

Stand: August 2022

Publikationsliste

Fachgebiet Verfahrenstechnik

TU Berlin



Stand: August 2022

Eine Liste der Dissertationen und Habilitationen
ist am Ende der Publikationsliste zu finden.

Inhaltsverzeichnis/Jahresindex

1985.....	3
1988.....	3
1989.....	3
1990.....	3
1992.....	3
1995.....	4
1997.....	4
1998.....	4
1999.....	5
2000.....	7
2001.....	8
2002.....	11
2003.....	13
2004.....	16
2005.....	18
2006.....	22
2007.....	25
2008.....	31
2009.....	37
2010.....	43
2011.....	47
2012.....	50
2013.....	55
2014.....	61
2015.....	68
2016.....	75
2017.....	82
2018.....	85
2019.....	89
2020.....	91
2021.....	94
2022.....	97
Liste der Dissertationen/Habilitationen	99

1985Abstracts

1. **Kraume, M.; Steiff, A.; Weinspach, P.M.** (1985): Direkter Wärmeübergang bei der Kondensation eines Blasenschwarms in Wasser. Chem. Ing. Tech. 57 (6) 535.

1988Journals

2. **Kraume, M.; Zehner, P.** (1988): Suspensieren im Rührbehälter - Vergleich unterschiedlicher Berechnungsgleichungen. Chem. Ing. Tech. 60 (11) 822-829.

Proceedings

3. **Kraume, M.; Zehner, P.** (1988): Modelling of the hydrodynamics in bubble columns. German Japanese Symposium Bubble Columns, Schwerte.

1989Proceedings

4. **Kraume, M.; Zehner, P.** (1989): Modellierung der Fluidodynamik in Blasensäulen. Chem. Ing. Tech. 61 (4) 332-333.

1990Journals

5. **Kraume, M.; Zehner, P.** (1990): Homogenisieren in gerührten Fest/Flüssig-Systemen. Chem. Ing. Tech. 62 (4) 306-311.

1992Abstracts

6. **Kraume, M.; Zehner, P.** (1992): Maßstabsübertragung beim Suspensieren im Rührbehälter. Chem. Ing. Tech. 64 (9) 832.

Booksection

7. **Zehner, P.; Kraume, M.** (1992): Bubble Columns, Ullmann's Encyclopedia of Industrial Chemistry B 4, 275-307, VHC Verlag Weinheim.

Journals

8. **Kraume, M.; Zehner, P.** (1992): Konzept zur Maßstabsübertragung beim Suspensieren im Rührbehälter. Chem. Ing. Tech. 64 (3) 275-278.

9. **Kraume, M.** (1992): Mixing times in stirred suspensions. Chem. Eng. Technol. 15 313-318.

1995

Journals

10. **Kraume, M.; Zehner, P.** (1995): Konzept zur Maßstabsübertragung beim Suspendieren im Rührbehälter. Chem. Ing. Tech. 67 (3) 280-288.

1997

Proceedings

11. **Mier, P.; Kraume, M.** (1997): Numerical simulation and experimental (LDA) verification of velocity fields in single phase jet loop reactors. The First European Congress of Chemical Engineering, Florenz, Italien

1998

Journals

12. **Kraume, M.** (1998): Suspendieren, Mischen und Rühren 249-272, VDI, Gesellschaft Verfahrenstechnik und Chemieingenieurwesen Düsseldorf.
13. **Kraume, M.** (1998): Homogenisieren in Rührbehältern, Mischen und Rühren 25-53, VDI, Gesellschaft Verfahrenstechnik und Chemieingenieurwesen Düsseldorf.

1999*Abstracts*

14. **Ritter, J.; Kraume, M.** (1999): Dispergierung und Phasentrennung gerührter Flüssig/Flüssig-Systeme bei technisch relevanten Phasenanteilen. Chem. Ing. Tech. 71 (9) 1038-1039.

Journals

15. **Mier, P.; Kraume, M.** (1999): Einfluß einer festen, dispersen Phase auf die Umwälzung und die Turbulenz in Strahlschlaufenapparaten. Chem. Tech. 51 271-275.
16. **Ritter, J.; Kraume, M.** (1999): Inline-Meßtechnik zur Tropfengrößenbestimmung in flüssigen Zweiphasensystemen bei hohen Dispersphasenanteilen. Chem. Ing. Tech. 71 (7) 717-720.
17. **Schulze, K.; Ritter, J.; Kraume, M.** (1999): Optische Verfahren zur Visualisierung von Tropfen in gerührten flüssigen Zweiphasensystemen. Chem. Tech. 51 241-245.
18. **Wenzel, W.; Szewzyk, U.; Kozariszczyk, M.; Kraume, M.** (1999): Entwicklung einer optimierten Behandlungsstrategie für die anaerobe Abwasserreinigung, Verfahrenstechnik der Abwasser- und Schlammbehandlung 2, 473-477, Fuck Verlag Koblenz.

Proceedings

19. **Kozariszczyk, M.; Wenzel, W.; Kraume, M.; Szewzyk, U.** (1999): Microbiology and chemical engineering - new possibilities for interdisciplinary cooperation in the development of small wastewater treatment plants. IAWQ 4th Specialised Conference on Small Wastewater Treatment Plants, 19.-21.04.1999, Stratford upon Avon, UK.
20. **Kozariszczyk, M.; Kraume, M.; Wenzel, W.; Szewzyk, U.** (1999): Zusammenarbeit von Mikrobiologie und Verfahrenstechnik in der anaeroben Abwasserreinigung. Vortrags- und Diskussionstagung "Wechselwirkung zwischen Biologie und Prozeßführung", 10.-11.05.1999, Erfurt.
21. **Mier, P.; Kraume, M.** (1999): Optimisation and Scale-up of Jet Loop Reactors using CFD. 2nd European Congress of Chemical Engineering, 05.-07.10.1999, Montpellier, Frankreich.
22. **Pollei, A.; Seewald, F.; Kraume, M.; Mittelbach, W.** (1999): Numerical Simulation of the Heat Transfer in an Adsorption Energy Storage. 4th Italian Conference on Chemical and Process Engineering, Florenz, Italien.
23. **Pollei, A.; Kraume, M.** (1999): Modelling of the influence of mixing on the crystal size distribution. 14th International Symposium on Industrial Crystallization, Rugby, UK (ISBN: 0-85295-424-7).
24. **Ritter, J.; Kraume, M.** (1999): Local drop size distributions in agitated liquid-liquid dis-

- persions of various dispersed phase fractions. 2nd European Congress of Chemical Engineering, 05.-07.10.1999, Montpellier, Frankreich.
25. **Ritter, J.; Kraume, M.** (1999): Drop size distributions in stirred liquid-liquid dispersions. Two-Phase Flow Modelling and Experimentation, Pisa, Italien (ISBN: 88-467-0177-1).
 26. **Rosenberger, S.; Kraume, M.; Szewzyk, U.** (1999): Sludge free management of membrane bioreactors. 2nd International Meeting on Membrane Bioreactors for Wastewater Treatment, Cranfield, UK.
 27. **Rosenberger, S.; Kraume, M.; Szewzyk, U.** (1999): Operation of different membrane reactors: Experimental results and physiological state of microorganisms. International Specialized Conference on Membrane Technology in Environmental Management, 01.-04.11.1999, Tokio, Japan.
 28. **Rosenberger, S.; Kraume, M.; Witzig, R.; Szewzyk, U.** (1999): Abbauverhalten und Überschussschlammproduktion von Mischbiozönosen in Membranbioreaktoren, Verfahrenstechnik der Abwasser- und Schlammbehandlung 1, 216-226, Fuck Verlag Koblenz.
 29. **Zehner, P.; Kraume, M.** (1999): Surface aeration in stirred vessels. Two-Phase Flow Modelling and Experimentation, Pisa, Italien (ISBN: 88-467-0177-1).

2000*Journals*

30. **Kozariszczuk, M.; Wenzel, W.; Kraume, M.; Szewzyk, U.** (2000): Microbiology and chemical engineering - new possibilities for interdisciplinary cooperation in the development of small anaerobic wastewater treatment plants. *Water Sci. Technol.* 41 (1) 17-20.
31. **Mier, P.; Kraume, M.** (2000): Betriebsverhalten und Maßstabsübertragung von einphasig betriebenen Strahlschlaufenapparaten. *Chem. Ing. Tech.* 72 (5) 463-467.
32. **Mier, P.; Kraume, M.** (2000): Betriebsverhalten und Maßstabsübertragung von ein- und zweiphasig betriebenen Strahlschlaufenapparaten (CFD-Simulationen und Experimente). *Chem. Ing. Tech.* 72 (9) 1067-1068.
33. **Rosenberger, S.; Witzig, R.; Manz, W.; Szewzyk, U.; Kraume, M.** (2000): Operation of different membrane bioreactors: experimental results and physiological state of the microorganisms. *Water Sci. Technol.* 41 (10-11) 269-277.
34. **Rosenberger, S.; Kubin, K.; Kraume, M.** (2000): Operation of membrane bioreactors without sludge withdrawal. *Tribune de l'eau* № 603-605 53 184-190.
35. **Ritter, J.; Kraume, M.** (2000): On-line measurement technique for drop size distributions in liquid/liquid systems at high dispersed phase fractions. *Chem. Eng. Technol.* 23 (7) 579-581.

Proceedings

36. **Kassera, V.; Kraume, M.; Berger, T.** (2000): CFD Simulation of Liquid-Particle Flows in Mixing Vessels. *ASME Pressure Vessels and Piping Conference: International Emerging Technologies for Fluids, Structures and Fluid-Structure Interactions*, 23.-27.07.2000, Seattle, USA.
37. **Mier, P.; Kraume, M.** (2000): Simulation of the influence of a dispersed solid phase on the internal flow field in jet loop reactors. *14th International Congress of Chemical and Process Engineering*, 27.-31.08.2000, Prag, Tschechien.
38. **Pollei, A.; Borowski, T.; Kraume, M.** (2000): Simulation of Turbulent Mixing in Precipitation Reactors. *14th International Congress of Chemical and Process Engineering*, 27.-31.08.2000, Prag, Tschechien.
39. **Rosenberger, S.; Kubin, K.; Kraume, M.** (2000): Vorteile und Grenzen des Betriebs von Membranbioreaktoren bei hohem TS-Gehalt. *3. Aachener Tagung Siedlungswasserwirtschaft und Verfahrenstechnik*, 08.-09.02.2000, Aachen.
40. **Schulze, K.; Ritter, J.; Kraume, M.** (2000): Investigations of local drop size distributions and scale-up in stirred liquid-liquid dispersions. In: *Proc. 10th European Conference on Mixing*, 2-4 July 2000, Delft, Niederlande (ISBN: 978-0-444-50476-0), 181-188.

2001*Abstracts*

41. **Angst, R.; Mier, P.; Kraume, M.** (2001): Simulation and Experimental Investigation of the Two-Phase Flow Field in Jet Loop Reactors. Chem. Ing. Tech. 73 (6) 659.
42. **Kraume, M.; Paschedag, A.; Piarah, W.H.; Schulze, K.** (2001): Unsteady Conjugate Mass Transfer in Single Drop Systems. Chem. Ing. Tech. 73 (6) 752.
43. **Rosenberger, S.; Drews, A.; Kraume, M.** (2001): Comparison of Microfiltration Behaviour of Activated Sludge and Model Suspensions in a Novel Membrane Test Cell. Chem. Ing. Tech. 73 (6) 597.

Journals

44. **Drews, A.; Vanieul, D.; Schwecke, T.; von Döhren, H.; Kraume, M.** (2001): Produktion von Siderophoren mit *Ustilago maydis*. BIOforum 24 (9) 572 – 573.
45. **Kraume, M.; Zehner, P.** (2001): Experience with experimental standards for measurements of various parameters in stirred tanks: A comparative test. Chem. Eng. Res. Des. 79 (8) 811-818.
46. **Paschedag, A.; Piarah, W.H.; Kraume, M.** (2001): Grenz betrachtungen zum Stofftransport am Einzeltropfen – Validierung numerischer Ergebnisse. Chem. Ing. Tech. 73 (11) 1431-1435.
47. **Piarah, W.H.; Paschedag, A.; Kraume, M.** (2001): Numerical simulation of mass transfer between a single drop and an ambient flow. AIChE J. 47 (7) 1701-1704.

Proceedings

48. **Adam, C.; Kraume, M.; Gnirss, R.; Lesjean, B.** (2001): Vermehrte biologische Phosphorelimination in Membranbioreaktoren. 4. Aachener Tagung Siedlungswasserwirtschaft und Verfahrenstechnik, 11.-12.09.2001, Aachen (ISBN: 3-921955-25-4).
49. **Adam, C.; Gnirss, R.; Lesjean, B.; Buisson, H.; Kraume, M.** (2001): Enhanced Biological Phosphorus Removal in Membrane Bioreactors. IWA 2001 Berlin World Water Congress, Berlin.
50. **Angst, R.; Mier, P.; Kraume, M.** (2001): Application of LDA and PIV to solid/liquid flow in jet loop reactors with high dispersed phase volume fraction. Experimental Heat Transfer, Fluid Mechanics and Thermodynamics 2001, Pisa, Italien (ISBN: 88-467-0459-2).
51. **Angst, R.; Mier, P.; Kraume, M.** (2001): Simulations of the solid/liquid two-phase flow field in jet loop reactors, Computational Fluid and Solid Mechanics. First MIT Conference on Computational Fluid and Solid Mechanics, Cambridge, USA.

52. **Drews, A.; Schwecke, T.; von Döhren, H.; Kraume, M.** (2001): Produktion von Siderophoren mit *Ustilago maydis*. 19. DECHEMA-Jahrestagung der Biotechnologen, 13.-15.03.2001, Leipzig.
53. **Drews, A.; Klahm, T.; Saygily, M.; Müller, H.; Kraume, M.** (2001): Nanofiltration model for cleaning of cip waters from x-ray contrast media production. FILTECH 2001, Düsseldorf.
54. **Drews, A.; Klahm, T.; Saygily, M.; Müller, H.; Kraume, M.** (2001): A two-stage NF process for cleaning of CIP waters from x-ray contrast media production. IWA 2001 Berlin World Water Congress, Berlin.
55. **Kraume, M.; Zehner, P.** (2001): Cooperative test. Experimental standards for measurements of various parameters in stirred tanks. Proceedings International Symposium on Mixing in Industrial Processes –ISMIP 4, 14.-16.05.2001, Toulouse, Frankreich.
56. **Kubin, K.; Rosenberger, S.; Kraume, M.** (2001): Bedeutung der Betriebsweise für die Auslegung von Membranbelebungsanlagen. 4. Aachener Tagung Siedlungswasserwirtschaft und Verfahrenstechnik, 11.-12.09.2001, Aachen (ISBN: 3-921955-25-4).
57. **Kubin, K.; Rosenberger, S.; Kraume, M.** (2001): Substratabbau in Membranbioreaktoren mit mehrstufiger Nitrifikation. Aachener Tagung Siedlungswasserwirtschaft und Verfahrenstechnik, 11.-12.09.2001, Aachen (ISBN: 3-921955-25-4).
58. **Kubin, K.; Kraume, M.; Dorau, W.** (2001): Investigation of Nitrogen Removal in a Cascaded Membrane Bioreactor. IWA 2001 Berlin World Water Congress, Berlin.
59. **Paschedag, A.; Piarah, W.H.; Schulze, K.; Kraume, M.** (2001): Unsteady mass transfer in single drop systems with interfacial mobility. In: Proc. 6th International Conference on the Computational Modelling of Free and Moving Boundary Problems, Southampton, UK (ISBN: 1-85312-864-3).
60. **Punal, A.; Kozariszczuk, M.; Wenzel, W.; Szewzyk, U.; Kraume, M.; Lema, J. M.** (2001): Influence of the addition of an easily degradable cosubstrate and/or a buffer in the start-up of upflow anaerobic filter reactors. Anaerobic Digestion 2001, 02.-06.09.2001, Antwerpen, Belgien (ISBN: 90-76019-16-9).
61. **Rosenberger, S.; Schreiner, A.; Wiesmann, U.; Kraume, M.** (2001): Impact of different sludge ages on the performance of membrane bioreactors. IWA 2001 Berlin World Water Congress, Berlin.
62. **Rosenberger, S.; Kraume, M.** (2001): Dezentrale Abwasserreinigung in einer Hauskläranlage mit dem Membranbelebungsverfahren. 4. Aachener Tagung Siedlungswasserwirtschaft und Verfahrenstechnik, 11.-12.09.2001, Aachen (ISBN: 3-921955-25-4).

63. **Rosenberger, S.; Drews, A.; Kraume, M.** (2001): Vergleich der Filtrierbarkeit von Belebtschlamm aus einem Membranbelebungsreaktor und einer Modellsuspension. 4. Aachener Tagung Siedlungswasserwirtschaft und Verfahrenstechnik, 11.-12.09.2001, Aachen (ISBN: 3-921955-25-4).
64. **Rosenberger, S.; Drews, A.; Kraume, M.** (2001): Comparison of Microfiltration Behaviour of Activated Sludge and Model Suspensions in a Novel Membrane Test Cell. 3rd European Congress of Chemical Engineering, 26.-28.6.2001, Nürnberg.

Reports

65. **Kraume, M.; Kubin, K.; Rosenberger, S.** (2001): Klärschlammvermeidung in dezentralen Kleinkläranlagen, Verantwortungsbewusste Klärschlammverwertung 383-403, TK-Verlag Karl J. Thomé-Kozmiensky Neuruppin.
66. **Kraume, M.; Angst, R.; Mier, P.** (2001). Numerische Untersuchung der Flüssigkeits/Feststoff-Strömung in Strahlschlaufenapparaten einschließlich experimenteller Validierung. *Forschungsförderung 2000 – Anlage 1 zum Tätigkeitsbericht 2000.*

2002*Journals*

67. **Adam, C.; Gnirss, R.; Lesjean, B.; Buisson, H.; Kraume, M.** (2002): Enhanced biological phosphorus removal in membrane bioreactors. *Water Sci. Technol.* 46 (4-5) 281-286.
68. **Burkhardt, T.; Verstraete J.; Galtier, P.; Kraume, M.** (2002): Residence time distributions with a radiotracer in a hydrotreating pilot plant: Upflow versus downflow operation. *Chem. Eng. Sci.* 57 (11) 1859-1866.
69. **Drews, A.; Kraume, M.** (2002): Influence of continuous membrane bioreactor operation on ferrichrome production using *Ustilago maydis*. *Desalination* 149 (1-3) 261-266.
70. **Kraume, M.; Zehner, P.** (2002): Concept for scale-up of solids suspension in stirred tanks. *Can. J. Chem. Eng.* 80 (4) 674-681.
71. **Kubin, K.; Kraume, M.; Dorau, W.** (2002): Investigation of nitrogen removal in a cascaded membrane bioreactor. *Water Sci. Technol.* 46 (4-5) 241-247.
72. **Paschedag, A.; Piarah, W.H.; Kraume, M.** (2002): Treatment of limits for mass transfer at single droplets - Validation of numerical results. *Chem. Eng. Technol.* 25 (10) 953-956.
73. **Rosenberger, S.; Kubin, K.; Kraume, M.** (2002): Rheology of Activated Sludge in Membrane Bioreactors. *Eng. Life Sci.* 2 (9) 269-274.
74. **Rosenberger, S.; Kubin, K.; Kraume, M.** (2002): Rheologie von Belebtschlamm in Membranbelebungsreaktoren. *Chem. Ing. Tech.* 74 (4) 487-494.
75. **Rosenberger, S.; Kruger, U.; Witzig, R.; Manz, W.; Szewzyk, U.; Kraume, M.** (2002): Performance of a bioreactor with submerged membranes for aerobic treatment of municipal waste water. *Water Res.* 36 (2) 413-420.
76. **Rosenberger, S.; Kraume M.** (2002): Filterability of activated sludge in membrane bioreactors. *Desalination* 146 (1-3) 373-379.
77. **Witzig, R.; Manz W.; Rosenberger S.; Krüger U.; Kraume M.; Szewzyk U.** (2002): Microbiological aspects of a bioreactor with submerged membranes for aerobic treatment of municipal wastewater. *Water Res.* 36 (2) 394-402.

Proceedings

78. **Gnirss, R.; Lesjean, B.; Adam, C.; Buisson, H.** (2002): Cost Effective and Advanced Phosphorus Removal in Membrane Bioreactors for a Decentralised Wastewater Technology. IWA 3rd World Water Congress, 07.-12.04.2002, Melbourne, Australien.

79. **Lesjean, B.; Gnirss, R.; Adam, C.; Kraume, M.; Luck, F.** (2002): Enhanced Biological Phosphorus Removal Process Implemented in Membrane Bioreactors to Improve Phosphorus Recovery and Recycling. AQUATECH, Int. Conference “From Nutrient Removal to Recovery”, 2.-4.10.2002, Amsterdam, Niederlande
80. **Paschedag, A.; Tornatora, M.; Ausner, L.; Signorino, M.** (2002): Modelling of agglomeration for BaSO₄ precipitation. In: Proc. 15th International Symposium on Industrial Crystallization, 15.-18.09.2002, Sorrento, Italien (ISBN: 88-900775-0-0).
81. **Schulze, K.; Kraume, M.** (2002): Influence of mass transfer on drop rise velocity. In: Schindler, F.-P. (Ed.), 1st International Berlin Workshop - IBW 1 on Transport Phenomena with Moving Boundaries, 11-12.10.2001, Berlin (ISBN: 3-18-373 803-1).
82. **Signorino, M.; Baldi, G.; Barresi, A.A.; Cournil, M.; Derksen, J.J.; Gruy, F.; Hollander, E. D.; Kraume, M.; Marchisio, D.; Paschedag, A.; Vanni, M.; Van den Akker, H.E.A.; Varone, A.M.** (2002): Agglomeration in pratsolis project. In: Proc. 8th International conference on Multiphase Flow in Industrial plants, 18.-20.09.2002, Alba, Italien (ISBN: 88-88198-03-02).

2003*Books/Bookchapters*

83. **Kraume, M.** (2003): Mischen und Rühren: Grundlagen und moderne Verfahren, Wiley-VCH Weinheim.
84. **Angst, R.; Wittig, A.; Kraume, M.** (2003): Standardmessmethoden, Mischen und Rühren: Grundlagen und moderne Verfahren 45-62, Wiley-VCH Weinheim.
85. **Kraume, M.** (2003): Homogenisieren in Rührbehältern, Mischen und Rühren: Grundlagen und moderne Verfahren 21-44, Wiley-VCH Weinheim.
86. **Kraume, M.** (2003): Suspendieren, Mischen und Rühren: Grundlagen und moderne Verfahren 221-239, Wiley-VCH Weinheim.

Journals

87. **Adam, C.; Kraume, M.; Gnirss, R.; Lesjean, B.** (2003): Membranbelebungsverfahren mit vermehrter biologischer Phosphorelimination (EBPR). Chem. Ing. Tech. 75 (5) 628-632.
88. **Drews, A.; Klahm, T.; Renk, B.; Saygili, M.; Baumgarten, G.; Kraume, M.** (2003): Nanofiltration of CIP waters from iodine X-ray contrast media production: process design and modelling. Desalination 159 (2) 119-129.
89. **Drews, A.; Klahm, T.; Renk, B.; Saygili, M.; Baumgarten, G.; Kraume, M.** (2003): Reinigung jodhaltiger Spülwässer aus der Röntgenkontrastmittelproduktion mittels Nanofiltration: Prozessgestaltung und Modellierung. Chem. Ing. Tech. 75 (4) 441-447.
90. **Drews, A.; Klahm, T.; Renk, B.; Saygili, M.; Baumgarten, G.; Kraume, M.** (2003): Cleaning of iodine CIP waters from X-ray contrast media production using nanofiltration: Process design and modeling. Chem. Eng. Technol. 26 (11) 1137-1142.
91. **Drews, A.; Kraume, M.** (2003): Einfluss einer kontinuierlichen Prozessführung im Membranbioreaktor auf die Ferrichromproduktion von *Ustilago maydis*. Chem. Ing. Tech. 75 (5) 623-628.
92. **Kraume, M.** (2003): Mischprozesse - ein lebendiges Arbeitsgebiet. Chem. Ing. Tech. 75 (10) 1456-1459.
93. **Lesjean, B.; Gnirss, R.; Adam, C.; Kraume, M.; Luck, F.** (2003): Enhanced biological phosphorus removal process implemented in membrane bioreactors to improve phosphorous recovery and recycling. Water Sci. Technol. 48 (1) 87-94.
94. **Mier, P.; Angst, R.; Kraume, M.** (2003): Anwendung der Euler-Euler-Methode zur Simulation der Flüssigkeits-Feststoff-Strömung im Strahlschlaufenapparat. Chem. Ing. Tech. 75 (4) 367-370.

95. **Paschedag, A.** (2003): Kopplung zwischen Populationsbilanzen und CFD am Beispiel von Fällungsprozessen. Chem. Ing. Tech. 75 (12) 1835-1840.
96. **Paschedag, A.; Kraume, M.** (2003): Letters to the Editor - Reply. AIChE J. 49 (6) 1611-1612.
97. **Rosenberger, S.; Kraume, M.** (2003): Filterability of activated sludge in membrane bioreactors. Desalination 151 (2) 195-200.
98. **Rosenberger, S.; Kraume, M.; Belz, C.** (2003): Dezentrale Abwasserreinigung in Hauskläranlagen mit dem Membranbelebungsverfahren. Korrespondenz Abwasser 50 45 - 51.

Proceedings

99. **Adam, C.; Kraume, M.** (2003): Weitgehende biologische Phosphor- und Stickstoffelimination in Membranbelebungen. 5. GVC-Abwasser-Kongress "Prozessintegrierte und additive Verfahren der Abwasser- und Schlammbehandlung", 22.-24.09.2003, Bremen.
100. **Adam, C.; Kraume, M.; Gnirss, R.; Lesjean, B.** (2003): Membrane bioreactor configurations for enhanced biological phosphorus removal. In: Proc. Membranes in Drinking and Industrial Water Production III 237-244.
101. **Adam, C.; Kraume, M.; Gnirss, R.; Lesjean, B.** (2003): Die Kombination der biologischen P-Elimination mit der Simultanfällung im Membranbelebungsverfahren. 5. Aachener Tagung Siedlungswasserwirtschaft und Verfahrenstechnik, Aachen (ISBN: 3-921955-28-9).
102. **Angst, R.; Kraume, M.** (2003): Grid and model dependency of the solid/liquid two phase flow CFD simulations of stirred vessels. 11th European Conference on Mixing, 14.-17.10.2003, Bamberg (ISBN: 3-931384-45-4).
103. **Belz, C.; Rosenberger, S.; Kraume, M.** (2003): In-building membrane bioreactors for wastewater treatment. AWWA Membrane Technology, 02.-05.03.2003, Atlanta, USA.
104. **Drews, A.; Kraume, M.** (2003): Prozessanalyse der kontinuierlichen Ferrichromproduktion mit *Ustilago maydis* auf Basis der CO₂-Bildungsrate. 21. DECHEMA-Jahrestagung der Biotechnologen, 02.-04.04.2003, München.
105. **Drews, A.; Kraume, M.** (2003): Einfluss der Substratkonzentrationen bei der kontinuierlichen Ferrichromproduktion mit *Ustilago maydis* im Membranbioreaktor. GVC Bioverfahrenstechnik, 26.-28.05.2003, Bad Dürkheim.
106. **Kraume, M.; Bracklow, U.** (2003): Das Membranbelebungsverfahren in der kommunalen Abwasserbehandlung – Betriebserfahrungen und Bemessungsansätze in Deutschland. In: Proc. 5. Aachener Tagung Siedlungswasserwirtschaft und Verfahrenstechnik, 30.09.-01.10.2003, Aachen (ISBN: 3-921955-28-9).

107. **Kraume, M.; Gäbler, A.; Schulze, K.** (2003): Influence of physical properties and agitation conditions on drop size distributions of stirred liquid/liquid dispersions. 11th European Conference on Mixing, 14.-17.10.2003, Bamberg (ISBN: 3-931384-45-4).
108. **Paschedag, A.** (2003): Modeling of mixing and precipitation using CFD and population balances. 11th European Conference on Mixing, 14.-17.10.2003, Bamberg (ISBN: 3-931384-45-4).
109. **Rosenberger, S.; Kraume, M.** (2003): Parameters influencing filterability of activated sludge in membrane bioreactors. AWWA Membrane Technology, 02.-05.03.2003, Atlanta, USA.
110. **Rosenberger, S.; Kubin, K.; Kraume, M.** (2003): Rheology of activated sludge in membrane bioreactors and its impact on energy requirements. AWWA Membrane Technology, 02.-05.03.2003, Atlanta, USA.
111. **Schulze, K.; Paschedag, A.; Kraume, M.** (2003): Experimental and numerical investigations of mass transfer in liquid-liquid extraction with superposed Marangoni convection. International Symposium on Transient Convective Heat and Mass Transfer in Single and Two-Phase Flows, 17.-22.08.2003, Izmir, Türkei.
112. **Signorino, M.; Malcovati, L.; Kraume, M.; Paschedag, A.; Cournil, M.** (2003): Comparison of Measurement Techniques for the Determination of Mixing Times in Stirred Tank Reactors. ECCE 4, 21-25. September 2003, Granada, Spanien.

2004*Abstracts*

113. **Drews, A.; Kraume, M.** (2004): Modellbasierte Online-Schätzung der Ferrichromproduktion mit *Ustilago maydis* im Membranbioreaktor. Chem. Ing. Tech. 76 (9) 1237.
114. **Schulze, K.; Kraume, M.; Paschedag, A.R.** (2004): Stoffaustausch und Fluidodynamik eines bewegten Einzeltropfens unter Berücksichtigung von Marangoni-Konvektion. Chem. Ing. Tech. 76 (9) 1405.

Book

115. **Kraume, M.** (2004): Transportvorgänge in der Verfahrenstechnik - Grundlagen und apparative Umsetzungen, Springer Verlag Berlin, Heidelberg.

Journals

116. **Kraume, M.; Gäbler, A.; Schulze, K.** (2004): Influence of physical properties on drop size distributions of stirred liquid-liquid dispersions. Chem. Eng. Technol. 27 (3) 330-334.
117. **Kraume, M.** (2004): 11th European conference on mixing - Editorial. Chem. Eng. Technol. 27 (3) 203.
118. **Paschedag, A.R.** (2004): Modeling of mixing and precipitation using CFD and population balances. Chem. Eng. Technol. 27 (3) 232-236.

Proceedings

119. **Angst, R.; Kraume, M.** (2004): Experimental investigations of particle distributions in stirred solid/liquid systems. 3rd International Symposium on Two-Phase Flow Modelling and Experimentation, 22.-24.09.2004, Pisa, Italien (ISBN: 88-467-1075-4).
120. **Drews, A.; Klahm, T.; Renk, B.; Baumgarten, G.; Seifert, J.; Kraume, M.** (2004): Modelling of X-ray Contrast Agent Retention by NF and Model Application to a Technical Process. Euromembrane, 28.09.-1.10.2004, Hamburg (ISBN: 3-930400-65-0).
121. **Drews, A.; Kraume, M.** (2004): Process Improvement by Application of Membrane Bioreactors. 7th Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction, 22.-26.08.2004, Prag, Tschechien (ISBN: 80-86059-40-5).
122. **Gäbler, A.; Wegener, M.; Schlauch, S.; Kraume, M.** (2004): Transient drop size distributions in stirred liquid liquid dispersions. 15th International Conference Process Engineering and Chemical Plant Design, 26.09.-01.10.2004, Krakau, Polen (ISBN: 0011-4561).
123. **Kraume, M.; Bracklow, U.; Drews, A.; Vocks, M.** (2004): Nutrients removal in MBRs for municipal wastewater treatment. IWA Specialized Conference on Water Environment-Membrane Technology, 07-10.06.2004, Seoul, Südkorea.

124. **Schulze, K.; Paschedag, A.; Kraume, M.** (2004): Marangoni convection on liquid-liquid interfaces. In: Schindler, F.-P. (Ed.), 2nd International Berlin Workshop - IBW 2 on Transport Phenomena with Moving boundaries, 09.-10. October 2003, Berlin (ISBN: 3-18-381703-9).
125. **Schulze, K.; Paschedag, A.; Kraume, M.** (2004): Enhancement of single drop mass transfer due to marangoni convection. 3rd International Symposium on Two-Phase Flow Modeling and Experimentation, 22.-24.09.2004, Pisa, Italien (ISBN: 88-467-1075-4).
126. **Stawiarski, K.; Cate, A.; Derksen, J.; Paschedag, A.** (2004): Large eddy simulation of colliding monodisperse particles in forced isotropic turbulence. International Conference for Mesoscopic Methods in Engineering and Science, 26.-29.07.2004, Braunschweig.
127. **Stawiarski, K.; Hanjalic, K.; Paschedag, A.** (2004): A second moment turbulence closure with two scale equations. 15th International Conference Process Engineering and Chemical Plant Design, 26.09.-01.10.2004, Krakau, Polen (ISBN: 0011-4561).

