# Michael SchlÃ¼ter

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 91 papers | 1,360 citations | 471371 17 h-index | 395590 33 g-index |
| 95 all docs | 95 docs citations | 95 times ranked | 1123 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Experimental investigation of liquidâ€“liquid mixing in T-shaped micro-mixers using <mml:math altimg="si31.gif" display="inline" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" | Chemical Engineering Science, 2015, 126, 660-678. | 1.9 | 259 |
| 2 | Bubble columns operated under industrially relevant conditions â€“ Current understanding of design parameters. Chemical Engineering Science, 2015, 126, 660-678. | 1.9 | 112 |
| 3 | Synthesis of ionic liquids in micro-reactorsâ€”a process intensification study. Green Chemistry, 2007, 9, 1084. | 4.6 | 85 |
| 4 | Mass transfer from freely rising microbubbles in aqueous solutions of surfactant or salt. Chemical Engineering Journal, 2020, 387, 121246. | 6.6 | 53 |
| 5 | Hydrodynamic inhomogeneities in large scale stirred tanks â€“ Influence on mixing time. Chemical Engineering Science, 2018, 188, 208-220. | 1.9 | 45 |
| 6 | Micro-PIV analysis of gasâ€“liquid Taylor flow in a vertical oriented square shaped fluidic channel. International Journal of Multiphase Flow, 2014, 67, 140-148. | 1.6 | 43 |
| 7 | Oil Droplet Size Distributions in Deep-Sea Blowouts: Influence of Pressure and Dissolved Gases. Environmental Science & Technology, 2018, 52, 6326-6333. | 4.6 | 37 |
| 8 | Optimization of a split and recombine micromixer by improved exploitation of secondary flows. Chemical Engineering Journal, 2018, 334, 1996-2003. | 6.6 | 35 |
| 9 | Mass Transfer from Single Taylor Bubbles in Minichannels. Chemical Engineering and Technology, 2015, 38, 1925-1932. | 0.9 | 33 |
| 10 | Validation of Novel Lattice Boltzmann Large Eddy Simulations (LB LES) for Equipment Characterization in Biopharma. Processes, 2021, 9, 950. | 1.3 | 27 |
| 11 | Local Measurement Techniques for Multiphase Flows. Chemie-Ingenieur-Technik, 2011, 83, 992-1004. | 0.4 | 26 |
| 12 | Local Measurement of Mass Transfer Rate of a Single Bubble with and without a Chemical Reaction. Journal of Chemical Engineering of Japan, 2012, 45, 708-712. | 0.3 | 24 |
| 13 | Rise Velocity of Live-Oil Droplets in Deep-Sea Oil Spills. Environmental Engineering Science, 2018, 35, 289-299. | 0.8 | 23 |
| 14 | Influence of Bubble Bouncing on Mass Transfer and Chemical Reaction. Chemical Engineering and Technology, 2016, 39, 1955-1962. | 0.9 | 21 |
| 15 | Laserâ€Induced Fluorescence in Multiphase Systems. ChemBioEng Reviews, 2018, 5, 253-269. | 2.6 | 21 |
| 16 | Test System for the Investigation of Reactive Taylor Bubbles. Chemical Engineering and Technology, 2017, 40, 1494-1501. | 0.9 | 20 |
| 17 | Influence of Spacing of Multiple Impellers on Power Input in an Industrialâ€Scale Aerated Stirred Tank Reactor. Chemie-Ingenieur-Technik, 2019, 91, 1794-1801. | 0.4 | 20 |
| 18 | Comparative investigation of fine bubble and macrobubble aeration on gas utilityÂand biotransformation productivity. Biotechnology and Bioengineering, 2021, 118, 130-141. | 1.7 | 18 |

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|---|---|---|---|
| 19 | Microbubble enhanced mass transfer efficiency of CO<sub>2</sub> capture utilizing aqueous triethanolamine for enzymatic resorcinol carboxylation. RSC Advances, 2021, 11, 4087-4096. | 1.7 | 18 |
| 20 | Analyse des grenzschichtnahen Stofftransports an frei aufsteigenden Gasblasen. Chemie-Ingenieur-Technik, 2009, 81, 1599-1606. | 0.4 | 17 |
| 21 | Reaction Systems for Bubbly Flows. European Journal of Inorganic Chemistry, 2018, 2018, 2101-2124. | 1.0 | 17 |
| 22 | How coherent structures dominate the residence time in a bubble wake: An experimental example. Chemical Engineering Science, 2019, 207, 317-326. | 1.9 | 16 |
