

Bernd Hitzmann

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134
papers

1,795
citations

23
h-index

35
g-index

147
ext. papers

2,076
ext. citations

3.7
avg. IF

4.92
L-index

#	Paper	IF	Citations
134	On-line infrared spectroscopy for bioprocess monitoring. <i>Applied Microbiology and Biotechnology</i> , 2010 , 88, 11-22	5.7	110
133	Fluorescence spectroscopy and chemometric modeling for bioprocess monitoring. <i>Sensors</i> , 2015 , 15, 10271-91	3.8	78
132	Catalytic conversion of waste biomass by hydrothermal treatment. <i>Fuel</i> , 2011 , 90, 555-562	7.1	75
131	Artificial neural network prediction of the biogas flow rate optimised with an ant colony algorithm. <i>Biosystems Engineering</i> , 2016 , 143, 68-78	4.8	60
130	Chemometric modelling with two-dimensional fluorescence data for <i>Claviceps purpurea</i> bioprocess characterization. <i>Journal of Biotechnology</i> , 2003 , 105, 179-88	3.7	57
129	In-situ imaging sensors for bioprocess monitoring: state of the art. <i>Analytical and Bioanalytical Chemistry</i> , 2010 , 398, 2429-38	4.4	54
128	Challenges in integrating biosensors and FIA for on-line monitoring and control. <i>Trends in Biotechnology</i> , 1996 , 14, 21-31	15.1	54
127	State variables monitoring by in situ multi-wavelength fluorescence spectroscopy in heterologous protein production by <i>Pichia pastoris</i> . <i>Journal of Biotechnology</i> , 2006 , 124, 412-9	3.7	47
126	Polyethyleneimine-protein interactions and implications on protein stability. <i>International Journal of Biological Macromolecules</i> , 2010 , 47, 15-20	7.9	44
125	Biosynthesis of 1,3-propanediol from glycerol with <i>Lactobacillus reuteri</i> : effect of operating variables. <i>Journal of Bioscience and Bioengineering</i> , 2014 , 118, 188-94	3.3	41
124	Between the Poles of Data-Driven and Mechanistic Modeling for Process Operation. <i>Chemie-Ingenieur-Technik</i> , 2017 , 89, 542-561	0.8	37
123	Future aspects of bioprocess monitoring. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2007 , 105, 249-93	1.7	37
122	Online monitoring of microcarrier based fibroblast cultivations with in situ microscopy. <i>Biotechnology and Bioengineering</i> , 2008 , 99, 136-45	4.9	35
121	Knowledge-based fault detection and diagnosis in flow-injection analysis. <i>Analytica Chimica Acta</i> , 1994 , 291, 29-40	6.6	32
120	Microgel particle formation in yogurt as influenced by sonication during fermentation. <i>Journal of Food Engineering</i> , 2016 , 180, 29-38	6	31
119	Assessment of the energy and exergy efficiencies of farm to fork grain cultivation and bread making processes in Turkey and Germany. <i>Energy</i> , 2015 , 93, 421-434	7.9	29
118	Sensors in disposable bioreactors status and trends. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2009 , 115, 145-69	1.7	29