2005*Abstracts*

128. **Gäbler, A.; Kraume, M.; Paschedag, A.; Schlauch, S.; Mehrmann, V.** (2005): Experiments, Modeling and Simulation of Drop Size Distributions in Stirred Liquid/Liquid Systems. Chem. Ing. Tech. 77 (8) 1091-1092.

Electronic Resource

129. **Paschedag, A.R.** (2005): Computational Fluid Dynamics, Ullmanns's Encyclopedia of Industrial Chemistry, Electronic Release, 7th ed. Wiley-VCH Weinheim, URL: http://dx.doi.org/10.1002/14356007.i07_i01.

Journals

130. **Angst, R.; Kraume, M.** (2005): Particle distributions in stirred solid-liquid systems. Experimental investigations in three different scales. Inzynieria Chemiczna I Procesowa 26 (3) 405-412.
131. **Drews, A.; Evenblij, H.; Rosenberger, S.** (2005): Potential and drawbacks of microbiology-membrane interaction in membrane bioreactors. Environ. Prog. 24 (4) 426-433.
132. **Drews, A.; Vocks, M.; Iversen, V.; Lesjean, B.; Kraume, M.** (2005): Fouling in Membranbelebungsreaktoren: Erfahrungen beim Betrieb mit diskontinuierlichem Schlammabzug. Chem. Ing. Tech. 77 (5) 593-599.
133. **Drews, A.; Kraume, M.** (2005): Process improvement by application of membrane bioreactors. Chem. Eng. Res. Des. 83 (A3) 276-284.
134. **Gäbler, A.; Wegener, M.; Schlauch, S.; Kraume, M.** (2005): Transiente Tropfengrößenverteilungen in gerührten Flüssig/flüssig –Dispersionen. Chem. Ing. Tech. 77 (1-2) 80-84.
135. **Gildemeister, R.; Kraume, M.** (2005): Greywater treatment with membrane coupled biological processes. Sustainable Water Management (1) 23-25.
136. **Gildemeister, R.; Drews, A.; Kraume, M.** (2005): Greywater treatment in a submerged membrane sequencing batch reactor (SM-SBR). Environmental Protection Engineering 31 (3-4) 39-52.
137. **Kraume, M.; Bracklow, U.; Vocks, M.; Drews, A.** (2005): Nutrients removal in MBRs for municipal wastewater treatment. Water Sci. Technol. 51 (6-7) 391-402.
138. **McAdam, E.; Judd, S.J.; Gildemeister, R.; Drews, A.; Kraume, M.** (2005): Critical analysis of submerged membrane sequencing batch reactor operating conditions. Water Res. 39 (16) 4011-4019.

139. **Paschedag, A.R.; Piarah, W.H.; Kraume, M.** (2005): Sensitivity study for the mass transfer at a single droplet. *Int. J. Heat Mass Transfer* 48 (16) 3402-3410.
140. **Pawelski, A.; Paschedag, A.R.; Kraume, M.** (2005): Beschreibung des Stofftransports am Einzeltropfen in Anwesenheit einer schnellen chemischen Reaktion mittels CFD-Simulation. *Chem. Ing. Tech.* 77 (7) 874-880.
141. **Peters, T.; Kraume, M.** (2005): Entwicklungen und Perspektiven druckgetriebener Membranverfahren. *Chem. Ing. Tech.* 77 (5) 473-485.
142. **Vocks, M.; Adam, C.; Lesjean, B.; Gnirss, R.; Kraume, M.** (2005): Enhanced post-denitrification without addition of an external carbon source in membrane bioreactors. *Water Res.* 39 (14) 3360-3368.

Proceedings

143. **Angst, R.; Kraume, M.** (2005): Experimental Investigations of the Particle Distribution in three differently sized Stirred Solid/liquid Systems. In: Proc. 11th Workshop on Two-Phase Flow Predictions, 05.-08.04.2005, Merseburg (ISBN: 3-86010-767-4).
144. **Angst, R.; Kraume, M.** (2005): Particle distributions in stirred solid/liquid systems: Experimental investigations in three different scales. 10th Polish Sem. on Mixing and Int. Workshop - PSMIW, 26.-29. 9. 2005, Posen, Polen (ISBN: 83-7143-314-X).
145. **Drews, A.; Iversen, V.; Vocks, M.; Lesjean, B.; Mante, J.; Kraume, M.** (2005): Einfluss von Instationaritäten auf den EPS-Gehalt und das Fouling in Membranbioreaktoren. 6. Aachener Tagung, Siedlungswasserwirtschaft und Verfahrenstechnik, 25.-26.10.2005, Aachen (ISBN: 3-86130-775-8).
146. **Drews, A.; Keil, C.; Szewzyk, U.; Kraume, M.** (2005): Erhaltungskinetik nichtwachsender Zellen. DEHEMA/GVC Vortrags- und Diskussionstagung „Systembiologie für industrielle Prozesse“, 02.-04. Mai 2005, Braunschweig.
147. **Drews, A.; Kraume, M.** (2005): MBR Concepts for Enhanced Nutrient Removal. AWA Speciality Conference Membranes & Desalination, Adelaide, Australien (ISBN: ABN 78096 035773).
148. **Drews, A.; Schaller, J.; Kraume, M.** (2005): Möglichkeiten und Grenzen einer mechanistischen Modellierung der Membranfiltration zur Prozessoptimierung. Bremer Colloquium, 13.-14.09. 2005, Bremen.
149. **Drews, A.; Vocks, M.; Iversen, V.; Lesjean, B.; Kraume, M.** (2005): Influence of unsteady membrane bioreactor operation on EPS formation and filtration resistance. International Congress on Membrane Processes - ICOM 2005, 21.-26.08.2005, Seoul, Südkorea (ISBN: 1738-7868).

150. **Gäbler, A.; Schlauch, S.; Paschedag, A.R.; Kraume, M.** (2005): Experiments modelling and simulation of drop size distributions in stirred liquid/liquid systems. In: Schindler, F.-P. (Ed.), 3rd International Berlin Workshop - IBW3 on Transport Phenomena with Moving Boundaries, 06.-07.10. 2005, Berlin (ISBN: 3-00-017322-6).
151. **Gäbler, A.; Schlauch, S.; Paschedag, A.R.; Kraume, M.; Mehrmann, V.** (2005): Transient drop size distributions in stirred liquid liquid dispersions. In: Proc. 11th Workshop on Two-Phase Flow Predictions, 05.-08.04.2005, Merseburg (ISBN: 3-86010-767-4).
152. **Gildemeister, R.; Drews, A.; Kraume, M.** (2005): Greywater treatment with a submerged membrane sequencing batch reactor (SM-SBR). In: Proc. 1st Zero-M Conference on Sustainable Water Management, 15.-16. 03. 2005, Istanbul, Türkei.
153. **Gildemeister, R.; Drews, A.; Kraume, M.** (2005): Greywater treatment with a submerged membrane sequencing batch reactor (SM-SBR). In: Proc. PERMEA 2005, 18.-22.09.2005, Polanica-Zdrój, Polen.
154. **Iversen, V.; Drews, A.; Vocks, M.; Lesjean, B.; Kraume, M.** (2005): Einfluss instationärer Betriebsbedingungen auf das Foulingverhalten eines Membranbelebungsreaktors. Bremer Colloquium, 13.-14.09.2005, Bremen.
155. **Keil, C.; Drews, A.; Kraume, M.; Müller, S.; Szewzyk, U.** (2005): Physiologie nicht-wachsender Escheria coli-Zellen im Erhaltungsstoffwechsel in einem substratlimitierten Membranbioreaktor. DECHEMA/GVC Vortrags- und Diskussionstagung „Systembiologie für industrielle Prozesse“, 02.-04. Mai 2005, Braunschweig.
156. **Kraume, M.; Bracklow, U.; Drews, A.; Vocks, M.** (2005): Process configurations for biotreatment: MBR concepts for biological nutrients removal. 5th International Conference on Membrane Bioreactors, 28.01.2005, Cranfield, UK.
157. **Paschedag, A.R.; Wegener, M.; Schulze, K.; Kraume, M.** (2005): Mass Transfer at Single Droplets under Influence of Marangoni Convection, 4th International Conference on CFD in the Oil and Gas, Metallurgical & Process Industries, 6-8 June 2005, SINTEF/NTNU Trondheim, Norwegen.
158. **Pawelski, A.; Paschedag, A.R.; Kraume, M.** (2005): Unsteady mass transfer in single droplets with a superimposed chemical reaction. In: Schindler, F.-P. (Ed.), 3rd International Berlin Workshop - IBW3 on Transport Phenomena with Moving Boundaries, 06.-07.10. 2005, Berlin (ISBN: 3-00-017322-6).
159. **Vocks, M.; Gnirrs, R.; Lesjean, B.; Villwock, J.; Kraume, M.** (2005): Membrane bioreactors coupled with low-pressure sewer for decentralized wastewater treatment. 1st Zero-M Conference on Sustainable Water Management, 15.-16.03.2005, Istanbul, Türkei.
160. **Vocks, M.; Lesjean, B.; Gnirrs, R.; Stumpf, D.; Kraume, M.** (2005): Auswirkung der diskontinuierlichen Überschussschlammmentnahme auf die vermehrte biologische Nährstoffelimination in einer Membranbelebung. 6. Aachener Tagung, Siedlungswasserwirtschaft und Verfahrenstechnik, 25.-26. 10. 2005, Aachen (ISBN: 3-86130-775-8).

161. **Vocks, M.; Stumpf, D.; Lesjean, B.; Gnirss, R.; Kraume, M.** (2005): Effect of irregular sludge wastage on enhanced biological nitrogen removal in a membrane activated sludge system. In: Proc. IWA Specialized Conference: Nutrient Management in Wastewater Treatment Processes and Recycle Streams, 19.-21.09.2005, Krakau, Polen.
162. **Wegener, M.; Pawelski, A.; Paschedag, A.R.; Kraume, M.** (2005): The effect of Marangoni convection and chemical reaction on transient mass transfer to single moving drops. In: Proc. 11th Workshop on Two-Phase Flow Predictions, 05.-08.04.2005, Merseburg (ISBN: 3-86010-767-4).

2006*Abstracts*

163. **Arellano-Garcia, H.; Drews, A.; Wendt, M.; Kraume, M.; Wozny, G.** (2006): Optimierungsbasierte Prozessführung eines Membranbioreaktors zur kontinuierlichen Ferrichromproduktion. Chem. Ing. Tech. 78 (9) 1313-1314.
164. **Arendt, B.; Wegener, M.; Paschedag, A.R.; Kraume, M.; Eggers, R.** (2006): Überlagerung von freier Konvektion und konzentrationsinduzierter Marangoni-Konvektion am hängenden Einzeltropfen. Chem. Ing. Tech. 78 (9) 1295.
165. **Iversen, V.; Schaller, J.; Drews, A.; Bonnet, L.; Lesjean, B.; Kraume, M.** (2006): Einfluss von flusssteigernden Zusatzstoffen auf das Foulingverhalten bei Cross-Flow- Mikrofiltration. Chem. Ing. Tech. 78 (9) 1227-1228.
166. **Maaß, S.; Gäbler, A.; Wegener, M.; Zacccone, A.; Paschedag, A.R.; Kraume, M.** (2006): Tropfenzerfall und Koaleszenz in gerührten Flüssig/Flüssig-Systemen und deren Einfluss auf die Tropfengrößenverteilung. Chem. Ing. Tech. 78 (9) 1347.
167. **Vocks, M.; Bracklow, U.; Drews, A.; Kraume, M.** (2006): Vermehrte Nährstoffeliminatio- n in Membranbelebungsreaktoren. Chem. Ing. Tech. 78 (9) 1225-1226.

Journals

168. **Angst, R.; Kraume, M.** (2006): Experimental investigations of stirred solid/liquid systems in three different scales: Particle distribution and power consumption. Chem. Eng. Sci. 61 (9) 2864-2870.
169. **Drews, A.; Lee, C.H.; Kraume, M.** (2006): Membrane fouling - a review on the role of EPS. Desalination 200 (1-3) 186-188.
170. **Drews, A.; Vocks, M.; Iversen, V.; Lesjean, B.; Kraume, M.** (2006): Influence of unsteady membrane bioreactor operation on EPS formation and filtration resistance. Desalination 192 (1-3) 1-9.
171. **Gäbler, A.; Wegener, M.; Paschedag, A.R.; Kraume, M.** (2006): The effect of pH on experimental and simulation results of transient drop size distributions in stirred liquid-liquid dispersions. Chem. Eng. Sci. 61 (9) 3018-3024.
172. **Gildemeister, R.; Kraume, M.** (2006): Kostbares Wasser mehrfach nutzen. Erfahrungen im Betrieb eines getauchten Membran-SBR zur Grauwasserreinigung. WLB Zeitschrift für Umwelttechnik 50 (7-8) 23-26.
173. **Schaller, J.; Drews, A.; Kraume, M.** (2006): Analyses and modelling of filtration processes in MBR and test cells. Desalination 199 (1-3) 507-508.

174. **Vocks, M.; Bracklow, U.; Drews, A.; Lesjean, B.; Mante, J.; Kraume, M.** (2006): Comparison of polysaccharide concentration and fouling rates in different membrane activated sludge systems. *Desalination* 199 (1-3) 381-383.

Proceedings

175. **Angst, R.; Kraume, M.** (2006): Particle distribution in stirred tanks: experimental and numerical investigations in different scales. 12th European Conference on Mixing, 27.-30.06.2006, Bologna, Italien (ISBN: 88-901915-9-7).
176. **Bracklow, U.; Drews, A.; Vocks, M.; Kraume, M.** (2006): Enhanced nutrients removal in MBR. *ACHEMA*, 15.-19.05.2006, Frankfurt/M.
177. **Bracklow, U.; Vocks, M.; Drews, A.; Kraume, M.** (2006): Comparison of nutrients degradation in smallscale MBR fed with synthetic/domestic wastewater. In: *Proc. Chemical Engineering and Environment V*, 3.-5.05.2006, Wien, Österreich.
178. **Drews, A.; Arellano-Garcia, H.; Wendt, M.; Kraume, M.; Wozny, G.** (2006): Optimization of Operating Conditions for Ferrichrome Production in a Membrane Bioreactor Using *Ustilago maydis*. 16th European Symposium on Computer Aided Process Engineering and 9th International Symposium on Process Systems Engineering, Computer-Aided Chemical Engineering 21A, 9.-13.07.2006, Garmisch-Partenkirchen (ISBN: 978-0-444-52257-3).
179. **Drews, A.; Iversen, V.; Mante, J.; Lesjean, B.; Vocks, M.; Kraume, M.** (2006): Influence of Environmental Conditions on EPS Elimination and Fouling in Membrane Bioreactors. In: *Proc. Chemical Engineering and Environment V* 3.-5.05.2006, Wien, Österreich.
180. **Drews, A.; Lee, C.-H.; Kraume, M.** (2006): MBR fouling - a review on the role of extracellular polymeric substances *ACHEMA*, Book of Abstracts, 15.-19.05.2006, Frankfurt/M.
181. **Gildemeister, R.; Kraume, M.** (2006): Operational Experiences in Greywater Treatment with a Submerged Membrane Sequencing Batch Reactor (SM-SBR). In: *Proc. Medawater International Conference on Sustainable Water Management, Rational Water Use, Wastewater Treatment and Reuse - RUWTR*, 8.-10.06.2006, Marrakesh, Marokko.
182. **Maaß, S.; Gäbler, A.; Wegener, M.; Zaccone, A.; Paschedag, A.R.; Kraume, M.** (2006): Drop breakage and Daughter Drop Distributions in Stirred Liquid/Liquid Systems and their Modelling within the Population Balance Equation. In: *Proc. 12th European Conference on Mixing*, 27.-30.06.2006, Bologna, Italien (ISBN: 88-901915-9-7).
183. **Maaß, S.; Paschedag, A.R.; Kraume, M.** (2006): Experimental and numerical investigations of coalescence and breakage phenomena in stirred liquid/liquid systems. In: *Proc. 16th International Conference Process Engineering and Chemical Plant Design*, 10.-11.10. 2006, Berlin (ISBN: 978-3-7983-2017-8).

184. **Merz, C.; Scheumann, R.; El Hamouri, B.; Kraume, M.** (2006): Membrane bioreactor technology for the treatment of greywater from a sports and leisure club. MEDA WATER International Conference on Sustainable Water Management Rational Water Use, Wastewater Treatment and Reuse (RUWTR2006), 8.-10.06.2006, Marrakech, Marokko.
185. **Paschedag, A.R.; Wegener, M.** (2006): Three-dimensional simulations of mass transfer at single droplets. Fifth International Conference on Computational Fluid Dynamics in the Process Industries, 13.-15.12.2006, Melbourne, Australien (ISBN: 0 643 09423 7).
186. **Peryt, S.; Paschedag, A.R.; Kraume, M.** (2006): Influence of solid particles on temperature spectra in a turbulent flow. In: Proc. Fluid Mixing VIII, 10.-12.04, London, UK (ISBN: CD-ROM).
187. **Prieske, H.; Tacke, D.; Baumgarten, S.; Pinnekamp, J.; Drews, A.; Kraume, M.** (2006): Aeration of a Membrane Bioreactor in an Airlift Loop Configuration. Chemical Engineering and Environment V 3.-5.05.2006, Wien, Österreich (ISBN: 3 900 554 57 9).
188. **Rudolph, S.; Schaefer, M.; Atiemo-Obeng, V.; Kraume, M.** (2006): Mixing of high viscosity Fluids: Experimental and numerical explorations of co-axial mixers. 12th European Conference on Mixing, 27.-30.06.2006, Bologna, Italien (ISBN: 88-901915-9-7).
189. **Schaller, J.; Drews, A.; Kraume, M.** (2006): Analyses of filtration mechanisms in membrane bioreactors and test cells by mathematical modelling. In: Proc. 16th International Conference Process Engineering and Chemical Plant Design, 10.-11.10.2006, Berlin (ISBN: 978-3-7983-2017-8).

2007**Abstracts**

190. **Drews, A.; Arellano-Garcia, H.; Schöneberger, J.; Schaller, J.; Wozny, G.; Kraume, M.** (2007): Optimierung von Filtrationsprozessen in MBR-Anlagen mittels automatisierter Mechanismenerkennung. Chem. Ing. Tech. 79 (9) 1427-1428.
191. **Kraume, M.** (2007): Neues von der Mischtechnik?! Chem. Ing. Tech. 79 (7) 923.
192. **Wegener, M.; Paschedag, A.R.; Kraume, M.** (2007): Marangoni-Instabilitäten an sphärischen und deformierbaren Tropfen. Chem. Ing. Tech. 79 (9) 1367-1368.

Journals

193. **Bracklow, U.; Drews, A.; Vocks, M.; Kraume, M.** (2007): Comparison of nutrients degradation in small scale membrane bioreactors fed with synthetic/domestic wastewater. J. Hazard. Mater. 144 (3) 620-626.
194. **Bracklow, U.; Manigas, L.; Drews, A.; Vocks, M.; Barjenbruch, M.; Kraume, M.** (2007): Impact of different recirculation schemes on nitrogen removal and overall performance of a laboratory scale MBR. Water Sci. Technol. 56 (6) 115-124.
195. **Bracklow, U.; Vocks, M.; Drews, A.; Barjenbruch, M.; Kraume, M.** (2007): Membranbelebungsreaktoren zur weitergehenden Nährstoffelimination aus kommunalem Abwasser. WLB Zeitschrift für Umwelttechnik (11-12) 16-19.
196. **Drews, A.; Kraume, M.** (2007): On maintenance models in severely and long-term limited membrane bioreactor cultivations. Biotechnol. Bioeng. 96 (5) 892-903.
197. **Drews, A.; Mante, J.; Iversen, V.; Vocks, M.; Lesjean, B.; Kraume, M.** (2007): Impact of ambient conditions on SMP elimination and rejection in MBRs. Water Res. 41 (17) 3850-3858.
198. **Ernst, M.; Mehrez, R.; Drews, A.; Iversen, V.; Kraume, M.; Jekel, M.** (2007): Continuous measurement and control of fouling active compounds in membrane bioreactor systems. Water Sci. Technol. 56 (7) 11-19.
199. **Germain, E.; Nelles, F.; Drews, A.; Pearce, R.; Kraume, M.; Reid, E.; Judd, S.J.; Stephenson, T.** (2007): Biomass effects on oxygen transfer in membrane bioreactors. Water Res. 41 (5) 1038-1044.
200. **Grünig, J.; Kraume, M.; Shilkin, A.** (2007): Fluidodynamik eines Flüssigkeitsfilms an einem vertikalen Draht. Chem. Ing. Tech. 79 (7) 1045-1051.
201. **Heiser, M.; Ritter, J.; Sperling, R.; Kraume, M.** (2007): Koaxialrührwerk zum Rühren hochviskoser und nicht-Newtonscher Medien. Chem. Ing. Tech. 79 (7) 1029-1034.

202. **Iversen, V.; Drews, A.; Schaller, J.; Lesjean, B.; Kraume, M.** (2007): Verringerung des Fouling in Membranbelebungsanlagen durch Zugabe von Filtrationshilfsmitteln. Chem. Ing. Tech. 79 (11) 1951-1957.
203. **Iversen, V.; Drews, A.; Schmidt, T.; Lesjean, B.; Fatarella, E.; Kraume, M.** (2007): Textile Filtermedien für den Einsatz in Membranbelebungsanlagen. Chem. Ing. Tech. 79 (11) 1945-1950.
204. **Maaß, S.; Gäbler, A.; Zaccone, A.; Paschedag, A.R.; Kraume, M.** (2007): Experimental investigations and modelling of breakage phenomena in stirred liquid/liquid systems. Chem. Eng. Res. Des. 85 (A5) 703-709.
205. **Merz, C.; Scheumann, R.; El Hamouri, B.; Kraume, M.** (2007): Membrane bioreactor technology for the treatment of greywater from a sports and leisure club. Desalination 215 (1-3) 37-43.
206. **Paschedag, A.R.; Kassera, V.; Sperling, R.** (2007): Aktuelle Entwicklungen in der CFD für gerührte Systeme. Chem. Ing. Tech. 79 (7) 983-999.
207. **Rudolph, L.; Schäfer, M.; Atiemo-Obeng, V.; Kraume, M.** (2007): Experimental and numerical analysis of power consumption for mixing of high viscosity fluids with a co-axial mixer. Chem. Eng. Res. Des. 85(5), 568-575.
208. **Wegener, M.; Grünig, J.; Stüber, J.; Paschedag, A.R.; Kraume, M.** (2007): Transient rise velocity and mass transfer of a single drop with interfacial instabilities - experimental investigations. Chem. Eng. Sci. 62 (11) 2967-2978.
209. **Wegener, M.; Paschedag, A.R.; Kraume, M.** (2007): Experimentelle Untersuchungen sowie 2D- und 3D-Simulationen zum Stofftransport an Einzeltropfen mit Marangoni-Konvektion. Chem. Ing. Tech. 79 (1-2) 73-81.
210. **Wollny, S.; Sperling, R.; Kraume, M.; Ritter, J.** (2007): Beanspruchung von Partikeln und Fluidelementen beim Rühren. Chem. Ing. Tech. 79 (7) 1024-1028.
211. **Zaccone, A.; Gäbler, A.; Maaß, S.; Marchisio, D.; Kraume, M.** (2007): Drop breakage in liquid-liquid stirred dispersions: Modelling of single drop breakage. Chem. Eng. Sci. 62 (22) 6297-6307.

Electronic Resource

212. **Stumpf, D.** (2007): Phosphorrecycling durch MAP-Fällung im kommunalen Faulschlamm. URL: <http://www.umweltbundesamt.de/publikationen/phosphorrecycling-durch-map-faellung-im-kommunalen>

Proceedings

213. **Arellano-Garcia, H.; Drews, A.; Faber, R.; Schubert, U.; Kraume, M.; Wozny, G.** (2007): Increasing the predictivity of kinetic models for high-cell-density cultivations. In: Proc. ESCAPE 17 Computer-Aided Chemical Engineering, 27.-30.05.2007, Bukarest, Rumänien (ISBN: 978-0-444-53157-5).
214. **Arellano-Garcia, H.; Drews, A.; Schöneberger, J.; Kraume, M.; Wozny, G.** (2007): Optimierung von Filtrationsprozessen in MBR-Anlagen mittels automatisierter Mechanismenerkennung. In: Proc. ProcessNet-Fachausschusssitzung "Prozess- und Anlagentechnik" und "Fluidverfahrenstechnik", 11.-13.02.2007, Karlsruhe.
215. **Bracklow, U.; Drews, A.; Manigas, L.; Majer, S.; Wunderlich-Pfeiffer, J.; Kraume, M.** (2007): Adsorption and Hydrolysis of Slowly Biodegradable Substrate in MBRs. In: Proc. 4th IWA Conference on Membranes for Water and Wastewater Treatment, 15.-17.05.2007, Harrogate, UK (ISBN: 978-1-86194-127-5).
216. **Bracklow, U.; Manigas, L.; Drews, A.; Vocks, M.; Kraume, M.** (2007): Impact of different recirculation schemes on nutrients removal in a laboratory scale MBR. In: Proc. 2nd IWA National Young Water Professionals Conference: Membrane Technologies for Wastewater Treatment and Reuse, Berlin, 4.-6.6.2007, 9-17.
217. **Drews, A.; Arellano-Garcia, H.; Schöneberger, J.; Schaller, J.; Kraume, M.; Wozny, G.** (2007): Improving the efficiency of membrane bioreactors by a novel model-based control of membrane filtration. In: Proc. ESCAPE 17 Computer-Aided Chemical Engineering 24, 27.-30.05.2007, Bukarest, Rumänien (ISBN: 978-0-444-53157-5).
218. **Drews, A.; Arellano-Garcia, H.; Schöneberger, J.; Schaller, J.; Wozny, G.; Kraume, M.** (2007): Model-based recognition of fouling mechanisms in membrane bioreactors. IMSTEC 2007, 05.-09.11.2007, Sydney, Australien (ISBN: 970-0-7334-2561-5).
219. **Drews, A.; Arellano-Garcia, H.; Schubert, U.; Wozny, G.; Kraume, M.** (2007): Führung von hochzelldichten Bioprozessen. ProcessNet-Fachausschusssitzung "Prozess- und Anlagentechnik" und "Fluidverfahrenstechnik", 11.-13.02.2007, Karlsruhe.
220. **Drews, A.; Iversen, V.; Schaller, J.; Lesjean, B.; Kraume, M.** (2007): Fouling reduction in membrane bioreactors by use of flux enhancers and analysis of filtration mechanisms. Filtech 2007, 27.2.-01.03.2007, Wiesbaden.
221. **Drews, A.; Vocks, M.; Bracklow, U.; Iversen, V.; Kraume, M.** (2007): Does fouling in MBR depend on SMP? 4th IWA Conference on Membranes for Water and Wastewater Treatment, 15.-17.05.2007, Harrogate, UK (ISBN: 978-1-86194-127-5).
222. **Grünig, J.; Kraume, M.; Shilkin, A.** (2007): Fluid Dynamics of a Liquid Film on a Vertical Wire with Counter Current Gas Flow. In: Schindler, F.-P. (Ed.), 4th International Berlin Workshop - IBW 4 on Transport Phenomena with Moving Boundaries, 27-28.09.07, Berlin (ISBN: 978-3-18-388303-5).

223. **Iversen, V.; Drews, A.; Mehrez, R.; Ernst, M.; Lesjean, B.; Jekel, M.; Kraume, M.** (2007): Fouling control in MBRs by on-line analyzing and dosing of flux enhancing chemicals. IMSTEC 2007, 05.-09.11.2007, Sydney, Australien (ISBN: 970-0-7334-2561-5).
224. **Iversen, V.; Drews, A.; Schmidt, T.; Lesjean, B.; Kraume, M.** (2007): Performance of textile filtration materials as a replacement for membranes in membrane bioreactors (MBRs). Filtech 2007, 27.2.-01.03.2007, Wiesbaden.
225. **Iversen, V.; Mohaupt, J.; Drews, A.; Lesjean, B.; Kraume, M.** (2007): Side effects of flux enhancing chemicals in membrane bioreactors (MBRs): study on their biological toxicity and their residual fouling propensity. 4th International conference on membranes for water and wastewater treatment, 15.-17.05.2007, Harrogate, UK (ISBN: 978-1-86194-127-5).
226. **Iversen, V.; Mohaupt, J.; Drews, A.; Lesjean, B.; Kraume, M.** (2007): Systematic investigation of the effect of flux enhancers on MBR sludge filtrability. 2nd IWA National Young Water Professionals Conference: Membrane Technologies for Wastewater Treatment and Reuse, 04.-06.06.2007, Berlin (ISBN: 987-3-9811684-0-2).
227. **Kraume, M.; Drews, A.; Iversen, V.; Schaller, J.; Wedi, D.** (2007): Fouling in Membranbelebungsanlagen - Nutzen Laboruntersuchungen dem großtechnischen Betrieb? 7. Aachener Tagung Wasser und Membranen, Aachen (ISBN: 3-86130-888-6).
228. **Kraume, M.; Wedi, D.; Schaller, J.; Iversen, V.; Drew, A.** (2007): Fouling in MBR - What use are lab investigations for full scale operation? IMSTEC 2007, 05.-09.11.2007, Sydney, Australien (ISBN: 970- 0-7334-2561-5).
229. **Maaß, S.; Gäbler, A.; Wegener, M.; Zaccone, A.; Paschedag, A.R.; Kraume, M.** (2007): Tropfenzerfall in gerührten Flüssig/flüssig-Systemen. 9. Köthener Rührer-Kolloquium, 2007, Köthen (ISBN: 978-3-86011-012-6).
230. **Maaß, S.; Paschedag A.R.; Kraume, M.** (2007): Influence of Electrolytes and Turbulence Parameters on Drop Breakage and Drop Size Distributions in Stirred Liquid/Liquid Dispersions. 6th International Conference on Multiphase Flow, 09.-13.07.2007, Leipzig (ISBN: 978-3-86010-913-7).
231. **Maaß, S.; Wollny, S.; Rojahn, J.; Paschedag, A.R.; Kraume M.** (2007): Comparison of measurement techniques for drop sizes in highly dispersed and fastly coalescing systems. PARTEC 2007, 27.-29.03.2007, Nürnberg.
232. **Prieske, H.; Drews, A.; Kraume, M.** (2007): Hydrodynamic Optimisation of a Membrane Bioreactor for Wastewater Treatment. Filtech 2007, 27.02.-01.03.2007, Wiesbaden.
233. **Prieske, H.; Drews, A.; Kraume, M.** (2007): Hydrodynamic optimisation of a submerged membrane bioreactor in an airlift loop configuration. In: Proc. 4th IWA Conference on Membranes for Water and Wastewater Treatment, 15.-17.05.2007, Harrogate, UK (ISBN: 978-1-86194-127-5).

