Alessandro ButtÃ©

List of Publications by Year
in descending order

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	Functional-Hybrid modeling through automated adaptive symbolic regression for interpretable mathematical expressions. Chemical Engineering Journal, 2022, 430, 133032.	12.7	13
2	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
3	Machine Learning for Biologics: Opportunities for Protein Engineering, Developability, and Formulation. Trends in Pharmacological Sciences, 2021, 42, 151-165.	8.7	94
4	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
5	Knowledge transfer across cell lines using hybrid Gaussian process models with entity embedding vectors. Biotechnology and Bioengineering, 2021, 118, 4389-4401.	3.3	19
6	Hybrid Models for the simulation and prediction of chromatographic processes for protein capture. Journal of Chromatography A, 2021, 1650, 462248.	3.7	40
7	Design of Biopharmaceutical Formulations Accelerated by Machine Learning. Molecular Pharmaceutics, 2021, 18, 3843-3853.	4.6	25
8	Hybrid modeling â€" a key enabler towards realizing digital twins in biopharma?. Current Opinion in Chemical Engineering, 2021, 34, 100715.	7.8	25
9	Bioprocessing in the Digital Age: The Role of Process Models. Biotechnology Journal, 2020, 15, e1900172.	3.5	147
10	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
11	Model based strategies towards protein A resin lifetime optimization and supervision. Journal of Chromatography A, 2020, 1625, 461261.	3.7	14
12	Processâ€wide control and automation of an integrated continuous manufacturing platform for antibodies. Biotechnology and Bioengineering, 2020, 117, 1367-1380.	3.3	73
13	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
14	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
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	Decision Treeâ€PLS (DTâ€PLS) algorithm for the development of process: Specific local prediction models. Biotechnology Progress, 2019, 35, e2818.	2.6	29
17	Combining Mechanistic Modeling and Raman Spectroscopy for Monitoring Antibody Chromatographic Purification. Processes, 2019, 7, 683.	2.8	27
18	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

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19	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
20	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
21	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
22	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
23	Model-based description of peptide retention on doped reversed-phase media. Journal of Chromatography A, 2015, 1407, 169-175.	3.7	17
24	Doping reversed-phase media for improved peptide purification. Journal of Chromatography A, 2015, 1397, 11-18.	3.7	10
25	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
26	Quality by Design for peptide nanofiltration: Fundamental understanding and process selection. Chemical Engineering Science, 2013, 101, 200-212.	3.8	21
27	Model-based design space determination of peptide chromatographic purification processes. Journal of Chromatography A, 2013, 1284, 80-87.	3.7	27
28	NF in organic solvent/water mixtures: Role of preferential solvation. Journal of Membrane Science, 2013, 444, 101-115.	8.2	35
29	Model-based design of peptide chromatographic purification processes. Journal of Chromatography A, 2013, 1284, 69-79.	3.7	18
30	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
31	Modeling of ion-pairing effect in peptide reversed-phase chromatography. Journal of Chromatography A, 2012, 1249, 92-102.	3.7	11
32	End-to-End Self-Assembly of RADA 16-I Nanofibrils in Aqueous Solutions. Biophysical Journal, 2012, 102, 1617-1626.	0.5	48
33	Behavior of human serum albumin on strong cation exchange resins: II. Model analysis. Journal of Chromatography A, 2010, 1217, 5492-5500.	3.7	18
34	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
35	Behavior of human serum albumin on strong cation exchange resins: I. Experimental analysis. Journal of Chromatography A, 2010, 1217, 5484-5491.	3.7	25
36	Novel Anisotropic Porous Materials through Self-Assembly of Super-Paramagnetic Particles. Chimia, 2009, 63, 78.	0.6	1

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37	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
38	Preparative weak cation-exchange chromatography of monoclonal antibody variants. Journal of Chromatography A, 2008, 1200, 156-165.	3.7	22
39	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
40	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
41	Shock formation in binary systems with nonlinear characteristic curves. Chemical Engineering Science, 2008, 63, 4159-4170.	3.8	7
42	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
43	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
44	RAFT Polymerization in Bulk and Emulsion. Macromolecular Symposia, 2007, 248, 168-181.	0.7	3
45	Microgel Formation in Emulsion Polymerization. Macromolecular Theory and Simulations, 2007, 16, 441-457.	1.4	14
46	Adsorption of monoclonal antibody variants on analytical cation-exchange resin. Journal of Chromatography A, 2007, 1154, 121-131.	3.7	35
47	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
48	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
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	Modeling of Diffusion Limitations in Bulk RAFT Polymerization. Macromolecular Theory and Simulations, 2006, 15, 546-562.	1.4	14
52	Modeling and inferential control of the batch acetylation of cellulose. AIChE Journal, 2006, 52, 2149-2160.	3.6	8
53	Production of Polymeric Materials with Controlled Pore Structure: the â€œReactive Gelationâ€•Process. Macromolecular Materials and Engineering, 2005, 290, 221-229.	3.6	38
54	A discretization method for computing chain length distributions. Macromolecular Symposia, 2004, 206, 481-494.	0.7	15

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55	Emulsion polymerization: radical segregation and its role in controlled polymerization. Macromolecular Symposia, 2002, 182, 181-194.	0.7	3
56	Evaluation of the Chain Length Distribution in Free-Radical Polymerization, 1. Bulk Polymerization. Macromolecular Theory and Simulations, 2002, 11, 22-36.	1.4	41
57	Evaluation of the Chain Length Distribution in Free-Radical Polymerization, 2. Emulsion Polymerization. Macromolecular Theory and Simulations, 2002, 11, 37-52.	1.4	42
58	Miniemulsion Living Free Radical Polymerization by RAFT. Macromolecules, 2001, 34, 5885-5896.	4.8	164
59	Miniemulsion Living Free Radical Polymerization of Styrene. Macromolecules, 2000, 33, 3485-3487.	4.8	100
60	Kinetics of â€œlivingâ€•free radical polymerization. Chemical Engineering Science, 1999, 54, 3225-3231.	3.8	57
61	Calculation of molecular weight distributions in free-radical polymerization with chain branching. Macromolecular Theory and Simulations, 1999, 8, 498-512.	1.4	36
62	RAFT Polymerization in Bulk and Emulsion. , 0, , 168-181.		0