117	In situ multi-wavelength fluorescence spectroscopy as effective tool to simultaneously monitor spore germination, metabolic activity and quantitative protein production in recombinant <i>Aspergillus niger</i> fed-batch cultures. <i>Journal of Biotechnology</i> , 2007 , 132, 461-8	3.7	28
116	Kalman filter based glucose control at small set points during fed-batch cultivation of <i>Saccharomyces cerevisiae</i> . <i>Biotechnology Progress</i> , 2004 , 20, 377-83	2.8	26
115	Wheat flour characterization using NIR and spectral filter based on Ant Colony Optimization. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2014 , 132, 133-140	3.8	25
114	Experimental design for optimal parameter estimation of an enzyme kinetic process based on the analysis of the Fisher information matrix. <i>Journal of Theoretical Biology</i> , 2006 , 238, 111-23	2.3	25
113	2D-fluorescence and multivariate data analysis for monitoring of sourdough fermentation process. <i>Food Control</i> , 2014 , 38, 8-18	6.2	24
112	Non-invasive lactate- and pH-monitoring in porcine meat using Raman spectroscopy and chemometrics. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2015 , 142, 197-205	3.8	24
111	Conversion of yeast by hydrothermal treatment under reducing conditions. <i>Fuel</i> , 2011 , 90, 3424-3432	7.1	23
110	On-line monitoring of galactoside conjugates and glycerol by flow injection analysis. <i>Analytica Chimica Acta</i> , 1998 , 373, 57-62	6.6	23
109	A study of the effect of the interaction between site-specific conditions, residue cover and weed control on water storage during fallow. <i>Agricultural Water Management</i> , 2008 , 95, 1028-1040	5.9	23
108	Application of a modified GA, ACO and a random search procedure to solve the production scheduling of a case study bakery. <i>Expert Systems With Applications</i> , 2014 , 41, 5882-5891	7.8	22
107	Evaluation of pH field effect transistor measurement signals by neural networks. <i>Analytica Chimica Acta</i> , 1994 , 294, 243-249	6.6	22
106	Monitoring and control of recombinant protein production. <i>Analytica Chimica Acta</i> , 1993 , 279, 3-16	6.6	22
105	On-line determination of intracellular beta-galactosidase activity in recombinant <i>Escherichia coli</i> using flow injection analysis (FIA). <i>Journal of Biotechnology</i> , 1991 , 20, 95-104	3.7	22
104	Comparison of polysialic acid production in <i>Escherichia coli</i> K1 during batch cultivation and fed-batch cultivation applying two different control strategies. <i>Journal of Biotechnology</i> , 2011 , 154, 222-237	3.7	21
103	Prediction of the biogas production using GA and ACO input features selection method for ANN model. <i>Information Processing in Agriculture</i> , 2019 , 6, 349-356	4.2	21
102	Cytokine production using membrane adsorbers: Human basic fibroblast growth factor produced by <i>Escherichia coli</i> . <i>Engineering in Life Sciences</i> , 2012 , 12, 29-38	3.4	20
101	Characterization of farinographic kneading process for different types of wheat flours using fluorescence spectroscopy and chemometrics. <i>Food Control</i> , 2016 , 66, 44-52	6.2	19
100	On-line monitoring of recombinant bacterial cultures using multi-wavelength fluorescence spectroscopy. <i>Biochemical Engineering Journal</i> , 2011 , 58-59, 133-139	4.2	19