| 23 | Bubble size and bubble velocity distribution in bubble columns under industrial conditions. Canadian Journal of Chemical Engineering, 2017, 95, 902-912. | 0.9 | 15 |
| 24 | Experimental and numerical investigation of single-phase hydrodynamics in glass sponges by means of combined ÂµPIV measurements and CFD simulation. Chemical Engineering Science, 2017, 160, 131-143. | 1.9 | 15 |
| 25 | Methane bubble rise velocities under deep-sea conditionsâ€”Influence of initial shape deformation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 505, 106-117. | 2.3 | 14 |
| 26 | Experimental and numerical investigation of reactive species transport around a small rising bubble. Chemical Engineering Science: X, 2019, 1, 100007. | 1.5 | 13 |
| 27 | A Chaotic Advection Enhanced Microfluidic Split-and-Recombine Mixer for the Preparation of Chemical and Biological Probes. Journal of Chemical Engineering of Japan, 2012, 45, 703-707. | 0.3 | 12 |
| 28 | Scalingâ€down biopharmaceutical production processes via a single multiâ€compartment bioreactor (SMCB). Engineering in Life Sciences, 2023, 23, . | 2.0 | 12 |
| 29 | Mass Transfer from a Shrinking Single Microbubble Rising in Water. Japanese Journal of Multiphase Flow, 2017, 30, 529-535. | 0.1 | 11 |
| 30 | Potential of Lagrangian Analysis Methods inÂtheÂStudy of Chemical Reactors. Chemie-Ingenieur-Technik, 2020, 92, 540-553. | 0.4 | 11 |
| 31 | Theoretische und experimentelle Untersuchungen der MischvorgÃnge in T-fÃ¶rmigen Mikroreaktoren - Teil 2: Experimentelle Untersuchung des StrÃ¶mungsmischens. Chemie-Ingenieur-Technik, 2004, 76, 1682-1688. | 0.4 | 10 |
| 32 | Einsatz des Strahlzonen-Schlaufenreaktors bei stofftransportlimitierten, mehrphasigen chemischen Reaktionen. Chemie-Ingenieur-Technik, 2010, 82, 243-250. | 0.4 | 10 |
| 33 | SkalenÃ¼bergreifende Beschreibung der Transportprozesse bei Gas/FlÃ¼ssig-Reaktionen. Chemie-Ingenieur-Technik, 2011, 83, 1084-1095. | 0.4 | 10 |
| 34 | Modeling Parameters for Bubbly Flows. Chemie-Ingenieur-Technik, 2013, 85, 1023-1035. | 0.4 | 10 |
| 35 | Far-Field Modeling of aÂDeep-Sea Blowout: Sensitivity Studies of Initial Conditions, Biodegradation, Sedimentation, and Subsurface Dispersant Injection on Surface Slicks and Oil Plume Concentrations. , 2020, , 170-192. | | 10 |
| 36 | Lagrangian sensors in a stirred tank reactor: Comparing trajectories from 4D-Particle Tracking Velocimetry and Lattice-Boltzmann simulations. Chemical Engineering Journal, 2022, 449, 137549. | 6.6 | 10 |

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|---|---|---|---|
| 37 | Mass transfer and chemical reactions in reactive deformable bubble swarms. Applied Physics Letters, 2006, 88, 134102. | 1.5 | 9 |
| 38 | Small-Scale Phenomena in Reactive Bubbly Flows: Experiments, Numerical Modeling, and Applications. Annual Review of Chemical and Biomolecular Engineering, 2021, 12, 625-643. | 3.3 | 9 |
| 39 | Scale-down des Strahlzonen-Schlaufenreaktors: Entwicklung eines Screening-Tools fÃ¼r transportlimitierte chemische Reaktionen. Chemie-Ingenieur-Technik, 2011, 83, 349-357. | 0.4 | 8 |
| 40 | Laminar Mixing in Miniature Hollowâ€Fibre Membrane Reactors by using Secondary Flows (Part 1). Chemie-Ingenieur-Technik, 2011, 83, 1066-1073. | 0.4 | 8 |
| 41 | The Helmholtz Energy Alliance â€œEnergy Efficient Multiphase Chemical Processesâ€• Chemie-Ingenieur-Technik, 2013, 85, 992-996. | 0.4 | 8 |
| 42 | Reactive Liquidâ€Flow Simulation of Micromixers Based on Grid Deformation Techniques. Chemical Engineering and Technology, 2017, 40, 1408-1417. | 0.9 | 8 |
| 43 | Countercurrently Operated Reactive Extractor with an Additively Manufactured Enzyme Carrier Structure. Organic Process Research and Development, 2020, 24, 1621-1628. | 1.3 | 8 |
