

# Willie Nicol

## List of Publications by Year in descending order

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60  
papers

1,133  
citations

430754

18  
h-index

434063

31  
g-index

60  
all docs

60  
docs citations

60  
times ranked

884  
citing authors

#	ARTICLE	IF	CITATIONS
1	Succinic acid production on xylose-enriched biorefinery streams by <i>Actinobacillus succinogenes</i> in batch fermentation. <i>Biotechnology for Biofuels</i> , 2016, 9, 28.	6.2	120
2	Continuous succinic acid production by <i>Actinobacillus succinogenes</i> on xylose-enriched hydrolysate. <i>Biotechnology for Biofuels</i> , 2015, 8, 181.	6.2	89
3	Continuous succinic acid fermentation by <i>Actinobacillus succinogenes</i> . <i>Biochemical Engineering Journal</i> , 2013, 73, 5-11.	1.8	65
4	Succinic acid production with <i>Actinobacillus succinogenes</i> : rate and yield analysis of chemostat and biofilm cultures. <i>Microbial Cell Factories</i> , 2014, 13, 111.	1.9	52
5	Continuous succinic acid production by <i>Actinobacillus succinogenes</i> in a biofilm reactor: Steady-state metabolic flux variation. <i>Biochemical Engineering Journal</i> , 2014, 85, 1-7.	1.8	50
6	Succinic acid-producing biofilms of <i>Actinobacillus succinogenes</i> : reproducibility, stability and productivity. <i>Applied Microbiology and Biotechnology</i> , 2014, 98, 7379-7386.	1.7	43
7	Multiple hydrodynamic states in trickle flow: Quantifying the extent of pressure drop, liquid holdup and gas-liquid mass transfer variation. <i>Chemical Engineering Science</i> , 2006, 61, 7551-7562.	1.9	40
8	Continuous succinic acid production from xylose by <i>Actinobacillus succinogenes</i> . <i>Bioprocess and Biosystems Engineering</i> , 2016, 39, 233-244.	1.7	38
9	Fast X-ray tomography for the quantification of the bubbling-, turbulent- and fast fluidization-flow regimes and void structures. <i>Chemical Engineering Journal</i> , 2013, 234, 437-447.	6.6	37
10	Continuous and batch cultures of <i>Escherichia coli</i> KJ134 for succinic acid fermentation: metabolic flux distributions and production characteristics. <i>Microbial Cell Factories</i> , 2013, 12, 80.	1.9	35
11	Particle wetting distribution in trickle-bed reactors. <i>AIChE Journal</i> , 2006, 52, 3532-3542.	1.8	33
12	Trickle flow distribution and stability by X-ray radiography. <i>Chemical Engineering Journal</i> , 2007, 132, 47-59.	6.6	33
13	The effect of carbon dioxide availability on succinic acid production with biofilms of <i>Actinobacillus succinogenes</i> . <i>Biochemical Engineering Journal</i> , 2017, 117, 218-225.	1.8	30
14	One-step methyl isobutyl ketone synthesis from acetone and hydrogen using Amberlyst® CH28. <i>Chemical Engineering and Processing: Process Intensification</i> , 2004, 43, 1539-1545.	1.8	29
15	The rate inhibiting effect of water as a product on reactions catalysed by cation exchange resins: formation of mesityl oxide from acetone as case study. <i>Applied Catalysis A: General</i> , 2004, 277, 219-225.	2.2	26
16	Nature of Residual Liquid Holdup in Packed Beds of Spherical Particles. <i>Industrial &amp; Engineering Chemistry Research</i> , 2004, 43, 8363-8368.	1.8	19
17	Characterization of Multiple Flow Morphologies within the Trickle Flow Regime. <i>Industrial &amp; Engineering Chemistry Research</i> , 2005, 44, 9446-9450.	1.8	19
18	Fumaric acid fermentation with immobilised <i>Rhizopus oryzae</i> : Quantifying time-dependent variations in catabolic flux. <i>Process Biochemistry</i> , 2017, 56, 8-20.	1.8	19