99	Model based substrate set point control of yeast cultivation processes based on FIA measurements. <i>Analytica Chimica Acta</i> , 2008 , 623, 30-7	6.6	18
98	An expert system approach for the control of a bioprocess. I: knowledge representation and processing. <i>Biotechnology and Bioengineering</i> , 1992 , 39, 33-43	4.9	18
97	Design and characterization of a rotating bed system bioreactor for tissue engineering applications. <i>Biotechnology Progress</i> , 2008 , 24, 140-7	2.8	17
96	Comparative Studies of Glucose Catabolism by Escherichia coli Grown in a Complex Medium under Aerobic and Anaerobic Conditions. <i>Biotechnology Progress</i> , 1990 , 6, 326-332	2.8	17
95	Sonication induced particle formation in yogurt: Influence of the dry matter content on the physical properties. <i>Journal of Food Engineering</i> , 2016 , 191, 77-87	6	16
94	Rheological properties of microgel suspensions: Viscoelastic modelling of microstructural elements from casein micelles to fermented dairy products. <i>International Dairy Journal</i> , 2014 , 39, 157-166	3.5	15
93	Neural networks as a modeling tool for the evaluation and analysis of FIA signals. <i>Journal of Biotechnology</i> , 1998 , 65, 15-22	3.7	14
92	Prediction of the pH as indicator of porcine meat quality using Raman spectroscopy and metaheuristics. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2016 , 154, 45-51	3.8	14
91	In Vivo NMR Analysis of the Influence of Pyruvate Decarboxylase and Alcohol Dehydrogenase of Zymomonas mobilis on the Anaerobic Metabolism of Escherichia coli. <i>Biotechnology Progress</i> , 1991 , 7, 305-310	2.8	13
90	Supervision of Food Manufacturing Processes Using Optical Process Analyzers [An Overview]. <i>ChemBioEng Reviews</i> , 2016 , 3, 219-228	5.2	12
89	Parallel online multi-wavelength (2D) fluorescence spectroscopy in each well of a continuously shaken microtiter plate. <i>Biotechnology Journal</i> , 2016 , 11, 1605-1616	5.6	12
88	Process analytical technologies in food industry - challenges and benefits: A status report and recommendations. <i>Biotechnology Journal</i> , 2015 , 10, 1095-100	5.6	11
87	Chemometric modeling and two-dimensional fluorescence analysis of bioprocess with a new strain of Klebsiella pneumoniae to convert residual glycerol into 1,3-propanediol. <i>Journal of Industrial Microbiology and Biotechnology</i> , 2012 , 39, 701-8	4.2	11
86	Disposable Sensor Systems 2011 , 67-81		11
85	Multiple model approach to modelling of Escherichia coli fed-batch cultivation extracellular production of bacterial phytase. <i>Electronic Journal of Biotechnology</i> , 2007 , 10, 0-0	3.1	11
84	Anomaly detection during milk processing by autoencoder neural network based on near-infrared spectroscopy. <i>Journal of Food Engineering</i> , 2021 , 299, 110510	6	11
83	A novel LED-based 2D-fluorescence spectroscopy system for in-line monitoring of Chinese hamster ovary cell cultivations - Part I. <i>Engineering in Life Sciences</i> , 2019 , 19, 352-362	3.4	10
82	Downstream processing of high chain length polysialic acid using membrane adsorbers and clay minerals for application in tissue engineering. <i>Engineering in Life Sciences</i> , 2013 , 13, 140-148	3.4	10

81	Comparison of methods for wavelength combination selection from multi-wavelength fluorescence spectra for on-line monitoring of yeast cultivations. <i>Analytical and Bioanalytical Chemistry</i> , 2017 , 409, 707-717	4.4	10
80	Sensors as components of integrated analytical systems. <i>Trends in Biotechnology</i> , 1994 , 12, 42-6	15.1	10
79	A fluorescence spectroscopic approach to predict analytical, rheological and baking parameters of wheat flours using chemometrics. <i>Journal of Food Engineering</i> , 2016 , 182, 65-71	6	10
78	Fluorescence Spectroscopy for the Monitoring of Food Processes. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2017 , 161, 121-151	1.7	9
77	Artificial neural network for bioprocess monitoring based on fluorescence measurements: Training without offline measurements. <i>Engineering in Life Sciences</i> , 2017 , 17, 874-880	3.4	9
76	Chia (<i>Salvia hispanica</i> L.) as fat replacer in sweet pan breads. <i>International Journal of Food Science and Technology</i> , 2016 , 51, 1425-1432	3.8	9
75	Potential of fluorescence spectroscopy in detection of low-levels of gluten in flour: A preliminary study. <i>Food Control</i> , 2017 , 73, 401-405	6.2	9
74	In vivo regulation of glucose transporter genes at glucose concentrations between 0 and 500 mg/L in a wild type of <i>Saccharomyces cerevisiae</i> . <i>Journal of Biotechnology</i> , 2008 , 135, 161-7	3.7	9
73	Model-based calibration of a gas sensor array for on-line monitoring of ethanol concentration in <i>Saccharomyces cerevisiae</i> batch cultivation. <i>Biosystems Engineering</i> , 2020 , 198, 198-209	4.8	9
72	Estimation of the nutritional parameters of various types of wheat flours using fluorescence spectroscopy and chemometrics. <i>International Journal of Food Science and Technology</i> , 2016 , 51, 1186-1194	3.8	9
71	Application of fuzzy logic control for the dough proofing process. <i>Food and Bioprocesses Processing</i> , 2019 , 115, 36-46	4.9	8
70	Assessment of coating quality by use of dissolution kinetics. <i>Powder Technology</i> , 2015 , 286, 325-331	5.2	8
69	Influence of the heating rate and the potassium concentration of the feed solution on the hydrothermal liquefaction of used yeast and apple pomace under reducing conditions. <i>Biomass Conversion and Biorefinery</i> , 2015 , 5, 125-139	2.3	8
68	NIR pre-selection data using modified changeable size moving window partial least squares and pure spectral chemometrical modeling with ant colony optimization for wheat flour characterization. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2015 , 142, 78-86	3.8	8
67	Automatic control of bioprocesses. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2013 , 132, 35-63	1.7	8
66	On-line monitoring of relevant fluorophores of yeast cultivations due to glucose addition during the diauxic growth. <i>Process Biochemistry</i> , 2017 , 58, 51-59	4.8	7
65	When is optimal experimental design advantageous for the analysis of Michaelis-Menten kinetics?. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2009 , 99, 9-18	3.8	7
64	In-situ- und On-line-Berwachung und Regelung biotechnologischer Prozesse. <i>Chemie-Ingenieur-Technik</i> , 1993 , 65, 1447-1456	0.8	7