234. **Prieske, H.; Drews, A.; Kraume, M.** (2007): Prediction of the Circulation Velocity in a Membrane Bioreactor. In: Proc. 4th IWA Conference on Membranes for Water and Wastewater Treatment, 15.-17.05.2007, Harrogate, UK (ISBN: 978-1-86194-127-5).
235. **Prieske, H.; Halde, B.; Drews, A.; Kraume, M.** (2007): Experimental and Numerical Investigation of the Multiphase Flow in a Membrane Bioreactor. 6th International Conference on Multiphase Flow, 09.-13.07.2007, Leipzig (ISBN: 978-3-86010-913-7).
236. **Schaller, J.; Drews, A.; Kraume, M.** (2007): Analyses of filtration mechanisms in membrane bioreactors and test cells by the application of pore blockage and cake filtration models. 4th International Water Association Conference on Membranes for Water and Wastewater Treatment, 15.-17.05.2007, Harrogate, UK (ISBN: 978-1-86194-127-5).
237. **Scheumann, R.; Besançon, A.; Jefferson, B.; Kraume, M.** (2007): Biological parameters in greywater treatment with a submerged membrane sequencing batch reactor. 4th International Water Association Conference on Membranes for Water and Wastewater Treatment, 15.-17.05.2007, Harrogate, UK (ISBN: 978-1-86194-127-5).
238. **Scheumann, R.; Kraume, M.** (2007): Influence of different HRT for the operation of a submerged membrane sequencing batch reactor (SM-SBR) for the treatment of greywater. MEDA WATER International Conference on Sustainable Water Management, 21.-24.03.2007, Tunis, Tunesien (ISBN: 978-3-901425-12-7).
239. **Scheumann, R.; Masi, F.; El Hamouri, B.; Kraume, M.** (2007): Greywater treatment as an option for effective wastewater management in small communities. In: Proceedings SmallWat07, 12.-15.11.2007, Sevilla, Spanien (ISBN: 978-84-611-9742-2).
240. **Scheumann, R.; Merz, C.; Atasoy, E.; Murat, S.; Baban, A.; ElHamouri, B.; Kraume, M.** (2007): Greywater treatment with membrane bioreactors: Comparison of three different reactors operated with synthetic and real greywater. In: Proceedings 7. Aachener Tagung Wasser und Membranen, 30.-31.10.2007, Aachen (ISBN: 3-86130-888-6).
241. **Schlauch, S.; Kraume, M.; Mehrmann, V.** (2007): Numerical Simulations of Drop Size Distributions in Stirred Liquid-Liquid Systems Using a Compartment Model Approach, In: Schindler, F.-P. (Ed.), 4th International Berlin Workshop - IBW 4 on Transport Phenomena with Moving Boundaries, 27-28.09.07, Berlin (ISBN: 978-3-18-388303-5).
242. **Tacke, D.; Pinnekamp, J.; Prieske, H.; Kraume, M.** (2007): Untersuchungen zur Belüftungsoptimierung von getauchten Modulsystemen. In: Proc. 7. Aachener Tagung Wasser und Membranen, 30.-31.10.2007, Aachen (ISBN: 3-86130-888-6).
243. **Tacke, D.; Pinnekamp, J.; Prieske, H.; Kraume, M.** (2007): Membrane Bioreactor Aeration: Investigation of the Velocity Flow Pattern. 2nd IWA National Young Water Professionals Conference: Membrane Technologies for Wastewater Treatment and Reuse, 04.-06.06.2007, Berlin (ISBN: 987-3-9811684-0-2).

244. **Vocks, M.; Lesjean, B.; Gnirss, R.; Kraume, M.** (2007): Vermehrte Nährstoffelimination in einer Membranbelebung in Kombination mit Druckentwässerung (ENREM Projekt, Berlin). 19. Fachtagung Norddeutsche Tagung für Abwasserwirtschaft und Gewässerentwicklung, 24.-25.4.2007, Lübeck (ISBN: 978-3-930400-92-8).
245. **Vocks, M.; Lesjean, B.; Gnirss, R.; Kraume, M.** (2007): Impact of two different excess sludge removal strategies on the performance of a membrane bioreactor system. 4th International Water Association Conference on Membranes for Water and Wastewater Treatment, 15.-17.05.2007, Harrogate, UK (ISBN: 978-1-86194-127-5).
246. **Wegener, M.; Fevre, M.; Wang, Z.; Paschedag, A.R.; Kraume, M.** (2007): Marangoni convection in single drop flow - Experimental investigations and 3D-simulations. International Conference on Multiphase Flow, 09.-13.07.2007, Leipzig (ISBN: 978-3-86010-913-7).

2008**Abstracts**

247. **Drews, A.; Arellano-Garcia, H.; Wozny, G.; Kraume, M.** (2008): Modellgestütztes Monitoring zur optimierten Bioprozessführung. Chem. Ing. Tech. 80 1342.
248. **Drews, A.; Prieske, H.; Kraume, M.** (2008): Optimierung der Blasen- und Zirkulationsströmung in Membranbioreaktoren. Chem. Ing. Tech. 80 1289-1290.
249. **Gramdorf, S.; Hermann, S.; Kraume, M.** (2008): Einsatz der Emulgiertechnik zur Erzeugung fester Lipidnanopartikel Chem. Ing. Tech. 80 (9) 1405.
250. **Iversen, V.; Villwock, J.; Koseoglu, H.; Yigit, N.O.; Kitis, M.; Drews, A.; Kraume, M.** (2008): Filtrierbarkeit und Scherstabilität von geflocktem Belebtschlamm. Chem. Ing. Tech. 80 1313.
251. **Maaß, S.; Lutz, E.; Metz, F.; Rehm, T.; Kraume, M.** (2008): Experimentelle und numerische Untersuchungen von gerührten Flüssig/Flüssig-Systemen für die PVC-Produktion mit mehrstufigen Rührern. Chem. Ing. Tech. 80 (9) 1358.

Journals

252. **Arellano-Garcia, H.; Drews, A.; Kraume, M.** (2008): Modellbasierte Führungsstrategie für die Foulingminimierung in Membranbioreaktoren. Chem. Ing. Tech. 80 (1-2) 87-95.
253. **De la Torre, T.; Lesjean, B.; Drews, A.; Kraume, M.** (2008): Monitoring of transparent exopolymer particles (TEP) in a membrane bioreactor (MBR) and correlation with other fouling indicators. Water Sci. Technol. 58 (10) 1903-1909.
254. **Drews, A.; Arellano-Garcia, H.** (2008): Model-based Determination of Changing Kinetics in High Cell Density Cultures Using Respiration Data. Chem. Eng. Sci. 63 4789-4799.
255. **Drews, A.; Prieske, H.; Kraume, M.** (2008): Optimierung der Blasen- und Zirkulationsströmung in Membranbelebungsreaktoren. Chem. Ing. Tech. 80 (12) 1795-1801.
256. **Drews, A.; Vocks, M.; Bracklow, U.; Iversen, V.; Kraume, M.** (2008): Does fouling in MBRs depend on SMP? Desalination 231 (1-3) 141-149.
257. **Gramdorf, S.; Hermann, S.; Hentschel, A.; Schrader, K.; Müller, R.H.; Kumpugdee-Vollrath, M.; Kraume, M.** (2008): Crystallized miniemulsions: Influence of operating parameters during high-pressure homogenization on size and shape of particles. Colloids Surf., A 331 (1-2) 108-113.
258. **Hwang, B.K.; Lee, W.N.; Yeon, K.M.; Park, P.K.; Lee, C.H.; Chang, I.S.; Drews, A.; Kraume, M.** (2008): Correlating TMP increases with microbial characteristics in the bio-cake on the membrane surface in a membrane bioreactor. Environ. Sci. Technol. 42 (11) 3963-3968.

259. **Iversen, V.; Mohaupt, J.; Drews, A.; Lesjean, B.; Kraume, M.** (2008): Side effects of flux enhancing chemicals in membrane bioreactors (MBRS): study on their biological toxicity and their residual fouling propensity. *Water Sci. Technol.* 57 (1) 117-123.
260. **Koseoglu, H.; Yigit, N.O.; Iversen, V.; Drews, A.; Kitis, M.; Lesjean, B.; Kraume, M.** (2008): Effects of several different flux enhancing chemicals on filterability and fouling reduction of membrane bioreactor (MBR) mixed liquors. *J. Membr. Sci.* 320 (1-2) 57-64.
261. **Liwarska-Bizukojc, E.; Drews, A.; Kraume, M.** (2008): Effect of selected nonionic surfactants on the activated sludge morphology and activity in a batch system. *J. Surfactant Deterg.* 11 (2) 159-166.
262. **Liwarska-Bizukojc, E.; Scheumann, R.; Drews, A.; Bracklow, U.; Kraume, M.** (2008): Effect of anionic and nonionic surfactants on the kinetics of the aerobic heterotrophic biodegradation of organic matter in industrial wastewater. *Water Res.* 42 (4-5) 923-930.
263. **Nataraj, S.; Schomäcker, R.; Kraume, M.; Mishra, I.M.; Drews, A.** (2008): Analyses of polysaccharide fouling mechanisms during crossflow membrane filtration. *J. Membr. Sci.* 308 (1-2) 152-161.
264. **Prieske, H.; Drews, A.; Kraume, M.** (2008): Prediction of the circulation velocity in a membrane bioreactor. *Desalination* 231 (1-3) 219-226.
265. **Stumpf, D.; Zhu, H.; Heinzmann, B.; Kraume, M.** (2008): Phosphorus recovery in aerated systems by MAP precipitation: optimizing operational conditions. *Water Sci. Technol.* 58 (10) 1977-1983.
266. **Stumpf, D.; Heinzmann B.; Galander, C.** (2008): Nachhaltiger Umgang mit natürlichen Ressourcen - Phosphorrecycling aus kommunalem Faulschlamm. *Umweltschutztechnik* 4, 2-3.
267. **Tacke, D.; Pinnekamp, J.; Prieske, H.; Kraume, M.** (2008): Membrane bioreactor aeration: investigation of the velocity flow pattern. *Water Sci. Technol.* 57 (4) 559-565.

Proceedings

268. **Arellano-Garcia, H.; Drews, A.; Carrascosa, M.; Wozny, G.** (2008): Identifiability analysis and optimisation-based state and parameter estimation in bioreactors. In: Proc. 18th European Symposium on Computer Aided Process Engineering, Computer-Aided Chemical Engineering 25, Lyon, Frankreich (ISBN: 9780444532275), 575-581.
269. **Bracklow, U.; Carvalho, G.; Drews, A.; Pallasch, M.; Barjenbruch, M.; Kraume, M.** (2008): Substrate influence on the performance and microbial population of a laboratory scale MBR. Proceedings International Symposium on Sanitary and Environmental Engineering, 24.-27.06.2008, Florenz, Italien (ISBN: 978-88-903557-0-7), 1-8.

270. **Bracklow, U.; Drews, A.; Gnirss, R.; Klamm, S.; Lesjean, B.; Stüber, J.; Barjenbruch, M.; Kraume, M.** (2008): Influence of sludge loadings and types of substrates on nutrients removal in MBRs. In: Proc. Membranes in drinking water production and waste water treatment, 20.-24.10.2008, Toulouse, Frankreich, Nr. 120, 1-8.
271. **De la Torre, T.** (2008): Fouling in MBR - Looking for the culprits. In: Proceedings Network Young Membranes 10th Edition, 18-19.09.2008, Berlin (ISBN: 978-3-00-025711-7), 192-193.
272. **De la Torre, T.; Iversen, V.; Moreau, A.; Stüber, J.** (2008): Filtration Characterisation Methods in MBR Systems: A practical comparison. In: Proceedings Membranes in drinking water production and waste water treatment, 20.-24.10.2008, Toulouse, Frankreich.
273. **De la Torre, T.; Lesjean, B.; Mottschall, M.; Drews, A.; Kraume, M.** (2008): Filterability Assessment in Membrane Bioreactors Using an In-Situ Filtration Test Cell. IWA Conference in Aquatech 2008, 01.-02.10.2008, Amsterdam, Niederlande.
274. **Drews, A.; De la Torre, T.; Iversen, V.; Schaller, J.; Stüber, J.; Meng, F.; Lesjean, B.; Kraume, M.** (2008): On the lookout for a fouling indicator - A critical evaluation of various methods for fouling characterisation in MBR. Program book ICOM 2008, 12.-18.07.2008, Honolulu, USA.
275. **Drews, A.; De la Torre, T.; Iversen, V.; Schaller, J.; Stüber, J.; Meng, F.; Lesjean, B.; Kraume, M.** (2008): Fouling - the unsolved mystery: Critical view on the practical use of various fouling characterisation methods. In: Proc. 12th Aachener Membran Kolloquium, 29.-30.10.2008, Aachen (ISBN: 978-3-00-026060-5).
276. **Drews, A.; Prieske, H.; Meyer, E.-L.; Senger, G.; Kraume, M.** (2008): Advantageous and detrimental effects of air-sparging in membrane filtration: bubble movement, exerted shear and particle classification. In: Proc. 12th Aachener Membran Kolloquium, 29.-30.10.2008, Aachen (ISBN: 978-3-00-026060-5).
277. **Drews, A.; Prieske, H.; Senger, G.; Kraume, M.** (2008): Influence Of Bubble Movement On Cake Layer Control In Flat Sheet Membrane Modules. In: Proc. Engineering With Membranes, 25.-28.5.2008, Vale do Lobo, Portugal (ISBN: 978-84-691-3670-6).
278. **Grünig, J.; Kraume, M.** (2008): Film Flow on a Vertical Wire - Experimental Investigation of Fluid Dynamics and Mass Transfer. Czasopismo Techniczne Mechanika z. 5-M/2008, 07.-09.10.2008, Krakau, Polen (ISBN: 0011-4561/1897-6328), Vol. 105/6, 139-149.
279. **Iversen, V.** (2008): Flux enhancement via chemical dosing in membrane bioreactors (MBR). In: Proc. Network Young Membranes 10th Edition, 18-19.09.2008, Berlin (ISBN: 978-3-00-025711-7), 50-51.

280. **Iversen, V.; Villwock, J.; De la Torre, T.; Drews, A.; Kraume, M.** (2008): Impact of flux enhancer for MBR on floc size distribution, dewaterability and shear stability. In: Proc. Membranes in drinking water production and waste water treatment, 20.-24.10.2008, Toulouse, Frankreich.
281. **Koseoglu, H.; Yigit, N.O.; Iversen, V.; Drews, A.; Kraume, M.; Kitis, M.** (2008): Katyonik polimerler kullanarak membrane biyoreaktörde (MBR) tikanmaların azaltılması. Endüstriyel Kirlenme '08, Endüstriyel Kirlenme Kontrolü Sempozyumu, 11.-13.6.2008, Istanbul, Türkei (ISBN: 978-975-561-331-4).
282. **Kraume, M.; Drews, A.** (2008): Membrane fouling in water applications: Recent trends in fouling research and cure. In: Proceedings Network Young Membranes 10th Edition, 18-19.09.2008, Berlin (ISBN: 978-3-00-025711-7), 18-19.
283. **Kraume, M.; Scheumann, R.; Baban, A.; El Hamouri, B.** (2008): Performance of a Compact Submerged Membrane Sequencing Batch Reactor (SM-SBR) for Greywater Treatment. In: Proc. 12th Aachener Membran Kolloquium, 29.-30.10.2008, Aachen (ISBN: 978-3-00-026060-5).
284. **Kraume, M.; Wedi, D.; De la Torre, T.; Schaller, J.; Iversen, V.; Drews, A.** (2008): Scale-up investigations on fouling in MBR - Potentials and limitations. Program book ICOM 2008, 12.-18.07.2008, Honolulu, USA.
285. **Maaß, S.; Horn, S.; Kraume, M.** (2008): Measurement techniques for drop size distributions in stirred and fast coalescing liquid/liquid systems. Czasopismo Techniczne Mechanika z. 5-M/2008, 07.-09.10.2008, Krakau, Polen (ISBN: 0011-4561/1897-6328), Vol. 105/6, 219-230.
286. **Maaß, S.; Paschedag, A.R.; Kraume, M.** (2008): Einfluss von Elektrolyten und Turbulenzparametern auf Tropfengrößenverteilungen in gerührten Flüssig/flüssig Systemen. 10. Köthener Rührerkolloquium, Köthen (ISBN: 978-3-86011-015-7).
287. **Maaß, S.; Metz, F.; Rehm, T.; Kraume, M.** (2008): Fundamental experimental and numerical analysis of stirred liquid/liquid systems for PVC-production in slim reactors with multi-stage stirrers. Sixth International Symposium on Mixing in Industrial Process Industries- ISMIP VI, 17.-21.08.2008, Ontario, Kanada.
288. **Meng, F.** (2008): Surface modiface of filter cloth to improve its anti-fouling property in MBR: PVA microsphere coating. In: Proceedings Network Young Membranes 10th Edition, 18-19.09.2008, Berlin (ISBN: 978-3-00-025711-7), 30-31.
289. **Meng, F.; Kraume, M.** (2008): Fate of dissolved organic matter (DOM) in a pilot-scale membrane bioreactor. In: Proc. of Particle separation in water and wastewater treatment 2008, 06.-11.07.08, Delft, Niederlande.
290. **Prieske, H.; Drews, A.; Kraume, M.** (2008): Optimisation of bubbly flow in flat sheet membrane modules. Program book ICOM 2008, 12.-18.07.2008, Honolulu, USA.

291. **Prieske, H.; Meyer, E.-L.; Drews, A.; Kraume, M.** (2008): Analysis of Particle Classification During the Membrane Filtration of Activated Sludge. Proceedings of Engineering with Membranes, 25.-28.5.2008, Vale do Lobo, Portugal (ISBN: 978-84-691-3670-6).
292. **Prieske, H.; Stünkel, S.; Drews, A.; Kraume, M.** (2008): Optimisation of The Circulation Flow in an MBR with Flat Sheet Modules. In: Proc. Engineering with Membranes (EWM), 25.-28.5.2008, Vale do Lobo, Portugal (ISBN: 978-84-691-3670-6).
293. **Schaller, J.** (2008): Minimisation of excess sludge production in membrane bioreactors. In: Proceedings Network Young Membrains 10th Edition, 18-19.09.2008, Berlin (ISBN: 978-3-00-025711-7), 186-187.
294. **Schaller, J.; Camacho, M.; Drews, A.; Kraume, M.** (2008): Operation of Membrane Bioreactors at high Sludge Ages: Effects on Sludge Characteristics. In: Proceedings International symposium on Sanitary and Environmental Engineering, 24.-27.06.2008, Florenz, Italien (ISBN: 978-88-903557-0-7).
295. **Schaller, J.; Iversen, V.; Drews, A.; Kraume, M.** (2008): Operation of Membrane Bioreactors in parallel: Experiences and Difficulties. In: Proceedings IWA World Water Congress and Exhibition, 07.-12.09.2008, Wien, Österreich.
296. **Stüber, J.** (2008): Containerised MBR system for advanced nutrients elimination. In: Proceedings Network Young Membrains 10th Edition, 18-19.09.2008, Berlin (ISBN: 978-3-00-025711-7), 178-179.
297. **Stüber, J.; Luedicke, C.; Gnirss, R.; Lesjean, B.; Kraume, M.** (2008): Operation of membranes used in a decentralised domestic wastewater treatment plant: Field study and comparison of different cleaning strategies. In: Proc. Membranes in drinking water production and waste water treatment, 20.-24.10.2008, Toulouse, Frankreich.
298. **Stumpf, D.; Gros, S.; Heinzmann, B.; Kraume, M.** (2008): Phosphorus Recovery by Induced MAP-Precipitation. Czasopismo Techniczne Mechanika z. 5-M/2008, 07.-09.10.2008, Krakau, Polen (ISBN: 0011-4561/1897-6328).
299. **Stumpf, D.; Zhu, H.; Heinzmann, B.; Kraume, M.** (2008): Phosphorus Recovery in Aerated Systems by MAP Precipitation: Optimizing Operational Conditions. Programme and Abstract Book 5th IWA Leading-Edge Technology, 16.04.2008, Zürich, Schweiz.
300. **Stumpf, D.; Zhu, H.; Heinzmann, B.; Kraume, M.** (2008): Kinetics of MAP Precipitation in Aerated Systems for Phosphorus Recovery. Proceedings International symposium on Sanitary and Environmental Engineering, 24.-27.06.2008, Florenz, Italien (ISBN: 978-88-903557-0-7).
301. **Vandhyaningumoro, N.** (2008): Fouling Comparison at Different Parameter Processes. In: Proceedings Network Young Membrains 10th Edition, 18-19.09.2008, Berlin (ISBN: 978-3-00-025711-7), 64-65.

302. **Yigit, N.O.; Koseoglu, H.; Iversen, V.; Drews, A.; Kraume, M.; Kitis, M.** (2008): Membran Biyoreaktörlerin (MBR) tıkanma kontrolünde kullanılan katyonik polimerlerin biyolojik aktiviteye etkileri. Endüstriyel Kirlenme '08, Endüstriyel Kirlenme Kontrolü Sempozyumu, 11.-13.6.2008, İstanbul, Türkiye (ISBN: 978-975-561-331-4).

2009*Abstracts*

303. **Bäumler, K.; Wegener, M.; Paschedag, A.R.; Bänsch, E.** (2009): Mesh-Moving-Methode zur Berechnung des instationären Impuls- und Stofftransports an deformierbaren Einzeltropfen. Chem. Ing. Tech. 81 (8) 1060-1061.
304. **Gramdorf, S.; Hermann, S.; Kumpugdee-Vollrath, M.; Kraume, M.** (2009): Einfluss der Partikelgröße auf Schmelz- und Kristallisationsverhalten von Miniemulsionen. Chem. Ing. Tech. 81 (8) 1168-1169.
305. **Grünig, J.; Lyagin, E.; Kraume, M.** (2009): Filmströmung am senkrechten Draht - Experimentelle Untersuchungen zum gas- und flüssigkeitsseitigen Stofftransport. Chem. Ing. Tech. 81 (8) 1055-1056.
306. **Himmelsbach, W.; Kraume, M.** (2009): Neue Herausforderungen in der industriellen Mischtechnik. Chem. Ing. Tech. 81 (8) 1058.
307. **Maaß, S.; Kraume, M.** (2009): Experimentelle Untersuchungen zur Tropfenbeanspruchung in turbulenten Strömungen. Chem. Ing. Technik 81 (8) 1146-1147.

Electronic Resource

308. **Stumpf, D.; Villwock, J.; Heinzmann, B.; Kraume, M.** (2009): Induced MAP-precipitation in digested sludge for reuse as magnesium ammonium phosphate for fertilizer. In: BALTIC 21 Conference „Phosphorus Recycling and Good Agricultural Management Practice“, 28.09.-30.09.2009, Berlin. URL: http://www.jki.bund.de/fileadmin/dam_uploads/koordinierend/bs_naehrstofftage/baltic21/7_Poster%20Stumpf.pdf

Journals

309. **De la Torre, T.; Harff, M.; Lesjean, B.; Drews, A.; Kraume, M.** (2009): Characterisation of polysaccharide fouling of an ultrafiltration membrane using model solutions. Desalin. Water Treat. 8, 17-23.
310. **De la Torre, T.; Iversen, V.; Moreau, A.; Stüber, J.** (2009): Filtration characterization methods in MBR systems: A practical comparison. Desalin. Water Treat. 9, 15-21.
311. **Drews, A.; Arellano-Garcia, H.; Schöneberger, J.; Schaller, J.; Wozny, G.; Kraume, M.** (2009): Model-based recognition of fouling mechanisms in membrane bioreactors. Desalination 236 (1-3), 224-233.
312. **Grünig, J.; Kraume, M.** (2009): Annular Liquid Films on a Vertical Wire with Counter Current Gas Flow - Experimental Investigations. Chem. Eng. Trans. 17, 621-626.

313. **Iversen, V.; Koseoglu, H.; Yigit, N.; Drews, A.; Kitis, M.; Lesjean, B.; Kraume, M.** (2009): Impacts of Membrane Flux Enhancers on Activated Sludge Respiration and Nutrient Removal in MBRs. *Water Res.* 43 (3), 822-830.
314. **Iversen, V.; Villwock, J.; de la Torre Garcia, T.; Drews, A.; Kraume, M.** (2009): Impact of MBR flux enhancer on floc size distribution, dewaterability and shear stability. *Desalin. Water Treat.* 6, 33-40.
315. **Iversen, V.; Mehrez, R.; Horng, R. Y.; Chen, R.H.; Meng, F.; Drews, A.; Lesjean, B.; Ernst, M.; Jekel, M.; Kraume, M.** (2009): Fouling mitigation through flocculants and adsorbents addition in membrane bioreactors: comparing lab and pilot studies. *J. Membr. Sci.* 345 (1-2), 21-30.
316. **Kraume, M.; Wedi, D.; Schaller, J.; Iversen, V.; Drews, A.** (2009): Fouling in MBR: What use are lab investigations for full scale operation? *Desalination* 236 (1-3), 94-103.
317. **Lahidjanian, D.; Kraume, M.; Hausmann, K.; Bausen, D.; Kuhlenschmidt, B.** (2009): Untersuchung einer Plasmabehandelten Luftfahrtspezifischen Polyurethanbeschichtung Mittels der Chemischen Rasterkraftmikroskopie. *Galvanotechnik* 100 (5), 1059-1068.
318. **Maaß, S.; Wollny, S.; Sperling, R.; Kraume, M.** (2009): Numerical and experimental analysis of particle strain and breakage in turbulent dispersions. *Chem. Eng. Res. Des.* 87 (4), 565-572.
319. **Maaß, S.; Grünig, J.; Kraume, M.** (2009): Techniki pomiarowe do rozkładu wielkości kropel w mieszanej cieczy - Measurement techniques for drop size distributions in stirred liquid/liquid systems. *Chem. Process Eng.* 30 (4), 635-651.
320. **Meng, F.; Chae, S.R.; Drews, A.; Kraume, M.; Shin, H.S.; Yang, F.** (2009): Recent advances in membrane bioreactors (MBRs): Membrane fouling and membrane material. *Water Res.* 43 (6), 1489-1512.
321. **Meng, F.; Drews, A.; Mehrez, R.; Iversen, V.; Ernst, M.; Yang, F.; Jekel, M.; Kraume, M.** (2009) Occurrence, Source, and Fate of Dissolved Organic Matter (DOM) in a Pilot-Scale Membrane Bioreactor. *Environ. Sci. Technol* 43 (23), 8821–8826.
322. **Scheumann, R.; Kraume, M.** (2009): Influence of hydraulic retention time on the operation of a submerged membrane sequencing batch reactor (SM-SBR) for the treatment of greywater. *Desalination* 246, 1-8.
323. **Scheumann, R.; Masi, F.; El Hamouri, B.; Kraume, M.** (2009): Greywater treatment as an option for effective wastewater management in small communities. *Desalin. Water Treat.* 4, 33-39.
324. **Stüber, J.; Luedicke, C.; Lesjean, B.; Gnirss, R.; Kraume, M.** (2009): Operation of MBR membrane modules used in a decentralised wastewater treatment plant: Field study and comparison of different cleaning strategies. *Desalin. Water Treat.* 9 (1-3), 181-188.

325. **Wegener, M.; Eppinger, T.; Bäuml, K.; Kraume, M.; Paschedag, A.R.; Bänsch, E.** (2009): Transient rise velocity and mass transfer of a single drop with interfacial instabilities - Numerical investigations. *Chem. Eng. Sci.* 64 (23), 4835-4845.
326. **Wegener, M.; Paschedag, A.R.; Kraume, M.** (2009): Mass transfer enhancement through Marangoni instabilities during single drop formation. *Int. J. Heat Mass Transfer* 52 (11-12), 2673-2677.
327. **Wegener, M.; Fevre, M.; Paschedag, A.R.; Kraume, M.** (2009): Impact of Marangoni instabilities on the fluid dynamic behaviour of organic droplets. *Int. J. Heat Mass Transfer* 52 (11-12), 2543-2551.
328. **Wegener, M.; Kraume, M.; Paschedag, A.R.** (2009): Influence of Marangoni convection on mass transfer at non-spherical droplets. *Chem. Eng. Trans.* 17, 525-530.

Proceedings

329. **Bäuml, K.; Wegener, M.; Bänsch, E.; Paschedag, A.R.** (2009): 2D simulations of interfacial instabilities at deformable single droplets, In: *Proceedings of the Seventh International Conference on Computational Fluid Dynamics in the Minerals and Process Industries*, CSIRO Melbourne, Australien, 09.-11.12.2009, ISBN: 978-0-643-09825-1 CD-ROM.
330. **Charlery, C.; Drews, A.; Kraume, M.; Kroh, L.** (2009): Advanced analysis of polysaccharides in MBR fouling by chromatography. In: *Proc. Final MBR-Network Workshop*, 31.3.-1.4.2009, Berlin, ISBN: 978-3-9811684-5-7, 103-104.
331. **De la Torre, T.; Iversen, V.; Stüber, J.; Mehrez, R.; Drews, A.; Lesjean, B.; Kraume, M.; Ernst, M.; Jekel, M.; Meng, F.** (2009): Searching for a universal fouling indicator for MBR. In: *Proc. 5th IWA specialised membrane technology conference for water & wastewater treatment*, 01.-03.09.2009, Peking, China, 507-508.
332. **De la Torre, T.; Stüber, J.; Iversen, V.; Drews, A.; Kraume, M.** (2009): The quest for indicators of membrane bioreactor systems. In: *Proc. Final MBR-Network Workshop*, 31.03.-01.04.2009, Berlin (ISBN: 978-3-9811684-5-7), 15-16.
333. **Drews, A.; Charlery, C.; Kroh, L.; Kraume, M.** (2009): Influence of nitrifiers on polysaccharides concentration and composition in MBR. In: *Proc. Final MBR-Network Workshop*, 31.03.-01.04.2009, Berlin (ISBN: 978-3-9811684-5-7), 109-110.
334. **Fatarella, E.; Iversen, V.; Paulussen, S.; Brüß, U.; Kraume, M.** (2009): Optimised electrospun nanofibers for municipal wastewater treatment by Textile Bioreactors (TBR). In: *Proc. Final MBR-Network Workshop*, 31.03.-01.04.2009, Berlin (ISBN: 978-3-9811684-5-7), 33-34.
335. **Hermann, S.; Röttgers, N.; Iversen, V.; Drews, A.; Lesjean, B.; Kraume, M.** (2009): MBR - Influence of dynamic operations. In: *Proc. Final MBR-Network Workshop*, 31.03.-01.04.09, Berlin (ISBN: 978-3-9811684-5-7), 125-126.

336. **Iversen, V.; Hermann, S.; Drews, A.; Mehrez, R.; Ernst, M.; Jekel, M.; Lesjean, B.; Kraume, M.** (2009): Effects of various Flux Enhancers in MBR: lab tests vs. pilot scale operation. In: Proc. Final MBR-Network Workshop, 31.03-01.04.2009, Berlin (ISBN: 978-3-9811684-5-7), 29-30.
337. **Iversen, V.; Hermann, S.; Drews, A.; Münz, J.; Götz, G.; Fatarella, E.; Lesjean, B.; Böhm, L.; Kraume, M.** (2009): Textiles for the filtration of activated sludge in membrane bioreactors (MBRs). In: Proc. Filtech 2009, 13.-15.10.2009, Wiesbaden, ISBN: 978-3-941655-00-3, II-694 - II-701.
338. **Iversen, V.; Hermann, S.; Drews, A.; Lesjean, B.; Kraume, M.** (2009): Flux enhancing chemicals in MBR: A 3-year comprehensive study. In: Proc. Euromembrane, 06.09-10.09.2009, Montpellier, Frankreich, 508.
339. **Kraume, M.; Iversen, V.; Hermann, S.; Drews, A.; Lesjean, B.** (2009): Flux Enhancing chemicals in MBR: From jar-tests to pilot-scale. In: Proc. 8. Aachener Tagung Wasser und Membranen, 13.-15.10.2009, Aachen, ISBN: 3-8107-0064-9, A15-1 - A15-9.
340. **Kraume, M.; Drews, A.** (2009): Membrane bioreactors in waste water treatment - Status and trends. In: Proc. FILTECH 2009, 13.-15.10.2009, Wiesbaden, ISBN: 978-3-941655-00-3, 80-94.
341. **Lüdicke, C.; Stüber, J.; Gnirss, R.; Lesjean, B.; Kraume, M.** (2009): Betriebserfahrungen einer Membranbelebungsanlage mit nachgeschalteter Denitrifikation in Berlin-Margaretenhöhe (ENREM-Projekt). In: Proc. 8. Aachener Tagung Wasser und Membranen, 27.-28.10.2009, Aachen, ISBN: 3-8107-0064-9, A25-1 - A25-10.
342. **Lüdicke, C.; Stüber, J.; Gnirss, R.; Lesjean, B.; Kraume, M.** (2009): Operational experience of MBR demonstration plant with post denitrification in Berlin-Margaretenhöhe (ENREM-Projekt). In: Proc. Final MBR-Network Workshop 31.03-01.04.2009, Berlin (ISBN: 978-3-9811684-5-7), 63-64.
343. **Maaß, S.; Lutz, E.; Metz, F.; Rehm, T.; Kraume, M.** (2009): Analysis of stirred liquid/liquid systems for PVC-production in slim reactors with multi-stage stirrers. In: Proc. AICHEM 2009, 11.-15.05.2009, Frankfurt/M., 11.-15. Mai 2009.
344. **Maaß, S.; Wollny, S.; Sperling, R.; Kraume, M.** (2009): Numerical and experimental analysis of particle strain and breakage in turbulent dispersions. 13th Conference on European Mixing, 14.-17.04.2009, Kings College, London, UK.
345. **Mehrez, R.; Ernst, M.; Iversen, V.; Drews, A.; Kraume, M.; Jekel, M.** (2009): Development and application of a proteins and polysaccharides sensor for on-line fouling control in membrane bioreactors. In: Proc. Final MBR-Network Workshop, 31.03-01.04.2009, Berlin (ISBN: 978-3-9811684-5-7), 9-10.

