Norbert Kockmann

List of Publications by Year
in descending order

95 papers	3,090 citations	201674 27 h-index	168389 53 g-index
99 all docs	99 docs citations	99 times ranked	1984 citing authors

#	Article	IF	Citations
1	Miniaturized draft tube baffle crystallizer for continuous cooling crystallization. Chemical Engineering Research and Design, 2022, 178, 232-250.	5.6	5
2	Advances in Continuous Flow Calorimetry. Organic Process Research and Development, 2022, 26, 267-277.	2.7	10
3	Open-source multi-purpose sensor for measurements in continuous capillary flow. Journal of Flow Chemistry, 2022, 12, 185-196.	1.9	5
4	Implementation of a Control Strategy for Hydrodynamics of a Stirred Liquidâ€“Liquid Extraction Column Based on Convolutional Neural Networks. ACS Engineering Au, 2022, 2, 369-377.	5.1	8
5	Cooling Crystallization with Complex Temperature Profiles on a Quasi-Continuous and Modular Plant. Processes, 2022, 10, 1047.	2.8	5
6	Detecting flooding state in extraction columns: Convolutional neural networks vs. a whiteâ€box approach for imageâ€based soft sensor development. Computers and Chemical Engineering, 2022, 164, 107904.	3.8	5
7	Microâ€computed tomography for the 3D timeâ€resolved investigation of monodisperse droplet generation in a coâ€flow setup. AICHE Journal, 2021, 67, e17111.	3.6	10
8	Oscillating droplet reactor â€“ towards kinetic investigations in heterogeneous catalysis on a droplet scale. Reaction Chemistry and Engineering, 2021, 6, 1023-1030.	3.7	1
9	Application of Polyimideâ€based Microfluidic Devices on Acidâ€catalyzed Hydrolysis of Dimethoxypropane. Chemie-Ingenieur-Technik, 2021, 93, 796-801.	0.8	0
10	Digital Image Processing of Gasâ€Liquid Reactions in Coiled Capillaries. Chemie-Ingenieur-Technik, 2021, 93, 825-829.	0.8	4
11	Softwareâ€guided Microfluidic Reaction Calorimeter Based on Thermoelectric Modules. Chemie-Ingenieur-Technik, 2021, 93, 802-808.	0.8	4
12	A Unified Research Data Infrastructure for Catalysis Research â€“ Challenges and Concepts. ChemCatChem, 2021, 13, 3223-3236.	3.7	45
13	Software-guided microscale flow calorimeter for efficient acquisition of thermokinetic data. Journal of Flow Chemistry, 2021, 11, 321-332.	1.9	8
14	Kinetic Measurement of Acrylic Acid Polymerization at High Concentrations under Nearly Isothermal Conditions in a Pendula Slug Flow Reactor. Industrial & Engineering Chemistry Research, 2021, 60, 4240-4250.	3.7	7
15	The Digital Twin â€“ Your Ingenious Companion for Process Engineering and Smart Production. Chemical Engineering and Technology, 2021, 44, 954-961.	1.5	23
16	Nucleation in continuous flow cooling sonocrystallization for coiled capillary crystallizers. Journal of Flow Chemistry, 2021, 11, 303-319.	1.9	3
17	3D investigations of microscale mixing in helically coiled capillaries. Journal of Flow Chemistry, 2021, 11, 217-222.	1.9	2
18	Gas-liquid mass transfer intensification for bubble generation and breakup in micronozzles. Journal of Flow Chemistry, 2021, 11, 429-444.	1.9	7

