

Eveline Volcke

List of Publications by Year in descending order

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126
papers

4,332
citations

94381

37
h-index

123376

61
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128
all docs

128
docs citations

128
times ranked

3704
citing authors

#	ARTICLE	IF	CITATIONS
1	Model-based analysis of sulfur-based denitrification in a moving bed biofilm reactor. Environmental Technology (United Kingdom), 2022, 43, 2948-2955.	1.2	5
2	Continuous aerobic granular sludge plants: Better settling versus diffusion limitation. Chemical Engineering Journal, 2022, 428, 131427.	6.6	17
3	Sulfur transformations during two-stage anaerobic digestion and intermediate thermal hydrolysis. Science of the Total Environment, 2022, 810, 151247.	3.9	13
4	Dynamic modelling of N ₂ O emissions from a full-scale granular sludge partial nitrification-anammox reactor. Biotechnology and Bioengineering, 2022, 119, 1426-1438.	1.7	5
5	Modelling of methane production and emissions. , 2022, , 197-212.		0
6	Mainstream short-cut N removal modelling: current status and perspectives. Water Science and Technology, 2022, 85, 2539-2564.	1.2	5
7	Application of data reconciliation to a dynamically operated wastewater treatment process with off-gas measurements. Environmental Science: Water Research and Technology, 2022, 8, 2114-2125.	1.2	1
8	Life Cycle Environmental Impacts of Wastewater-Derived Phosphorus Products: An Agricultural End-User Perspective. Environmental Science & Technology, 2022, 56, 10289-10298.	4.6	14
9	Autotrophic nitrogen removal for decentralized treatment of ammonia-rich industrial textile wastewater: process assessment, stabilization and modelling. Environmental Science and Pollution Research, 2021, 28, 46643-46654.	2.7	9
10	Model-Based Analysis of Feedback Control Strategies in Aerobic Biotrickling Filters for Biogas Desulfurization. Processes, 2021, 9, 208.	1.3	5
11	Key parameters influencing hydrogen sulfide removal in microaerobic sequencing batch reactor. Biochemical Engineering Journal, 2021, 168, 107951.	1.8	11
12	Ammonium-based aeration control improves nitrogen removal efficiency and reduces N ₂ O emissions for partial nitrification-anammox reactors. Chemosphere, 2021, 274, 129720.	4.2	9
13	Inorganic carbon limitation during nitrogen conversions in sponge-bed trickling filters for mainstream treatment of anaerobic effluent. Water Research, 2021, 201, 117337.	5.3	12
14	Potential of off-gas analyses for sequentially operated reactors demonstrated on full-scale aerobic granular sludge technology. Science of the Total Environment, 2021, 787, 147651.	3.9	10
15	Un-aerated feeding alters the fate of dissolved methane during aerobic wastewater treatment. Water Research, 2021, 204, 117619.	5.3	3
16	Impact of organics, aeration and flocs on N ₂ O emissions during granular-based partial nitrification-anammox. Science of the Total Environment, 2021, 797, 149092.	3.9	9
17	Plant-wide investigation of sulfur flows in a water resource recovery facility (WRRF). Science of the Total Environment, 2021, 801, 149530.	3.9	8
18	Model-based evaluation of an integrated high-rate activated sludge and mainstream anammox system. Chemical Engineering Journal, 2020, 382, 122878.	6.6	31