346. **Meng, F.; Mehrez, R.; Iversen, V.; Drews, A.; Jekel, M.; Ernst, M.; Kraume, M.** (2009): Fate of dissolved organic matter (DOM) in a MBR plant: Long-term observation and batch test investigation. In: Proc. 5th IWA specialised membrane technology conference for water & wastewater treatment, 01.-03.09.2009, Peking, China, 166-167.
347. **Prieske, H.; Böhm, L.; Drews, A.; Kraume, M.** (2009): Improved deposition control for membrane bioreactors with immersed flat sheet membrane modules. In: Proc. Filtech 2009, 13.-15.10.2009, Wiesbaden, ISBN: 978-3-941655-00-3, II-615 - II-622.
348. **Prieske, H.; Böhm, L.; Drews, A.; Kraume, M.** (2009): Optimised hydrodynamics for membrane bioreactors with immersed flat sheet membrane modules. In: Proc. 5th IWA specialised membrane technology conference for water & wastewater treatment, 01.-03.09.2009, Peking, China, 514-515.
349. **Prieske, H.; Böhm, L.; Drews, A.; Kraume, M.** (2009): Fluidodynamische Auslegung von Membranbioreaktoren unter dem Aspekt der effektiven Deckschichtkontrolle. In: Proc. 8. Aachener Tagung Wasser und Membranen, 27.- 28.10.2009, Aachen, ISBN: 3-8107-0064-9, A16-1 - A16-10
350. **Rudolph, L.; Atiemo-Obeng, V.; Schaefer, M.; Kraume, M.** (2009): Power Consumption and Blend Time of Co-Axial Tank Mixing Systems in Non-Newtonian Fluids. In: Proc. 13th Conference on European Mixing, 14.-17.04.2009, Kings College, London, UK.
351. **Schaller, J.; Drews, A.; Kraume, M.** (2009): Development of a Cost Model for Membrane Bioreactors including Sludge Handling Costs. In: Proc. 5th IWA specialised membrane technology conference for water & wastewater treatment, 01.-03.09.2009, Peking, China, 416.
352. **Schaller, J.; Drews, A.; Kraume, M.** (2009): Effect of High Sludge Ages on the Sludge Characteristics in Membrane Bioreactors. In: Proc. Final MBR-Network Workshop, 31.03.-01.04.2009, Berlin (ISBN: 978-3-9811684-5-7), 163-164.
353. **Stüber, J.; Schallehn, F.; Lüdicke, C.; Lesjean, B.; Gnirss, R.; Kraume, M.** (2009): Linking the effluent quality to the costs: Economical and ecological evaluation of conventional and decentralised wastewater treatment. In: Proc. 6th IWA Leading Edge Conference on Water and Waste Water Technologies, 23.-25.06.2009, Singapur.
354. **Stüber, J.; Bost, M.; Vocks, M.; Lesjean, B.; Gnirss, R.; Kraume, M.** (2009): Investigations on enhanced denitrification capacities of the ENREM process scheme using a synthetic monosubstrate. In: Proc. 2nd IWA specialized conference: Nutrient Management in wastewater treatment processes, 06.-09.09.2009, Krakau, Polen, 229-237.
355. **Stumpf, D.; Heinzmann, B.; Schwarz, R.-J.; Gnirss, R.; Kraume, M.** (2009): Induced Struvite Precipitation in an Airlift Reactor for Phosphorus Recovery. In: Proc. International Conference on Nutrient Recovery from Wastewater Streams, 10.-13.05.2009, Vancouver, Kanada (ISBN: 978-1-84339-232-3), 179-192.

356. **Stumpf, D.; Freudenberg, N.; Heinzmann, B.; Kraume, M.** (2009): Optimierung der MAP-Kristallisation und Abtrennung aus Faulschlamm in einem Airlift-Schlaufenreaktor zur P-Rückgewinnung. In: Proc. 13. Bremer Colloquium Produktionsintegrierte Wasser-/Abwassertechnik 2009 - "Abwasser als Ressource!" - Kreislaufschließung, Energie- und Wertstoffrückgewinnung, 28.09.-29.09.2009, Bremen.
357. **Villwock, J.; Iversen, V.; Drews, A.; Lesjean, B.; Kraume, M.** (2009): Combination of flux enhancers for MBR. In: Proc. Final MBR-Network Workshop, 31.01.-01.04.09, Berlin (ISBN: 978-3-9811684-5-7), 175-176.
358. **Vu, V.-K.; Gäbler, A.; Gaitzsch, F.** (2009): Innovative Low Weight & Footprint Process on FPSO for Deep Water Developments. In: Proc. Deep Offshore Technology International, 03.-05.11.2009, Monte Carlo, Monaco, CD-ROM.

2010*Abstracts*

359. **Bäumler, K.; Wegener, M.; Paschedag, A.R.; Bänsch, E.** (2010): DNS deformierbarer Einzeltropfen mit Marangoni-Konvektion. Chem. Ing. Tech. 82 (9), 1386-1387.
360. **Bhattacharya, S.; Drews, A.; Kraume, M.; Ansorge-Schumacher, M.B.** (2010): Kinetik einer Epoxidierung mittels silikonbeschichtetem Novozym[®] 435. Chem. Ing. Tech. 82 (9), 1523-1524.
361. **Böhm, L.; Bérubé, P.; Kraume, M.** (2010): Messung von Schubspannungen beim Aufstieg von Einzelblasen. Chem. Ing. Tech. 82 (9), 1397.
362. **Brehmer, M.; Merz, C.; Lemasle, S.; Kraume, M.** (2010): Rheologische Charakterisierung von Faulschlamm. Chem. Ing. Tech. 82 (9), 1375.
363. **Gaitzsch, F.; Gäbler, A.; Kraume, M.** (2010): Vergleich des Koaleszenzverhaltens ruhender und umströmter Wasser-in-Öl-in-Wasser-Einzeltropfen. Chem. Ing. Tech. 82 (9), 1355.
364. **Hermann, S.; Maaß, S.; Walle, A.; Schäfer, M.; Kraume, M.** (2010): Experimentelle und numerische Untersuchungen zu Ort und Art des Tropfenbruchs in gerührten Flüssig-flüssig-Systemen. Chem. Ing. Tech. 82 (9), 1389.
365. **Justice, C.; Pino Grace, P.; Freimark, D.; Kraume, M.; Geigle, P.; Czermak, P.** (2010): Prozessintensivierung bei der Kultivierung humaner mesenchymaler Stammzellen. Chem. Ing. Tech. 82 (9), 1504.
366. **Lyagin, E.; Drews, A.; Kraume, M.** (2010): Kontinuierliches Screeningsystem für biokatalytische Prozesse. Chem. Ing. Tech. 82 (9), 1547.
367. **Maaß, S.; Herrmann, S.** (2010): Scale Up für schlanke gerührte Reaktoren, Scale UP, Zeitschrift des VT- Vereins an der TU Graz, Ausgabe: X/10/2010
368. **Stumpf, D.; Schünemann, M.; Heinzmann, B.; Kraume, M.** (2010): Fluidynamische Untersuchungen in einem Airlift-Schlaufenreaktor zur MAP-Kristallisation. Chem. Ing. Tech. 82 (9), 1576.
369. **Wegener, M.; Kraume, M.; Paschedag, A.R.** (2010): Der Einfluss grenzflächenaktiver Substanzen auf den Stofftransport an sphärischen und deformierbaren Einzeltropfen in marangonidominierten Flüssig/flüssig-Systemen. Chem. Ing. Tech. 82 (9), 1356.

Journals

370. **Awad, M.F.; Kraume, M.** (2010): The Occurrence of Fungi in Activated Sludge from MBRs. Int. Journal of Chemical and Biological Engineering 3 (4), 180-183.

371. **Barz, T.; Löffler, V.; Arellano-Garcia, H.; Wozny, G.** (2010): Optimal determination of steric mass action model parameters for β -lactoglobulin using static batch experiments. *J. Chromatogr. A* 1217, 4267-4277, ISSN: 0021-9673
372. **Bracklow, U.; Drews, A.; Gnirss, R.; Klamm, S.; Lesjean, B.; Stüber, J.; Barjenbruch, M.; Kraume, M.** (2010): Influence of sludge loadings and types of substrates on nutrients removal in MBRs. *Desalination* 250 (2), 734-739.
373. **De la Torre, T.; Mottschall, M.; Lesjean, B.; Drews, A.; Iheanaetu, A.; Kraume M.** (2010): Filterability assessment in membrane bioreactors using an in-situ filtration test cell. *Water Sci. Technol.* 61 (11), 2809-2816.
374. **De la Torre, T.; Iversen, V.; Meng, F.; Stüber, J.; Drews, A.; Lesjean, B.; Kraume, M.** (2010): Searching for a universal fouling indicator for membrane bioreactors. *Desalin. Water Treat.* 18, 264-269.
375. **Drews, A.; Prieske, H.; Meyer, E.-L.; Senger, G.; Kraume, M.** (2010): Advantageous and detrimental effects of air sparging in membrane filtration: Bubble movement, exerted shear and particle classification. *Desalination* 250 (3), 1083-1086.
376. **Drews, A.** (2010): Membrane Fouling in Membrane Bioreactors – Characterisation, Contradictions, Cause and Cures, *J. Membr. Sci.* 363 (1-2), 1-28.
377. **Grünig, J.; Skale, T.; Kraume, M.** (2010): Liquid flow on a vertical wire in a countercurrent gas flow. *Chem. Eng. J.* 164 (1), 121-131.
378. **Justice, C.; Pino-Grace, P.; Freimark, D.; Kraume, M.; Wallrapp, C.; Geigel, P.; Czermak, P.** (2010): Process Intensification of Stem Cell Cultivation. *Biomed Tech* 55 (s1), 6-11, DOI:10.1515/BMT.2010.115
379. **Kraume, M.; Scheumann, R.; Baban, A.; El Hamouri, B.** (2010): Performance of a compact submerged membrane sequencing batch reactor (SM-SBR) for greywater treatment. *Desalination* 250 (3), 1011-1013.
380. **Kraume, M.; Drews, A.** (2010): Membrane bioreactors in waste water treatment - Status and trends. *Chem. Eng. Technol.* 33 (8), 1-10.
381. **Lyagin, E.; Drews, A.; Bhattacharya, S.; Ansorge-Schumacher, M.B.; Kraume, M.** (2010): Continuous screening system for inhibited enzyme catalysis: A membrane reactor approach. *Biotechnol. J.* 5 (8), 813-821.
382. **Maaß, S.; Metz, F.; Rehm, T.; Kraume, M.** (2010): Prediction of drop sizes for liquid-liquid systems in stirred slim reactors - Part I: Single stage impellers. *Chem. Eng. J.* 162, 792-801.
383. **Priske, M.; Wiese, K.-D.; Drews, A.; Kraume, M.; Baumgarten, G.** (2010): Reaction integrated separation of homogenous catalysts in the hydroformylation of higher olefins by means of organophilic nanofiltration. *J. Membr. Sci.* 360 (1-2), 77-83.

384. **Prieske, H.; Böhm, L.; Drews, A.; Kraume, M.** (2010): Optimized hydrodynamics for membrane bioreactors with immersed flat sheet membrane modules. *Desalin. Water Treat.* 18, 270–276.
385. **Schaller, J.; Drews, A.; Kraume, M.** (2010): Development of a cost model for membrane bioreactors including sludge handling costs. *Desalin. Water Treat.* 18, 315-320.
386. **Wegener, M.; Kraume M.; Paschedag A.R.** (2010): Terminal and Transient Drop Rise Velocity of Single Toluene Droplets in Water. *AIChE J.* 56 (1), 2-10.

Proceedings

387. **Awad, M.F.; Kraume, M.** (2010): The occurrence of fungi in activated sludge from MBRs. In: Proc. ICESE 2010: International Conference on Environmental Sciences and Engineering 24.-26.11.2010, Venedig, Italien.
388. **Drews, A.** (2010): Fouling in MBR – Causes, Cures and Contradictions. In: Proc. MBR Asia, 26.-27.04.2010, Bangkok, Thailand, 54-61, ISBN: 978-974-401-794-9.
389. **Drews, A.; Iversen, V.; Kraume, M.** (2010): Comprehensive flux enhancer screening – from lab to pilot scale. In: Proc. MBR Asia, 26.-27.04.2010, Bangkok, Thailand, 199-206, ISBN: 978-974-401-794-9.
390. **Drews, A.; Arellano-Garcia, H.; Schomäcker, R.; Kraume, M.; Wozny, G.** (2010): Ultrafiltration of Surfactant Micelles: Cross-flow Experiments and Flux Modelling. In: Computer Aided Chemical Engineering 28 787-792 - Proc. 20th European Symposium on Computer Aided Process Engineering, 06.-09.06.2010, Ischia, Neapel, Italien.
391. **Gaitzsch, F.; Gäbler, A.; Kraume, M.** (2010): Determination of Coalescence Processes in Single Water-in-Oil-in-Water Double Emulsion Globules. In: Proc. International Conference on Multiphase Flow, 30.05.-04.06.2010, Tampa, USA.
392. **Gaitzsch, F.; Gäbler, A.; Kraume, M.** (2010): Liquid-liquid separation using double emulsions created by phase inversion. In: Proc. World Congress on Emulsion, 12.-14.10. 2010, Lyon, Frankreich.
393. **Grünig, J.; Horn, S.; Skale, T.; Kraume, M.** (2010): Experiments on fluid dynamics and mass transfer of annular film flow on a vertical wire. In: Proc. International Conference on Multiphase Flow, 30.05.-04.06.2010, Tampa, USA.
394. **Hermann, S.; Maaß, S.; Kumar, S.; Agarwal, S.K.; Kraume, M.** (2010): Modelling of coalescence in turbulent stirred liquid/liquid dispersions considering droplet charge. In: Proc. 4th International Conference on Population Balance Modelling, 15.-17.09.2010, Berlin.
395. **Maaß, S.; Kraume, M.** (2010): Tropfenverteilung in gerührten Dispersionen. In: Proc. 12. Köthener Rührer Kolloquium, 17.-18.06.2009, Köthen, 111- 130, ISBN: 978-3-86011-036-2.

396. **Maaß, S.; Heldt, S.; Kraume, M.** (2010): Influence of ionic strength on coalescence in liquid/liquid systems. In: Proc. WCPT6 2010, 26.-29.04.2010, Nürnberg, CD-ROM.
397. **Maaß, S.; Rojahn, J.; Kraume, M.** (2010): Automated image processing for in-situ observation and control of multiphase dispersions occurring in chemical and process engineering. In: Proc. WCPT6 2010, 26.-29.04.2010, Nürnberg.
398. **Maaß, S.; Grünig, J.; Kraume, M.** (2010): Measuring of particle size distributions in stirred tanks. In: Proc. International Conference on Multiphase Flow, 30.05.-04.06.2010, Tampa, USA.
399. **Maaß, S.; Rojahn, J.; Kraume, M.** (2010): Measuring of particle size distributions in multi phase systems. In: Proc. 7th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics, 19.-21.07.2010, Antalya, Türkei.
400. **Maaß, S.; Hermann, S.; Kraume, M.** (2010): Determination of breakage rates with single drop experiments. In: Proc. 4th International Conference on Population Balance Modelling, 15.-17.09.2010, Berlin.
401. **Prieske, H.; Böhm, L.; Drews, A.; Kraume, M.** (2010): Optimised MBR design and aeration for enhanced deposition control. In: Proc. MBR Asia, 26.-27.04.2010, Bangkok, Thailand, 163-173, ISBN: 978-974-401-794-9.

2011*Abstracts*

402. **Brand, C.; Chlaida, M.; Kraume, M.** (2011): Industrial Herbal Extraction Wastewater Treatment Using an Anaerobic Membrane Bioreactor, in Proceedings WATEIC 2011 1st Water and Environment International Conference, 26-29.10.2011, Marrakech, Morocco, ISBN: 978-9981-916-34-0, S. 221
403. **Chlaida, M.; Brand, C.; Kraume, M.** (2011): Diagnosis of Wastewater in the Suburban of Casablanca (Morocco): Physicochemical Quality and Treatment Systems, in Proceedings WATEIC 2011 1st Water and Environment International Conference, 26–29.10.2011, Marrakech, Morocco, ISBN: 978-9981-916-34-0, S. 1
404. **Eppinger, T.; Holst, N.; Godini, H.R.; Jaso, S.; Kraume, M.; Steinbach, J.; Arellano-Garcia, H.; Wozny, G.** (2011): Different Aspects in Modeling and Design of Reactor Concepts for the Oxidative Coupling of Methane, Joint Int. Symposium of UniCat, Erkner, Book of Abstracts
405. **Maaß, S., Kraume, M.** (2011): Process intensification and monitoring of stirred liquid-liquid dispersions, International Symposium on Mixing in Industrial Processes VII, 18. - 22.09.2011 Beijing, China, 14-15.

Journals

406. **Awad, M. F.** (2011): Keratinophilic fungi in activated sludge of wastewater treatment plants in Berlin, Germany. *Mycology: An International Journal of Fungal Biology* 4, 276-282, ISSN 2150-1203, (doi:10.1080/21501203.2011.603103)
407. **Awad, M.F.; Kraume, M.** (2011): Mycological survey of activated sludge in MBRs. *Mycoses* 54 (5), e493-e498, (doi: 10.1111/j.1439-0507.2010.01959.x)
408. **Awad, M. F.; Kraume, M.** (2011): Fungal diversity in activated sludge from membrane bioreactors in Berlin. *Can. J. Microbiol.* 57 (8), 693-698, (doi: 10.1139/w11-056)
409. **Eppinger, T.; Seidler, K.; Kraume, M.** (2011): DEM-CFD simulations of fixed bed reactors with small tube to particle diameter ratios, *Chem. Eng. J.* 166 (1), 324-331, (doi: 10.1016/j.ces.2010.10.053)
410. **Gaitzsch, F.; Kamp, J.; Gäbler, A.; Kraume, M.** (2011): Vergleich des Koaleszenzverhaltens ruhender und umströmter Wasser-in-Öl-in-Wasser-Einzeltropfen. *Chem. Ing. Tech.* 83, (4), 511-517, (doi:10.1002/cite.201100006).
411. **Gaitzsch, F.; Gäbler, A.; Kraume, M.** (2011): Analysis of droplet expulsion in stagnant single water-in-oil-in-water double emulsion globules, *Chem. Eng. Sci.* 66, (20), 4663-4669, ISSN: 0009-2509, (doi: 10.1016/j.ces.2011.06.020)

412. **Jeon, S. J.; Pawelski, A.; Kraume, M.; Hong, W. H.** (2011): Mass transfer enhancement by the alkaline hydrolysis of ethyl acetate in a single droplet system. *J. Ind. Eng. Chem.* 17, (4), 782-787 (doi: 10.1016/j.jiec.2011.05.026)
413. **Justice, C.; Brix, A.; Freimark, D.; Kraume, M.; Pfromm, P.; Eichenmüller, B.; Czermak, P.** (2011): Process control in cell culture technology using dielectric spectroscopy. *Biotechnol. Adv.* 29, 391-401, ISSN:0734-9750, (doi: 10.1016/j.biotechadv.2011.03.002)
414. **Justice, C.; Leber, J.; Freimark, D.; Pino Grace, P.; Kraume, M.; Czermak, P.** (2011): Online- and offline- monitoring of stem cell expansion on microcarrier, *Cytotechnology*, 63 (4), 325-330, (doi: 10.1007/s10616-011-9359-4)
415. **Lyagin, E.; Drews, A.; Bhattacharya, S.; Kraume, M.** (2011): Continuous Membrane-Based Screening System for Biocatalysis. *Membranes*, 1, 70-79, ISSN 2077-0375 (doi: 10.3390/membranes1010070)
416. **Maaß, S.; Buscher, S.; Hermann, S.; Kraume, M.** (2011) Analysis of particle strain in stirred bioreactors by drop breakage investigations. *Biotechnol. J.* 2011, 6 (8), 979-982, (doi: 10.1002/biot.201100161)
417. **Maaß, S.; Rehm, T.; Kraume, M.** (2011): Prediction of drop sizes for liquid-liquid systems in stirred slim reactors - Part II: Multiple stage impellers. *Chem. Eng. J.* 168 (2), 827-838, ISSN: 1385-8947 (doi: 10.1016/j.cej.2011.01.084)
418. **Maaß, S.; Eppinger, T.; Altwasser, S.; Rehm, T.; Kraume, M.** (2011): Flow Field Analysis of Stirred Liquid- Liquid Systems in Slim Reactors. *Chem. Eng. J.* 34 (8), 1215-1227 (doi: 10.1002/ceat.201100033)
419. **Maaß, S.; Wollny, S.; Voigt, A.; Kraume, M.** (2011): Experimental comparison of measurement techniques for drop size distributions in liquid/liquid dispersions. *Exp. Fluids*, 50 (2), 259-269. (doi: 10.1007/s00348-010-0918-9)
420. **Meng, F.; Zhou, Z.; Ni, B.-J.; Zheng, X.; Huang, G.; Jia, X.; Li, S.; Xiong, Y.; Kraume, M.** (2011): Characterization of the size-fractionated biomacromolecules: Tracking their role and fate in a membrane bioreactor. *Water Res.* 45 (15), 4661-4671, (doi: 10.1016/j.watres.2011.06.026)
421. **Wu, C.; Kraume, M.; Ansorge-Schumacher, M. B.** (2011): Optimized Biocatalytically Active Static Emulsions for Organic Synthesis in Nonaqueous Media. *ChemCatChem* 3 (8), 1314-1319, (doi: 10.1002/cctc.201100085) ISSN: (1867-3899)

Proceedings

422. **Al Shamary, L.; Prieske, H.; Kraume, M.** (2011): Optimized Hydrodynamics for Membrane Bioreactor with immersed Flat Sheet Membrane Module. *Proc: Filtech 2011*, 22.-24.3.2011, Wiesbaden.

423. **Chlaida, M.; Brand, C.; Moutaib, Z.; Fouad, S.; Kraume, M.** (2011): Wastewater in the Peri-Urban Area of Great Casablanca (Morocco): Status Quo, Treatment and Potential Re-use in Urban Agriculture, Proceedings of 3rd International Symposium Re-Water, 21-22.11.2011, Braunschweig, ISSN 0934-9731, S. 265-281
424. **Böhm, L.; Prieske, H.; Kraume, M.** (2011): Determination of Shear Stress Around Single Bubbles between Flat Sheet Membranes, in Proc. 1st International Symposium on Multiscale Multiphase Process Engineering, 04.-07.11.2011, Kanazawa, Japan
425. **Gaitzsch, F.; Horn, S.; Gäbler, A.; Kraume, M.** (2011): Coalescence in Double Emulsions. In: Proc. of the 5th International Berlin Workshop – IBW5 - on Transport Phenomena with Moving Boundaries, Fortschrittsberichte VDI, Reihe 3, Nr. 920, ISBN 978-3-18-392003-7, VDI-Verlag, Düsseldorf.
426. **Hermann, S.; Maaß, S.; Zedel, D.; Walle, A.; Schäfer, M.; Kraume, M.** (2011): Experimental and Numerical Investigations of Drop Breakage Mechanism, in Proc. 1st International Symposium on Multiscale Multiphase Process Engineering, 04.-07.11.2011, Kanazawa, Japan
427. **Kraume, M.; Wegener, M.; Paul, N.** (2011): The effect of interfacial phenomena on fluid dynamics and mass transfer of single droplets in Proceedings of the AIChE Annual Meeting 2011, Minneapolis, USA, 16.-21.11.2011, ISBN: 978-0-8169-1070-0 CD ROM
428. **Maaß, S.; Eppinger, T.; Kraume, M.** (2011): Ortsaufgelöste Untersuchung von Festbettreaktoren mit homogener und heterogener Reaktion in: Proc. CFD Fachausschüsse, Dortmund.
429. **Maaß, S.; Wallau, W.; Hülagü, D.; Hermann, S.; Kraume, M.** (2011): Overview of Measurement Techniques for Sizing Fluid Particles in Multi phase Systems, in Proc. 1st International Symposium on Multiscale Multiphase Process Engineering, 04.-07.11.2011, Kanazawa, Japan
430. **Maaß, S.; Hermann, S.; Rojahn, J.; Kraume, M.** (2011): On-line Monitoring of Fluid Particle Size Distributions using Image Analysis, in Proc. 1st International Symposium on Multiscale Multiphase Process Engineering, 04.-07.11.2011, Kanazawa, Japan
431. **Maaß, S.; Kraume, M.** (2011): Process Intensification for Coalescence Hindered Stirred Liquid-liquid Systems, in Proc. 1st International Symposium on Multiscale Multiphase Process Engineering, 04.-07.11.2011, Kanazawa, Japan
432. **Prieske, H.; Kraume, M.** (2011): Investigation of multiphase circulating flow in MBR, in Proc. 1st International Symposium on Multiscale Multiphase Process Engineering, 04.-07.11.2011, Kanazawa, Japan

2012*Abstracts*

433. **Böhm, L.; Kraume, M.; Prieske, H.** (2012): Optimierung der Reinigung von Plattenmembranmodulen durch Untersuchung der Schubspannung, Chem. Ing. Tech., 84 (8), 1366, ISSN:0009-286X , (doi: 10.1002/cite.201250270)
434. **Brehmer, M.; Kraume, M.** (2012): Rühreffizienz in Biogasreaktoren, Chem. Ing. Tech. 84 (8), 1205, ISSN: 0009-286X, (doi: 10.1002/cite.201250430)
435. **Emmerich, J.; Maaß, S.; Rojahn, J.; Kraume, M.; Neubauer, P.** (2012): Automatische Blasenzählung mit quantitativer Größenanalyse in turbulenten Gas/ Flüssig Systemen, Chem. Ing. Tech. 84 (8), 1189, ISSN:0009-286X, (doi: 10.1002/cite.201250352)
436. **Horn, S.; Lewitzka, F.; Kraume, M.** (2012): Charakterisierung und Simulation eines Mili- Mischers zur Auflösung von schwerlöslichen Feststoffen, Chem. Ing. Tech. 84(8), 1367, ISBN: 0009-286X, (doi: 10.1002/cite.201250118)
437. **Druzinec, D.; Salzig, D.; Kraume, M.; Czermak, P.; Vilcinkas, A.** (2012): Prozessentwicklung für die Produktion des Peptides Gloverin aus *Galleria mellonella* in Insektenzellen, Chem. Ing. Tech. 84(8), 1341, ISSN:0009-286X, (doi: 10.1002/cite.201250149)
438. **Guthausen, G.; Dalitz, F.; Zientek, N.; Nirschl, H.; Kraume, M.; Maiwald, M.** (2012): Applikationen der Medium - Resolution- NMR- Spektroskopie in der Prozessanalytik: Potential und Herausforderungen, Chem. Ing. Tech. 84(8), 1364, ISSN: 0009-286X, (doi: 10.1002/cite.201250110)
439. **Lyagin, E.; Drews, A.; Kraume, M.** (2012): Paralleles Reaktorsystem zur verbesserten Charakterisierung und zum Scale Up von Biokatalyse bei kontinuierlichem Betrieb, Chem. Ing. Tech. 84(8), 1400- 1401, ISSN: 0009-286X, (doi: 10.1002/cite.201250099)
440. **Paul, N.; Kraume, M.** (2012): Stoffübergang in tensidhaltigen Flüssig/ Flüssig Systemen, Chem. Ing. Tech. 84(8), 1249-1250, ISSN: 0009-286X, (doi: 10.1002/cite.201250381)

Journals

441. **Bhattacharya, S.; Drews, A.; Jaso S.; Lyagin, E.; Wozny, G.; Kraume, M.; Ansorge-Schumacher, M.B.** (2012): Efficient Chemo-Enzymatic Epoxidation Using silcoat-Novozym®435: Characterizing the Multiphase System, Chem. Eng. Technol., 35 (8), 1448-1455, ISSN:1521-4125, (doi: 10.1002/ceat.201100640)
442. **Böhm, L.; Drews, A.; Prieske, H.; Berube, P.R.; Kraume, M.** (2012): The Importance of fluid dynamics for MBR fouling mitigation, Bioresour. Technol. 122, 50- 61, ISSN: 0960-8524

443. **Böhm, L.; Kraume, M.** (2012): Hydrodynamic Investigation of single bubbles, Proc. zur 19th International Conference Process Engineering and Chemical Plant Design in Czasopismo Techniczne Mechanika 5, 21-29, ISSN: 1897-6328
444. **Brehmer, M.; Eppinger, T.; Kraume, M.** (2012): Einfluss der Rheologie auf das Strömungsregime in gerührten großtechnischen Biogasreaktoren, Chem. Ing. Tech. 84 (11), 2048- 2056, ISSN: 0009-286X
445. **Elseberg, C.L.; Leber, J.; Salzig, D.; Wallrapp, C.; Kassem, M.; Kraume, M.; Czermak, P.** (2012): Microcarrier-based expansion process for hMSCs with high vitality and undifferentiated characteristics. Int. J. Artif. Organs 35(12) 93-107, ISSN:0391-3988
446. **Grünig, J.; Lyagin, E.; Horn, S.; Skale, T.; Kraume, M.** (2012): Mass transfer of liquid films on a vertical wire in a counter current gas flow, Chem. Eng. Sci. 69 (1), 329-339, ISSN:0009-2509, (doi: 10.1016/j.ces.2011.10.049
447. **Hülagü, D.; Kramer, V.; Kraume, M.** (2012): Preparation and Characterization of mixed-matrix membranes, Proc. zur 19th International Conference Process Engineering and Chemical Plant Design in Czasopismo Techniczne Mechanika 5, 95-105, ISSN: 1897-6328
448. **Kamp, J.; Nachtigall, S.; Maaß, S.; Kraume, M.;** (2012): Modelling of Coalescence in turbulent liquid / liquid dispersions considering droplet charge, Proc. zur 19th International Conference Process Engineering and Chemical Plant Design in Czasopismo Techniczne Mechanika 5, 114-124, ISSN: 1897-6328
449. **Kleyböcker, A.; Liebrich, M.; Kasina, M.; Kraume, M.; Wittmaier, M.; Würdemann, H.** (2012): Comparison of different procedures to stabilize biogas formation after process failure in a thermophilic waste digestion system: Influence of aggregate formation on process stability. Waste Manag. 32 (6), 1122-1130, ISSN: 0956-053X
450. **Kleyböcker, A.; Liebrich, M.; Verstraete, W.; Kraume, M.; Würdemann, H.** (2012): Early warning indicators for process failure due to organic overloading by rapeseed oil in one-stage continuously stirred tank reactor, sewage sludge and waste digesters, Bioresour. Technol. 129, 534-541, ISSN: 0960-8564
451. **Kramer, V., Hülagü, D., Kraume, M.** (2012): Development of a mechanistic model for sorption selective mixed-matrix membranes for gas separation, Proc. zur 19th International Conference Process Engineering and Chemical Plant Design in Czasopismo Techniczne Mechanika 5, 125-135, ISSN: 1897-6328
452. **Lyagin, E.; Drews, A.; Bhattacharya, S.; Kraume, M.** (2012): Membrane reactor System for parallel continuous screening and Characterisation of Biocatalysts, Chem. Eng. Trans. 27, 319-324, ISSN: 1974-9791
453. **Lyagin, E.; Drews, A.; Kraume, M.** (2012): Parallel Reactor System for Screening and Characterisation of Biocatalysts, Proc. zur 19th International Conference Process Engineering and Chemical Plant Design in Czasopismo Techniczne Mechanika 5, 149-154, ISSN: 1897-6328

454. **Müller, D.; Müller, M.; Nguyen, L.A.T.; Ludwig, J.; Drews, A.; Schomäcker, R.; Kraume, M.; Wozny, G.** (2012): Development of separation methods for a continuous hydrofoylation process in miniplant-scale, Proc. zur 19th International Conference Process Engineering and Chemical Plant Design in Czasopismo Techniczne Mechanika 5, 165-174, ISSN: 1897-6328
455. **Maaß, S.; Kraume, M.** (2012): Prozesse auf Basis der Partikelgröße steuern. CITplus 6, 31-33, ISSN: 1436-2597.
456. **Maaß, S.; Kraume, M.** (2012): Determination of breakage rates with single drop experiments. Chem. Eng. Sci. (70) 146-164, (doi: 10.1016/j.ces.2011.08.027)
457. **Maaß, S.; Rojahn, J.; Hänsch, R.; Kraume, M.** (2012): Automated drop detection using image analysis for online particle size monitoring in multiphase systems, Comput. Chem. Eng. 45, 27-37, (doi: 10.1016/j.compchemeng.2012.05.014)
458. **Maaß, S.; Paul, N.; Kraume, M.** (2012): Influence of the dispersed phase fraction on experimental and predicted drop size distributions in breakage dominated systems. Chem. Eng. Sci. (76), 140-153, (doi: 10.1016/j.ces.2012.03.050)
459. **Paul, N.; Kraume, M.** (2012): Influence of non-ionic surfactants on liquid-liquid Mass transfer of single droplets, Proc. zur 19th International Conference Process Engineering and Chemical Plant Design in Czasopismo Techniczne Mechanika 5, 185-194, ISSN: 1897-6328
460. **Schaller, J.; Heine, W.; Drews, A.; Kraume, M.** (2012): Investigation of the sludge thickening potential of waste activated sludge using membranes, Desalin. Water Treat. 42 (1-3), 37-42, ISSN: 1944-3994, (doi:10.5004/dwt.2012.2450)
461. **Schwarze, M.; Schmidt, M.; Nguyen, L.A.T.; Drews, A.; Kraume, M.; Schomäcker, R.** (2012): Micellar enhanced ultrafiltration of a rhodium catalyst, J. Membr. Sci. 421-422, 165-171, ISSN: 0376-7388
462. **Zobel, N.; Eppinger, T.; Behrendt, F.; Kraume, M.** (2012): Influence of the wall structure on the void fraction distribution in packed beds. Chem. Eng. Sci. (71) 212-219, ISSN: 0009-2509, (doi: 10.1016/j.ces.2011.12.029)