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19	Simultaneous self-optimisation of yield and purity through successive combination of inline FT-IR spectroscopy and online mass spectrometry in flow reactions. Journal of Flow Chemistry, 2021, 11, 285-302.	1.9	9
20	Spinning Band Distillation Columnâ€"Rotating Element Design and Vacuum Operation. Industrial & Engineering Chemistry Research, 2021, 60, 10854-10862.	3.7	5
21	Continuous Cooling Crystallization in a Coiled Flow Inverter Crystallizer Technologyâ€"Design, Characterization, and Hurdles. Processes, 2021, 9, 1537.	2.8	10
22	Characterization of an Automated Spinningâ€Band Column as a Module for Laboratory Distillation. Chemical Engineering and Technology, 2021, 44, 1660-1667.	1.5	4
23	Machine Learning Based Suggestions of Separation Units for Process Synthesis in Process Simulation. Chemie-Ingenieur-Technik, 2021, 93, 1930-1936.	0.8	7
24	Editorial special issue in the journal of flow chemistry: engineering aspects of flow chemistry. Journal of Flow Chemistry, 2021, 11, 211-212.	1.9	2
25	Efficient Shortcut Method for Determining the Process Window in Stirredâ€Pulsed Extraction Columns. Chemie-Ingenieur-Technik, 2021, 93, 466-472.	0.8	3
26	Flooding Prevention in Distillation and Extraction Columns with Aid of Machine Learning Approaches. Chemie-Ingenieur-Technik, 2021, 93, 1917-1929.	0.8	9
27	Towards a Systematic Data Harmonization toÂEnable AI Application in the Process Industry. Chemie-Ingenieur-Technik, 2021, 93, 2105-2115.	0.8	12
28	Microâ€computed tomography for the investigation of stationary liquidâ€"liquid and liquidâ€"gas interfaces in capillaries. AIChE Journal, 2020, 66, e16890.	3.6	6
29	Self-optimising processes and real-time-optimisation of organic syntheses in a microreactor system using Nelderâ€"Mead and design of experiments. Reaction Chemistry and Engineering, 2020, 5, 1281-1299.	3.7	27
30	Two-Phase Flow in a Coiled Flow Inverter: Process Development from Batch to Continuous Flow. Organic Process Research and Development, 2020, 24, 2094-2104.	2.7	12
31	Arduinoâ€based slider setup for gasâ€"liquid mass transfer investigations: Experiments and CFD simulations. AIChE Journal, 2020, 66, e16953.	3.6	15
32	Design and Hydrodynamic Characterization of a Draft Tube Baffle Tank for Labâ€Scale. Chemie-Ingenieur-Technik, 2020, 92, 288-294.	0.8	4
33	Design of an Automated Reagent-Dispensing System for Reaction Screening and Validation with DNA-Tagged Substrates. ACS Combinatorial Science, 2020, 22, 101-108.	3.8	17
34	Efficient Kinetic Data Acquisition and Model Prediction: Continuous Flow Microreactors, Inline Fourier Transform Infrared Spectroscopy, and Self-Modeling Curve Resolution. Organic Process Research and Development, 2020, 24, 1955-1968.	2.7	22
35	Model-Based Scale-Up Predictions: From Micro- to Millireactors Using Inline Fourier Transform Infrared Spectroscopy. Organic Process Research and Development, 2019, 23, 2020-2030.	2.7	11
36	In Situ Reaction Monitoring of Unstable Lithiated Intermediates through Inline FTIR Spectroscopy. Chemical Engineering and Technology, 2019, 42, 2095-2104.	1.5	9

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37	Model-based scale-up and reactor design for solvent-free synthesis of an ionic liquid in a millistructured flow reactor. Reaction Chemistry and Engineering, 2019, 4, 523-536.	3.7	12
38	Mixing Time Scale Determination in Microchannels Using Reaction Calorimetry. Chemie-Ingenieur-Technik, 2019, 91, 622-631.	0.8	15
39	Local Mass Transfer Phenomena and Chemical Selectivity of Gasâ€Liquid Reactions in Capillaries. Chemical Engineering and Technology, 2019, 42, 1536-1537.	1.5	0
40	Equipment and Separation Units for Flow Chemistry Applications and Process Development. Chemical Engineering and Technology, 2019, 42, 1985-1995.	1.5	13
41	Kinetic Study of Leucoâ€Indigo Carmine Oxidation and Investigation of Taylor and Dean Flow Superposition in a Coiled Flow Inverter. Chemical Engineering and Technology, 2019, 42, 2052-2060.	1.5	17
42	Modular Coiled Flow Inverter with Narrow Residence Time Distribution for Process Development and Production. Chemie-Ingenieur-Technik, 2019, 91, 567-575.	0.8	13
43	Reactor Concept for Contactless Kinetic Measurement in Oscillating Droplets viaÂRamanÂSpectroscopy. Chemie-Ingenieur-Technik, 2019, 91, 651-656.	0.8	5
44	Digital methods and tools for chemical equipment and plants. Reaction Chemistry and Engineering, 2019, 4, 1522-1529.	3.7	31
45	Suspension flow behavior and particle residence time distribution in helical tube devices. Chemical Engineering Journal, 2019, 360, 1371-1389.	12.7	28
46	Continuous Downstream Processing of Amino Acids in a Modular Miniplant. Chemical Engineering and Technology, 2018, 41, 1152-1164.	1.5	13
47	Analysis of Crystal Size Dispersion Effects in a Continuous Coiled Tubular Crystallizer: Experiments and Modeling. Crystal Growth and Design, 2018, 18, 1459-1473.	3.0	49
48	Axial Backmixing and Residence Time Distribution in a Miniaturized, Stirredâ€Pulsed Extraction Column. Chemical Engineering and Technology, 2018, 41, 134-142.	1.5	16
49	100â€‰% Digital Process Industry â€" Impressions and Results from the Tutzing Symposium 2018. Chemie-Ingenieur-Technik, 2018, 90, 1621-1627.	0.8	9
50	Smart Equipment â€" A Perspective Paper. Chemie-Ingenieur-Technik, 2018, 90, 1806-1822.	0.8	21
51	Hydrodynamics and Mass Transfer in a Labâ€Scale Stirredâ€Pulsed Extraction Column. Chemical Engineering and Technology, 2018, 41, 1847-1856.	1.5	16
52	Miniaturized Tubular Cooling Crystallizer With Solid-Liquid Flow for Process Development. , 2018, , .		6
53	Gas-liquid reaction and mass transfer in microstructured coiled flow inverter. Chemical Engineering Science, 2017, 169, 164-178.	3.8	62
54	Safety assessment in development and operation of modular continuous-flow processes. Reaction Chemistry and Engineering, 2017, 2, 258-280.	3.7	179

