Gerrit van Straten

List of Publications by Year
in descending order

94 papers	2,648 citations

201674
27 h-index

206112
48 g-index

94 all docs	94 docs citations

94 times ranked

2637 citing authors

#	Article	IF	Citations
1	Sorption isotherms, GAB parameters and isosteric heat of sorption. Journal of the Science of Food and Agriculture, 2005, 85, 1805-1814.	3.5	246
2	Design scenarios for flat panel photobioreactors. Applied Energy, 2011, 88, 3342-3353.	10.1	155
3	An evolutionary strategy for fed-batch bioreactor optimization; concepts and performance. Journal of Biotechnology, 1999, 67, 173-187.	3.8	128
4	A vision based row detection system for sugar beet. Computers and Electronics in Agriculture, 2008, 60, 87-95.	7.7	123
5	Scenario analysis of large scale algae production in tubular photobioreactors. Applied Energy, 2013, 105, 395-406.	10.1	99
6	Efficient Differential Evolution algorithms for multimodal optimal control problems. Applied Soft Computing Journal, 2003, 3, 97-122.	7.2	97
7	Scenario evaluation of open pond microalgae production. Algal Research, 2013, 2, 358-368.	4.6	95
8	Autonomous navigation using a robot platform in a sugar beet field. Biosystems Engineering, 2011, 109, 357-368.	4.3	81
9	On-line detection of toxic components using a microbial fuel cell-based biosensor. Journal of Process Control, 2012, 22, 1755-1761.	3.3	74
10	Uncertainty and arbitrariness in ecosystems modelling: A lake modelling example. Ecological Modelling, 1981, 13, 87-110.	2.5	72
11	Towards user accepted optimal control of greenhouse climate. Computers and Electronics in Agriculture, 2000, 26, 221-238.	7.7	70
12	Quality prediction of bakery products in the initial phase of process design. Innovative Food Science and Emerging Technologies, 2007, 8, 285-298.	5.6	65
13	Darcian permeability constant as indicator for shear stresses in regular scaffold systems for tissue engineering. Biomechanics and Modeling in Mechanobiology, 2009, 8, 499-507.	2.8	61
14	Kinetic models for detection of toxicity in a microbial fuel cell based biosensor. Biosensors and Bioelectronics, 2011, 26, 3115-3120.	10.1	56
15	Constant specific growth rate in fed-batch cultivation of Bordetella pertussis using adaptive control. Journal of Biotechnology, 2006, 125, 252-268.	3.8	48
16	Decision support for dynamic greenhouse climate control strategies. Computers and Electronics in Agriculture, 2008, 60, 18-30.	7.7	47
17	Process Integration for Food Drying with Air Dehumidified by Zeolites. Drying Technology, 2007, 25, 225-239.	3.1	44
18	Towards an adaptive model for greenhouse control. Computers and Electronics in Agriculture, 2009, 67, 1-8.	7.7	44

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19	ISE and Chemfet sensors in greenhouse cultivation. Sensors and Actuators B: Chemical, 2005, 105, 74-80.	7.8	39
20	Multistage Zeolite Drying for Energy-Efficient Drying. Drying Technology, 2007, 25, 1053-1067.	3.1	36
21	An improved experimental and regression methodology for sorption isotherms. Journal of the Science of Food and Agriculture, 2005, 85, 175-185.	3.5	35
22	Effect of Toxic Components on Microbial Fuel Cell-Polarization Curves and Estimation of the Type of Toxic Inhibition. Biosensors, 2012, 2, 255-268.	4.7	35
23	A path following algorithm for mobile robots. Autonomous Robots, 2010, 29, 85-97.	4.8	33
24	Optimal control of nitrate in lettuce by a hybrid approach: differential evolution and adjustable control weight gradient algorithms. Computers and Electronics in Agriculture, 2003, 40, 179-197.	7.7	31
25	Product quality driven design of bakery operations using dynamic optimization. Journal of Food Engineering, 2008, 86, 399-413.	5.2	31
26	Anomalies in moisture transport during broccoli drying monitored by MRI?. Faraday Discussions, 2012, 158, 65.	3.2	30
27	Control vector parameterization with sensitivity based refinement applied to baking optimization. Food and Bioproducts Processing, 2008, 86, 130-141.	3.6	29
28	Robust optimal receding horizon control of the thermal sterilization of canned foods. Journal of Food Engineering, 1999, 40, 207-218.	5.2	28
29	Sensitivity Analysis of a Dynamic Growth Model of Lettuce. Biosystems Engineering, 1994, 59, 19-31.	0.4	27
30	Comparison of optimization methods for fed-batch cultures of hybridoma cells. Bioprocess and Biosystems Engineering, 1997, 17, 99.	0.5	27
31	An improved methodology to evaluate crop salt tolerance from field trials. Agricultural Water Management, 2019, 213, 375-387.	5.6	27
32	EXPERIMENTAL RESULTS OF RECEDING HORIZON OPTIMAL CONTROL OF GREENHOUSE CLIMATE. Acta Horticulturae, 1996, , 229-238.	0.2	26
33	Assessment of near infrared and â€œsoftware sensorâ€•for biomass monitoring and control. Chemometrics and Intelligent Laboratory Systems, 2008, 94, 166-174.	3.5	25
34	Analysis of endogenous process behavior in activated sludge. , 1998, 57, 155-163.		24
35	A recursively identified model for short-term predictions of NH4/NO3 â€" concentrations in alternating activated sludge processes. Journal of Process Control, 1999, 9, 87-100.	3.3	24
36	Moisture Sorption Isotherms of Broccoli Interpreted with the Flory-Huggins Free Volume Theory. Food Biophysics, 2014, 9, 1-9.	3.0	24