| 44 | New Insights from Locally Resolved Hydrodynamics in Stirred Cell Culture Reactors. Processes, 2022, 10, 107. | 1.3 | 8 |
| 45 | Direct numerical simulation of the interfacial mass transfer of a bubble in self-induced turbulent flows. International Journal of Heat and Mass Transfer, 2019, 135, 1248-1259. | 2.5 | 7 |
| 46 | Fine Bubbleâ€based CO 2 Capture Mediated by Triethanolamine Coupled to Whole Cell Biotransformation. Chemie-Ingenieur-Technik, 2019, 91, 1822-1826. | 0.4 | 7 |
| 47 | SMARTâ€Reactors: Tailoring Gas Holdup Distribution by Additively Manufactured Lattice Structures. Chemical Engineering and Technology, 2020, 43, 2053-2061. | 0.9 | 7 |
| 48 | Experimental Analysis and Modeling of Micromixing in Microreactors. Heat and Mass Transfer, 2010, , 287-303. | 0.2 | 7 |
| 49 | Three dimensional flows beneath a thin layer of 2D turbulence induced by Faraday waves. Experiments in Fluids, 2021, 62, 1. | 1.1 | 7 |
| 50 | Influence of local effects in three phase flows on power input in Jet-Loop Reactors. Powder Technology, 2005, 151, 68-76. | 2.1 | 6 |
| 51 | Chemical Absorption of CO<sub>2</sub> in Helically Wound Hollow Fiber Membrane Contactors. Chemie-Ingenieur-Technik, 2013, 85, 476-483. | 0.4 | 6 |
| 52 | Bildgebende UV/VISâ€Spektroskopie zur Untersuchung des Einflusses der Fluiddynamik auf die Entstehung von Hauptâ€•und Nebenprodukt in schnellen konkurrierenden konsekutiven Gasâ€FlÃ¼ssigâ€Reaktionen. Chemie-Ingenieur-Technik, 2021, 93, 297-305. | 0.4 | 6 |
| 53 | Behavior of Rising Droplets and Bubbles: Impact on the Physics of Deep-Sea Blowouts and Oil Fate. , 2020, , 65-82. | | 6 |
| 54 | Fluidization of Fine Particles in Bubble Wakes Affects Hydrodynamics in Three-Phase Flows. Journal of Chemical Engineering of Japan, 2004, 37, 947-954. | 0.3 | 6 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | NEW FUNCTIONS FOR MICROFLUIDIC COMPONENTS BY USING MICRO METAL INJECTION MOLDING (Î¼-MIM). Chemical Engineering Communications, 2007, 194, 859-866. | 1.5 | 5 |
| 56 | Experimental Analysis of a Bubble Wake Influenced by a Vortex Street. Fluids, 2018, 3, 8. | 0.8 | 5 |
| 57 | Smart Structuresâ€"Additive Manufacturing of Stimuli-Responsive Hydrogels for Adaptive Packings. Industrial & Engineering Chemistry Research, 2020, 59, 19458-19464. | 1.8 | 5 |
| 58 | The choice of droplet size probability distribution function for oil spill modeling is not trivial. Marine Pollution Bulletin, 2021, 163, 111920. | 2.3 | 5 |
| 59 | Electrical Capacitance Volume Tomography (ECVT) for Characterization of Additively Manufactured Lattice Structures (AMLS) in Gas-Liquid Systems. Fluids, 2021, 6, 321. | 0.8 | 5 |
| 60 | Jet Formation at the Spill Site and Resulting Droplet Size Distributions. , 2020, , 43-64. | | 5 |
| 61 | Coexistence of Inverse and Direct Energy Cascades in Faraday Waves. Fluids, 2022, 7, 148. | 0.8 | 5 |
| 62 | Investigation of the local specific energy dissipation rates in a jetâ€zone loop reactor for halogenation of ketones. Canadian Journal of Chemical Engineering, 2010, 88, 359-366. | 0.9 | 4 |
| 63 | Resolving the dilemma of dispersant use for deep oil spill response. Environmental Research Letters, 2019, 14, 091002. | 2.2 | 4 |
| 64 | Taylor Bubble Study of the Influence of Fluid Dynamics on Yield and Selectivity in Fast Gasâ€Liquid Reactions. Chemie-Ingenieur-Technik, 2021, 93, 830-837. | 0.4 | 4 |
| 65 | L4 Blasen und Tropfen in technischen Apparaten. , 2013, , 1413-1458. | | 4 |
| 66 | How Do Vortex Structures Influence Boundary Layer Dynamics in Gasâ€Liquid Systems?. Chemical Engineering and Technology, 2019, 42, 1421-1426. | 0.9 | 3 |
| 67 | Summary of Contemporary Research on theÂUse of Chemical Dispersants for Deep-Sea Oil Spills. , 2020, , 494-512. | | 3 |