63	A Future Road Map for Carbon Dioxide (CO ₂) Gas Hydrate as an Emerging Technology in Food Research. <i>Food and Bioprocess Technology</i> , 2021 , 14, 1758-1762	5.1	7
62	Closed loop control system for dough fermentation based on image processing. <i>Journal of Food Process Engineering</i> , 2018 , 41, e12801	2.4	6
61	Fluorescence spectroscopy as a novel method for on-line analysis of biocatalytic C=O bond formations. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2010 , 66, 124-129		6
60	Development of a flow-through microscopic multitesting system for parallel monitoring of cell samples in biotechnological cultivation processes. <i>Journal of Biotechnology</i> , 2010 , 150, 87-93	3.7	6
59	Simultaneous calibration in flow-injection analysis using multiple-injection signals evaluated by partial least squares. <i>Analytica Chimica Acta</i> , 1998 , 363, 183-189	6.6	6
58	Prediction of baking results from farinograph measurements by using stepwise linear regression and artificial neuronal networks. <i>Journal of Cereal Science</i> , 2017 , 76, 64-68	3.8	5
57	Evaluation of the linear and non-linear prediction models optimized with metaheuristics: Application to anaerobic digestion processes. <i>Engineering in Agriculture, Environment and Food</i> , 2019 , 12, 397-403	1.7	5
56	Optical inline measurement procedures for counting and sizing cells in bioprocess technology. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2009 , 116, 125-42	1.7	5
55	Vorhersage von Bioprozessgrößen aus 2D-Fluoreszenzspektren. <i>Chemie-Ingenieur-Technik</i> , 1998 , 70, 1610-1618		5
54	Application of urease inhibitor improves protein composition and bread-baking quality of urea fertilized winter wheat. <i>Journal of Plant Nutrition and Soil Science</i> , 2020 , 183, 260-270	2.3	5
53	Transcriptome analysis. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2012 , 127, 1-25	1.7	4
52	Feed Forward/Feedback Control of Glucose Concentration During Cultivation of Escherichia Coli. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2001 , 34, 403-407		4
51	A knowledge-based system for real-time validation of calibrations and measurements. <i>Chemometrics and Intelligent Laboratory Systems</i> , 1999 , 46, 57-66	3.8	4
50	Neuronale Netze zur Auswertung von Meßsignalen der Fließinjektionsanalyse. <i>Chemie-Ingenieur-Technik</i> , 1993 , 65, 947-949	0.8	4
49	Implementation of QbD strategies in the inoculum expansion of a mAb production process. <i>Engineering in Life Sciences</i> , 2021 , 21, 196-207	3.4	4
48	Feedback control based on NADH fluorescence intensity for <i>Saccharomyces cerevisiae</i> cultivations. <i>Bioresources and Bioprocessing</i> , 2018 , 5,	5.2	4
47	Teff-Based Probiotic Functional Beverage Fermented with and. <i>Foods</i> , 2021 , 10,	4.9	4
46	Image analysis and mathematical modelling for the supervision of the dough fermentation process 2016 ,		3