Electronic Resource

463. **Grünig, J.; Kim, S.J.; Kraume, M.** (2012): Liquid Film Flow on Structured Wires: Fluid Dynamics and Gas-Side Mass Transfer, AIChE J. (doi: 10.1002/aic.13795)

Proceedings

464. **Al Shamary, L.; Böhm, L.; Prieske, H.; Kraume, M.** (2012): Optimized Hydrodynamics for membrane bioreactors with Newtonian and non-Newtonian fluids, in Proc. zur Euromembrane Conference 2012, 23.-27.09.2012, London, UK, 723-724, ISSN: 1877-7058

465. **Böhm L.; Prieske, H.; Kraume, M.** (2012): Experimental and numerical investigation of air scouring inside flat sheet membrane modules, in Proc. zur Euromembrane Conference 2012, 23.-27.09.2012, London, UK, 535-536, ISSN: 1877-7058
466. **Brehmer, M.; Kraume, M.** (2012): Bedeutung einer exakten rheologischen Beschreibung von Gärsubstraten für das Strömungsregime im Biogasfermenter, Sammelband zur 2. VDI-Konferenz „Prozessmesstechnik an Biogasanlagen 2“, VDI Wissensforum, 09.-10.2012, Fulda, 117-128, ISBN: 978-3-942980-99-9
467. **Brehmer, M.; Kraume, M.** (2012): Fluidodynamik in Biogasreaktoren, Proceedings zur 21. Biogastagung, 10.-12.01.2012, Bremen, Bd. 1, Biogas, 234.
468. **Brehmer, M.; Kraume, M.** (2012): Rheologische Charakterisierung von Gärsubstraten, Vortragssammlung zum 14. Köthener Rührerkolloquium, 16.06.2011, Köthen, 108-122, ISBN: 978-3-86011-050-8
469. **Brehmer, M.; Kraume, M.** (2012): Mixing Performances in Biogas Plants, Proc. zur 14th European Conference on Mixing, 10.-13.09.2012, Warschau, Polen, online: mixing14.eu/Proceedings.php
470. **Grünig, J.; Kim, S.- J.; Schröder, M.; Kraume, M.** (2012): Wire Bundles as Packing Elements in Separation Columns, Proc. zum 6th International Berlin Workshop IBW 6 on Transport Phenomena with Moving Boundaries, 24.-25.11. 2011, Berlin, VDI Fortschrittsberichte, Reihe 3 Nr. 929, VDI Verlag, 298-312, ISBN: 978-3-18-392903-0
471. **Hülagü, D.; Kramer, V.; Böttger, M.; Kraume, M.; Lyagin, E.** (2012): Detailed investigation on laboratory scale mixed-matrix membrane preparation for gas separation modules, in Proc. zur Euromembrane Conference 2012, 23.-27.09.2012, London, UK, 1870-1872, ISSN: 1877-7058
472. **Kramer, V.; Hülagü, D.; Kraume, M.; Lyagin, E.** (2012): Development of a mechanistic model for mass transfer in sorption selective mixed-matrix membranes for gas separation, in Proc. zur Euromembrane Conference 2012, 23.-27.09.2012, London, UK, 1867-1869, ISSN: 1877-7058
473. **Lyagin, E.; Drews, A.; Kraume, M.** (2012): Fully automated small-scale membrane reactor (MR) system for enzymes and process characterization, in Proc. zur Euromembrane Conference 2012, 23.-27.09.2012, London, UK, 184-186, ISSN: 1877-7058
474. **Lyagin, E.; Eppinger, T.; Grollich, T.; Drews, A.; Kraume, M.** (2012): Experimental and numerical investigations of the power input in a standard geometry membrane reactor (MR) system, in Proc. zur Euromembrane Conference 2012, 23.-27.09.2012, London, UK, 391-393, ISSN: 1877-7058
475. **Maaß, S., Kraume, M.** (2012): Investigation of discrete population balance models and its parameters for turbulent emulsification processes, Proc. zur 14th European Conference on Mixing, 10.-13.09.2012, Warschau, Polen, online: mixing14.eu/Proceedings.php

476. **Maaß, S.; Kraume, M.** (2012): Investigation of discrete population balance models and its parameters for turbulent emulsification processes. Proc. zur 14th European Conference on Mixing, 10.-13.09.2012, Warschau, Polen, online: mixing14.eu/Proceedings.php
477. **Maaß, S., Rojahn, J., Emmerich, J., Kraume, M.** (2012): On-line monitoring of fluid particle size distributions in agitated vessels using automated image analysis, Proc. zur 14th European Conference on Mixing, 10.-13.09.2012, Warschau, Polen, online: mixing14.eu/Proceedings.php
478. **Nachtigall, S.; Zedel, D.; Maaß, S.; Walle, A.; Schäfer, M.; Kraume, M.** (2012): Determination of drop breakage mechanisms by experimental and numerical investigations of single drop breakages, Proc. zur 14th European Conference on Mixing, 10.-13.09.2012, Warschau, Polen, online: mixing14.eu/Proceedings.php
479. **Nguyen, L.A.T.; Schwarze, M.; Drews, A.; Kraume, M.; Schomäcker, R.; Böhm, L.** (2012): Influence on Non-ionic Surfactants on Reverse Micellar-enhanced Ultrafiltration, in Proc. zur Euromembrane Conference 2012, 23.-27.09.2012, London, UK, 1692-1694, ISSN: 1877-7058
480. **Paul, N.; Kraume, M.** (2012): Liquid / Liquid Mass Transfer in Micellar Systems, Proc. zum 6th International Berlin Workshop IBW 6 on Transport Phenomena with Moving Boundaries, 24.-25.11.2011, Berlin, Germany in VDI Fortschrittsberichte, Reihe 3 Nr. 929, VDI Verlag, 195-206, ISBN: 978-3-18-392903-0

Books/Bookchapters

481. **Brehmer, M.; Kraume, M.; Jobst, K.; Lincke, M.** (2012): Messhandbuch Biogas - Bestimmung von analytischen und prozessbeschreibenden Parametern im Biogasbereich, Kap. 6.3. Viskosität, Hrsg.: BMU / DFZ, 58-78, ISSN: 2192-1806
482. **Brehmer, M.; Kraume, M.; Lomtscher, A.** (2012): Messhandbuch Biogas - Bestimmung von analytischen und prozessbeschreibenden Parametern im Biogasbereich, Kap. 6.4. Strömungsuntersuchungen, Hrsg.: BMU / DFZ, 79-91, ISSN: 2192-1806
483. **Kraume, M.** (2012): Transportvorgänge in der Verfahrenstechnik Grundlagen und apparative Umsetzungen, 2. bearb. Auflage, Springer-Vieweg Wiesbaden, ISBN: 978-3-642-25148-1

2013*Abstracts*

484. **Böhm, L.; Kraume, M.** (2013): Von der Einzelblase zum Blasenschwarm – Eine Grundlagenuntersuchung im rechtwinkligen Kanal, Proc. zur Jahrestagung der Fachgemeinschaft Fluidodynamik und Trenntechnik, DECHEMA, Würzburg, Chem. Ing. Tech. 85 (9), 1423-1424, ISSN: 0009-286X, (doi:10.1002./cite.201250579)
485. **Brehmer, M.; Kraume, M.** (2013): Optimierung des Rührregimes in Biogasreaktoren – eine Frage der Rührwerkspositionierung, Proc. zur Jahrestagung der Fachgemeinschaft Fluidodynamik und Trenntechnik, DECHEMA, Würzburg, Chem. Ing. Tech. 85 (9), 1437-1438, ISSN: 0009-286X, (doi:10.1002./cite.201250719)
486. **Eppinger, T.; Wehinger, G.; Jurtz, N.; Kraume, M.** (2013): Numerische Untersuchung von Schüttungen sphärischer und nichtsphärischer Füllkörper mithilfe von DEM und CFD, Proc. zur Jahrestagung der Fachgemeinschaft Fluidodynamik und Trenntechnik, DECHEMA, Würzburg, Chem. Ing. Tech. 85 (9), 1376-1377, ISSN: 0009-286X, (doi:10.1002./cite.201250708)
487. **Gebauer, F.; Villwock, J.; Kamp, J.; Bart, H.J.; Kraume, M.** (2013): Koaleszenzphänomene im Einzeltropfenexperiment: Einfluss von Ionenzugabe auf Filmriss und Koaleszenzzeit, Proc. zur Jahrestagung der Fachgemeinschaft Fluidodynamik und Trenntechnik, DECHEMA, Würzburg, Chem. Ing. Tech. 85 (9), 1400, ISSN: 0009-286X, (doi:10.1002./cite.201250670)
488. **Gebauer, F.; Hlawitschka, M.W.; Villwock, J.; Kamp, J.; Bart, H.-J.; Kraume, M.** (2013): CFD- Simulation von binärer Tropfenkollision unter Berücksichtigung von Koaleszenz- und Repulsionsereignissen, Proc. zur Jahrestagung der Fachgemeinschaft Fluidynamik und Trenntechnik, DECHEMA, Würzburg, Chem. Ing. Tech. 85 (9), 1382 ISSN: 0009-286X, (doi:10.1002./cite.201250678)
489. **Kamp, J.; Kraume, M.** (2013): Einfluss des Stofftransports auf die Koaleszenz in Flüssig/flüssig-Dispersionen, Proc. zur Jahrestagung der Fachgemeinschaft Fluidodynamik und Trenntechnik, DECHEMA, Würzburg, Chem. Ing. Tech. 85 (9), 1390, ISSN: 0009-286X, (doi:10.1002./cite.201250646)
490. **Nachtigall, S.; Kraume, M.** (2013): Analyse des Tropfenzerfalls in turbulenter Strömung, Proc. zur Jahrestagung der Fachgemeinschaft Fluidodynamik und Trenntechnik, DECHEMA, Würzburg, Chem. Ing. Tech. 85 (9), 1436-1437, ISSN: 0009-286X, (doi:10.1002./cite.201250647)
491. **Paul, N.; Hamerla, T.; Schomäcker, R.; Kraume, M.** (2013): Stofftransport in mizellaren Mehrphasenreaktionen, Proc. zur Jahrestagung der Fachgemeinschaft Fluidodynamik und Trenntechnik, DECHEMA, Würzburg, Chem. Ing. Tech. 85 (9), 1459, ISSN: 0009-286X, (doi:10.1002./cite.201250614)

492. **Villwock, J.; Kamp, J.; Kraume, M.; Gebauer, F.; Bart, H.J.** (2013): Einzeltropfenuntersuchungen zur Koaleszenzeffizienz unter dem Einfluss von Ionen, Proc. zur Jahrestagung der Fachgemeinschaft Fluidodynamik und Trenntechnik, DECHEMA, Würzburg, Chem. Ing. Tech. 85 (9), 1398, ISSN: 0009-286X, (doi:10.1002./cite.201250669)
493. **Wehinger, G.; Eppinger, T.; Muzaferija, S.; Kraume, M.** (2013): Numerische Simulation der Dynamik von vertikalen Flüssigfilmen, Proc. zur Jahrestagung der Fachgemeinschaft Fluidodynamik und Trenntechnik, DECHEMA, Würzburg, Chem. Ing. Tech. 85 (9), 1378, ISSN: 0009-286X, (doi:10.1002./cite.201250589)
494. **Wehinger, G.; Eppinger, T.; Kraume, M.** (2013): Anforderungen an eine OCM- Kinetik aus ingenieurstechnischer Sicht, Proc. zur Jahrestagung der Fachgemeinschaft Fluidodynamik und Trenntechnik, DECHEMA, Würzburg, Chem. Ing. Tech. 85 (9), S. 1381, ISSN: 0009-286X, (doi:10.1002./cite.201250590)

Journals

495. **Böhm, L.; Drews, A.; Kraume, M.** (2013): Bubble induced shear stress in flat sheet membrane systems – Serial examination of single bubble experiments with the electrodiffusion method, J. Membr. Sci. 437, 131-140, (doi: 10.1016/j.memsci.2013.02.036), ISSN: 0376-7388
496. **Böhm, L.; Prieske, H.; Kraume, M.** (2013): Fluid Dynamic Optimization of Flat Sheet Membrane Modules – Movement of Bubbles in Vertical Channels, Chem. Eng. Trans. 32, 1501-1507, ISBN: 978-88-95608-23-5
497. **Busse, N.; Wagner, D.; Kraume, M.; Czermak, P.** (2013): Reaction kinetics of versatile peroxidase for the degradation of lignin compounds, Am. J. Biochem. Biotechnol. 9 365-394 (doi.org/10.3844/ajbbsp.2013.365.394), ISSN: 1553-3468
498. **Francke, H., Kraume, M., Saadat, A.** (2013): Thermal-hydraulic measurements and modelling of the brine circuit in a geothermal well, Environ. Earth Sci. 70 (8), 3481-3495, ISSN: 1866-6280, (doi: 10.1007/s12665-013-2612-8)
499. **Grünig, J.; Kim, S.J.; Kraume, M.** (2013): Liquid Film Flow on Structured Wires: Fluid Dynamics and Gas- Side Mass Transfer, AIChE J. 59 (1), 295-302, (doi: 10.1002/aic.13795)
500. **Hamerla, T.; Paul, N.; Kraume, M.; Schomäcker, R.** (2013): Aufklärung der Stofftransportwege in mizellaren Mehrphasenreaktionen am Beispiel der Hydroformylierung, Chem. Ing. Tech 85 (10), 1530-1539, (doi:10.1002/cite.201300048), ISSN: 0009-286X
501. **Kaiser, S.C.; Kraume, M.; Eibl, D.** (2013): Development of the Travelling Wave Bioreactor - A Concept Study, Chem. Ing. Tech. 85 (1-2), 136-143, (doi:10.1003/cite.201200125) ISSN: 0009-286X
502. **Kraume, M.** (2013): Integrierte Chemische Prozesse in flüssigen Mehrphasensystemen, Chem. Ing. Tech. 85 (10), 1-14, (doi:10.1002/cite.201300013), ISSN: 0009-286X

503. **Lienen, T.; Kleyböcker, A.; Brehmer, M.; Kraume, M.; Moeller, L.; Görsch, K.; Würdemann, H. (2013):** Floating layer formation, foaming, and microbial community structure change in full-scale biogas plant due to disruption of mixing and substrate overloading, *Energ. Sustain. Soc.* 3(1), 20, ISSN: 2192-0567, (doi: 10.1186/2192-0567-3-20)
504. **Löffelholz, C.; Husemann, U.; Greller, G.; Meusel, W.; Kauling, J.; Ay, P.; Kraume, M.; Eibl, R.; Eibl, D. (2013):** Bioengineering Parameters for Single Use Bioreactors: Overview and Evaluation of Suitable Methods, *Chem. Ing. Tech.* 85 (1-2), 40-56, (doi:10.1003/cite.201200125), ISSN: 0009-286X
505. **Lyagin, E., Drews, A., Kraume, M. (2013):** Paralleles System zum Screening und zur Charakterisierung von Biokatalysatoren, *GIT Labor-Fachzeitschrift* 5, 322-324, ISSN: 0016-3538,
506. **Nguyen, L.A.T.; Minding, M.; Schwarze, M., Drews, A.; Schomäcker, R.; Kraume, M. (2013)** Adsorption and filtration behaviour of non-ionic surfactants during reverse micellar-enhanced ultrafiltration, *J. Membr. Sci.* 433, 80-87, ISSN: 0376-7388
507. **Panckow, R.; Maaß, S.; Emmerich, J.; Kraume, M. (2013):** Automatisierte Quantifizierung von Blasengrößenverteilungen in einem gerührten Luft/Wasser-System, *Chem. Ing. Tech.* 85 (7), 1036-1045, (doi:10.1002/cite.201200228)
508. **Pawelski, A.; Jeon, S.J.; Paschedag, A.; Kraume, M. (2013):** Interaction of a homogeneous chemical reaction and mass transfer in a single moving droplet; *Chem. Eng. Sci.* 104, 260-268, ISSN: 0009- 2509
509. **Wehinger, G.; Peeters, J.; Muzafferija, S.; Eppinger, T.; Kraume, M. (2013):** Numerical Simulation of vertical liquid-film waves dynamics, *Chem. Eng. Sci.* 104, 934-944, (doi: 10.1016/j.ces.2013.02.027), ISSN: 0009- 2509

Electronic Resource

510. **Eppinger, T.; Wehinger, G.; Kraume, M. (2013):** Parameter Optimization for the Oxidative Coupling of Methane in a Fixed Bed Reactor by Combination of Response Surface Methodology and Computational Fluid Dynamics, *Chem. Eng. Res. Des.*, ISSN: 0263-8762, (doi: 10.1016/j.cherd.2013.12.017)
511. **Kamp, J.; Kraume, M. (2013):** Influence of drop size and superimposed mass transfer on coalescence in liquid/liquid dispersions - Test cell design for single drop investigations, *Chem. Eng. Res. Des.*, ISSN: 0263-8762, (doi: doi.org/10.1016/j.cherd.2013.12.023)
512. **Mushardt, H.; Kramer, V.; Hülagü, D.; Brinkmann, T.; Kraume, M. (2013):** Development of Solubility Selective Mixed Matrix Membranes for Gas Separation, *Chem. Ing. Tech.*, ISSN:1552-2640, (doi: 10.1002/cite.201300074)
513. **Paul, N., Schrader, P.; Enders, S.; Kraume, M. (2013):** Effects of phase behaviour on mass transfer in micellar liquid/liquid systems, *Chem. Eng. Sci.*, ISSN:0009-2509, (doi: 10.1016/j.ces.2013.02.018)

514. **Schlick-Hasper, E., Jahnke, W., Drousch B., Goedecke, T., Kraume, M.** (2013): Experimental Investigations Concerning the Sensitivity of the Leakproofness Test for Dangerous Goods Packagings Relating to the Leak Diameter, Packag. Technol. Sci., ISSN: 1099-1522, (doi: 10.1002/pts.2029)

Proceedings

515. **Böhm, L.; Kraume, M.** (2013): Is it reasonable to use air-water model systems in fluid dynamic investigations of MBRs? in Proc. zum 2nd International Workshop MBR for the Next Generation 21.-22. 8.2013, Berlin, ISBN: 978-3-00-043145-6
516. **Böhm, L., Kraume, M.** (2013): Untersuchung des Aufstiegs von Einzelblasen in Newtonschen und nicht-Newtonschen Fluiden mittels PIV, in Proc. zur 21. Fachtagung Lasermethoden in der Strömungsmesstechnik, 3.- 5.9.2013 München, ISBN: 978-3-9805613-9-6
517. **Böhm L., Kraume M.** (2013): Bubble Induced Flow in Flat Sheet Membrane Systems - Serial Examination of Single Bubble Experiments, Symposium: "Membranes for Liquid Separation and Water Treatment: Environmental Applications and Future Perspectives", 10. - 11. 10.2013, Turin, Italien, Book of Abstracts
518. **Böhm, L., Kraume, M.** (2013): A fundamental investigation of single bubble and bubble swarm behavior with respect to fouling prevention in membrane systems, 2013 AIChE Annual Meeting, 3. - 8.11.2013, San Francisco, USA, link: <https://aiche.confex.com/aiche/2013/webprogram/Paper317467.html>
519. **Brand. C.; Kraume, M.** (2013): Resource management and urban mining – Urban agriculture and water reuse in Casablanca, Morocco, 2nd International BMBF Conference - Future Megacities in Action, 14. - 16.5.2013, Hamburg, link: <http://future-megacities.org/index.php?id=128&L=%271> (Session 06)
520. **Eppinger, T.; Jurtz, N.; Kraume, M.** (2013): Numerical Investigation of Packed Bed Reactors with Non-Spherical Particles, 2013 AIChE Annual Meeting, 3. - 8.11.2013, San Francisco, USA, link: <https://aiche.confex.com/aiche/2013/webprogram/Paper328477.html>
521. **Kamp, J.; Villwock, J.; Gebauer, F.; Bart, H.-J.; Kraume, M.** (2013): Influence Of Drop Size Ratio And Superimposed Mass Transfer On Coalescence In Liquid/Liquid Dispersions, 9th European Congress of Chemical Engineering & 2nd European Congress of Applied Biotechnology, 21. - 25.4.2013, Den Haag, Niederlande, link: <http://www.eventure-online.com/eventure/publicAbstractView.do?id=207370&congressId=6293>
522. **Kamp, J., Villwock, J., Kraume, M.** (2013): From Fundamental Single Drop Analysis to the Description of Liquid/Liquid Dispersions - Part I: Coalescence, 2013 AIChE Annual Meeting, 03. - 08.11.2013, San Francisco, USA, link: <https://aiche.confex.com/aiche/2013/webprogram/Paper318986.html>

523. **Kramer, V.; Hülagü, D.; Kraume, M.** (2013): Development of Mixed-Matrix Membranes for Separation of Methane/N-Butane Gas Mixtures, 9th European Congress of Chemical Engineering & 2nd European Congress of Applied Biotechnology, 21. - 25.4.2013, Den Haag, Niederlande, link: <http://www.eventure-online.com/eventure/publicAbstractView.do?id=220507&congressId=6293>
524. **Lyagin, E.; Drews, A.; Kraume, M.** (2013): Smart-Scale Membrane Reactor System For Fast Biocatalysts And Process Characterisation, 9th European Congress of Chemical Engineering & 2nd European Congress of Applied Biotechnology, 21. - 25.4.2013, Den Haag, Niederlande, link: <http://www.eventure-online.com/eventure/publicAbstractView.do?id=206501&congressId=6293>
525. **Maaß, S.; Emmerich, J.; Junne, S.; Neubauer, P.** (2013): Smart Imaging Analysis for the On Line Observation of Bioprocesses At the Example of the Microalgae *Cryptomonas*, 2013 AIChE Annual Meeting, 3. - 8.11.2013, San Francisco, USA, link: <https://aiche.confex.com/aiche/2013/webprogram/Paper318230.html>
526. **Maaß, S.; Schäfer, M.; Kruis, E.K.** (2013): Concept Presentation for The Renewed EFCE Working Party “Characterization of Particulate Systems”, 9th European Congress of Chemical Engineering & 2nd European Congress of Applied Biotechnology, 21. - 25.4.2013, Den Haag, Niederlande, link: <http://www.eventure-online.com/eventure/publicAbstractView.do?id=207892&congressId=6293>
527. **Maaß, S.; Emmerich, J.; Rojahn, J.; Kraume, M.** (2013): Real-Time Monitoring Of Morphology Changes Of *Cryptomonas* During DHA Production With A Photo-Optical In-Situ Measurement Technique and Automated Image Analysis, 9th European Congress of Chemical Engineering & 2nd European Congress of Applied Biotechnology, 21. - 25.4.2013, Den Haag, Niederlande, link: <http://www.eventure-online.com/eventure/publicAbstractView.do?id=207899&congressId=6293>
528. **Maaß, S., Russo, M., Kraume, M.** (2013): Phase-Inversion and Coalescence in Turbulent Liquid/Liquid-Dispersions, 2013 AIChE Annual Meeting, 3. - 8.11.2013, San Francisco, USA, link: <https://aiche.confex.com/aiche/2013/webprogram/Paper318257.html>
529. **Nachtigall, S., Kraume, M.** (2013): From Fundamental Single Drop Analysis to the Description of Liquid/Liquid Dispersions-Part II: Breakage, 2013 AIChE Annual Meeting, 3. - 8.11.2013, San Francisco, USA, link: <https://aiche.confex.com/aiche/2013/webprogram/Paper319022.html>
530. **Paul, N.; Kraume, M.** (2013): Experimental Investigations of Transport Processes and Interfacial Phenomena in Micellar Liquid/Liquid Systems, 2013 AIChE Annual Meeting, 3. - 8.11.2013, San Francisco, USA, link: <https://aiche.confex.com/aiche/2013/webprogram/Paper324529.html>
531. **Prieske, H.; Drews, A.; Kraume, M.** (2013): Hydrodynamik nicht-Newtonscher Fluide in MBR mit Plattenmodulen, Membrantechnik in der Wasseraufbereitung und Abwasserbehandlung, in Proc. zur 10. Aachener Tagung Wasser und Membranen Aachen, 259-262, ISBN: 3-8107-0178-5

532. **Prieske, H., Drews, A., Kraume, M.** (2013): Fluid dynamics of Newtonian and non-Newtonian liquids in MBR with flat sheet membranes, in Proc. zum 2nd International Workshop MBR for the Next Generation 21.-22.8.2013, Berlin, ISBN: 978-3-00-043145-6
533. **Wehinger, G., Eppinger, T., Kraume, M.** (2013): Combining CFD and Statistical Methods to Optimize the Oxidative Coupling of Methane in a Fixed Bed Reactor, 2013 AIChE Annual Meeting, 3.- 8.11.2013, San Francisco, USA,
link: <https://aiche.confex.com/aiche/2013/webprogram/Paper313480.html>
534. **Würdemann, H.; Kleyböcker, A.; Lienen, T.; Liebrich, M.; Brehmer, M.; Kraume, M.; Balussou, D.; McKenna, R.; Moeller, L.; Görsch, K.; Müller, R.; Zehnsdorf, A.; Zirkler, D.; Kaupenjohann, M.** (2013): Vergleichende Untersuchungen an großtechnischen Biogasreaktoren – mikrobiologische, verfahrenstechnische und ökonomische Bewertung und Optimierung, 4. Statuskonferenz, 05. - 06.11.2012, Berlin, Konferenzband zur Schriftenreihe des BMU- Förderprogramms“ Energetische Biomassenutzung“, Band 9, ISSN: 2192-1806

Books/Bookchapters

535. **Drews, A.; Prieske, H. (Hrsg.)** (2013): MBR for the Next Generation II, ISBN: 978-3-00-043145-6
536. **Druzinec, D.; Salzig, D.; Brix, A.; Kraume, M.; Kollwe, C.; Vilcinskas, A.; Czermak, P.** (2013): Optimization of Insect Cell Based Protein Production Processes - Expression Systems, Online Monitoring, Scale-Up, Advances in Biochemical Engineering/Biotechnology, (doi.org/10.1007/10_2013_205)

2014*Abstracts*

537. **Altwasser, S.; Wollny, S.; Klatt, D.; Kraume, M.** (2014): Untersuchungen zur Hydrodynamik in zentral gerührten Biogasanlagen anhand von Modellstoffsyste men und realen Substraten, Proc. zur ProcessNet-Jahrestagung 2014 und 31. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 86 (9), 1623, ISSN: 1522-2640, (doi:10.1002/cite.201450020)
538. **Böhm, L.; Kraume, M.** (2014): Einfluss der Flüssigkeitsrheologie auf das Blasenschwarmverhalten in Flachmembranmodulen, Proc. zur ProcessNet-Jahrestagung 2014 und 31. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 86 (9), 1526-1527, ISSN: 1522-2640, (doi:10.1002/cite.201450005)
539. **Brehmer, M.; Kraume, M.** (2014): Einfluss der nichtnewtonschen Substrateigenschaften auf das Rührregime in Biogasanlagen, Proc. zur ProcessNet-Jahrestagung 2014 und 31. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 86 (9), 1362, ISSN: 1522-2640, (doi:10.1002/cite.201450502)
540. **Druzinec, D.; Salzig, D.; Kollwe, C.; Kraume, M.; Vilcinskas, A.; Czermak, P.** (2014): PAT-basierte Charakterisierung hydrodynamischer Einflussgrößen auf insektenzellbasierte Systeme im mikroblasenbegasteten Rührreaktor, Proc. zur ProcessNet-Jahrestagung 2014 und 31. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 86 (9), 1589, ISSN: 1522-2640, (doi:10.1002/cite.201450537)
541. **Kamp, J.; Kraume, M.** (2014): Einfluss hydrodynamischer Größen auf die Koaleszenz in Flüssig/Flüssig-Dispersionen, Proc. zur ProcessNet-Jahrestagung 2014 und 31. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 86 (9), 1457, ISSN: 1522-2640, (doi:10.1002/cite.201450132)
542. **Panckow, R.; Maaß, S.; Kraume, M.** (2014): Bestimmung der Partikelgrößenverteilung in Mehrphasensystemen mit gasförmiger Dispersphase, Proc. zur ProcessNet-Jahrestagung 2014 und 31. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 86 (9), 1587, ISSN: 1522-2640, (doi:10.1002/cite.201450421)
543. **Skale, T.; Zedel, D.; Carl, A.; Kraume, M.; von Klitzing, R.; Drews, A.** (2014): Einfluss von transmembraner Druckdifferenz, Partikelgehalt und Phasenanteil auf das Filtrationsverhalten von Pickering-Emulsionen, Proc. zur ProcessNet-Jahrestagung 2014 und 31. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 86 (9), 1528-1529, ISSN: 1522-2640, (doi:10.1002/cite.201450555)
544. **Villwock, J.; Gebauer, F.; Bart, H.-J., Kraume, M.** (2014): Systematische Untersuchung des Einflusses von Ionen auf die Koaleszenz von Einzeltropfen, Proc. zur ProcessNet-Jahrestagung 2014 und 31. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 86 (9), 1460-1461, ISSN: 1522-2640, (doi:10.1002/cite.201450156)

545. **Wehinger, G.D.; Heitmann, H.; Eppinger, T.; Kraume, M.** (2014): Numerische Simulation komplexer Geometrien mit detaillierten heterogenen Reaktionsmechanismen, Proc. zur ProcessNet-Jahrestagung 2014 und 31. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 86 (9), 1623-1624, ISSN: 1522-2640, (doi:10.1002/cite.201450031)
546. **Zientek, N.; Meyer, K.; Dalitz, F.; Kraume, M.; Guthausen, G.; Maiwald, M.** (2014): Neue Möglichkeiten für die Prozessanalytik mit gekoppelter 1H- und 19F-Medium-Resolution-NMR-Spektroskopie, Proc. zur ProcessNet-Jahrestagung 2014 und 31. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 86 (9), 1575, ISSN: 1522-2640, (doi:10.1002/cite.201450687)

Journals

547. **Böhm, L., Kurita, T., Kimura, K., Kraume, M.** (2014): Rising behaviour of single bubbles in narrow rectangular channels in Newtonian and non-Newtonian liquids, Int. J. Multiphase Flow 65, 11-23, ISSN: 0301-9322, (doi: 10.1016/j.ijmultiphaseflow.2014.05.001)
548. **Böhm, L.; Jankhah, S.; Tihon, J.; Berubé, P. R.; Kraume, M.** (2014): Application of the Electrodiffusion Method to Measure Wall Shear Stress: Integrating Theory and Practice, Chem. Eng. Technol. 37 (6), 938-950, ISSN: 1521-4125, (doi: 10.1002/ceat.201400026)
549. **Dittler, I. Kaiser, S. C., Blaschczok, K., Löffelholz, C., Bösch, P., Dornfeld, W., Schöb, R., Rojahn, J., Kraume, M., Eibl, D.** (2014): A Cost-Effective and Reliable Method to Predict Mechanical Stress in Single-Use and Standard Pumps, Eng. Life Sci. 14, 311-317 ISSN:16182863, (doi:10.1002/elsc.201300068)
550. **Eppinger, T.; Wehinger, G.; Kraume, M.** (2013): Parameter Optimization for the Oxidative Coupling of Methane in a Fixed Bed Reactor by Combination of Response Surface Methodology and Computational Fluid Dynamics, Chem. Eng. Res. Des. 92 (9), 1693-1703 ISSN: 0263-8762, (doi: 10.1016/j.cherd.2013.12.017)
551. **Kamp, J., Kraume, M.** (2014): Influence of drop size and superimposed mass transfer on coalescence in liquid/liquid dispersions - Test cell design for single drop investigations, Chem. Eng. Res. Des. 92 (4), 635-643, ISSN: 0263-8762, (doi: 10.1016/j.cherd.2013.12.023)
552. **Kleyböcker, A.; Lienen, T.; Liebrich, M.; Kasina, M.; Kraume, M.; Würdemann, H.** (2014): Application of an early warning indicator and CaO to maximize the time-space-yield of a completely mixed waste digester using rape seed oil as co-substrate, Waste Manag. 34 (3), 661-668, ISSN: 0956-053X, (doi: 10.1016/j.wasman.2013.11.011)
553. **Kraume, M.** (2014): Die Entwicklung der Rührtechnik von einer empirischen Kunst zur Wissenschaft, Chem. Ing. Tech. 86 (12), 2051-2062, ISSN: 1522-2640, (doi: 10.1002/cite.201400124).
554. **Mushardt, H.; Kramer, V.; Hülagü, D.; Brinkmann, T.; Kraume, M.** (2014): Development of Solubility Selective Mixed Matrix Membranes for Gas Separation, Chem. Ing. Tech. 86 (1-2), 83-91, ISSN:1522-2640, (doi: 10.1002/cite.201300074)