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37	MULTIâ€OBJECTIVE OPTIMIZATION TO IMPROVE THE PRODUCT RANGE OF BAKING SYSTEMS. Journal of Food Process Engineering, 2009, 32, 709-729.	2.9	22
38	Improving Adsorption Dryer Energy Efficiency by Simultaneous Optimization and Heat Integration. Drying Technology, 2011, 29, 1459-1471.	3.1	20
39	The sesquiterpene Î±-copaene is induced in tomato leaves infected byBotrytis cinerea. Journal of Plant Interactions, 2005, 1, 163-170.	2.1	19
40	Assessment of a Two-Stage Zeolite Dryer for Energy-Efficient Drying. Drying Technology, 2009, 27, 1205-1216.	3.1	19
41	Logistic analysis of algae cultivation. Bioresource Technology, 2015, 179, 314-322.	9.6	19
42	Identification and simulated control of greenhouse closed water supply systems. Computers and Electronics in Agriculture, 2000, 26, 361-374.	7.7	18
43	Oxygen transfer rate estimation in oxidation ditches from clean water measurements. Water Research, 2001, 35, 2058-2064.	11.3	18
44	Sensitivity analysis in oxidation ditch modelling: the effect of variations in stoichiometric, kinetic and operating parameters on the performance indices. Journal of Chemical Technology and Biotechnology, 2001, 76, 430-438.	3.2	17
45	Online automatic tuning and control for fed-batch cultivation. Bioprocess and Biosystems Engineering, 2008, 31, 453-467.	3.4	16
46	Methodic design of a measurement and control system for climate control in horticulture. Computers and Electronics in Agriculture, 2008, 64, 162-172.	7.7	16
47	Energy Efficiency of Multi-Stage Adsorption Drying for Low-Temperature Drying. Drying Technology, 2009, 27, 555-564.	3.1	16
48	Acceptance of optimal operation and control methods for greenhouse cultivation. Annual Reviews in Control, 1999, 23, 83-90.	7.9	16
49	Computational Fluid Dynamics for Multistage Adsorption Dryer Design. Drying Technology, 2008, 26, 487-502.	3.1	15
50	Estimation of BODst, respiration rate and kinetics of activated sludge. Water Research, 1997, 31, 2278-2286.	11.3	14
51	Low Temperature Drying With Air Dehumidified by Zeolite for Food Products: Energy Efficiency Aspect Analysis. International Journal of Food Engineering, 2011, 7, .	1.5	14
52	HYDRION-LINE, TOWARDS A CLOSED SYSTEM FOR WATER AND NUTRIENTS: FEEDBACK CONTROL OF WATER AND NUTRIENTS IN THE DRAIN. Acta Horticulturae, 2005, , 259-266.	0.2	14
53	Physics-based model for a water-saving greenhouse. Biosystems Engineering, 2010, 105, 149-159.	4.3	13
54	Control of fluid bed tea dryers: controller performance under varying operating conditions. Computers and Electronics in Agriculture, 2000, 29, 217-231.	7.7	12