45	Innovative Bioprozessanalytik [Neue Wege zum besseren Verständnis biotechnologischer Prozesse. <i>Chemie-Ingenieur-Technik</i> , 2001 , 73, 19-26	0.8	3
44	Supervisor [Ein Realzeit-Expertensystem. <i>Chemie-Ingenieur-Technik</i> , 1989 , 61, 910-911	0.8	3
43	Optische Prozessanalytoren für die Lebensmittelindustrie. <i>Chemie-Ingenieur-Technik</i> , 2016 , 88, 735-745	0.8	3
42	Volume Fraction Measurement of Soft (Dairy) Microgels by Standard Addition and Static Light Scattering. <i>Food Biophysics</i> , 2021 , 16, 237-253	3.2	3
41	Experimental investigation of CO uptake in CO hydrates formation with amino acids as kinetic promoters and its dissociation at high temperature.. <i>Scientific Reports</i> , 2022 , 12, 8359	4.9	3
40	Fluorescence Spectroscopy as a Tool for Ethanol Fermentation On-line Monitoring. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012 , 45, 940-945		2
39	Gas sensitive field-effect transistors: applications to the monitoring of biotechnological processes. <i>Analytica Chimica Acta</i> , 1998 , 373, 253-259	6.6	2
38	Technische Chemie 2002. <i>Nachrichten Aus Der Chemie</i> , 2003 , 51, 352-357	0.1	2
37	Expertensystemgestützte Überwachung komplexer Analysesysteme. <i>Chemie-Ingenieur-Technik</i> , 1993 , 65, 945-947	0.8	2
36	Optimization of No-Wait Flowshop Scheduling Problem in Bakery Production with Modified PSO, NEH and SA. <i>Processes</i> , 2021 , 9, 2044	2.9	2
35	Development of a model for the simulation of Farinograph measurements 2016 ,		2
34	Parameter and state estimation of baker's yeast cultivation with a gas sensor array and unscented Kalman filter. <i>Engineering in Life Sciences</i> , 2021 , 21, 170-180	3.4	2
33	Avoiding misleading predictions in fluorescence-based soft sensors using autoencoders. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2022 , 223, 104527	3.8	2
32	The Potential of Spectroscopic Techniques in Coffee Analysis – A Review. <i>Processes</i> , 2022 , 10, 71	2.9	2
31	The Supervision of Dough Fermentation Using Image Analysis Complemented by a Continuous Discrete Extended Kalman Filter. <i>Processes</i> , 2020 , 8, 1669	2.9	1
30	Automated sonic velocity calculation based on ultrasonic resonator measurements for on-line process monitoring. <i>Sensors and Actuators A: Physical</i> , 2013 , 198, 69-74	3.9	1
29	Ein FIA-System zur schnellen Glucosemessung bei Bioprozessen. <i>Chemie-Ingenieur-Technik</i> , 1998 , 70, 297-299	0.8	1
28	Optimierung der industriellen Tryptophanproduktion durch den Einsatz bioanalytischer Systeme. <i>Chemie-Ingenieur-Technik</i> , 2001 , 73, 524-526	0.8	1