555. **Paul, N., Schrader, P.; Enders, S.; Kraume, M.** (2014): Effects of phase behaviour on mass transfer in micellar liquid/liquid systems, *Chem. Eng. Sci.* 115, 148-156, ISSN: 0009-2509, (doi: 10.1016/j.ces.2013.02.018)
556. **Schlick-Hasper, E., Jahnke, W., Drousch B., Goedecke, T., Kraume, M.** (2014): Experimental Investigations Concerning the Sensitivity of the Leakproofness Test for Dangerous Goods Packagings Relating to the Leak Diameter, *Packag. Technol. Sci.* 27 (4), 337-339, ISSN: 1099-1522, (doi: 10.1002/pts.2029)
557. **Sitanggang, A. B., Drews, A., Kraume, M.** (2014): Rapid Transgalactosylation Towards Lactulose Synthesis in a Small-scale Enzymatic Membrane Reactor (EMR), *Chem. Eng. Trans.* 38, 19-24, ISSN: 2283-9216, (doi: 10.3303/CET1438004)
558. **Sitanggang, A. B., Drews, A., Kraume, M.** (2014): Continuous synthesis of lactulose in an enzymatic membrane reactor reduces lactulose secondary hydrolysis, *Bioresour. Technol.* 167, 108-115, ISSN: 0960-8524, (doi: 10.1016/j.biortech.2014.05.124)
559. **Sundmacher, K., Górak, A., Kraume M., Wozny, G.** (2014): Special issue: InPROMPT - Integrated chemical processes with liquid multiphase systems – Editorial, *Chem. Eng. Sci.* 115, 1-2, ISSN: 0009-2509, (doi: 10.1016/j.ces.2014.05.034)
560. **Villwock, J., Gebauer, F., Kamp, J., Bart, H.-J., Kraume, M.** (2014): Systematic analysis of single droplet coalescence, *Chem. Eng. Technol.* 37 (7), 1103-1111, ISSN: 1521-4125, (doi:10.1002/ceat.201400180)
561. **Wegener, M., Paul, N., Kraume, M.** (2014): Fluid dynamics and mass transfer at single droplets in liquid/liquid systems, *Int. J. Heat Mass Transfer* 71, 475-495, ISSN: 0017-9310, (doi: 10.1016/j.ijheatmasstransfer.2013.12.024)
562. **Wehinger, G., Eppinger, T., Kraume, M.** (2014): Fluidic Effects on Kinetic Parameter Estimation in Lab-scale Catalysis Testing - A Critical Evaluation Based on Computational Fluid Dynamics, *Chem. Eng. Sci.* 111, 220-230, ISSN: 0009-2509, (doi: 10.1016/j.ces.2014.02.025)
563. **Zientek, N., Laurain, C., Meyer, K., Kraume, M., Guthausen, G., Maiwald, M.** (2014): Simultaneous ^{19}F - ^1H Medium Resolution NMR Spectroscopy for Online Reaction Monitoring, *J. Magn. Reson.* 249, 53-62, ISSN: 1090-7807, (doi: 10.1016/j.jmr.2014.10.007)

Electronic Resource

564. **Böhm, L., Kraume, M.** (2014): Fluid dynamics of bubble swarms rising in Newtonian and non-Newtonian liquids in flat sheet membrane systems, *J. Membr. Sci.*, ISSN: 0376-7388, (doi: 10.1016/j.memsci.2014.11.003)
565. **Druzinec, D., Salzig, D., Kraume, M., Czermak, P.** (2014): Micro-bubble aeration in turbulent stirred bioreactors: Coalescence behavior in Pluronic F68 containing cell culture media, *Chem. Eng. Sci.*, ISSN: 0009-2509, (doi: 10.1016/j.ces.2014.12.020)

566. **Kamp, J., Kraume, M.** (2014): Coalescence efficiency model including electrostatic interactions in liquid/liquid dispersions, *Chem. Eng. Sci.*, ISSN: 0009-2509, (doi: 10.1016/j.ces.2014.11.045)
567. **Lyagin, E., Drews, A., Kraume, M.** (2014): Fully Automated Reactor System for Continuous Characterization of (Bio)catalysts, *Chem. Eng. Tech.*, ISSN: 1521-4125 (doi: 10.1002/ceat.201400135)
568. **Paul, N., Schön, S., von Klitzing, R., Kraume, M.** (2014): Transport processes at single droplets in micellar liquid/liquid systems, *AIChE J.*, ISSN: 1547-5905, (doi: 10.1002/aic.14699)
569. **Schlick-Hasper, E., Bethke, J., Jahnke, W., Drosch, B., Goedecke, T., Kraume, M.** (2014): Maximum Gauge Pressure in Dangerous Goods Packagings Under Normal Conditions of Carriage – Comparison of Direct Measurement and Calculation, *Packag. Technol. Sci.*, ISSN: 1099-1522, (doi: 10.1002/pts.2111)
570. **Wehinger, G., Eppinger, T., Kraume, M.** (2014): Detailed numerical simulations of catalytic fixed-bed reactors: Heterogeneous dry reforming of methane, *Chem. Eng. Sci.*, ISSN: 0009-2509, (doi: 10.1016/j.ces.2014.09.007)

Proceedings

571. **Böhm, L.; Kraume, M.** (2014): Mass transfer from bubbles to reactive liquid phases, 2nd International Symposium on Multiscale Multiphase Process Engineering, 24.-27.09.2014, Hamburg, Book of full-length manuscripts, S. 357.
572. **Böhm, L.; Kraume, M.** (2014): Bubble swarms rising in Newtonian and non-Newtonian liquids, 2nd International Symposium on Multiscale Multiphase Process Engineering, 24.-27.09.2014, Hamburg, Book of full-length manuscripts, S. 255.
573. **Böhm, L., Kraume, M.** (2014): Wall Shear Stress Generated By Bubble Swarms in Newtonian and Non-Newtonian Liquids, 2014 AIChE Annual Meeting, 16.- 21.11.2014, Atlanta, USA, ISBN: 978-0-8169-1086-1
link: <https://aiche.confex.com/aiche/2014/webprogram/Paper372259.html>
574. **Brehmer, M., Kraume, M.** (2014): Optimaler Einsatz der Mischtechnik in Biogasreaktoren – Eine Frage der Rührwerkspositionierung, 5. Statuskonferenz, 14.-15.11.2013, Leipzig, in Konferenzband zur Schriftenreihe des BMU- Förderprogramms“ Energetische Biomassennutzung“, Band 15, ISSN: 2192-1806.
575. **Gebauer, F.; Villwock, J.; Kamp, J.; Bart, H.-J.; Kraume, M.** (2014): Ionic influence on coalescence and repulsion behavior in liquid/liquid dispersions, 20th International Solvent Extraction Conference, 07.-11.09.2014, Würzburg, Book of Abstracts, S. 357.
576. **Gebauer, F.; Villwock, J.; Bart, H.-J.; Kraume, M.** (2014): Salt influence on the dynamic coalescence behavior, 2nd International Symposium on Multiscale Multiphase Process Engineering, 24.-27.09.2014, Hamburg, Book of full-length manuscripts, S. 280.

577. **Hohl, L. and Paul, N. and Kraume, M.** (2014): Dispersion and coalescence in stirred micellar multiphase systems, 20th International Conference of Process Engineering and Chemical Plant Design, 15.-17.10.2014, Berlin, S. 97-106, ISBN: 978-3-00-047364-7.
578. **Kaiser, S.; Kraume, M.; Eibl, D.** (2014): The novel travelling wave bioreactor: engineering characteristics and cultivation experiments, 2nd International Symposium on Multiscale Multiphase Process Engineering, 24.-27.09.2014, Hamburg, Book of full-length manuscripts, S. 442.
579. **Kamp, J.; Villwock, J.; Kraume, M.** (2014): Impact of drop size and relative velocity on coalescence liquid/liquid dispersions, 20th International Solvent Extraction Conference, 07.-11.09.2014, Würzburg, Book of Abstracts, S. 359.
580. **Lomtscher, A.; Jobst, K.; Deutschmann, A.; Rostalski, K.; Kraume, M.** (2014): Qualification and quantification of mixing processes in biogas plants using process tomography, 2nd International Symposium on Multiscale Multiphase Process Engineering, 24.-27.09.2014, Hamburg, Book of full-length manuscripts, S. 248.
581. **Nachtigall, S., Kraume, M.** (2014): Analysis of Drop Breakage Processes in Turbulent Flow, 2014 AIChE Annual Meeting, 16.- 21.11.2014, Atlanta, USA, ISBN: 978-0-8169-1086-1, link: <https://aiche.confex.com/aiche/2014/webprogram/Paper374465.html>
582. **Panckow, R.; Comandè, G.; Maaß, S.; Kraume, M.** (2014): Determination of particle size distributions in multiphase systems containing nonspherical fluid particles, 2nd International Symposium on Multiscale Multiphase Process Engineering, 24.-27.09.2014, Hamburg, Book of full-length manuscripts, S. 319.
583. **Paul, N.; Kraume, M.** (2014): Influences of Interfacial Phenomena on the Fluid Dynamics and Mass Transfer of Single Droplets in Micellar liquid/liquid Systems, 10th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics, 14.-16.07.2014, Orlando, USA, ISBN: 978-1-77592-068-7.
584. **Paul, N.; Kim, S.-J.; Kraume, M.** (2014): Influences of interfacial phenomena on transport processes in micellar liquid/liquid systems, 20th International Solvent Extraction Conference, 07.-11.09.2014, Würzburg, Book of Abstracts, S. 379.
585. **Paul, N., Kim, S.-J.; Kraume, M.** (2014): The fluid dynamics of single droplets as a useful tool to determine the coverage and the adsorption kinetics of surfactants, 2nd International Symposium on Multiscale Multiphase Process Engineering, 24.-27.09.2014, Hamburg, Book of full-length manuscripts, S. 93.
586. **Paul, N.; Kim, S.-J.; Kraume, M.** (2014): Influence of a non-ionic surfactant Triton X-100 on fluid dynamics and mass transfer of single rising drops, 20th International Conference of Process Engineering and Chemical Plant Design, 15.-17.10.2014, Berlin, S. 141-148, ISBN: 978-3-00-047364-7.

587. **Paul, N., Kim, S.-J., Kraume, M.** (2014): Dynamic Adsorption Processes of Surfactants at Liquid/Liquid Interfaces Determined by the Fluid Dynamics of Single Droplets, 2014 AIChE Annual Meeting, 16.- 21.11.2014, Atlanta, USA, ISBN: 978-0-8169-1086-1, link: <http://www3.aiche.org/Proceedings/Abstract.aspx?ConfID=Annual-2014&GroupID=1881&SessionID=27591&PaperID=379281>
588. **Villwock, J.; Kamp, J.; Gebauer, F.; Bart, H.-J.; Kraume, M.** (2014). Influence of ion species and ionic strength on the dynamic coalescence of single drops, 20th International Solvent Extraction Conference, 07.-11.09.2014, Würzburg, Book of Abstracts, S. 358.
589. **Villwock, J.; Kamp, J.; Kraume, M.** (2014): Systematic Analysis of Coalescence in Liquid/Liquid Dispersion, 20th International Conference of Process Engineering and Chemical Plant Design, 15.-17.10.2014, Berlin, S. 119-126, ISBN: 978-3-00-047364-7.
590. **Villwock, J., Kamp, J., Gebauer, F., Bart, H.-J., Kraume, M.** (2014): From Single Drop Experiments to Stirred Tanks - Systematic Analysis of Coalescence in Liquid/Liquid Dispersions, 2014 AIChE Annual Meeting, 16.- 21.11.2014, Atlanta, USA, ISBN: 978-0-8169-1086-1, link: <https://aiche.confex.com/aiche/2014/webprogram/Paper374844.html>
591. **Wehinger, G.D.; Eppinger, T.; Kraume, M.** (2014): Spatially Resolved Simulations of Heterogeneous Dry Reforming of Methane in Fixed-Bed Reactors, 2014 AIChE Spring Meeting, 30.03.-03.04.2014, New Orleans, USA, ISBN: 978-0-8169-1083-0, link: <http://www3.aiche.org/Proceedings/Abstract.aspx?PaperID=353632>
592. **Wehinger, G., Eppinger, T., Kraume, M.** (2014): Detailed Catalytic Fixed-Bed Reactor Simulations: The Dry Reforming of Methane, 2014 AIChE Annual Meeting, 16.- 21.11.2014, Atlanta, USA, ISBN: 978-0-8169-1086-1, link: <http://www3.aiche.org/Proceedings/Abstract.aspx?ConfID=Annual-2014&GroupID=1899&SessionID=27339&PaperID=374594>
593. **Zedel, D.; Drews, A.; Kraume, M.** (2014): Comparison of Different Membranes for the Removal of Surfactants from Organic Solvents by Organic Solvent Nanofiltration, 20th International Conference of Process Engineering and Chemical Plant Design, 15.-17.10.2014, Berlin, S. 235-241, ISBN: 978-3-00-047364-7.

Books/Bookchapters

594. **Jossen, V., Pörtner, R., Kaiser, S.C., Kraume, M., Eibl, D., Eibl, R.** (2014): Mass Production of Mesenchymal Stem Cells - Impact of Bioreactor Design and Flow Conditions on Proliferation and Differentiation, in: Eberli, D. (Hrsg) Cells and Biomaterials in Regenerative Medicine, Chapter 5, 119-174, ISBN: 978-953-51-1731-5, (doi: 10.5772/58497).
595. **Druzinec, D., Weiss, K., Elseberg, C., Salzig, D., Kraume, M., Pörtner, R., Czermak, P.** (2014): Process Analytical Technology (PAT) in Insect and Mammalian Cell Culture Processes: Dielectric Spectroscopy and Focused Beam Reflectance Measurement (FBRM), in Pörtner, R. (Hrsg.): Animal Cell Biotechnology, Serie: Methods in Molecular Biology, vol. 1104, Chapter 20, 313-341, ISBN: 978-1-62703-732-7, (doi: 10.1007/978-1-62703-733-4_20).

596. **Löffelholz, C., Kaiser, S. C., Kraume, M., Eibl, R., Eibl, D.** (2014): Dynamic Single-Use Bioreactors Used in Modern Liter- and m3- Scale Biotechnological Processes: Engineering Characteristics and Scaling Up, in Disposable Bioreactors II, Serie: Advances in Biochemical Engineering/Biotechnology, Jhg. 138, 1-44, ISBN: 978-3-642-45157-7, (doi: 10.1007/10_2013_187), Springer- Verlag Berlin/ Heidelberg

2015*Abstracts*

597. **Gebauer, F.; Villwock, J.; Kraume, M.; Bart, H.-J.** (2015): Einfluss von Stoffsystem und Fluidodynamik auf lokale Koaleszenzphänomene in Flüssig/Flüssig-Systemen, Proc. zum Jahrestreffen der ProcessNet-Fachgemeinschaft Fluidodynamik und Trenntechnik, Bamberg, Chem. Ing. Tech. 87(8), 1055, ISSN: 1522-2640 (doi:10.1002/cite.201550018)
598. **Hohl, L.; Paul, N.; Kraume, M.** (2015): Einflussgrößen auf die Tropfengrößenverteilungen dreiphasiger mizellarer Systeme, Proc. zum Jahrestreffen der ProcessNet-Fachgemeinschaft Fluidodynamik und Trenntechnik, Bamberg, Chem. Ing. Tech. 87(8), 1086-1087, ISSN: 1522-2640 (doi:10.1002/cite.201550004)
599. **Kamp, J.; Hänsch, R.; Kendzierski, G.; Hellwich, O.; Kraume, M.** (2015): Automatisierte Bilddatenanalyse zeitlich hochaufgelöster Tropfenkollisions- und Koaleszenzereignisse, Proc. zum Jahrestreffen der ProcessNet-Fachgemeinschaft Fluidodynamik und Trenntechnik, Bamberg, Chem. Ing. Tech. 87(8), 1077-1078, ISSN: 1522-2640 (doi:10.1002/cite.201550003)
600. **Merker, D.; Böhm, L.; Kraume, M.** (2015): Fluidodynamik von Einzelblasen mit überlagertem Stofftransport, Proc. zum Jahrestreffen der ProcessNet-Fachgemeinschaft Fluidodynamik und Trenntechnik, Bamberg, Chem. Ing. Tech. 87(8), 1080, ISSN: 1522-2640 (doi:10.1002/cite.201550103)
601. **Paul, N.; Röhl, S.; Schulz, J.; Kraume, M.** (2015): Auswirkungen von Grenzflächenphänomenen auf die Transport- und Trennprozesse in mizellaren dreiphasigen Systemen, Proc. zum Jahrestreffen der ProcessNet-Fachgemeinschaft Fluidodynamik und Trenntechnik, Bamberg, Chem. Ing. Tech. 87(8), 1078-1079, ISSN: 1522-2640 (doi:10.1002/cite.201550097)
602. **Villwock, J.; Kamp, J.; Gebauer, F.; Bart, H.-J.; Kraume, M.** (2015): Koaleszenz in Flüssig/Flüssig-Systemen - Einfluss von Ionen und Fluidodynamik, Proc. zum Jahrestreffen der ProcessNet-Fachgemeinschaft Fluidodynamik und Trenntechnik, Bamberg, Chem. Ing. Tech. 87(8), 1055-1056, ISSN: 1522-2640 (doi:10.1002/cite.201550002)

Journals

603. **Böhm, L., Kraume, M.** (2015): Fluid dynamics of bubble swarms rising in Newtonian and non-Newtonian liquids in flat sheet membrane systems, J. Membr. Sci. 475, 533-544, ISSN: 0376-7388, (doi: 10.1016/j.memsci.2014.11.003)
604. **Dittler, I., Dornfeld, W., Schöb, R., Cocke, J., Rojahn, J., Kraume, M., Eibl, D.** (2015): A Cost-effective and Reliable Method to Predict Mechanical Stress in Single-use and Standard Pumps, J. Visualized Exp. 102, e53052, ISSN: 1940-087X, (doi: 10.3791/53052)
605. **Druzinec, D., Salzig, D., Kraume, M., Czermak, P.** (2015): Micro-bubble aeration in turbulent stirred bioreactors: Coalescence behavior in Pluronic F68 containing cell culture media, Chem. Eng. Sci. 126, 160-168, ISSN: 0009-2509, (doi: 10.1016/j.ces.2014.12.020)

606. **Kamp, J., Kraume, M.** (2015): Coalescence efficiency model including electrostatic interactions in liquid/liquid dispersions, *Chem. Eng. Sci.* 126, 132-142, ISSN: 0009-2509, (doi: 10.1016/j.ces.2014.11.045)
607. **Kraume, M.** (2015): The Development of Stirring Technology from an Empirical Art to Science, *ChemBioEng Reviews* 2(4), 279-289, ISSN 2196-9744, (doi: 10.1002/cben.201500009)
608. **Lyagin, E., Drews, A., Kraume, M.** (2015): Fully Automated Reactor System for Continuous Characterization of (Bio)catalysts, *Chem. Eng. Tech.* 38(1), 15-22, ISSN: 1521-4125 (doi: 10.1002/ceat.201400135).
609. **Panckow, R., Comandé, G., Maaß, S., Kraume, M.** (2015): Determination of particle size distributions in multiphase systems containing non-spherical fluid particles, *Chem. Eng. Tech.* 38(11), 2011-2016, ISSN 1521-4125, (doi: 10.1002/ceat.201500123).
610. **Paul, N., Schön, S., von Klitzing, R., Kraume, M.** (2015): Transport processes at single droplets in micellar liquid/liquid systems, *AIChE J.* 61(3), 1092-1104, ISSN: 1547-5905, (doi: 10.1002/aic.14699).
611. **Paul, N., Schulz, J., Kraume, M.** (2015): The fluid dynamics of droplets as a useful tool to determine the coverage and the adsorption kinetics of surfactants, *Chem. Eng. Tech.* 38(11), 1979-1984, ISSN 1521-4125, (doi: 10.1002/ceat.201500137).
612. **Schlick-Hasper, E., Bethke, J., Jahnke, W., Drousch, B., Goedecke, T., Kraume, M.** (2015): Maximum Gauge Pressure in Dangerous Goods Packagings Under Normal Conditions of Carriage – Comparison of Direct Measurement and Calculation, *Packag. Technol. Sci.* 28(5), 437-460, ISSN: 1099-1522, (doi: 10.1002/pts.2111).
613. **Schlick-Hasper, E., Seidler, O., Goedecke, T., Kraume, M.** (2015): Measurement of Helium Leakage Rates through Closures of Dangerous Goods Packagings for the Assessment of Potentially Explosive Mixtures in Freight Containers, *Packag. Technol. Sci.* 28(11), 959-985, ISSN: 1099-1522, (doi: 10.1002/pts.2151).
614. **Sitanggang, A. B., Drews, A., Kraume, M.** (2015): Influences of operating conditions on continuous lactulose synthesis in an enzymatic membrane reactor system: A basis prior to long-term operation, *J. Biotechnol.* 203, 89-96, ISSN: 0168-1656, (doi: 10.1016/j.jbiotec.2015.03.016)
615. **Wehinger, G., Eppinger, T., Kraume, M.** (2015): Detailed numerical simulations of catalytic fixed-bed reactors: Heterogeneous dry reforming of methane, *Chem. Eng. Sci.* 122, 197-209, ISSN: 0009-2509, (doi: 10.1016/j.ces.2014.09.007)
616. **Wehinger, G., Eppinger, T., Kraume, M.** (2015): Evaluating Catalytic Fixed-Bed Reactors for Dry Reforming of Methane with Detailed CFD, *Chem. Ing. Tech.* 87(6), 734-745 ISSN: 1522-2640, (doi: 10.1002/cite.201400153)

Electronic Resource

617. **Böhm, L., Brehmer, M., Kraume, M.** (2015): Comparison of the Single Bubble Ascent in a Newtonian and a Non-Newtonian Liquid: A Phenomenological PIV Study, Chem. Ing. Tech., ISSN: 1522-2640, (doi: 10.1002/cite.201500105).
618. **Gorak, A., Kraume, M., Sundmacher, K.** (2015): Preface Special Issue - Tuneable solvents for intensified reactions and separations, Chem. Eng. Process., ISSN 0255-2701, (doi: 10.1016/j.cep.2015.12.001).
619. **Hohl, L., Paul, N., Kraume, M.** (2015): Dispersion conditions and drop size distributions in stirred micellar multiphase systems, Chem. Eng. Process., ISSN 0255-2701, (doi: 10.1016/j.cep.2015.08.011).
620. **Kaiser, S. C., Kraume, M., Eibl, D.** (2015): Development of the Travelling Wave Bioreactor. Part I: Design Studies Based on Numerical Models, Chem. Ing. Tech., ISSN: 1522-2640, (doi: 10.1002/cite.201500092).
621. **Kaiser, S. C., Perepelitsa, N., Kraume, M., Eibl, D.** (2015): Development of the Travelling Wave Bioreactor. Part II: Engineering Characteristics and Cultivation Results, Chem. Ing. Tech., ISSN: 1522-2640, (doi: 10.1002/cite.201500091).
622. **Nachtigall S., Zedel D., Kraume M.** (2015): Analysis of drop deformation dynamics in turbulent flow, Chin. J. Chem. Eng., ISSN 1004-9541, (doi: 10.1016/j.cjche.2015.06.003).
623. **Paul, N., Schulz, J., Kraume, M.** (2015): Determination of phase separation and mass transfer in complex micellar three phase systems, Chem. Eng. Process., ISSN 0255-2701, (doi: 10.1016/j.cep.2015.07.010).
624. **Wehinger, G., Heitmann, H., Kraume, M.** (2015): An artificial structure modeler for 3D CFD simulations of catalytic foams, Chem. Eng. J., ISSN: 1385-8947, (doi: 10.1016/j.cej.2015.09.014).
625. **Zedel, D., Drews, A., Kraume M.** (2015): Retention of surfactants by organic solvent nanofiltration and influences on organic solvent flux, Sep. Purif. Technol., ISSN: 1383-5866, (doi: 10.1016/j.seppur.2015.12.040).
626. **Zientek, N., Laurain, C., Meyer, K., Paul, A., Engel, D., Guthausen, G., Kraume, M., Maiwald, M.** (2015): Automated data evaluation and modelling of simultaneous ¹⁹F-¹H medium-resolution NMR spectra for online reaction monitoring, Magn. Reson. Chem., ISSN: 1097-458X, (doi:10.1002/mrc.4216).

Proceedings

627. **Böhm, L., Merker, D., Paul, N., Kraume** (2015): Mass transfer in bubble columns - a single bubble approach, 12th International Conference on Gas-Liquid & Gas-Liquid-Solid Reactor Engineering, 28.06.-01.07.2015, New York City, USA,
link: <http://www3.aiche.org/proceedings/Abstract.aspx?PaperID=396428>

628. **Brehmer, M., Kraume, M.** (2015): Experimentelle Untersuchungen zur Entwicklung eines Steuerkonzepts für Tauchmotorrührwerke in Biogasanlagen, Jahrestreffen der Fachgruppen Extraktion und Mischvorgänge, 16.-17.03.2015, Heidelberg, Tagungshandbuch, S. 20
629. **Eppinger, T., Kramer, V., Jurtz, N., Lucht, D., Aglave, R.H., Kraume, M.** (2015): Predicting Performance and Efficiency of Semi-Permeable Membranes with Simulation, 2015 AIChE Spring Meeting, 26.-30.04.2015, Austin, USA, ISBN: 978-0-8169-1089-2, link: <https://aiche.confex.com/aiche/s15/webprogram/Paper401266.html>
630. **Eppinger, T., Jurtz, N., Aglave, R., Wehinger, G., Kraume, M.** (2015): A Numerical Optimization Study on the Catalytic Dry Reforming of Methane in a Spatially Resolved Fixed-Bed Reactor, 2015 AIChE Annual Meeting, 08.-13.11.2015, Salt Lake City, USA, ISBN: 978-0-8169-1094-6, link: <http://www3.aiche.org/proceedings/Abstract.aspx?ConfID=Annual-2015&GroupID=2059&SessionID=30263&PaperID=427218>
631. **Gebauer, F., Hlawitschka, M.W., Villwock, J., Kamp, J., Kraume, M., Bart, H.-J.** (2015): Hoch aufgelöste Analyse binärer Tropfeninteraktionen, Jahrestreffen der Fachgruppen Extraktion und Mischvorgänge, 16.-17.03.2015, Heidelberg, Tagungshandbuch, S. 32
632. **Hohl, L., Paul, N., Kraume, M.** (2015): Charakterisierung von mizellaren Mehrphasensystemen, Jahrestreffen der Fachgruppen Extraktion und Mischvorgänge, 16.-17.03.2015, Heidelberg, Tagungshandbuch, S. 37.
633. **Hohl, L., Paul, N., Kraume, M.** (2015): Influence of composition and process parameters on the dispersion conditions and drop size distribution in stirred micellar multiphase systems, 10th European Congress of Chemical Engineering 27.09.-01.10.2015, Nizza, Frankreich, Abstract Book, S. 575, ISBN: 978-2-910239-82-4.
634. **Lomtscher, A., Jobst, K., Deutschmann, A., Rostalski, K., Kraume, M.** (2015): Skalierung von Mischprozessen, Jahrestreffen der Fachgruppen Extraktion und Mischvorgänge, 16.-17.03.2015, Heidelberg, Tagungshandbuch, S. 22.
635. **Panckow, R., Maaß, S., Kraume, M.** (2015): Photo-optical in-situ determination of size distribution and shapes of fluid particles, 10th European Congress of Chemical Engineering 27.09.-01.10.2015, Nizza, Frankreich, Abstract Book, S. 164, ISBN: 978-2-910239-82-4.
636. **Paul, N., Schulz, J., Petzold, M., Kraume, M.** (2015): Phasentrennung und Flüssig/flüssig-Extraktion in mizellaren Dreiphasensystemen, Jahrestreffen der Fachgruppen Extraktion und Mischvorgänge, 16.-17.03.2015, Heidelberg, Tagungshandbuch, S. 24
637. **Paul, N.; Kim, S.- J.; Kraume, M.** (2015): Experimental investigations of transport phenomena in micellar multiphase systems, Proc. zum 7th International Berlin Workshop IBW 7 on Transport Phenomena with Moving Boundaries and more, 30. - 31.10. 2014, Berlin, VDI Fortschrittsberichte, Reihe 3 Nr. 947, VDI Verlag, 298-312, ISBN: 978-3-18-394703-4

638. **Paul, N., Schulz, J., Kraume, M.** (2015): Transport Processes in Micellar Three Phase Systems, 2015 AIChE Annual Meeting, 08.-13.11.2015, Salt Lake City, USA, ISBN: 978-0-8169-1094-6, link: <http://www3.aiche.org/proceedings/Abstract.aspx?ConfID=Annual-2015&GroupID=2042&SessionID=30670&PaperID=428949>
639. **Ulrich, S., Maaß, S., Kraume, M.** (2015): Optimizing Crude Oil Separations – a Study of Turbulence and Chemical Composition Influence on the Drop Size Distribution of Crude Oil in Maritime Conditions, 2015 AIChE Spring Meeting, 26.-30.04.2015, Austin, USA, ISBN: 978-0-8169-1089-2, link: <https://aiche.confex.com/aiche/s15/webprogram/Paper401697.html>
640. **Villwock, J., Kamp, J., Gebauer, F., Bart, H.-J., Kraume, M.** (2015): Einfluss von Ionen und der Fluidodynamik auf die Koaleszenz in Flüssig/flüssig-Dispersionen, Jahrestreffen der Fachgruppen Extraktion und Mischvorgänge, 16.-17.03.2015, Heidelberg, Tagungshandbuch, S. 23.
641. **Villwock, J., Kamp, J., Gebauer, F., Bart, H.-J., Kraume, M.** (2015): Coalescence in liquid/liquid dispersions - Influence of ions and fluid dynamics, 10th European Congress of Chemical Engineering 27.09.-01.10.2015, Nizza, Frankreich, Abstract Book, S. 554, ISBN: 978-2-910239-82-4.
642. **Villwock, J., Kamp, J., Gebauer, F., Bart, H.-J., Kraume, M.** (2015): Influence of Ions and Fluid Dynamics on Coalescence in Liquid/Liquid Dispersions, 2015 AIChE Annual Meeting, 08.-13.11.2015, Salt Lake City, USA, ISBN: 978-0-8169-1094-6, link: <http://www3.aiche.org/proceedings/Abstract.aspx?ConfID=Annual-2015&GroupID=2043&SessionID=30493&PaperID=417969>
643. **Wehinger, G., Eppinger, T., Kraume, M.** (2015): Is CFD Ready for Being a Design Tool for Fixed-Bed Reactors? 2015 AIChE Spring Meeting, 26.-30.04.2015, Austin, USA, ISBN: 978-0-8169-1089-2, link: <https://aiche.confex.com/aiche/s15/webprogram/Paper401012.html>
644. **Wehinger, G., Kraume, M.** (2015): Interstitial-Scale Modeling of Catalytic Foam Reactors: Partial Oxidation of Methane, 2015 AIChE Annual Meeting, 08.-13.11.2015, Salt Lake City, USA, ISBN: 978-0-8169-1094-6, link: <http://www3.aiche.org/proceedings/Abstract.aspx?ConfID=Annual-2015&GroupID=2059&SessionID=30261&PaperID=416414>
645. **Wehinger, G., Berg, V., Mette, K., Behrens, M., Schlögl, R., Korup, O., Horn, R., Kraume, M.** (2015): Dry Reforming of Methane on Ni in a Fixed-Bed Reactor: Spatial Reactor Profiles and Detailed CFD Simulations, 2015 AIChE Annual Meeting, 08.-13.11.2015, Salt Lake City, USA, ISBN: 978-0-8169-1094-6, link: <http://www3.aiche.org/proceedings/Abstract.aspx?ConfID=Annual-2015&GroupID=2070&SessionID=31535&PaperID=416663>

Books/Bookchapters

646. **Brand, C.; Chlaida, M.; Berdouz, S.; Kraume, M.; Gerster-Bentaya, M.** (2015): D2 - Testing synergies and stimulating action: The four pilot projects, D2.2 - Pilot project 1: Industry and urban agriculture, 244-253, in: Giseke, U.; Gerster-Bentaya, M.; Helten, F.; Kraume, M.; Scherer, D.; Spars, G.; Amraoui, F.; Adidi, A.; Berdouz, S.; Chlaida, M.; Mansour, M.; Mdafai, M.: *Urban Agriculture for Growing City Regions: Connecting Urban-Rural Spheres in Casablanca*, ISBN: 978-0-415-82501-6, Taylor & Francis Ltd.
647. **Feiertag, P.; Naismith, I.-C.; Heinze, M.; Brand, C.; Fehrenbach, U.; Gerster-Bentaya, M.; Helten, F.; Kasper, C.; Scherer, D.; Giseke, U.; Chlaida, M.; Mansour, M.; Amraoui, F.** (2015): D1 - Grand Casablanca 2025: Integrated scenarios, 223-233, in: Giseke, U.; Gerster-Bentaya, M.; Helten, F.; Kraume, M.; Scherer, D.; Spars, G.; Amraoui, F.; Adidi, A.; Berdouz, S.; Chlaida, M.; Mansour, M.; Mdafai, M.: *Urban Agriculture for Growing City Regions: Connecting Urban-Rural Spheres in Casablanca*, ISBN: 978-0-415-82501-6, Taylor & Francis Ltd.
648. **Giseke, U.; Gerster-Bentaya, M.; Helten, F.; Kraume, M.; Scherer, D.; Spars, G.; Adidi, A.; Amraoui, F.; Berdouz, S.; Chlaida, M.; Mansour, M.; Mdafai, M.** (2015): A1 - Dealing with five major challenges of growing city regions, 19-27, in: Giseke, U.; Gerster-Bentaya, M.; Helten, F.; Kraume, M.; Scherer, D.; Spars, G.; Amraoui, F.; Adidi, A.; Berdouz, S.; Chlaida, M.; Mansour, M.; Mdafai, M.: *Urban Agriculture for Growing City Regions: Connecting Urban-Rural Spheres in Casablanca*, ISBN: 978-0-415-82501-6, Taylor & Francis Ltd.
649. **Giseke, U.; Gerster-Bentaya, M.; Helten, F.; Kraume, M.; Scherer, D.; Spars, G.; Adidi, A.; Amraoui, F.; Berdouz, S.; Chlaida, M.; Mansour, M.; Mdafai, M.** (2015): A2 - The UAC research approach, A2.1 - Problems, questions and definitions, 28-37, in: Giseke, U.; Gerster-Bentaya, M.; Helten, F.; Kraume, M.; Scherer, D.; Spars, G.; Amraoui, F.; Adidi, A.; Berdouz, S.; Chlaida, M.; Mansour, M.; Mdafai, M.: *Urban Agriculture for Growing City Regions: Connecting Urban-Rural Spheres in Casablanca*, ISBN: 978-0-415-82501-6, Taylor & Francis Ltd.
650. **Kaiser, S.C., Kraume, M., Eibl, D., Eibl, R.** (2015): Single-Use Bioreactors for Animal and Human Cells, in *Animal Cell Culture*, Serie: Cell Engineering, Jhg. 9, 445-500, ISBN: 978-3-319-10319-8, (doi: 10.1007/978-3-319-10320-4_14), Springer- Verlag Berlin/ Heidelberg
651. **Kasper, C.; Brand, C.; Brandt, J.; Fehrenbach, U.; Gerster-Bentaya, M.; Giseke, U.; Heinze, M.; Helten, F.; Kraume, M.; Scherer, D.; Chlaida, M.; Mansour, M.; Mdafai, M.** (2015): E1 - Connecting spheres: Urban Agriculture as a multidimensional strategy, E1.6 - A way to make it work: multifunctional spatial systems, 346-367, in: Giseke, U.; Gerster-Bentaya, M.; Helten, F.; Kraume, M.; Scherer, D.; Spars, G.; Amraoui, F.; Adidi, A.; Berdouz, S.; Chlaida, M.; Mansour, M.; Mdafai, M.: *Urban Agriculture for Growing City Regions: Connecting Urban-Rural Spheres in Casablanca*, ISBN: 978-0-415-82501-6, Taylor & Francis Ltd.