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55	RECEDING HORIZON OPTIMAL CONTROL OF A SOLAR GREENHOUSE. Acta Horticulturae, 2005, , 797-806.	0.2	12
56	Observer design and tuning for biomass growth and kLa using online and offline measurements. Journal of Process Control, 2008, 18, 621-631.	3.3	12
57	Modeling and analysis of the dynamic behavior of the XlnR regulon in Aspergillus niger. BMC Systems Biology, 2011, 5, S14.	3.0	11
58	Dealing with bio- and ecological complexity: Challenges and opportunities. Annual Reviews in Control, 2006, 30, 91-101.	7.9	10
59	Model—Based Energy Efficiency Optimization of a Low—Temperature Adsorption Dryer. Chemical Engineering and Technology, 2011, 34, 1723-1732.	1.5	10
60	A Mixed Integer Formulation for Energy-efficient Multistage Adsorption Dryer Design. Drying Technology, 2012, 30, 873-883.	3.1	10
61	CALIBRATION AND SENSITIVITY ANALYSIS OF A DYNAMIC MODEL FOR CONTROL OF NITRATE IN LETTUCE. Acta Horticulturae, 1999, , 149-156.	0.2	9
62	A modelling and control structure for product quality control in climate-controlled processing of agro-material. Control Engineering Practice, 2002, 10, 533-548.	5.5	9
63	Forward and backward uncertainty propagation: an oxidation ditch modelling example. Water Research, 2003, 37, 429-435.	11.3	9
64	Benchmarking procedure for full-scale activated sludge plants. Control Engineering Practice, 2004, 12, 315-322.	5.5	9
65	Direct product quality control for energy efficient climate controlled transport of agro-material. Journal of Process Control, 2005, 15, 235-246.	3.3	9
66	Estimating cultivar-specific salt tolerance model parameters from multi-annual field tests for identification of salt tolerant potato cultivars. Agricultural Water Management, 2021, 252, 106902.	5.6	9
67	Test of ACW-gradient optimisation algorithm in computation of an optimal control policy for achieving acceptable nitrate concentration of greenhouse lettuce. Mathematics and Computers in Simulation, 2004, 65, 117-126.	4.4	8
68	Synergistic Process Design: Reducing Drying Energy Consumption by Optimal Adsorbent Selection. Industrial & Engineering Chemistry Research, 2013, 52, 6201-6210.	3.7	8
69	Estimation of uncertainties in the performance indices of an oxidation ditch benchmark. Journal of Chemical Technology and Biotechnology, 2002, 77, 1058-1067.	3.2	7
70	Field robot event, Wageningen, 5—6 June 2003. Computers and Electronics in Agriculture, 2004, 42, 51-58.	7.7	7
71	On the controllability and energy sensitivity of heat-integrated desiccant adsorption dryers. Chemical Engineering Science, 2012, 80, 134-147.	3.8	7
72	WATERGY, TOWARDS A CLOSED GREENHOUSE IN SEMI-ARID REGIONS - EXPERIMENT WITH A HEAT EXCHANGER. Acta Horticulturae, 2005, , 845-852.	0.2	6

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73	Optimisation of product quality and minimisation of its variation in climate controlled operations. Computers and Electronics in Agriculture, 2005, 48, 103-122.	7.7	6
74	Distributed mathematical model supporting design and construction of solar collectors for drying. Drying Technology, 2017, 35, 1675-1687.	3.1	6
75	WATERGY: INFRASTRUCTURE FOR PROCESS CONTROL IN A CLOSED GREENHOUSE IN SEMI-ARID REGIONS. Acta Horticulturae, 2005, , 821-828.	0.2	6
76	Improving dryer energy efficiency and controllability simultaneously by process modification. Computers and Chemical Engineering, 2013, 59, 138-144.	3.8	5
77	l1-norm optimal control of N-removal in an activated sludge process. Control Engineering Practice, 1999, 7, 63-70.	5.5	4
78	Scaling-up vaccine production: implementation aspects of a biomass growth observer and controller. Bioprocess and Biosystems Engineering, 2009, 32, 289-299.	3.4	4
79	Evaluation of Design Strategies for Time Course Experiments in Genetic Networks: Case Study of the XlnR Regulon in Aspergillus niger. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2012, 9, 1316-1325.	3.0	4
80	Progress in process operation by goal oriented advanced control. Annual Reviews in Control, 1996, 20, 209-223.	7.9	3
81	THE NICOLET LETTUCE MODEL: A THEME WITH VARIATIONS. Acta Horticulturae, 2004, , 71-78.	0.2	3
82	Potential of Conceptual Design Methodology for Food Process Innovation. Food Science and Technology International, 2008, 14, 139-149.	2.2	3
83	Quantitative modeling and analytic assessment of the transcription dynamics of the XlnR regulon in Aspergillus niger. BMC Systems Biology, 2015, 10, 13.	3.0	2
84	Effects of Increasing Salinity by Drip Irrigation on Total Grain Weight Show High Yield Potential of Putative Salt-Tolerant Mutagenized Wheat Lines. Sustainability, 2022, 14, 5061.	3.2	2
85	CLIMATE CONTROL OF NATURAL VENTILATED PIG HOUSES. Acta Horticulturae, 1996, , 81-88.	0.2	1
86	A MODEL FOR THE CLIMATE OF AN INNOVATIVE CLOSED GREENHOUSE FOR MODEL BASED CONTROL. Acta Horticulturae, 2006, , 323-330.	0.2	1
87	Uncertainty analysis of a storage facility under optimal control. Biosystems Engineering, 2008, 99, 67-75.	4.3	1
88	Improving dryer controllability & energy efficiency. Computer Aided Chemical Engineering, 2012, , 847-851.	0.5	1
89	Bio- and Ecological Systems: Challenges, Accomplishments and Forecasts â€œStatus report prepared by the IFAC Coordinating Committee on Bio- and Ecological Systemsâ€. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 3458-3469.	0.4	0
90	Evaluation of design strategies for time course experiments in genetic networks. , 2011, , .		0

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91	Reducing drying energy consumption by adsorbent property optimization in multistage systems. Computer Aided Chemical Engineering, 2012, 31, 1346-1350.	0.5	0
92	Optimal Day-to-Night Greenhouse Heat Storage: Square-Wave Weather. IFAC-PapersOnLine, 2016, 49, 375-380.	0.9	0
93	Moisture Dependent Diffusion and Shrinkage in Yam during Drying. International Journal of Food Engineering, 2018, 14, .	1.5	0
94	An Autonomous Weeding Robot for Organic Farming. , 2006, , 579-590.		0