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19	Malic acid production through the whole-cell hydration of fumaric acid with immobilised <i>Rhizopus oryzae</i> . <i>Biochemical Engineering Journal</i> , 2018, 137, 152-161.	1.8	19
20	Improved continuous fumaric acid production with immobilised <i>Rhizopus oryzae</i> by implementation of a revised nitrogen control strategy. <i>New Biotechnology</i> , 2018, 44, 13-22.	2.4	17
21	Fumarate production with <i>Rhizopus oryzae</i> : utilising the Crabtree effect to minimise ethanol by-product formation. <i>Biotechnology for Biofuels</i> , 2020, 13, 22.	6.2	17
22	The attainable region and process synthesis: reaction systems with external cooling and heating. <i>Chemical Engineering Science</i> , 2001, 56, 173-191.	1.9	16
23	Parallel hydrogenation for the quantification of wetting efficiency and liquid–solid mass transfer in a trickle-bed reactor. <i>AIChE Journal</i> , 2011, 57, 1310-1319.	1.8	16
24	Trickle flow liquid–solid mass transfer and wetting efficiency in small diameter columns. <i>Canadian Journal of Chemical Engineering</i> , 2013, 91, 441-447.	0.9	14
25	Two dimensional fluidised bed reactor: Performance of a novel multi-vortex distributor. <i>Chemical Engineering Journal</i> , 2011, 175, 484-493.	6.6	13
26	Fluidization of high-density particles: The influence of fines on reactor performance. <i>Powder Technology</i> , 2013, 245, 48-55.	2.1	13
27	Three-dimensional analysis of trickle flow hydrodynamics: Computed tomography image acquisition and processing. <i>Chemical Engineering Science</i> , 2007, 62, 7233-7244.	1.9	12
28	Entrainment behaviour of high-density Geldart A powders with different shapes. <i>Powder Technology</i> , 2009, 190, 297-303.	2.1	12
29	Trickle flow hydrodynamic multiplicity: Experimental observations and pore-scale capillary mechanism. <i>Chemical Engineering Science</i> , 2009, 64, 1267-1284.	1.9	12
30	Continuous succinic acid fermentation by <i>Escherichia coli</i> KJ122 with cell recycle. <i>Process Biochemistry</i> , 2015, 50, 2004-2011.	1.8	12
31	Acetone condensation on a cation exchange resin catalyst: the pseudo equilibrium phenomenon. <i>Chemical Engineering Science</i> , 2004, 59, 5545-5550.	1.9	11
32	Kinetic model for the dimerisation of 1-hexene over a solid phosphoric acid catalyst. <i>Applied Catalysis A: General</i> , 2008, 340, 119-124.	2.2	11
33	Solid phosphoric acid catalysts: The effect of free acid composition on selectivity and activity for 1-hexene dimerisation. <i>Applied Catalysis A: General</i> , 2009, 369, 83-89.	2.2	11
34	The pentose phosphate pathway leads to enhanced succinic acid flux in biofilms of wild-type <i>Actinobacillus succinogenes</i> . <i>Applied Microbiology and Biotechnology</i> , 2016, 100, 9641-9652.	1.7	11
35	Comparing Catalytic Distillation to Separate Reaction and Distillation for the Production of Diacetone Alcohol. <i>Chemical Engineering Research and Design</i> , 2003, 81, 1026-1032.	2.7	9
36	Effect of hydrodynamic multiplicity on trickle bed reactor performance. <i>AIChE Journal</i> , 2008, 54, 249-257.	1.8	9