652. **Kasper, C.; Giseke, U.; Brand, C.; Giseke, U.; Brandt, J.; Gerster-Bentaya, M.; Helten, F.; Kraume, M.; Scherer, D.; Mansour, M.; Chlaida, M.** (2015): E1 - Connecting spheres: Urban Agriculture as a multidimensional strategy, E1.5 - Five integrative sub-projects, 330-345, in: Giseke, U.; Gerster-Bentaya, M.; Helten, F.; Kraume, M.; Scherer, D.; Spars, G.; Amraoui, F.; Adidi, A.; Berdouz, S.; Chlaida, M.; Mansour, M.; Mdafai, M.: Urban Agriculture for Growing City Regions: Connecting Urban-Rural Spheres in Casablanca, ISBN: 978-0-415-82501-6, Taylor & Francis Ltd.
653. **Kraume, M.** (2015): Rohrleitungen für Feststoffe, in: Horlacher, H.-B., Helbig, U. (Hrsg.) Springer NachschlageWissen - Rohrleitungen, 1-11, ISBN: 978-3-642-45027-3, (doi: 10.1007/978-3-642-45027-3_27-1), Springer- Verlag Berlin/ Heidelberg
654. **Kraume, M.** (2015): Berechnung von Leitungen für die pneumatische Förderung von Feststoffen, in: Horlacher, H.-B., Helbig, U. (Hrsg.) Springer NachschlageWissen - Rohrleitungen, 1-18, ISBN: 978-3-642-45027-3, (doi: 10.1007/978-3-642-45027-3_53-1), Springer- Verlag Berlin/ Heidelberg
655. **Scherer, D.; Brand, C.; Brandt, J.; Fehrenbach, U.; Gerster-Bentaya, M.; Prystav, G.; Amraoui, F.; Berdouz, S.; Chlaida, M.** (2015): E2 - Urban Agriculture's contribution to a climate-optimized urban development, E2.2 - Climate-optimized urban development and Urban Agriculture: the local level, 388-395, in: Giseke, U.; Gerster-Bentaya, M.; Helten, F.; Kraume, M.; Scherer, D.; Spars, G.; Amraoui, F.; Adidi, A.; Berdouz, S.; Chlaida, M.; Mansour, M.; Mdafai, M.: Urban Agriculture for Growing City Regions: Connecting Urban-Rural Spheres in Casablanca, ISBN: 978-0-415-82501-6, Taylor & Francis Ltd.

2016*Abstracts*

656. **Gebauer, F., Villwock, J., Kraume, M., Bart, H.-J.** (2016): Prädiktiver Ansatz zur Beschreibung von Koaleszenzereignissen, Proc. zur ProcessNet-Jahrestagung 2016 und 32. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 88(9), 1287, ISSN: 1522-2640, (doi: 10.1002/cite.201650094).
657. **Hohl, L., Röhl, S., Schulz, J., Kraume, M.** (2016): Influence of Temperature and Composition on Dispersion Conditions and Stability of Liquid Multiphase Systems, Proc. zur ProcessNet-Jahrestagung 2016 und 32. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 88(9), 1303, ISSN: 1522-2640, (doi: 10.1002/cite.201650318).
658. **Jurtz, N., Wehinger, G., Eppinger, T., Kraume, M.** (2016): Numerische Untersuchung zu Dispersionskoeffizienten in Festbettreaktoren mit kleinem Rohr-zu-Partikel- Durchmesser- verhältnis, Proc. zur ProcessNet-Jahrestagung 2016 und 32. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 88(9), 1297, ISSN: 1522-2640, (doi: 10.1002/cite.201650418).
659. **Kolano, M., Brehmer, M., Kraume, M.** (2016): Ein OpenFOAM®-Solver für die numerische Strömungssimulation von viskoelastischen Flüssigkeiten in gerührten Systemen, Proc. zur ProcessNet-Jahrestagung 2016 und 32. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 88(9), 1238-1239, ISSN: 1522-2640, (doi: 10.1002/cite.201650360).
660. **Meyer, J., Horst, A., Steinhagen, M., Holtmann, D., Ansorge-Schumacher, M. B., Kraume, M., Drews, A.** (2016): Entwicklung eines einphasigen, kontinuierlichen Prozesses zur chemo-enzymatischen Epoxidierung von α -Pinen in Ethylacetat, Proc. zur ProcessNet-Jahrestagung 2016 und 32. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 88(9), 1240, ISSN: 1522-2640, (doi: 10.1002/cite.201650345).
661. **Meyer, J., Horst, A., Steinhagen, M., Holtmann, D., Ansorge-Schumacher, M. B., Kraume, M., Drews, A.** (2016): Produktion von Peroxyoktansäure mittels immobilisierter CalB: Realisierbarkeitsstudie im einphasigen Stoffsystem mit gradueller Wasserstoffperoxid-Dosing, Proc. zur ProcessNet-Jahrestagung 2016 und 32. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 88(9), 1246, ISSN: 1522-2640, (doi: 10.1002/cite.201650338).
662. **Petzold, M., Röhl, S., Hohl, L., Stehl, D., von Klitzing, R., Kraume, M.** (2016): Einfluss von Nanopartikeln auf den Stofftransport und die Tropfengröße in gerührten Flüssig/Flüssig-Systemen, Proc. zur ProcessNet-Jahrestagung 2016 und 32. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 88(9), 1299, ISSN: 1522-2640, (doi: 10.1002/cite.201650359).

663. **Skale, T., Hohl, L., Stahl, D., von Klitzing, R., Kraume, M., Drews, A.** (2016): Trennung von w/o Pickering Emulsionen mittels Ultrafiltration, Proc. zur ProcessNet-Jahrestagung 2016 und 32. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 88(9), 1333, ISSN: 1522-2640, (doi: 10.1002/cite.201650271).
664. **Villwock, J., Gebauer, F., Bart, H.-J., Kraume, M.** (2016): Vom Einzeltropfen zum Tropfenschwarm - Systematische Analyse der Koaleszenz in Flüssig/Flüssig-Systemen bei Ionenzugabe, Proc. zur ProcessNet-Jahrestagung 2016 und 32. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 88(9), 1299-1300, ISSN: 1522-2640, (doi: 10.1002/cite.201650245).

Journals

665. **Böhm, L., Brehmer, M., Kraume, M.** (2016): Comparison of the Single Bubble Ascent in a Newtonian and a Non-Newtonian Liquid: A Phenomenological PIV Study, Chem. Ing. Tech. 88(1-2), 93-106, ISSN: 1522-2640, (doi: 10.1002/cite.201500105).
666. **Böhm, L., Kolano, M., Kraume, M.** (2016): Simulation of the Single Bubble Ascent with OpenFOAM, Czasopismo Techniczne Mechanika 1-M(1), 25-32, ISSN: 2353-737X, (doi: 10.4467/2353737XCT.16.003.4967).
667. **Brehmer, M., Kraume, M.** (2016): Experimental Study to Develop a Control System for Submersible Mixers in Biogas Plants, Czasopismo Techniczne Mechanika 1-M(1), 33-42, ISSN: 2353-737X, (doi: 10.4467/2353737XCT.16.004.4968).
668. **Busse, N., Fuchs, F., Kraume, M., Czermak, P.** (2016): Treatment of enzyme-initiated delignification reaction mixtures with ceramic ultrafiltration membranes: Experimental investigations and modeling approach, Sep. Sci. Technol. 51(9), 1546-1565, ISSN 0149-6395, (doi: 10.1080/01496395.2016.1167739).
669. **Eppinger, T., Wehinger, G., Jurtz, N., Aglave, R., Kraume, M.** (2016): A numerical optimization study on the catalytic dry reforming of methane in a spatially resolved fixed-bed reactor, Chem. Eng. Res. Des. 115 B, 374-381 ISSN: 0263-8762, (doi: 10.1016/j.cherd.2016.09.007).
670. **Fechter, M., Kraume, M.** (2016): Digestate Treatment Techniques, Czasopismo Techniczne Mechanika 1-M(1), 95-106, ISSN: 2353-737X, (doi: 10.4467/2353737XCT.16.010.4974).
671. **Gebauer, F.; Villwock, J.; Kraume, M.; Bart, H.-J.** (2016): Detailed analysis of single drop coalescence - Influence of ions on film drainage and coalescence time, Chem. Eng. Res. Des. 115 B, 282-291, ISSN: 0263-8762, (doi: 10.1016/j.cherd.2016.09.037).
672. **Gorak, A., Kraume, M., Sundmacher, K.** (2016): Preface Special Issue - Tuneable solvents for intensified reactions and separations, Chem. Eng. Process. 99, 86-87, ISSN 0255-2701, (doi: 10.1016/j.cep.2015.12.001).

673. **Hohl, L., Paul, N., Kraume, M.** (2016): Dispersion conditions and drop size distributions in stirred micellar multiphase systems, *Chem. Eng. Process.* 99, 149-154, ISSN 0255-2701, (doi: 10.1016/j.cep.2015.08.011).
674. **Hohl, L., Schulz, J., Paul, N., Kraume, M.** (2016): Analysis of physical properties, dispersion conditions and drop size distributions in complex liquid/liquid systems, *Chem. Eng. Res. Des.* 108, 210-216, ISSN: 0263-8762, (doi: 10.1016/j.cherd.2016.01.010).
675. **Hohl, L., Röhl, S., Stehl, D., von Klitzing, R., Kraume, M.** (2016): Influence of Nanoparticles and Drop Size Distributions on the Rheology of w/o Pickering Emulsions, *Chem. Ing. Tech.* 88, 1815-1826, ISSN: 1522-2640, (doi: 10.1002/cite.201600063).
676. **Jossen, V., Schirmer, C., Sindi, D.M., Eibl, R., Kraume, M., Pörtner, R., Eibl, D.** (2016): Theoretical and Practical Issues That Are Relevant When Scaling Up hMSC Microcarrier Production Processes, *Stem Cells Int.* 2016, 1-15, ISSN: 1687-966X, (doi: 10.1155/2016/4760414).
677. **Kaiser, S. C., Kraume, M., Eibl, D.** (2016): Development of the Travelling Wave Bioreactor. Part I: Design Studies Based on Numerical Models, *Chem. Ing. Tech.* 88(1-2), 77-85, ISSN: 1522-2640, (doi: 10.1002/cite.201500092).
678. **Kaiser, S. C., Perepelitsa, N., Kraume, M., Eibl, D.** (2016): Development of the Travelling Wave Bioreactor. Part II: Engineering Characteristics and Cultivation Results, *Chem. Ing. Tech.* 88(1-2), 86-92, ISSN: 1522-2640, (doi: 10.1002/cite.201500091).
679. **Kamp, J., Hänsch, R., Kendzierski, G., Kraume, M., Hellwich, O.** (2016): Automated image analysis for trajectory determination of single drop collisions, *Comput. Chem. Eng.* 89, 184-191, ISSN: 0098-1354, (doi: 10.1016/j.compchemeng.201603.033).
680. **Kamp, J., Kraume, M.** (2016): From single drop coalescence to droplet swarms - Scale-up considering the influence of collision velocity and drop size on coalescence probability, *Chem. Eng. Sci.* 156, 162-177, ISSN: 0009-2509, (doi: 10.1016/j.ces.2016.08.028).
681. **Kolano, M., Brehmer, M., Kraume, M.** (2016). Numerical Simulation of Viscoelastic Fluid Flow in Stirred Vessels, *Czasopismo Techniczne Mechanika 1-M(1)*, 129-140, ISSN: 2353-737X, (doi: 10.4467/2353737XCT.16.013.4977).
682. **Nachtigall S., Zedel D., Kraume M.** (2016): Analysis of drop deformation dynamics in turbulent flow, *Chin. J. Chem. Eng.* 24(2), 264-277, ISSN 1004-9541, (doi: 10.1016/j.cjche.2015.06.003).
683. **Paul, N., Schulz, J., Kraume, M.** (2016): Determination of phase separation and mass transfer in complex micellar three phase systems, *Chem. Eng. Process.* 99, 143-148, ISSN 0255-2701, (doi: 10.1016/j.cep.2015.07.010).

684. **Pogrzeba, T., Schmidt, M., Hohl, L., Weber, A., Buchner, G., Schulz, J., Schwarze, M., Kraume, M., Schomäcker, R.** (2016): Catalytic Reactions in Aqueous Surfactant-Free Multiphase Emulsions, *Ind. Eng. Chem. Res.* 55(50), 12765-12775, ISSN: 1520-5045, (doi: 10.1021/acs.iecr.6b03384).
685. **Sitanggang, A.B., Drews, A., Kraume, M.** (2016): Development of a continuous membrane reactor process for enzyme-catalyzed lactulose synthesis, *Biochem. Eng. J.* 109, 65-80, ISSN: 1369-703X, (doi: 10.1016/j.bej.2016.01.006).
686. **Sitanggang, A.B., Drews, A., Kraume, M.** (2016): Recent advances on prebiotic lactulose production, *World J. Microbiol. Biotechnol.* 32(9), 1-10, ISSN: 1573-0972, (doi: 10.1007/s11274-016-2103-7).
687. **Sitanggang, A., Drews, A., Kraume, M.** (2016): Automated Membrane Reactors for the Early Process Development of Enzyme Promoted Bioconversion, *Czasopismo Techniczne Mechanika 1-M(1)*, 205-212, ISSN: 2353-737X, (doi: 10.4467/2353737XCT.16.020.4984).
688. **Skale, T., Stehl, D., Hohl, L., Kraume, M., von Klitzing, R., Drews, A.** (2016): Tuning Pickering Emulsions for Optimal Reaction and Filtration Conditions, *Chem. Ing. Tech.* 88, 1827-1832, ISSN: 0263-8762, (doi: 10.1002/cite.201600099).
689. **Stehl, D., Hohl, L., Schmidt, M., Hübner, J., Lehmann, M., Kraume, M., Schomäcker, R., von Klitzing, R.** (2016): Characteristics of Stable Pickering Emulsions under Process Conditions, *Chem. Ing. Tech.* 88, 1806-1814 ISSN: 0263-8762, (doi: 10.1002/cite.201600065).
690. **Wehinger, G., Heitmann, H., Kraume, M.** (2016): An artificial structure modeler for 3D CFD simulations of catalytic foams, *Chem. Eng. J.* 284, 543-556, ISSN: 1385-8947, (doi: 10.1016/j.cej.2015.09.014).
691. **Wehinger, G., Berg, V., Korup, O., Mette, K., Schlögl, R., Behrens, M., Horn, R., Kraume, M.** (2016): Investigating dry reforming of methane with spatial reactor profiles and particle-resolved CFD simulations, *AIChE J* 62(12), 4436-4452, ISSN: 1547-5905, (doi: 10.1002/aic.15520).
692. **Zedel, D., Drews, A., Kraume M.** (2016): Retention of surfactants by organic solvent nanofiltration and influences on organic solvent flux, *Sep. Purif. Technol.* 158, 396-408, ISSN: 1383-5866, (doi: 10.1016/j.seppur.2015.12.040).
693. **Zientek, N., Laurain, C., Meyer, K., Paul, A., Engel, D., Guthausen, G., Kraume, M., Maiwald, M.** (2016): Automated data evaluation and modelling of simultaneous 19F-1H medium-resolution NMR spectra for online reaction monitoring, *Magn. Reson. Chem.* 54(6), 513-520, ISSN: 1097-458X, (doi:10.1002/mrc.4216).

Electronic Resource

694. **Busse, N., Kraume, M., Czermak, P.** (2016): Optimal permeate flux for an enzymatic oxidation of technical lignins in a membrane reactor, *Sep. Sci. Technol.*, ISSN 0149-6395, (doi: 10.1080/01496395.2016.1213748).
695. **Kaiser, S., Werner, S., Jossen, V., Kraume, M., Eibl, D.** (2016): Development of a method for reliable power input measurements in conventional and single-use stirred bioreactors at laboratory scale, *Eng. Lif. Sci.*, ISSN: 1618-2863, (doi: 10.1002/elsc.201600096).
696. **Kamp, J., Villwock, J., Kraume, M.** (2016): Drop coalescence in technical liquid/liquid applications: a review on experimental techniques and modelling approaches, *Rev. Chem. Eng.*, ISSN: 0167-8299, (doi: 10.1515/revce-2015-0071).
697. **Lomtscher, A.; Jobst, K.; Fogel, S.; Rostalski, K.; Stempin, S.; Kraume, M.** (2016): Scale-up of mixing processes of highly concentrated suspensions using electrical resistance tomography, *Flow Meas. Instrum.*, ISSN 0955-5986, (doi: 10.1016/j.flowmeasinst.2016.10.002).
698. **Schlick-Hasper, E., Goedecke, T., Kraume, M.** (2016): Investigations Concerning the Maximum Filling Degree of Dangerous Goods Packagings for Hazardous Liquids, *Packag. Technol. Sci.*, ISSN: 1099-1522, (doi: 10.1002/pts.2209).
699. **Wehinger, G., Fütterer, C., Kraume, M.** (2016): Contact modifications for CFD simulations of fixed-bed reactors: cylindrical particles, *Ind. Eng. Chem. Res.*, ISSN: 1520-5045, (doi: 10.1021/acs.iecr.6b03596).

Proceedings

700. **Böhm, L.; Kolano, M., Kraume, M.** (2016): Simulation des Einzelblasenaufstiegs in engen Kanälen mittels OpenFOAM, Jahrestreffen der Fachgruppen Agglomerations- und Schüttguttechnik, Mehrphasenströmungen und Computational Fluid Dynamics, 29.02.-01.03.2016, Bingen, Tagungshandbuch, S. 38
701. **Eppinger, T., Jurtz, N., Aglave, R., Wehinger, G., Kraume, M.** (2016): Spatially Resolved Fixed-Bed Versus Pseudo-Homogeneous Reactor Models Including a Detailed Reaction Mechanism, 2016 AIChE Spring Meeting, 10.-14.04.2016, Houston, USA, ISBN: 978-0-8169-1096-0;
link: <http://www3.aiche.org/proceedings/Abstract.aspx?ConfID=Spring-GCPS-2016&GroupID=2136&SessionID=33153&PaperID=444079>
702. **Gebauer, F., Villwock, J., Kraume, M., Bart, H.-J.** (2016): Standardisierter Entkopplungsansatz zur Koaleszenzanalyse, Jahrestreffen der Fachgruppen Extraktion und Grenzflächenbestimmte Systeme und Prozesse, 14.-15.03.2016, Weimar, Tagungshandbuch S. 28
703. **Hohl, L., Schulz, J., Röhl, S., Paul, N., Kraume, M.** (2016): Einfluss von Prozessparametern auf die Phasengrenzflächen dreiphasiger mizellarer Systeme, Jahrestreffen der Fachgruppen Extraktion und Grenzflächenbestimmte Systeme und Prozesse, 14.-15.03.2016, Weimar, Tagungshandbuch S. 32

704. **Hohl, L., Röhl, S., Schulz, J., Paul, N., Kraume, M.** (2016): Influence of Dispersion Conditions on Phase Separation in Liquid Multiphase Systems, 2016 AIChE Annual Meeting, 13.-18.11.2016, San Francisco, USA, ISBN: 978-0-8169-1097-7,
link: <http://www3.aiche.org/proceedings/Abstract.aspx?ConfID=Annual-2016&GroupID=2152&SessionID=32823&PaperID=451414>
705. **Juling, M.; Steinbock, J.; Kraume, M.; Lederer, T.** (2016): LDA volume flow rate standard for water using high spatial resolution LDA for traceable measurements in power plants Proceedings 17th International Flow Measurement Conference Sydney, Australia, 1-4,
link: <http://metrology.asn.au/flomeko2016/papers/57a8357c33dae-Markus Juling - LDA volume flow rate standard for water.docx>
706. **Jurtz, N., Eppinger, T., Kraume, M.** (2016): Spatially Resolved 3D-CFD Simulation of a Packed Bed Membrane Reactor for Steam Reforming, 2016 AIChE Annual Meeting, 13.-18.11.2016, San Francisco, USA, ISBN: 978-0-8169-1097-7,
link: <http://www3.aiche.org/proceedings/Abstract.aspx?ConfID=Annual-2016&GroupID=2168&SessionID=32607&PaperID=463882>
707. **Jurtz, N., Wehinger, G., Eppinger, T., Kraume, M.** (2016): Numerical Investigation on Dispersion Phenomena in Packed Bed Reactors with Low Tube-to-Particle Diameter Ratio, 2016 AIChE Annual Meeting, 13.-18.11.2016, San Francisco, USA, ISBN: 978-0-8169-1097-7,
link: <http://www3.aiche.org/proceedings/Abstract.aspx?ConfID=Annual-2016&GroupID=2168&SessionID=32597&PaperID=463845>
708. **Kolano, M., Brehmer, M., Kraume, M.** (2016): Numerical Simulation of Viscoelastic Liquid Flow in Stirred Vessels, 2016 AIChE Annual Meeting, 13.-18.11.2016, San Francisco, USA, ISBN: 978-0-8169-1097-7,
link: <http://www3.aiche.org/proceedings/Abstract.aspx?ConfID=Annual-2016&GroupID=2156&SessionID=33200&PaperID=467195>
709. **Merker, D., Böhm, L., Kraume, M.** (2016): Fluidodynamik von Einzelblasen mit überlagertem Stofftransport, Jahrestreffen der Fachgruppen Agglomerations- und Schüttguttechnik, Mehrphasenströmungen und Computational Fluid Dynamics, 29.02.-01.03.2016, Bingen, Tagungshandbuch, S. 35
710. **Petzold, M., Stehl, D., Hohl, L., Röhl, S., von Klitzing, R., Kraume, M.** (2016): Auswirkungen von Nanopartikeln auf die Transport- und Grenzflächenphänomene in Flüssig/flüssig-Systemen, Jahrestreffen der Fachgruppen Extraktion und Grenzflächenbestimmte Systeme und Prozesse, 14.-15.03.2016, Weimar, Tagungshandbuch S. 23
711. **Petzold, M., Röhl, S., Hohl, L., Stehl, D., von Klitzing, R., Kraume, M.** (2016): Influence of Silica Nanoparticles on Transport and Interfacial Phenomena in Liquid/Liquid Systems, 2016 AIChE Annual Meeting, 13.-18.11.2016, San Francisco, USA, ISBN: 978-0-8169-1097-7,
link: <http://www3.aiche.org/proceedings/Abstract.aspx?ConfID=Annual-2016&GroupID=2151&SessionID=32978&PaperID=464439>

712. **Schulz, J., Paul, N., Kraume, M.** (2016): Transportprozesse in Flüssig/flüssig-Systemen - Grenzflächenphänomene und der Einfluss grenzflächenaktiver Substanzen, Jahrestreffen der Fachgruppen Extraktion und Grenzflächenbestimmte Systeme und Prozesse, 14.-15.03.2016, Weimar, Tagungshandbuch S. 7
713. **Stehl, D., Carl, A., von Klitzing, R., Hohl, L., Kraume, M., Skale, T., Drews, A.** (2016): Pickering-emulsions for hydroformylation of long chain olefins, Jahrestreffen der Fachgruppen Extraktion und Grenzflächenbestimmte Systeme und Prozesse, 14.-15.03.2016, Weimar, Tagungshandbuch S. 22
714. **Villwock, J., Kamp, J., Kraume, M.** (2016): Einfluss der Fluidodynamik auf das Koaleszenzverhalten von Einzeltropfen in O/W und W/O-Systemen, Jahrestreffen der Fachgruppen Agglomerations- und Schüttguttechnik, Mehrphasenströmungen und Computational Fluid Dynamics, 29.02.-01.03.2016, Bingen, Tagungshandbuch, S. 21
715. **Villwock, J., Gebauer, F., Bart, H.-J., Kraume, M.** (2016): Auswirkungen von Ionenzugabe und Phasenumkehr auf das Koaleszenzverhalten von Einzeltropfen, Jahrestreffen der Fachgruppen Extraktion und Grenzflächenbestimmte Systeme und Prozesse, 14.-15.03.2016, Weimar, Tagungshandbuch S. 27
716. **Villwock, J., Gebauer, F., Bart, H.-J., Kraume, M.** (2016): Influence of Ions on Coalescence in Liquid/Liquid Dispersions - a Systematic Experimental Analysis, 2016 AIChE Annual Meeting, 13.-18.11.2016, San Francisco, USA, ISBN: 978-0-8169-1097-7, link: <http://www3.aiche.org/proceedings/Abstract.aspx?ConfID=Annual-2016&GroupID=2152&SessionID=32454&PaperID=452109>
717. **Wehinger, G., M. Kraume, M.** (2016): catFM: ein Algorithmus zur automatischen Erzeugung von detaillierten Schwammstrukturen für CFD-Simulationen, Jahrestreffen der Fachgruppen Agglomerations- und Schüttguttechnik, Mehrphasenströmungen und Computational Fluid Dynamics, 29.02.-01.03.2016, Bingen, Tagungshandbuch, S. 56

2017*Journals*

718. **Busse, N., Kraume, M., Czermak, P.** (2017): Optimal permeate flux for an enzymatic oxidation of technical lignins in a membrane reactor, *Sep. Sci. Technol.* 52(2), 374-380, ISSN 0149-6395, (doi: 10.1080/01496395.2016.1213748).
719. **Busse, N.; Kraume, M.; Czermak, P.** (2017): Modeling the design and operational mode of a continuous membrane reactor for enzymatic lignin modification, *Biochem. Eng. J.* 124, 88-98, ISSN: 1369-703X, (doi: 10.1016/j.bej.2017.04.007).
720. **Hohl, L.; Knossalla, M.; Kraume, M.** (2017): Influence of dispersion conditions on phase separation in liquid multiphase systems, *Chem. Eng. Sci.* 171, 76-87, ISSN: 0009-2509, (doi: 10.1016/j.ces.2017.05.005).
721. **Kaiser, S., Werner, S., Jossen, V., Kraume, M., Eibl, D.** (2017): Development of a method for reliable power input measurements in conventional and single-use stirred bioreactors at laboratory scale, *Eng. Lif. Sci.* 17(5), 500-511, ISSN: 1618-2863, (doi: 10.1002/elsc.201600096).
722. **Kamp, J., Villwock, J., Kraume, M.** (2017): Drop coalescence in technical liquid/liquid applications: a review on experimental techniques and modeling approaches, *Rev. Chem. Eng.* 33(1), 1-47, ISSN: 0167-8299, (doi: 10.1515/revce-2015-0071).
723. **Klemm, E.; Kraume, M.; Ritter, J.; Sauer, J.** (2017): Reaktionstechnik und Mischvorgänge: Zwei untrennbare Fachgebiete, *Chem. Ing. Tech.*, 89(4), 355, ISSN: 0263-8762, (doi: 10.1002/cite.201770042).
724. **Lomtscher, A.; Jobst, K.; Fogel, S.; Rostalski, K.; Stempin, S.; Kraume, M.** (2017): Scale-up of mixing processes of highly concentrated suspensions using electrical resistance tomography, *Flow Meas. Instrum.* 53 A, 56-66, ISSN 0955-5986, (doi: 10.1016/j.flowmeasinst.2016.10.002).
725. **Lomtscher, A.; Jobst, K.; Kraume, M.** (2017): Einfluss der Anwesenheit von faserigen Partikeln auf die Strömungsgeschwindigkeiten in gerührten Systemen, *Chem. Ing. Tech.* 89(4), 424-431, ISSN: 0263-8762, (doi: 10.1002/cite.201600137).
726. **Merker, D.; Böhm, L.; Oßberger, M.; Klüfers, P.; Kraume, M.** (2017): Mass transfer in reactive bubbly flows - A single bubble study, *Chem. Eng. Technol.* 70, 1391-1399, ISSN: 1521-4125, (doi: 10.1016/j.compchemeng.2017.02.029).
727. **Meyer, J., Horst, A., Steinhagen, M., Holtmann, D., Ansorge-Schumacher, M. B., Kraume, M., Drews, A.** (2017): A continuous single organic phase process for the lipase catalyzed synthesis of peroxy acids increases productivity, *Eng. Lif. Sci.* 17, 759-767, ISSN: 1618-2863, (doi: 10.1002/elsc.201600171).