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19	Combination of cascade and feed-forward constrained control for stable partial nitrification with biomass retention. <i>Journal of Process Control</i> , 2020, 95, 55-66.	1.7	3
20	Monitoring methane and nitrous oxide emissions from digestate storage following manure mono-digestion. <i>Biosystems Engineering</i> , 2020, 196, 159-171.	1.9	18
21	Elucidating the Competition between Heterotrophic Denitrification and DNRA Using the Resource-Ratio Theory. <i>Environmental Science & Technology</i> , 2020, 54, 13953-13962.	4.6	30
22	Mass and heat balances for biological nitrogen removal in an activated sludge process: to couple or not to couple?. <i>Environmental Technology (United Kingdom)</i> , 2020, 42, 1-10.	1.2	0
23	Potential of sulfide-based denitrification for municipal wastewater treatment. <i>Journal of Water Process Engineering</i> , 2020, 35, 101206.	2.6	10
24	Model-based evaluation of ammonia removal in biological air scrubbers. <i>Biosystems Engineering</i> , 2020, 191, 85-95.	1.9	10
25	Stability of Thermophilic Pig Manure Mono-digestion: Effect of Thermal Pre-treatment and Separation. <i>Frontiers in Energy Research</i> , 2020, 8, .	1.2	9
26	When and why do gradients of the gas phase composition and pressure affect liquid-gas transfer?. <i>Water Research</i> , 2020, 178, 115844.	5.3	14
27	Process schemes for future energy-positive water resource recovery facilities. <i>Water Science and Technology</i> , 2019, 79, 1808-1820.	1.2	15
28	Operating conditions analysis for a partial nitrification process with biomass retention.. <i>IFAC-PapersOnLine</i> , 2019, 52, 643-648.	0.5	0
29	Dynamic simulation of N ₂ O emissions from a full-scale partial nitrification reactor. <i>Biochemical Engineering Journal</i> , 2019, 152, 107356.	1.8	12
30	Long-term microbial community dynamics at two full-scale biotrickling filters treating pig house exhaust air. <i>Microbial Biotechnology</i> , 2019, 12, 775-786.	2.0	11
31	Stability and control of a partial nitrification reactor with biomass retention. <i>Chemical Engineering Research and Design</i> , 2019, 144, 318-333.	2.7	5
32	Model-based analysis of greenhouse gas emission reduction potential through farm-scale digestion. <i>Biosystems Engineering</i> , 2019, 181, 157-172.	1.9	13
33	Resource recovery and wastewater treatment modelling. <i>Environmental Science: Water Research and Technology</i> , 2019, 5, 631-642.	1.2	57
34	Comparative 1-year performance study of two full-scale biotrickling filters for ammonia removal including nitrous oxide emission monitoring. <i>Biosystems Engineering</i> , 2019, 188, 178-189.	1.9	11
35	Modelling anaerobic, aerobic and partial nitrification-anammox granular sludge reactors - A review. <i>Water Research</i> , 2019, 149, 322-341.	5.3	90
36	The future of WRRF modelling – outlook and challenges. <i>Water Science and Technology</i> , 2019, 79, 3-14.	1.2	31

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37	Effect of operating conditions on N ₂ O emissions from one-stage partial nitrification-anammox reactors. <i>Biochemical Engineering Journal</i> , 2019, 143, 24-33.	1.8	32
38	Life cycle assessment of biological pig manure treatment versus direct land application – a trade-off story. <i>Resources, Conservation and Recycling</i> , 2018, 131, 86-98.	5.3	41
39	Relating N ₂ O emissions during biological nitrogen removal with operating conditions using multivariate statistical techniques. <i>Water Research</i> , 2018, 140, 387-402.	5.3	38
40	Integration of methane removal in aerobic anammox-based granular sludge reactors. <i>Environmental Technology (United Kingdom)</i> , 2018, 39, 1615-1625.	1.2	13
41	Targeted poly(3-hydroxybutyrate-co-3-hydroxyvalerate) bioplastic production from carbon dioxide. <i>Bioresource Technology</i> , 2018, 249, 858-868.	4.8	43
42	Heat recovery during treatment of highly concentrated wastewater: economic evaluation and influencing factors. <i>Water Science and Technology</i> , 2018, 78, 2270-2278.	1.2	6
43	Final products and kinetics of biochemical and chemical sulfide oxidation under microaerobic conditions. <i>Water Science and Technology</i> , 2018, 78, 1916-1924.	1.2	8
44	Trickling filters following anaerobic sewage treatment: state of the art and perspectives. <i>Environmental Science: Water Research and Technology</i> , 2018, 4, 1721-1738.	1.2	35
45	Modelling aerobic granular sludge reactors through apparent half-saturation coefficients. <i>Water Research</i> , 2018, 146, 134-145.	5.3	42
46	Experimental design for evaluating WWTP data by linear mass balances. <i>Water Research</i> , 2018, 142, 415-425.	5.3	16
47	Microaeration through a biomembrane for biogas desulfurization: lab-scale and pilot-scale experiences. <i>Environmental Science: Water Research and Technology</i> , 2018, 4, 1190-1200.	1.2	6
48	Effect of organic matter on the performance and N ₂ O emission of a granular sludge anammox reactor. <i>Environmental Science: Water Research and Technology</i> , 2018, 4, 1035-1046.	1.2	25
49	Plant-wide modelling of phosphorus transformations in wastewater treatment systems: Impacts of control and operational strategies. <i>Water Research</i> , 2017, 113, 97-110.	5.3	82
50	Evaluating the potential for dissimilatory nitrate reduction by anammox bacteria for municipal wastewater treatment. <i>Bioresource Technology</i> , 2017, 233, 363-372.	4.8	113
51	Improving the accuracy of granular sludge and biofilm reactor simulations in Aquasim through artificial diffusion. <i>Biotechnology and Bioengineering</i> , 2017, 114, 2131-2136.	1.7	8
52	Model-based optimization of microaeration for biogas desulfurization in UASB reactors. <i>Biochemical Engineering Journal</i> , 2017, 125, 171-179.	1.8	27
53	The use of a silicone-based biomembrane for microaerobic H ₂ S removal from biogas. <i>Separation and Purification Technology</i> , 2017, 189, 145-152.	3.9	9
54	Effect of the dilution rate on microbial competition: r-strategist can win over k-strategist at low substrate concentration. <i>PLoS ONE</i> , 2017, 12, e0172785.	1.1	31