27	Ein Expertensystem zur Modellierung, Regelung und Berwachung bioverfahrenstechnischer Prozesse. <i>Automatisierungstechnik</i> , 1998 , 46, 368-374	0.8	1
26	Ein Realzeit-Expertensystem zur Berwachung von Bioprozessen. <i>Chemie-Ingenieur-Technik</i> , 1994 , 66, 539-541	0.8	1
25	In-vivo-NMR-Spektroskopie zur Charakterisierung des Einflusses von Plasmiden auf den Glucose-Metabolismus von Escherichia coli. <i>Chemie-Ingenieur-Technik</i> , 1992 , 64, 574-575	0.8	1
24	Expertensysteme zur Automation von Bioprozessen. <i>Chemie-Ingenieur-Technik</i> , 1992 , 64, 708-714	0.8	1
23	Comparative Study of Chemical Composition, Pasting, Thermal and Functional properties of Teff (<i>Eragrostis tef</i>) Flours Grown in Ethiopia and South Africa. <i>International Journal of Food Properties</i> , 2022 , 25, 144-158	3	1
22	Comparison of various classification techniques for supervision of milk processing.. <i>Engineering in Life Sciences</i> , 2022 , 22, 279-287	3.4	1
21	The Kalman Filter for the Supervision of Cultivation Processes. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2021 , 177, 95-125	1.7	1
20	Fat-free fermented concentrated milk protein-based microgel dispersions manufactured at technical scale: Production parameters as drivers of textural properties. <i>International Dairy Journal</i> , 2021 , 105195	3.5	1
19	Establishing a novel procedure to detect deviations from standard milk processing by using online Raman spectroscopy. <i>Food Control</i> , 2022 , 131, 108442	6.2	1
18	Innovative Bioprozessanalytik – Neue Wege zum besseren Verständnis biotechnologischer Prozesse 2001 , 73, 19		1
17	Drought Stress during Anthesis Alters Grain Protein Composition and Improves Bread Quality in Field-Grown Iranian and German Wheat Genotypes. <i>Applied Sciences (Switzerland)</i> , 2021 , 11, 9782	2.6	0
16	Wasserabsorption von Getreidekernern – Vergleich verschiedener Modelle. <i>Chemie-Ingenieur-Technik</i> , 2020 , 92, 1083-1088	0.8	0
15	Optimale Versuchsplanung mittels Bootstrapping. <i>Chemie-Ingenieur-Technik</i> , 2017 , 89, 1752-1758	0.8	
14	A new mathematical model for the enzymatic kinetic resolution of racemates. <i>Journal of Mathematical Chemistry</i> , 2013 , 51, 1532-1547	2.1	
13	Erschließen von Prozesswissen für das Monitoring und die Regelung von Fermentationsprozessen. <i>TM Technisches Messen</i> , 2011 , 78, 569-578	0.7	
12	Fluorescence Techniques for Bioprocess Monitoring 2010 , 1		
11	Theoretical Model Based Evaluation of Superimposed Flow Injection Measurements. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2001 , 34, 167-170		
10	Accuracy and Reliability of Measured Data 2000 , 125-144		

- 9 Methoden zur Auswertung von Meßsignalen der Fließinjektionsanalyse. *Chemie-Ingenieur-Technik*, **1996**, 68, 570-573 0.8
- 8 Visualisierung von Prozedaten über das World Wide Web. *Chemie-Ingenieur-Technik*, **1996**, 68, 1311-1313 0.8
- 7 Bread and Other Baked Products 1-58
- 6 Bioprozessanalytik und -steuerung **2018**, 261-297
- 5 Monitoring and control of recombinant protein production **1993**, 3-16
- 4 Bioprozessanalytik und -steuerung **2011**, 263-294
- 3 Spectroscopic analysis of chia seeds. *Scientific Reports*, **2021**, 11, 9253 4.9
- 2 Herstellung und Bewertung glutenfreier Brotsorten. *Aktuelle Ernährungsmedizin Klinik Und Praxis*, **2018**, 43, 467-470 0.3
- 1 Spectroscopic-Based Prediction of Milk Foam Properties for Barista Applications. *Food and Bioprocess Technology*, 1 5.1