| 68 | BMBF-Projekt â€žMulti-Phaseâ€¡. Chemie-Ingenieur-Technik, 2013, 85, 989-991. | 0.4 | 2 |
| 69 | Die Modellierung von Stofftransportprozessen inÂMehrphasenstrÃ¶mungen â€“ am Beispiel desÂStrahlzonenâ€Schlaufenreaktors. Chemie-Ingenieur-Technik, 2015, 87, 590-599. | 0.4 | 2 |
| 70 | Experimental Investigation and Modelling of Local Mass Transfer Rates in Pure and Contaminated Taylor Flows. Advances in Mathematical Fluid Mechanics, 2017, , 609-637. | 0.1 | 2 |
| 71 | Largeâ€Scale Experiments on the Formation ofÂSurface Vortices with and without Vortex Suppression. Chemie-Ingenieur-Technik, 2019, 91, 1802-1811. | 0.4 | 2 |
| 72 | Visualization and Quantitative Analysis of Consecutive Reactions in Taylor Bubble Flows. Fluid Mechanics and Its Applications, 2021, , 507-543. | 0.1 | 2 |

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|---|---|---|---|
| 73 | Experimental Investigation of Pure and Gas-Saturated Crude Oil Viscosity and Density from 268 to 308 K and Up to 23 MPa. Journal of Chemical & Engineering Data, 2021, 66, 2355-2365. | 1.0 | 2 |
| 74 | Mixing and Reactions in Microchannels - an Educational Approach Using the Internet. Chemie-Ingenieur-Technik, 2012, 84, 1505-1512. | 0.4 | 1 |
| 75 | Theoretical Computational Fluid Dynamics Study of the Chemical Vapor Deposition Process for the Manufacturing of a Highly Porous 3D Carbon Foam. Chemical Engineering and Technology, 2019, 42, 1240-1246. | 0.9 | 1 |
| 76 | Summary of Progress on Major Research Issues: Deep-Sea Oil Spills. , 2020, , 584-594. | | 1 |
| 77 | Investigation of Reactive Bubbly Flows in Technical Apparatuses. Fluid Mechanics and Its Applications, 2021, , 621-642. | 0.1 | 1 |
| 78 | CFD analysis of asymmetric mixing at different inlet configurations of a split-and-recombine micro mixer. Journal of Flow Chemistry, 0, , 1. | 1.2 | 1 |
| 79 | â€žCampus BlasensÃ¤ulenâ€¡â€“ nachhaltige Entwicklung von Messtechniken und Auslegungswerkzeugen fÃ¼r MehrphasenstrÃ¶mungen. Chemie-Ingenieur-Technik, 2013, 85, 967-967. | 0.4 | 0 |
| 80 | Multiscale Multiphase Process Engineering. Chemical Engineering and Technology, 2015, 38, 1918-1918. | 0.9 | 0 |
| 81 | Simultaneous local determination of mass transfer and residence time distributions in organic multiphase systems. Chemical Engineering Journal, 2017, 321, 635-641. | 6.6 | 0 |
| 82 | Reactive Bubbly Flows. Chemical Engineering and Technology, 2017, 40, 1384-1384. | 0.9 | 0 |
| 83 | Bildung und Bewegung von Tropfen und Blasen in technischen Apparaten. Springer Reference Technik, 2018, , 1-19. | 0.0 | 0 |
| 84 | Von Campus BlasensÃ¤ulen zu Campus Mehrphasenreaktoren. Chemie-Ingenieur-Technik, 2019, 91, 1707-1707. | 0.4 | 0 |
| 85 | Determination of Kinetics for Reactive Bubbly Flows Using SuperFocus Mixers. Fluid Mechanics and Its Applications, 2021, , 479-506. | 0.1 | 0 |
| 86 | Chemical Reactions at Freely Ascending Single Bubbles. Fluid Mechanics and Its Applications, 2021, , 545-581. | 0.1 | 0 |
| 87 | Experimental Investigation of Reactive Bubbly Flowsâ€”Influence of Boundary Layer Dynamics on Mass Transfer and Chemical Reactions. Fluid Mechanics and Its Applications, 2021, , 267-307. | 0.1 | 0 |
| 88 | L4.1 Bildung und Bewegung von Tropfen und Blasen in technischen Apparaten. Springer Reference Technik, 2019, , 1621-1639. | 0.0 | 0 |
| 89 | Reaktoren fÃ¼r Fluid-Fluid-Reaktionen: Schlaufenreaktoren. Springer Reference Naturwissenschaften, 2019, , 1-32. | 0.2 | 0 |
| 90 | Reaktoren fÃ¼r Fluid-Fluid-Reaktionen: Schlaufenreaktoren. Springer Reference Naturwissenschaften, 2020, , 771-801. | 0.2 | 0 |

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|---|---|---|---|
| 91 | A Novel Approach for Visualizing Mixing Phenomena of Reactive Liquid-Liquid Flows in Milli- and Micro-Channels. Frontiers in Chemical Engineering, 2022, 4, . | 1.3 | 0 |