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55	Reaction Calorimetry for Exothermic Reactions in Plateâ€Type Microreactors UsingÂSeebeck Elements. Chemical Engineering and Technology, 2017, 40, 2144-2154.	1.5	24
56	Local Mass Transfer Phenomena and Chemical Selectivity of Gasâ€Liquid Reactions in Capillaries. Chemical Engineering and Technology, 2017, 40, 2134-2143.	1.5	30
57	Continuous Reactive Precipitation in a Coiled Flow Inverter: Inert Particle Tracking, Modular Design, and Production of Uniform CaCO₃ Particles. Industrial & Engineering Chemistry Research, 2017, 56, 11320-11335.	3.7	41
58	Local and overall heat transfer of exothermic reactions in microreactor systems. Reaction Chemistry and Engineering, 2017, 2, 763-775.	3.7	28
59	Planning Approach for Modular Plants in the Chemical Industry. Chemie-Ingenieur-Technik, 2017, 89, 785-799.	0.8	26
60	Investigation of Bubble Breakup in Laminar, Transient, and Turbulent Regime Behind Micronozzles. , 2017, , .		2
61	Internal Jet Formation During Bubble Generation in Microchannels. , 2017, , .		2
62	Gas-liquid dispersion in micronozzles and microreactor design for high interfacial area. Chemical Engineering Science, 2017, 169, 151-163.	3.8	18
63	Modules in process industry âˆ’ A life cycle definition. Chemical Engineering and Processing: Process Intensification, 2017, 111, 115-126.	3.6	37
64	Transport Phenomena and Chemical Reactions in Modular Microstructured Devices. Heat Transfer Engineering, 2017, 38, 1316-1330.	1.9	9
65	Performance of Laboratoryâ€Scale Stirredâ€Pulsed Extraction Columns with Different Diameters. Chemie-Ingenieur-Technik, 2017, 89, 1611-1618.	0.8	19
66	Energy Optimization of Gasâ€“Liquid Dispersion in Micronozzles Assisted by Design of Experiment. Processes, 2017, 5, 57.	2.8	9
67	Modular Equipment for Chemical Process Development and Smallâ€Scale Production in Multipurpose Plants. ChemBioEng Reviews, 2016, 3, 5-15.	4.4	38
68	Highly Sensitive Raman Spectroscopy with Low Laser Power for Fast In-Line Reaction and Multiphase Flow Monitoring. Analytical Chemistry, 2016, 88, 9368-9374.	6.5	22
69	Design of a Continuous Tubular Cooling Crystallizer for Process Development onÂLabâ€Scale. Chemical Engineering and Technology, 2016, 39, 1268-1280.	1.5	52
70	Enhanced heat transfer by exothermic reactions in laminar flow capillary reactors. Chemical Engineering Science, 2016, 141, 356-362.	3.8	19
71	Liquidâ€“liquid extraction system with microstructured coiled flow inverter and other capillary setups for single-stage extraction applications. Chemical Engineering Journal, 2016, 284, 764-777.	12.7	121
72	Utilization of milli-scale coiled flow inverter in combination with phase separator for continuous flow liquidâ€“liquid extraction processes. Chemical Engineering Journal, 2016, 283, 855-868.	12.7	114