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55	Mechanistic Modeling of Pollutant Removal, Temperature, and Evaporation in Chemical Air Scrubbers. <i>Chemical Engineering and Technology</i> , 2016, 39, 1785-1796.	0.9	7
56	Influence of process dynamics on the microbial diversity in a nitrifying biofilm reactor: Correlation analysis and simulation study. <i>Biotechnology and Bioengineering</i> , 2016, 113, 1962-1974.	1.7	7
57	Effect of foam on temperature prediction and heat recovery potential from biological wastewater treatment. <i>Water Research</i> , 2016, 95, 340-347.	5.3	14
58	Continuous measurements of ammonia, nitrous oxide and methane from air scrubbers at pig housing facilities. <i>Journal of Environmental Management</i> , 2016, 181, 163-171.	3.8	22
59	Non-Linear Data Reconciliation for a Partial Nitrification (SHARON) Reactor. <i>IFAC-PapersOnLine</i> , 2016, 49, 1139-1144.	0.5	3
60	Model-based process analysis of heterotrophic-autotrophic poly(3-hydroxybutyrate) (PHB) production. <i>Biochemical Engineering Journal</i> , 2016, 114, 202-208.	1.8	7
61	Effect of nitrite on the N ₂ O and NO production on the nitrification of low-strength ammonium wastewater. <i>Chemical Engineering Journal</i> , 2016, 287, 269-276.	6.6	42
62	Identifying N ₂ O formation and emissions from a full-scale partial nitrification reactor. <i>Water Research</i> , 2016, 88, 575-585.	5.3	43
63	Considering microbial and aggregate heterogeneity in biofilm reactor models: how far do we need to go?. <i>Water Science and Technology</i> , 2015, 72, 1692-1699.	1.2	7
64	Evaluation of sampling strategies for estimating ammonia emission factors for pig fattening facilities. <i>Biosystems Engineering</i> , 2015, 140, 79-90.	1.9	7
65	Modelling microbial competition in nitrifying biofilm reactors. <i>Biotechnology and Bioengineering</i> , 2015, 112, 2550-2561.	1.7	25
66	EPSAC for wastewater treatment process (BSM1). , 2015, , .		3
67	Microaeration for hydrogen sulfide removal during anaerobic treatment: a review. <i>Reviews in Environmental Science and Biotechnology</i> , 2015, 14, 703-725.	3.9	152
68	Evaluation of the 5 and 8 pH point titration methods for monitoring anaerobic digesters treating solid waste. <i>Environmental Technology (United Kingdom)</i> , 2015, 36, 861-869.	1.2	15
69	Modelling simultaneous anaerobic methane and ammonium removal in a granular sludge reactor. <i>Water Research</i> , 2015, 73, 323-331.	5.3	68
70	Effect of sodium accumulation on heterotrophic growth and polyhydroxybutyrate (PHB) production by <i>Cupriavidus necator</i> . <i>Bioresource Technology</i> , 2015, 191, 213-218.	4.8	21
71	Seasonal and diurnal variability of N ₂ O emissions from a full-scale municipal wastewater treatment plant. <i>Science of the Total Environment</i> , 2015, 536, 1-11.	3.9	112
72	Mitigating emissions from pig and poultry housing facilities through air scrubbers and biofilters: State-of-the-art and perspectives. <i>Biosystems Engineering</i> , 2015, 134, 74-93.	1.9	122