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37	Impact of metabolite accumulation on the structure, viability and development of succinic acid-producing biofilms of <i>Actinobacillus succinogenes</i> . <i>Applied Microbiology and Biotechnology</i> , 2019, 103, 6205-6215.	1.7	9
38	Multiplicity Behavior of Trickle Flow Liquid-Solid Mass Transfer. <i>Industrial &amp; Engineering Chemistry Research</i> , 2009, 48, 8387-8392.	1.8	8
39	Liquid-solid mass transfer distributions in trickle bed reactors. <i>Chemical Engineering Journal</i> , 2013, 230, 361-366.	6.6	8
40	The influence of shear on the metabolite yield of <i>Lactobacillus rhamnosus</i> biofilms. <i>New Biotechnology</i> , 2014, 31, 460-467.	2.4	8
41	Structure and cell viability analysis of <i>Actinobacillus succinogenes</i> biofilms as biocatalysts for succinic acid production. <i>Biochemical Engineering Journal</i> , 2017, 128, 134-140.	1.8	8
42	Effectiveness Factors for Partially Wetted Catalysts. <i>Industrial &amp; Engineering Chemistry Research</i> , 2010, 49, 8114-8124.	1.8	7
43	Effect of shear on morphology, viability and metabolic activity of succinic acid-producing <i>Actinobacillus succinogenes</i> biofilms. <i>Bioprocess and Biosystems Engineering</i> , 2020, 43, 1253-1263.	1.7	7
44	Continuous Production of Fumaric Acid with Immobilised <i>Rhizopus oryzae</i> : The Role of pH and Urea Addition. <i>Catalysts</i> , 2022, 12, 82.	1.6	7
45	Effect of Operating Pressure on the Extent of Hysteresis in a Trickle Bed Reactor. <i>Industrial &amp; Engineering Chemistry Research</i> , 2008, 47, 7593-7599.	1.8	6
46	Optimal Growth Conditions for <i>Azolla pinnata</i> R. Brown: Impacts of Light Intensity, Nitrogen Addition, pH Control, and Humidity. <i>Plants</i> , 2022, 11, 1048.	1.6	6
47	The cost of crossing reaction equilibrium in a system that is overall adiabatic. <i>Computers and Chemical Engineering</i> , 2002, 26, 803-809.	2.0	5
48	Extension of liquid-limited trickle-bed reactor modelling to incorporate channelling effects. <i>Chemical Engineering Science</i> , 2007, 62, 5543-5548.	1.9	5
49	Fed-batch growth of <i>Rhizopus oryzae</i> : Eliminating ethanol formation by controlling glucose addition. <i>Biochemical Engineering Journal</i> , 2021, 169, 107961.	1.8	5
50	Trickle Flow Multiplicity. <i>Chemical Engineering Research and Design</i> , 2007, 85, 1604-1610.	2.7	4
51	The effect of hydrodynamic multiplicity on liquid phase trickle flow axial dispersion. <i>Chemical Engineering Research and Design</i> , 2009, 87, 677-683.	2.7	4
52	Gas-Limited Hydrogenation of 1-Octene in a Fixed Bed: Upflow Versus Downflow. <i>Industrial &amp; Engineering Chemistry Research</i> , 2011, 50, 10476-10479.	1.8	4
53	Internal mass transfer considerations in biofilms of succinic acid producing <i>Actinobacillus succinogenes</i> . <i>Chemical Engineering Journal</i> , 2021, 407, 127220.	6.6	4
54	Interphase mass transfer of the high velocity bubbling fluidization regime. <i>Chemical Engineering Research and Design</i> , 2015, 93, 213-223.	2.7	3

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55	Identifying Energy Extraction Optimisation Strategies of <i>Actinobacillus succinogenes</i> . <i>Catalysts</i> , 2021, 11, 1016.	1.6	3
56	Nitrogen management in nitrification-hydroponic systems by utilizing their pH characteristics. <i>Environmental Technology and Innovation</i> , 2022, 26, 102360.	3.0	3
57	<i>Rhizopus oryzae</i> for Fumaric Acid Production: Optimising the Use of a Synthetic Lignocellulosic Hydrolysate. <i>Fermentation</i> , 2022, 8, 278.	1.4	3
58	Axial Variation of Wetting Efficiency and Liquid-Solid Mass Transfer in Long Trickle Bed Columns. <i>Industrial &amp; Engineering Chemistry Research</i> , 2014, 53, 494-497.	1.8	2
59	The Effect of pH, Metal Ions, and Insoluble Solids on the Production of Fumarate and Malate by <i>Rhizopus delemar</i> in the Presence of CaCO <sub>3</sub> . <i>Catalysts</i> , 2022, 12, 263.	1.6	2
60	Diazotrophic Behaviour in a Non-Sterile Bioreactor: The Effect of O <sub>2</sub> -Availability. <i>Processes</i> , 2021, 9, 2039.	1.3	0