728. **Meyer, J., Holtmann, D., Ansorge-Schumacher, M. B., Kraume, M., Drews, A.** (2017): Development of a continuous process for the lipase-mediated synthesis of peracids, *Biochem. Eng. J.* 118, 34-40, ISSN: 1369-703X, (doi: 10.1016/j.bej.2016.11.009).
729. **Meyer-Waßewitz, J., Holtmann, D., Ansorge-Schumacher, M., Kraume, M., Drews, A.** (2017): An organic-single-phase CSTR process for the chemo-enzymatic epoxidation of alpha-pinene enables high selectivity and productivity, *Biochem. Eng. J.* 126, 68-77, ISSN: 1369-703X, (doi: 10.1016/j.bej.2017.07.002).
730. **Misra, A.; de Souza, L.; Illner, M.; Hohl, L.; Kraume, M.; Repke, J.-U.; Thévenin, D.** (2017): Simulating separation of a multiphase liquid-liquid system in a horizontal settler by CFD, *Chem. Eng. Sci.* 167, 242-250, ISSN: 0009-2509, (doi: 10.1016/j.ces.2017.03.062).
731. **Müller, M., Meusel, W., Husemann, U., Greller, G., Kraume, M.** (2017): Measurement of heat transfer coefficients in stirred single-use bioreactors by the decay of hydrogen peroxide *Eng. Lif. Sci.* 17(12), 123-1243, ISSN: 1618-2863, (doi: 10.1002/elsc.201700099).
732. **Petzold, M., Röhl, S., Hohl, L., Stehl, D., Lehmann, M., von Klitzing, R., Kraume, M.** (2017): Mass Transfer and Drop Size Distributions in Reactive Nanoparticle-Stabilized Multiphase Systems *Chem. Ing. Tech.* 89(11), 1561-1573, ISSN: 0263-8762, (doi: 10.1002/cite.201700060).
733. **Schlick-Hasper, E., Goedecke, T., Kraume, M.** (2017): Investigations Concerning the Maximum Filling Degree of Dangerous Goods Packagings for Hazardous Liquids, *Packag. Technol. Sci.* 30(8), 461-475, ISSN: 1099-1522, (doi: 10.1002/pts.2209).
734. **Schmidt, M.; Pogrzeba, T.; Hohl, L.; Weber, A.; Kielholz, A.; Kraume, M.; Schomäcker, R.** (2017): Palladium catalyzed methoxycarbonylation of 1-dodecene in biphasic systems - Optimization of catalyst recycling, *Molecular Catalysis* 439, 1-8, ISSN: 2468-8231, (doi: 10.1016/j.mcat.2017.06.014).
735. **Skale, T.; Hohl, L.; Kraume, M.; Drews, A.** (2017): Feasibility of w/o Pickering emulsion ultrafiltration *J. Membr. Sci.* 535, 1-9, ISSN: 0376-7388, (doi: 10.1016/j.memsci.2017.04.006).
736. **Wehinger, G., Fütterer, C., Kraume, M.** (2017): Contact modifications for CFD simulations of fixed-bed reactors: cylindrical particles, *Ind. Eng. Chem. Res.* 56, 87-99, ISSN: 1520-5045, (doi: 10.1021/acs.iecr.6b03596).
737. **Wehinger, G.; Kraume, M.** (2017): CFD als Designtool für Festbettreaktoren mit kleinem Rohr-zu-Pelletdurchmesser-Verhältnis: Heute oder in Zukunft?, *Chem. Ing. Tech.* 89(4), 447-453, ISSN: 0263-8762, (doi: 10.1002/cite.201600155).
738. **Wehinger, G.; Klippel, F.; Kraume, M.** (2017): Modeling pore processes for particle-resolved CFD simulations of catalytic fixed-bed reactors *Comput. Chem. Eng.* 101, 11-22, ISSN: 0098-1354, (doi: 10.1016/j.compchemeng.2017.02.029).

739. **Zedel, D., Kraume, M., Drews, A.** (2017): Modelling and prediction of organic solvent flux and retention of surfactants by organic solvent nanofiltration J. Membr. Sci. 544, 323-332, ISSN: 0376-7388, (doi: 10.1016/j.memsci.2017.09.041).

Electronic Resource

740. **Hohl, L., Kraume, M.** (2017): The formation of complex droplets in liquid three phase systems and their effect on dispersion and phase separation, Chem. Eng. Res. Des., ISSN: 0263-8762, (doi: 10.1016/j.cherd.2017.10.027).
741. **Müller, M., Meusel, W., Husemann, U., Greller, G., Kraume, M.** (2017): Application of heat compensation calorimetry to an E. coli fed-batch process, J. Biotechnol., ISSN: 0168-1656, (doi: 10.1016/j.jbiotec.2017.12.002).
742. **Schlick-Hasper, E.; Goedecke, T.; Kraume, M.** (2017): Sift-proofness of Dangerous Goods Packagings - An Incompletely Defined Requirement, Packag. Technol. Sci., ISSN: 1099-1522, (doi: 10.1002/pts.2307).

Proceedings

743. **Gienau, T., Brüß, U., Kraume, M., Rosenberger, S.** (2018): Nutrient recovery from biogas digestate by optimised membrane treatment, in Proceedings of ATHENS 2017: 5th International Conference on Sustainable Solid Waste Management 21.-24.06.2017, online only, <http://athens2017.uest.gr/proceedings/proceedings.html>.

Books/Bookchapters

744. **Jossen, V., Eibl, R., Pörtner, R., Kraume, M., Eibl, D.** (2017): Stirred Bioreactors: Current State and Developments, With Special Emphasis on Biopharmaceutical Production Processes, 179-215, in: Larroche, C., Angeles Sanroman, M., Du, G., Pandey, A.(Eds.): Current Developments in Biotechnology and Bioengineering - Bioprocesses, Bioreactors and Controls, ISBN: 978-0-444-63663-8, (doi: 10.1016/b978-0-444-63663-8.00007-0), Elsevier

2018**Abstracts**

745. **Charlafti, E., Leleu, D., Steinhoff, J., Bart, H.-J., Pfennig, A., Kraume, M., Reinecke, L.** (2018): Separation efficiency and design optimization of gravity settlers - CFD modeling and experimental investigation, Proc. zur ProcessNet-Jahrestagung 2018 und 33. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 90(9), 1311, ISSN: 1522-2640, (doi: 10.1002/cite.201855387).
746. **Böhm, L., Bliatsiou, C., Kraume, M., Krull, R., Kwade, A., Veiter, L.** (2018): Partikelcharakterisierung und -messtechniken in lebensmittel- und biotechnologischen Systemen, Proc. zur ProcessNet-Jahrestagung 2018 und 33. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 90(9), 1336, ISSN: 1522-2640, (doi: 10.1002/cite.201855438).
747. **Hohl, L., Kraume, M.** (2018): Modellierung der Phasentrennung in flüssigen Dreiphasensysteme, Proc. zur ProcessNet-Jahrestagung 2018 und 33. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 90(9), 1311-1312, ISSN: 1522-2640, (doi: 10.1002/cite.201855388).
748. **Panckow, R., Böhm, L., Junne, S., Kraume, M.** (2018): Größenverteilung von fluiden Partikeln in einem wellendurchmischten Single-Use-Bioreaktor, Proc. zur ProcessNet-Jahrestagung 2018 und 33. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 90(9), 1301, ISSN: 1522-2640, (doi: 10.1002/cite.201855366).
749. **Petzold, M., Böhm, L., Kraume, M.** (2018): Charakterisierung des Gas/Flüssigkeits-Stofftransports in mizellaren Lösungsmittelsystemen mit mehreren Flüssigphasen, Proc. zur ProcessNet-Jahrestagung 2018 und 33. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 90(9), 1305, ISSN: 1522-2640, (doi: 10.1002/cite.201855374).
750. **Pommehrene, K., Schrader, M., Bliatsiou, C., Schmideder, S., Böhm, L., Briesen, H., Kraume, M., Kwade, A., Krull, R.** (2018): Experimental and numerical investigations on cultivations of filamentous microorganisms towards a better understanding and process control, Proc. zur ProcessNet-Jahrestagung 2018 und 33. DECHEMA-Jahrestagung der Biotechnologen, Aachen, Chem. Ing. Tech. 90(9), 1341, ISSN: 1522-2640, (doi: 10.1002/cite.201855449).

Journals

751. **Böhmert, L., König, L., Sieg, H., Lichtenstein, D., Paul, N., Braeuning, A., Voigt, A., Lampen, A.** (2018): In vitro nanoparticle dosimetry for adherent growing cell monolayers covering bottom and lateral walls, Part. Fibre Toxicol. 15(1), 1-20, ISSN: 1743-8977, (doi: 10.1186/s12989-018-0278-9).

752. **Foix-Cablé, M., Darmawan, R.A., Sahnoun, M., Hindersin, S., Kerner, M., Kraume, M.** (2018): Nutrient recycling from the effluent of a decentralized anaerobic membrane bioreactor AnMBR treating fresh domestic wastewater by cultivation of the microalgae *Acuto-desmus obliquus*, *Water Sci. Technol.* 78(7), 1556-1565 ISSN: 0273-1223, (doi: 10.2166/wst.2018.428).
753. **Gienau, T., Kraume, M., Rosenberger, S.** (2018): Rheological Characterization of Anaerobic Sludge from Agricultural and Bio-Waste Biogas Plants, *Chem. Ing. Tech.* 90(7), 988-997, ISSN: 1522-2640, (doi: 10.1002/cite.201700102).
754. **Gienau, T., Kraume, M., Rosenberger, S.** (2018): Biopolymer Interactions of Anaerobic Sludge and their Influence on Membrane Performance, *J. Mem. Sci.*, 564, 634-642, ISSN: 0376-7388, (doi: 10.1016/j.memsci.2018.07.066).
755. **Gienau, T., Brüß, U., Kraume, M., Rosenberger, S.** (2018): Nutrient recovery from anaerobic sludge by membrane filtration: pilot tests at a 2.5 MW_e biogas plant, *Int. J. Recycl. Org. Waste Agric.* 7(4), 325-334, ISSN: 2195-3228, (doi: 10.1007/s40093-018-0218-6).
756. **Gienau, T., Brüß, U., Kraume, M., Rosenberger, S.** (2018): Nutrient recovery from biogas digestate by optimised membrane treatment, *Waste Biomass Valorization* 9(12), 2337-2347, ISSN: 1877-2641, (doi: 10.1007/s12649-018-0231-z).
757. **Hohl, L., Kraume, M.** (2018): The formation of complex droplets in liquid three phase systems and their effect on dispersion and phase separation *Chem. Eng. Res. Des.* 129, 89-101, ISSN: 0263-8762, (doi: 10.1016/j.cherd.2017.10.027).
758. **Hohl, L., Panckow, R., Schulz, J., Jurtz, N., Böhm, L., Kraume, M.** (2018): Description of Disperse Multiphase Processes: Quo Vadis?, *Chem. Ing. Tech.* 90(11), 1709-1726, ISSN: 1522-2640, (doi: 10.1002/cite.201800079).
759. **Hohl, L., Schulz, J., Kraume, M.** (2018): Towards Drop Size Modeling in Three Phase Microemulsion Systems, *J. Chem. Eng. Jpn.* 51(4), 383-388, ISSN: 0021-9592, (doi: 10.1252/jcej.17we291).
760. **Jossen, V., Eibl, R., Kraume, M., Eibl, D.** (2018): Growth Behavior of Human Adipose Tissue-Derived Stromal/Stem Cells at Small Scale: Numerical and Experimental Investigations, *Bioengineering* 5(4), 106, ISSN: 2306-5354, (doi: 10.3390/bioengineering5040106).
761. **Müller, M., Meusel, W., Husemann, U., Greller, G., Kraume, M.** (2018): Application of heat compensation calorimetry to an *E. coli* fed-batch process, *J. Biotechnol.* 266, 133-143, ISSN: 0168-1656, (doi: 10.1016/j.jbiotec.2017.12.002).
762. **Müller, M., Husemann, U., Greller, G., Kraume, M., Meusel, W.** (2018): Heat transfer characteristics of a stirred single-use bioreactor, *Biochem. Eng. J.* 140, 168-177, ISSN: 1369-703X, (doi: 10.1016/j.bej.2018.09.022).

763. **Schlick-Hasper, E.; Goedecke, T.; Kraume, M.** (2018): Sift-proofness of Dangerous Goods Packagings - An Incompletely Defined Requirement, *Packag. Technol. Sci.* 31(5), 235-245, ISSN: 1099-1522, (doi: 10.1002/pts.2307).
764. **Schlick-Hasper, E, Eiben, M., Drousch, B., Heinrich, A., Goedecke, T., Kraume, M.** (2018): Influence of the length of the internal sleeve valve on the release of powdery substances from the closures of valved bags for dangerous goods, *Packag. Technol. Sci.* 31(8), 532-544, ISSN: 1099-1522, (doi: 10.1002/pts.2377).

Electronic Resource

765. **Bliatsiou, C., Malik, A., Böhm, L., Kraume, M.** (2018): Influence of impeller geometry on hydromechanical stress in stirred liquid/liquid dispersions, *Ind. Eng. Chem. Res.*, ISSN: 0888-5885, (doi: 10.1021/acs.iecr.8b03654)
766. **Jurtz, N., Kraume, M., Wehinger, G.** (2018): Advances in fixed-bed reactor modeling using particle-resolved computational fluid dynamics (CFD), *Rev. Chem. Eng.*, ISSN: 0167-8299, (doi: 10.1515/revce-2017-0059).

Proceedings

767. **Merker, D., Böhm, L., Enders, F., Kraume, M.** (2019): Fluid dynamics of single bubbles in different continuous phases measured with two high-speed cameras carried on a real-time controlled linear guidance, in *Proceedings of the 5th International Conference on Experimental Fluid Mechanics 2018*, 02.-04.07.2018 Munich, Germany, 464-468, ISBN: 978-3-943207-32-3, (doi: 10.18726/2018_2).
768. **Schulz, J., Junne, H., Böhm, L., Kraume, M.** (2019): Development of an experimental setup applying rainbow schlieren deflectometry for visualization and quantification of heat and mass transfer in multiphase systems, in *Proceedings of the 5th International Conference on Experimental Fluid Mechanics 2018*, 02.-04.07.2018 Munich, Germany, 226-231, ISBN: 978-3-943207-32-3, (doi: 10.18726/2018_2).

Books/Bookchapters

769. **Kraume, M.** (2018): Rohrleitungen für Feststoffe, 277-289, in: Horlacher, H.-B., Helbig, U.: *Rohrleitungen 2 - Einsatz, Verlegung, Berechnung, Rehabilitation*, ISBN: 978-3-662-50355-3, (doi: 10.1007/978-3-662-50355-3_27), Springer.
770. **Kraume, M.** (2018): Berechnung von Leitungen für die pneumatische Förderung von Feststoffen, 681-701, in: Horlacher, H.-B., Helbig, U.: *Rohrleitungen 2 - Einsatz, Verlegung, Berechnung, Rehabilitation*, ISBN: 978-3-662-50355-3, (doi: 10.1007/978-3-662-50355-3_53), Springer.
771. **Kraume M.** (2018): Misch- und Rührtechnik in chemischen Reaktoren, 1-46, in: Reschetilowski W.: *Handbuch Chemische Reaktoren- Grundlagen und Anwendungen der Chemischen Reaktionstechnik*, ISBN: 978-3-662-56444-8, (doi: 10.1007/978-3-662-56444-8_18-1), Springer.

772. **Misra, A., Bonamy, C., de Souza, L.M., Hohl, L., Illner, M., Kraume, M., Repke, J.-U., Thévenin, D.** (2018): A multi-fluid approach to simulate separation of liquid-liquid systems in a gravity settler, in Friedl, A., Klemeš, J.J., Radl, S., Varbanov, P.S., Wallek, T.: *Comput. Aided Chem. Eng. - 28th European Symposium on Computer Aided Process Engineering* 43, 31-36, (doi: 10.1016/b978-0-444-64235-6.50008-5).

2019*Journals*

773. **Bliatsiou, C., Malik, A., Böhm, L., Kraume, M.** (2019): Influence of impeller geometry on hydromechanical stress in stirred liquid/liquid dispersions, *Ind. Eng. Chem. Res.* 58(7), 2537-2550, ISSN: 0888-5885, (doi: 10.1021/acs.iecr.8b03654).
774. **Böhm, L., Hohl, L., Bliatsiou, C., Kraume, M.** (2019): Multiphase Stirred Tank Bioreactors - New Geometrical Concepts and Scale-up Approaches, *Chem. Ing. Tech.* 91(11), 1724-1746, ISSN: 1522-2640, (doi: 10.1002/cite.201900165).
775. **Bornemann, M., Kern, S., Jurtz, N., Thiede, T., Kraume, M., Maiwald, M.** (2019): Design and Validation of an Additively Manufactured Flow Cell - Static Mixer Combination for Inline NMR Spectroscopy, *Ind. Eng. Chem. Res.* 58(42), 19562-19570, ISSN: 0888-5885, (doi: 10.1021/acs.iecr.9b03746).
776. **Enders, F., Merker, D., Kolano, M., Böhm, L., Kraume, M.** (2019): Numerical Characterization of the Bubble Rise Behavior in Viscoelastic Liquids, *Chem. Eng. Technol.* 42(7), 1395-1403, ISSN: 1521-4125, (doi: 10.1002/ceat.201900076).
777. **Hohl, L., Röder, V., Kraume, M.** (2019): Dispersion and phase separation of water/oil/amphiphile systems in stirred tanks, *Chem. Eng. Technol.* 42(8), 1574-1586, ISSN: 1521-4125, (doi: 10.1002/ceat.201800743).
778. **Jurtz, N., Kraume, M., Wehinger, G.** (2019): Advances in fixed-bed reactor modeling using particle-resolved computational fluid dynamics (CFD), *Rev. Chem. Eng.* 35(2), 139-190, ISSN: 0167-8299, (doi: 10.1515/revce-2017-0059).
779. **Jurtz, N., Waldherr, P., Kraume, M.** (2019): Numerical Analysis of the Impact of Particle Friction on Bed Voidage in Fixed-Beds, *Chem. Ing. Tech.* 91(9), 1260-1266, ISSN: 1522-2640, (doi: 10.1002/cite.201800190).
780. **Kolano, M., Kraume, M.** (2019): Flow Compartments in Viscoelastic Fluids Using Radial Impellers in Stirred Tanks, *Chem. Eng. Technol.* 42(8), 1670-1679, ISSN: 1521-4125, (doi: 10.1002/ceat.201900122).
781. **Krakau, F.; Kraume, M.** (2019): 3D Single Bubble Breakup Tracking in a Stirred Tank, *Chem. Ing. Tech.* 91(7), 980-990, ISSN: 1522-2640, (doi: 10.1002/cite.201800111).
782. **Krakau, F.; Kraume, M.** (2019): 3-D Observation of Single Air Bubble Breakup in a Stirred Tank, *Chem. Eng. Technol.* 42(7), 1357-1370, ISSN: 1521-4125, (doi: 10.1002/ceat.201900033).
783. **Kraume, M.** (2019): The Charm of Small Conferences, *Chem. Eng. Technol.* 42(7), 1348 ISSN: 1521-4125, (doi: 10.1002/ceat.201970075).

784. **Kraume, M.** (2019): Vom Einzeltropfen zur Extraktionskolonne (Editorial), Chem. Ing. Tech. 91(11), 1495, ISSN: 1522-2640, (doi: 10.1002/cite.201971102).
785. **Nitzsche, R., Gröngröft, A., Kraume, M.** (2019): Separation of lignin from beech wood hydrolysate using polymeric resins and zeolites - Determination and application of adsorption isotherms, Sep. Purif. Technol. 209, 491-502, ISSN: 1383-5866, (doi: 10.1016/j.seppur.2018.07.077).
786. **Nitzsche, R., Gröngröft, A., Kraume, M.** (2019): Corrigendum to ‘Separation of lignin from beech wood hydrolysate using polymeric resins and zeolites - Determination and application of adsorption isotherms’, Sep. Purif. Technol. 219, 303-306, ISSN: 1383-5866, (doi: 10.1016/j.seppur.2019.02.011).
787. **Röhl, S., Hohl, L., Kempin, M., Enders, F., Jurtz, N., Kraume, M.** (2019): Influence of Different Silica Nanoparticles on Drop Size Distributions in Agitated Liquid-Liquid Systems, Chem. Ing. Tech. 91(11), 1640-1655, ISSN: 1522-2640, (doi: 10.1002/cite.201900049).
788. **Schlick-Hasper, E.; Goedecke, T.; Kraume, M.** (2019): Leakproofness of dangerous goods packagings-comparison of worst-case limit leakage rates and sensitivity of the bubble test, Packag. Technol. Sci., ISSN: 1099-1522, (doi: 10.1002/pts.2435).

Electronic Resource

789. **Heyse, A., Kraume, M., Drews, A.** (2019): The impact of lipases on the rheological behavior of colloidal silica nanoparticle stabilized Pickering emulsions for biocatalytical applications, Colloids Surf., B, ISSN: 0927-7765, (doi: 10.1016/j.colsurfb.2019.110580).
790. **Schulz, J., Junne, H., Böhm, L., Kraume, M.** (2019): Measuring local heat transfer by application of Rainbow Schlieren Deflectometry in case of different symmetric conditions, Exp. Therm Fluid Sci., ISSN: 0894-1777, (doi: 10.1016/j.expthermflusci.2019.109887).
791. **Steinhoff, J., Charlafti, E., Reinecke, L., Kraume, M., Bart, H.-J.** (2019): Investigation and Development of Gravity Separators with a Standardized Experimental Setup, Can. J. Chem. Eng., ISSN: 1939-019X, (doi: 10.1002/cjce.23603).

Books/Bookchapters

792. **Werner, S., Kraume, M., Eibl, D.** (2019): Mixing Systems for Single-Use, 25-35, in: Eibl, R., Eibl, D. (Eds.): Single-Use Technology in Biopharmaceutical Manufacture, 2nd Edition, ISBN: 978-1119477891, (doi: 10.1002/9781119477891.ch3), Wiley.

2020**Abstracts**

793. **Afraz, N., Petzold, M., Hohl, L., Hecht, K., Böhm, L., Kraume, M.** (2020): Gas-liquid mass transfer in micellar multiphase systems: A comparison between falling-film and stirred-tank reactors, Proc. zur ProcessNet-Jahrestagung 2020 und 34. DECHEMA-Jahrestagung der Biotechnologen, Chem. Ing. Tech. 92(9), 1312, ISSN: 1522-2640, (doi: 10.1002/cite.202055394).
794. **Drews, A., Kempin, M., Kraume, M.** (2020): First systematic study on the impact of preparation conditions on characteristic Pickering emulsion properties, Proc. zur ProcessNet-Jahrestagung 2020 und 34. DECHEMA-Jahrestagung der Biotechnologen, Chem. Ing. Tech. 92(9), 1295, ISSN: 1522-2640, (doi: 10.1002/cite.202055073).
795. **Kempin, M., Schroeder, H., Drews, A., Kraume, M.** (2020): Organic solvent nanofiltration of water-in-oil Pickering emulsions – Impact of organic phase viscosity, Proc. zur ProcessNet-Jahrestagung 2020 und 34. DECHEMA-Jahrestagung der Biotechnologen, Chem. Ing. Tech. 92(9), 1294-1295, ISSN: 1522-2640, (doi: 10.1002/cite.202055074).
796. **Last, W., Kraume, M.** (2020): Neue Herausforderungen und innovative Lösungen in der industriellen Mischtechnik, Proc. zur ProcessNet-Jahrestagung 2020 und 34. DECHEMA-Jahrestagung der Biotechnologen, Chem. Ing. Tech. 92(9), 1165, ISSN: 1522-2640, (doi: 10.1002/cite.202055070).
797. **Schmit, P., Brunner, M., Kraume, M.** (2020): Biotechnologische Synthese von Methan aus Wasserstoff und Kohlendioxid, Proc. zur ProcessNet-Jahrestagung 2020 und 34. DECHEMA-Jahrestagung der Biotechnologen, Chem. Ing. Tech. 92(9), 1158-1159, ISSN: 1522-2640, (doi: 10.1002/cite.202055132).

Journals

798. **Bliatsiou, C., Schrunner, K., Waldherr, P., Tesche, S., Böhm, L., Kraume, M., Krull, R.** (2020): Rheological characteristics of filamentous cultivation broths and suitable model fluids, Biochem. Eng. J. 163, 107746, ISSN: 1369-703X, (doi: 10.1016/j.bej.2020.107746).
799. **Cao, C., Kraume, M.** (2020): Hysteresis effect of propeller jet flows in viscoelastic fluids: Steady state flow patterns, Chem. Eng. Sci., 223, 115750, ISSN: 0009-2509, (doi: 10.1016/j.ces.2020.115750).
800. **Dietrich, S., Nieß, S., Rönsch, R., Kraume, M.** (2020): Synthesis of Light Hydrocarbons from Biogas and Hydrogen: Investigation of a Fe-Mn-K/MgO Catalyst, Chem. Eng. Technol. 43(8), 1547-1553, ISSN: 1521-4125, (doi: 10.1002/ceat.202000035).

801. **Gienau, T., Ehrmanntraut, A., Kraume, M., Rosenberger, S.** (2020): Influence of Ozone Treatment on Ultrafiltration Performance and Nutrient Flow in a Membrane Based Nutrient Recovery Process from Anaerobic Digestate, *Membranes* 10(4), 64, ISSN: 2077-0375, (doi: 10.3390/membranes10040064).
802. **Heyse, A., Kraume, M., Drews, A.** (2020): The impact of lipases on the rheological behavior of colloidal silica nanoparticle stabilized Pickering emulsions for biocatalytical applications, *Colloids Surf., B* 185, 110580, ISSN: 0927-7765, (doi: 10.1016/j.colsurfb.2019.110580).
803. **Javadi, A., Dowlati, S., Miller, R., Schneck, E., Eckert, K., Kraume, M.** (2020): Dynamics of Competitive Adsorption of Lipase and Ionic Surfactants at the Water–Air Interface, *Langmuir* 36(40), 12010-12022, ISSN: 0743-7463, (doi: 10.1021/acs.langmuir.0c02222).
804. **Jurtz, N., Wehinger, G., Srivastava, U., Henkel, T., Kraume, M.** (2020): Validation of pressure drop prediction and bed generation of fixed-beds with complex particle shapes using discrete element method and computational fluid dynamics *AIChE J.* 66, e16967, ISSN: 1547-5905, (doi 10.1002/aic.16967).
805. **Jurtz, N., Kruggel-Emden, H., Baran, O., Aglave, R., Cocco, R., Kraume, M.** (2020): Impact of Contact Scaling and Drag Calculation on the Accuracy of Coarse-Grained Discrete Element Method, *Chem. Eng. Technol.* 43(10), 1959-1970, ISSN: 1521-4125, (doi:10.1002/ceat.202000055).
806. **Jurtz, N., Flaischlen, S., Scherf, S.C., Kraume, M., Wehinger, G.D.** (2020): Enhancing the Thermal Performance of Slender Packed Beds through Internal Heat Fins, *Processes* 8(12), 1528, ISSN: 2227-9717, (doi: 10.3390/pr8121528).
807. **Kempin, M., Kraume, M., Drews, A.** (2020): W/O Pickering emulsion preparation using a batch rotor-stator mixer – Influence on rheology, drop size distribution and filtration behavior, *J. Colloid Interface Sci.* 573, 135-149, ISSN: 0021-9797, (doi: 10.1016/j.jcis.2020.03.103).
808. **Kempin, M., Stock, S., von Klitzing, R., Kraume, M., Drews, A.** (2020): Influence of particle type and concentration on the ultrafiltration behavior of nanoparticle stabilized Pickering emulsions and suspensions, *Sep. Purif. Technol.* 252, 117457, ISSN: 1383-5866, (doi: 10.1016/j.seppur.2020.117457).
809. **Nitzsche, R., Gröngröft, A., Goj, I., Kraume, M.** (2020): Ultrafiltration of Beechwood Hydrolysate for Concentrating Hemicellulose Sugars and Removal of Lignin—Parameter Estimation Using Statistical Methods and Multiobjective Optimization *Ind. Eng. Chem. Res.* 59, 7875-7887, ISSN: 0888-5885, (doi: 10.1021/acs.iecr.0c00487).
810. **Pessoa, M., Motta Sobrinho, M.A., Kraume, M.** (2020): The Use of Biomagnetism for Biogas Production from Sugar Beet Pulp, *Biochem. Eng. J.* 164, 107770, ISSN: 1369-703X, (doi: 10.1016/j.bej.2020.107770).

811. **Rusli, S., Grabowski, J., Drews, A., Kraume, M.** (2020): A Multi-Scale Approach to Modeling the Interfacial Reaction Kinetics of Lipases with Emphasis on Enzyme Adsorption at Water-Oil Interfaces, *Processes* 8(9), 1082, ISSN: 2227-9717, (doi: 10.3390/pr8091082).
812. **Schulz, J., Junne, H., Böhm, L., Kraume, M.** (2020): Measuring local heat transfer by application of Rainbow Schlieren Deflectometry in case of different symmetric conditions, *Exp. Therm Fluid Sci.* 110, 109887, ISSN: 0894-1777, (doi: 10.1016/j.expthermflusci.2019.109887).
813. **Stehl, D., Skale, T., Hohl, L., Lvov, Y., Koetz, J., Kraume, M., Drews, A., von Klitzing, R.** (2020): Oil-in-Water Pickering Emulsions Stabilized by Halloysite Clay Nanotubes Toward Efficient Filterability, *ACS Appl. Nano Mater.* 3(12), 11743-11751, ISSN: 2574-0970, (doi: 10.1021/acsanm.0c02205).
814. **Steinhoff, J., Charlafti, E., Reinecke, L., Kraume, M., Bart, H.-J.** (2020): Investigation and Development of Gravity Separators with a Standardized Experimental Setup, *Can. J. Chem. Eng.* 98(1), 384-393, ISSN: 1939-019X, (doi: 10.1002/cjce.23603).

Electronic Resource

815. **Heine, J., Schulz, J., Junne, H., Böhm, L., Kraume, M., Bart, H.-J.** (2020): Real-time visualization of internal and external concentration fields in multiphase systems via Laser-induced fluorescence and Rainbow Schlieren Deflectometry during and after droplet production, *Chem. Ing. Tech.*, ISSN: 1522-2640, (doi: 10.1002/cite.202000135).
816. **Rešetar, I., Jurtz, N., Böhm, L., Kraume, M. & Palz, N.** (2020): Integrated Framework for Digital Design and Thermal Analysis of PCM Macro-encapsulations for Passive Indoor Cooling, *Sustain. Cities Soc.*, ISSN: 2210-6707, (doi: 10.1016/j.scs.2020.102536).

Books/Bookchapters

817. **Kraume, M.** (2020): *Transportvorgänge in der Verfahrenstechnik - Grundlagen und apparative Umsetzungen*, 3. bearb. Auflage, ISBN: 978-3-662-60011-5, (doi: 10.1007/978-3-662-60012-2), Springer.
818. **Kraume, M.** (2020): *Transportvorgänge in der Verfahrenstechnik - Aufgaben und Lösungen*, 1. Auflage, ISBN: 978-3662603925, (doi: 10.1007/978-3-662-60393-2), Springer.

2021**Journals**

819. **Böhm, L.** (2021): Matthias Kraume - Forschung und Lehre (Editorial), Chem. Ing. Tech. 93(1-2), 3. ISSN: 1522-2640, (doi: 10.1002/cite.202170102).
820. **Böhm, L.** (2021): #IchBinHanna (Opinion), Chem. Ing. Tech. 93(8), 1205-1206. ISSN: 1522-2640, (doi: 10.1002/cite.202170810).
821. **Cao, C., Kraume, M.** (2021): Hysteresis effect of propeller jet flows in viscoelastic fluids: Transformation process and turbulence intensity, Chem. Eng. Sci. 235, 116506, ISSN: 0009-2509, (doi: 10.1016/j.ces.2021.116506).
822. **Charlafti, E., Steinhoff, J., Hohl, L., Huang, Z., Reinecke, L., Bart, H.-J., Kraume, M.** (2021): Droplet size distributions and batch separation of oil-in-water dispersions created by the two-phase flow through perforated plates, Chem. Eng. Res. Des. 168, 465-480, ISSN: 0263-8762, (doi: 10.1016/j.cherd.2021.02.004).
823. **Eppinger, T., Jurtz, N., Kraume, M.** (2021): Influence of Macroscopic Wall Structures on the Fluid Flow and Heat Transfer in Fixed Bed Reactors with Small Tube to Particle Diameter Ratio, Processes 9(4), 689, ISSN: 2227-9717, (doi:10.3390/pr9040689).
824. **Heiker, M., Kraume, M., Mertins, A., Wawer, T., Rosenberger, S.** (2021): Biogas Plants in Renewable Energy Systems - A Systematic Review of Modeling Approaches of Biogas Production, Applied Sciences 11(8), 3361, ISSN: 2076-3417 (doi: 10.3390/app11083361).
825. **Heine, J., Schulz, J., Junne, H., Böhm, L., Kraume, M., Bart, H.-J.** (2021): