3	82
6	Processâ€wide control and automation of an integrated continuous manufacturing platform for antibodies. Biotechnology and Bioengineering, 2020, 117, 1367-1380.	3.3	73
7	Gel effect in the bulk reversible addition-fragmentation chain transfer polymerization of methyl methacrylate: Modeling and experiments. Journal of Polymer Science Part A, 2006, 44, 1071-1085.	2.3	68
8	Kinetics of â€œlivingâ€•free radical polymerization. Chemical Engineering Science, 1999, 54, 3225-3231.	3.8	57
9	Enhanced process understanding and multivariate prediction of the relationship between cell culture process and monoclonal antibody quality. Biotechnology Progress, 2017, 33, 1368-1380.	2.6	54
10	Role of the ligand density in cation exchange materials for the purification of proteins. Journal of Chromatography A, 2010, 1217, 2216-2225.	3.7	49
11	End-to-End Self-Assembly of RADA 16-I Nanofibrils in Aqueous Solutions. Biophysical Journal, 2012, 102, 1617-1626.	0.5	48
12	Hybridâ€EKF: Hybrid model coupled with extended Kalman filter for realâ€time monitoring and control of mammalian cell culture. Biotechnology and Bioengineering, 2020, 117, 2703-2714.	3.3	48
13	Sequential Multivariate Cell Culture Modeling at Multiple Scales Supports Systematic Shaping of a Monoclonal Antibody Toward a Quality Target. Biotechnology Journal, 2018, 13, e1700461.	3.5	47
14	Evaluation of the Chain Length Distribution in Free-Radical Polymerization, 2. Emulsion Polymerization. Macromolecular Theory and Simulations, 2002, 11, 37-52.	1.4	42
15	A new flow cell and chemometric protocol for implementing inâ€line Raman spectroscopy in chromatography. Biotechnology Progress, 2019, 35, e2847.	2.6	42
16	Evaluation of the Chain Length Distribution in Free-Radical Polymerization, 1. Bulk Polymerization. Macromolecular Theory and Simulations, 2002, 11, 22-36.	1.4	41
17	Hybrid Models for the simulation and prediction of chromatographic processes for protein capture. Journal of Chromatography A, 2021, 1650, 462248.	3.7	40
18	Chromatographic behavior of a polyclonal antibody mixture on a strong cation exchanger column. Part I: Adsorption characterization. Journal of Chromatography A, 2008, 1214, 59-70.	3.7	39

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19	Production of Polymeric Materials with Controlled Pore Structure: the â€œReactive Gelationâ€•Process. Macromolecular Materials and Engineering, 2005, 290, 221-229.	3.6	38
20	Fingerprint detection and process prediction by multivariate analysis of fedâ€batch monoclonal antibody cell culture data. Biotechnology Progress, 2015, 31, 1633-1644.	2.6	37
21	Calculation of molecular weight distributions in free-radical polymerization with chain branching. Macromolecular Theory and Simulations, 1999, 8, 498-512.	1.4	36
22	Chromatographic behavior of a polyclonal antibody mixture on a strong cation exchanger column. Part II: Adsorption modelling. Journal of Chromatography A, 2008, 1214, 71-80.	3.7	36
23	Parallel experimental design and multivariate analysis provides efficient screening of cell culture media supplements to improve biosimilar product quality. Biotechnology and Bioengineering, 2017, 114, 1448-1458.	3.3	36
24	Adsorption of monoclonal antibody variants on analytical cation-exchange resin. Journal of Chromatography A, 2007, 1154, 121-131.	3.7	35
25	NF in organic solvent/water mixtures: Role of preferential solvation. Journal of Membrane Science, 2013, 444, 101-115.	8.2	35
26	Robust factor selection in early cell culture process development for the production of a biosimilar monoclonal antibody. Biotechnology Progress, 2017, 33, 181-191.	2.6	33
27	Decision Treeâ€PLS (DTâ€PLS) algorithm for the development of process: Specific local prediction models. Biotechnology Progress, 2019, 35, e2818.	2.6	29
28	Hybrid Models Based on Machine Learning and an Increasing Degree of Process Knowledge: Application to Capture Chromatographic Step. Industrial & Engineering Chemistry Research, 2021, 60, 10466-10478.	3.7	29
29	Model-based design space determination of peptide chromatographic purification processes. Journal of Chromatography A, 2013, 1284, 80-87.	3.7	27
30	Combining Mechanistic Modeling and Raman Spectroscopy for Monitoring Antibody Chromatographic Purification. Processes, 2019, 7, 683.	2.8	27
31	Kinetic model of reversible addition fragmentation chain transfer polymerization of styrene in seeded emulsion. Journal of Polymer Science Part A, 2006, 44, 6114-6135.	2.3	25
32	Behavior of human serum albumin on strong cation exchange resins: I. Experimental analysis. Journal of Chromatography A, 2010, 1217, 5484-5491.	3.7	25
33	Design of Biopharmaceutical Formulations Accelerated by Machine Learning. Molecular Pharmaceutics, 2021, 18, 3843-3853.	4.6	25
34	Hybrid modeling â€” a key enabler towards realizing digital twins in biopharma?. Current Opinion in Chemical Engineering, 2021, 34, 100715.	7.8	25
35	Cell culture process metabolomics together with multivariate data analysis tools opens new routes for bioprocess development and glycosylation prediction. Biotechnology Progress, 2020, 36, e3012.	2.6	23
36	Preparative weak cation-exchange chromatography of monoclonal antibody variants. Journal of Chromatography A, 2008, 1200, 156-165.	3.7	22