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73	Chemical engineering curricula and challenges resulting from global megatrends. Qscience Proceedings, 2015, , .	0.0	0
74	Chiral Separation of 3,5-Dinitrobenzoyl-(<i>R</i>,<i>S</i>)-Leucine in Process Intensified Extraction Columns. Industrial & Engineering Chemistry Research, 2015, 54, 8266-8276.	3.7	37
75	Parametrische Empfindlichkeit einer stark exothermen Reaktion im Kapillarwendelreaktor. Chemie-Ingenieur-Technik, 2015, 87, 781-790.	0.8	12
76	Axial Dispersion and Heat Transfer in a Milli/Microstructured Coiled Flow Inverter for Narrow Residence Time Distribution atÂLaminar Flow. Chemical Engineering and Technology, 2015, 38, 1122-1130.	1.5	81
77	Narrow residence time distribution in tubular reactor concept for Reynolds number range of 10â€“100. Chemical Engineering Research and Design, 2015, 95, 22-33.	5.6	106
78	Enantioseparation of chiral aromatic acids in process intensified liquidâ€“liquid extraction columns. AICHE Journal, 2015, 61, 266-276.	3.6	44
79	Fast and Efficient Acquisition of Kinetic Data in Microreactors Using In-Line Raman Analysis. Organic Process Research and Development, 2015, 19, 1286-1292.	2.7	61
80	Counter-Current Extraction in Microchannel Flow: Current Status and Perspectives. Journal of Fluids Engineering, Transactions of the ASME, 2014, 136, .	1.5	37
81	200 Years in Innovation of Continuous Distillation. ChemBioEng Reviews, 2014, 1, 40-49.	4.4	12
82	Kinetic and Scale-up Investigations of a Michael Addition in Microreactors. Organic Process Research and Development, 2014, 18, 1535-1544.	2.7	43
83	Selection of Technical Reactor Equipment for Modular, Continuous Small-Scale Plants. Processes, 2014, 2, 265-292.	2.8	45
84	Novel Process Windows for Enabling, Accelerating, and Uplifting Flow Chemistry. ChemSusChem, 2013, 6, 746-789.	6.8	521
85	Counter-current arrangement of microfluidic liquid-liquid droplet flow contactors. Green Processing and Synthesis, 2013, 2, .	3.4	12
86	Liquidâ€“Liquid Test Reactions to Characterize Two-Phase Mixing in Microchannels. Heat Transfer Engineering, 2013, 34, 169-177.	1.9	21
87	Scalable Equipment for Process Development. Chemie-Ingenieur-Technik, 2012, 84, 646-659.	0.8	31
88	Safety Aspects during Process Development and Small Scale Production with Microreactors. Chemie-Ingenieur-Technik, 2012, 84, 715-726.	0.8	21
89	Pressure drop and mixing in single phase microreactors: Simplified designs of micromixers. Chemical Engineering and Processing: Process Intensification, 2011, 50, 1069-1075.	3.6	81
90	Scale-up concept for modular microstructured reactors based on mixing, heat transfer, and reactor safety. Chemical Engineering and Processing: Process Intensification, 2011, 50, 1017-1026.	3.6	87

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91	Scale-up concept of single-channel microreactors from process development to industrial production. Chemical Engineering Journal, 2011, 167, 718-726.	12.7	193
92	Enabling Continuousâ€Flow Chemistry in Microstructured Devices for Pharmaceutical and Fineâ€Chemical Production. Chemistry - A European Journal, 2008, 14, 7470-7477.	3.3	171
93	Reaction Optimization of a Suzukiâ€Miyaura Crossâ€Coupling using Design of Experiments. Chemie-Ingenieur-Technik, 0, , .	0.8	3
94	Xâ€ray based Tomographic Imaging for the Investigation of Laminar Mixing in Capillaries. Chemical Engineering and Technology, 0, , .	1.5	0
95	Definition, Characterization, and Modeling of Hybrid Modularâ€Monolithic Process Plants. Chemie-Ingenieur-Technik, 0, , .	0.8	1