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73	Sustainable autotrophic production of polyhydroxybutyrate (PHB) from CO ₂ using a two-stage cultivation system. <i>Catalysis Today</i> , 2015, 257, 237-245.	2.2	77
74	Novel method for online monitoring of dissolved N ₂ O concentrations through a gas stripping device. <i>Environmental Technology (United Kingdom)</i> , 2015, 36, 1680-1690.	1.2	20
75	Poly(3-hydroxybutyrate) (PHB) production from CO ₂ : Model development and process optimization. <i>Biochemical Engineering Journal</i> , 2015, 98, 107-116.	1.8	64
76	Inoculum selection influences the biochemical methane potential of agro-industrial substrates. <i>Microbial Biotechnology</i> , 2015, 8, 776-786.	2.0	81
77	Influence of Partial Denitrification and Mixotrophic Growth of NOB on Microbial Distribution in Aerobic Granular Sludge. <i>Environmental Science & Technology</i> , 2015, 49, 11003-11010.	4.6	55
78	Effects of ionic strength and ion pairing on (plant-wide) modelling of anaerobic digestion. <i>Water Research</i> , 2015, 70, 235-245.	5.3	59
79	Effect of aeration regime on N ₂ O emission from partial nitrification-anammox in a full-scale granular sludge reactor. <i>Water Research</i> , 2015, 68, 793-803.	5.3	114
80	Feasibility of hydraulic separation in a novel anaerobic-anoxic upflow reactor for biological nutrient removal. <i>Bioprocess and Biosystems Engineering</i> , 2015, 38, 93-103.	1.7	7
81	Specific growth rate observer for the growing phase of a Polyhydroxybutyrate production process. <i>Bioprocess and Biosystems Engineering</i> , 2015, 38, 557-567.	1.7	4
82	Modelling of simultaneous methane and ammonium removal in a one-stage aerobic granular sludge reactor. <i>Proceedings of the Water Environment Federation</i> , 2015, 2015, 6320-6323.	0.0	0
83	Effect of process design and operating parameters on aerobic methane oxidation in municipal WWTPs. <i>Water Research</i> , 2014, 66, 308-319.	5.3	32
84	The impact of influent total ammonium nitrogen concentration on nitrite-oxidizing bacteria inhibition in moving bed biofilm reactor. <i>Water Science and Technology</i> , 2014, 69, 1227-1233.	1.2	32
85	Greenhouse gas emissions from landfill leachate treatment plants: A comparison of young and aged landfill. <i>Waste Management</i> , 2014, 34, 1156-1164.	3.7	30
86	Modeling pure culture heterotrophic production of polyhydroxybutyrate (PHB). <i>Bioresource Technology</i> , 2014, 155, 272-280.	4.8	39
87	Effect of heterotrophic growth on autotrophic nitrogen removal in a granular sludge reactor. <i>Environmental Technology (United Kingdom)</i> , 2014, 35, 1027-1037.	1.2	90
88	Modelling ammonium-oxidizing population shifts in a biofilm reactor. <i>Water Science and Technology</i> , 2014, 69, 208-216.	1.2	5
89	A robust fed-batch feeding strategy independent of the carbon source for optimal polyhydroxybutyrate production. <i>Process Biochemistry</i> , 2014, 49, 365-373.	1.8	76
90	Effect of nitrite pulses on N ₂ O production during nitrification. <i>Communications in Agricultural and Applied Biological Sciences</i> , 2014, 79, 87-90.	0.0	0

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91	Influence of sampling strategies on the estimated nitrous oxide emission from wastewater treatment plants. <i>Water Research</i> , 2013, 47, 3120-3130.	5.3	70
92	Modelling nitrous and nitric oxide emissions by autotrophic ammonia-oxidizing bacteria. <i>Environmental Technology (United Kingdom)</i> , 2013, 34, 1555-1566.	1.2	74
93	Benchmark simulation models, quo vadis?. <i>Water Science and Technology</i> , 2013, 68, 1-15.	1.2	49
94	Methane and nitrous oxide emissions from municipal wastewater treatment – results from a long-term study. <i>Water Science and Technology</i> , 2013, 67, 2350-2355.	1.2	180
95	High-Frequency Field Measurement of Nitrous oxide (N ₂ O) Gas Emissions and Influencing Factors at WWTPs under Dry and Wet Weather Conditions. <i>Proceedings of the Water Environment Federation</i> , 2013, 2013, 621-629.	0.0	5
96	Biomethane potential of agro-industrial substrates depends on the inoculum type. <i>Communications in Agricultural and Applied Biological Sciences</i> , 2013, 78, 185-90.	0.0	0
97	Towards a generalized physicochemical framework. <i>Water Science and Technology</i> , 2012, 66, 1147-1161.	1.2	65
98	N ₂ O and NO emissions during autotrophic nitrogen removal in a granular sludge reactor – a simulation study. <i>Environmental Technology (United Kingdom)</i> , 2012, 33, 2281-2290.	1.2	25
99	Methane emission during municipal wastewater treatment. <i>Water Research</i> , 2012, 46, 3657-3670.	5.3	263
100	The granule size distribution in an anammox-based granular sludge reactor affects the conversion – Implications for modeling. <i>Biotechnology and Bioengineering</i> , 2012, 109, 1629-1636.	1.7	94
101	Impact of influent characteristics on a partial nitrification SBR treating high nitrogen loaded wastewater. <i>Bioresource Technology</i> , 2012, 111, 62-69.	4.8	60
102	Towards a Generalized Physicochemical Framework: WWTmod Workshop Position Paper. <i>Proceedings of the Water Environment Federation</i> , 2010, 2010, 1054-1071.	0.0	0
103	Systematic model development for partial nitrification of landfill leachate in a SBR. <i>Water Science and Technology</i> , 2010, 61, 2199-2210.	1.2	13
104	Effect of granule size on autotrophic nitrogen removal in a granular sludge reactor. <i>Environmental Technology (United Kingdom)</i> , 2010, 31, 1271-1280.	1.2	103
105	Steady state multiplicity of two-step biological conversion systems with general kinetics. <i>Mathematical Biosciences</i> , 2010, 228, 160-170.	0.9	23
106	An ASM/ADM model interface for dynamic plant-wide simulation. <i>Water Research</i> , 2009, 43, 1913-1923.	5.3	86
107	Modeling microbial diversity in anaerobic digestion through an extended ADM1 model. <i>Water Research</i> , 2009, 43, 2787-2800.	5.3	68
108	Microbial population dynamics in nitrifying reactors: Experimental evidence explained by a simple model including interspecies competition. <i>Process Biochemistry</i> , 2008, 43, 1398-1406.	1.8	20

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109	Calculating pH in pig manure taking into account ionic strength. <i>Water Science and Technology</i> , 2008, 57, 1785-1790.	1.2	10
110	Combined anaerobic digestion and biological nitrogen removal for piggery wastewater treatment: a modelling approach. <i>Water Science and Technology</i> , 2008, 58, 133-141.	1.2	21
111	Calculating pH in pig manure taking into account ionic strength. <i>Water Science and Technology</i> , 2008, 58, 2067-2067.	1.2	1
112	Operation of a SHARON nitrification reactor: practical implications from a theoretical study. <i>Water Science and Technology</i> , 2007, 56, 145-154.	1.2	3
113	Influence of microbial growth kinetics on steady state multiplicity and stability of a two-step nitrification (SHARON) model. <i>Biotechnology and Bioengineering</i> , 2007, 98, 882-893.	1.7	17
114	Influence of temperature and pH on the kinetics of the Sharon nitrification process. <i>Journal of Chemical Technology and Biotechnology</i> , 2007, 82, 471-480.	1.6	174
115	Interaction between control and design of a SHARON reactor: economic considerations in a plant-wide (BSM2) context. <i>Water Science and Technology</i> , 2007, 56, 117-125.	1.2	16
116	Construction, start-up and operation of a continuously aerated laboratory-scale SHARON reactor in view of coupling with an Anammox reactor. <i>Water S A</i> , 2007, 31, .	0.2	9
117	Continuity-based model interfacing for plant-wide simulation: A general approach. <i>Water Research</i> , 2006, 40, 2817-2828.	5.3	51
118	Controlling the nitrite:ammonium ratio in a SHARON reactor in view of its coupling with an Anammox process. <i>Water Science and Technology</i> , 2006, 53, 45-54.	1.2	39
119	Plant-wide (BSM2) evaluation of reject water treatment with a SHARON-Anammox process. <i>Water Science and Technology</i> , 2006, 54, 93-100.	1.2	17
120	Existence, uniqueness and stability of the equilibrium points of a SHARON bioreactor model. <i>Journal of Process Control</i> , 2006, 16, 1003-1012.	1.7	12
121	Coupling the SHARON process with Anammox: Model-based scenario analysis with focus on operating costs. <i>Water Science and Technology</i> , 2005, 52, 107-115.	1.2	21
122	Coupling the SHARON process with anammox: model-based scenario analysis with focus on operating costs. <i>Water Science and Technology</i> , 2005, 52, 107-15.	1.2	2
123	Modeling and simulation of oxygen-limited partial nitrification in a membrane-assisted bioreactor (MBR). <i>Biotechnology and Bioengineering</i> , 2004, 86, 531-542.	1.7	105
124	The effect of temperature and pH on the kinetics of a partial nitrification process. <i>Communications in Agricultural and Applied Biological Sciences</i> , 2004, 69, 11-4.	0.0	0
125	MULTI-CRITERIA EVALUATION OF CONTROL STRATEGIES FOR WASTEWATER TREATMENT PROCESSES. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 417-422.	0.4	2
126	Improved nitrogen removal by application of new nitrogen-cycle bacteria. <i>Reviews in Environmental Science and Biotechnology</i> , 2002, 1, 51-63.	3.9	88