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37	Quality by Design for peptide nanofiltration: Fundamental understanding and process selection. Chemical Engineering Science, 2013, 101, 200-212.	3.8	21
38	Knowledge transfer across cell lines using hybrid Gaussian process models with entity embedding vectors. Biotechnology and Bioengineering, 2021, 118, 4389-4401.	3.3	19
39	Behavior of human serum albumin on strong cation exchange resins: II. Model analysis. Journal of Chromatography A, 2010, 1217, 5492-5500.	3.7	18
40	Model-based design of peptide chromatographic purification processes. Journal of Chromatography A, 2013, 1284, 69-79.	3.7	18
41	Model-based description of peptide retention on doped reversed-phase media. Journal of Chromatography A, 2015, 1407, 169-175.	3.7	17
42	A discretization method for computing chain length distributions. Macromolecular Symposia, 2004, 206, 481-494.	0.7	15
43	Modeling of Diffusion Limitations in Bulk RAFT Polymerization. Macromolecular Theory and Simulations, 2006, 15, 546-562.	1.4	14
44	Microgel Formation in Emulsion Polymerization. Macromolecular Theory and Simulations, 2007, 16, 441-457.	1.4	14
45	Purification of a modified cyclosporine A by co-current centrifugal partition chromatography: Process development and intensification. Journal of Chromatography A, 2013, 1311, 72-78.	3.7	14
46	Model based strategies towards protein A resin lifetime optimization and supervision. Journal of Chromatography A, 2020, 1625, 461261.	3.7	14
47	Hybrid Models Based on Machine Learning and an Increasing Degree of Process Knowledge: Application to Cell Culture Processes. Industrial & Engineering Chemistry Research, 2022, 61, 8658-8672.	3.7	14
48	Functional-Hybrid modeling through automated adaptive symbolic regression for interpretable mathematical expressions. Chemical Engineering Journal, 2022, 430, 133032.	12.7	13
49	Ab initio Emulsion Polymerization by RAFT (Reversible Additionâ€“Fragmentation Chain Transfer) through the Addition of Cyclodextrins. Helvetica Chimica Acta, 2006, 89, 1641-1659.	1.6	12
50	Parametric Analysis of the Intermediate Concentration in a RAFT Polymerization and its Influence upon the Polymerization Kinetics. Macromolecular Theory and Simulations, 2006, 15, 285-302.	1.4	11
51	Swelling Deswelling Behavior of PSâ€PNIPAAM Copolymer Particles and PNIPAAM Brushes Grafted from Polystyrene Particles & Monoliths. Macromolecular Materials and Engineering, 2008, 293, 491-502.	3.6	11
52	Modeling of ion-pairing effect in peptide reversed-phase chromatography. Journal of Chromatography A, 2012, 1249, 92-102.	3.7	11
53	Doping reversed-phase media for improved peptide purification. Journal of Chromatography A, 2015, 1397, 11-18.	3.7	10
54	Modeling and inferential control of the batch acetylation of cellulose. AICHE Journal, 2006, 52, 2149-2160.	3.6	8

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55	Modeling of the Chromatographic Solvent Gradient Reversed Phase Purification of a Multicomponent Polypeptide Mixture. Separation Science and Technology, 2008, 43, 1310-1337.	2.5	8
56	Shock formation in binary systems with nonlinear characteristic curves. Chemical Engineering Science, 2008, 63, 4159-4170.	3.8	7
57	Two novel solvent system compositions for protected synthetic peptide purification by centrifugal partition chromatography. Journal of Chromatography A, 2014, 1337, 155-161.	3.7	7
58	PNIPAAM Grafted Polymeric Monoliths Synthesized by the Reactive Gelation Process and their Swelling/Deswelling Characteristics. Macromolecular Reaction Engineering, 2008, 2, 215-221.	1.5	6
59	Emulsion polymerization: radical segregation and its role in controlled polymerization. Macromolecular Symposia, 2002, 182, 181-194.	0.7	3
60	RAFT Polymerization in Bulk and Emulsion. Macromolecular Symposia, 2007, 248, 168-181.	0.7	3
61	Novel Anisotropic Porous Materials through Self-Assembly of Super-Paramagnetic Particles. Chimia, 2009, 63, 78.	0.6	1
62	RAFT Polymerization in Bulk and Emulsion. , 0, , 168-181.		0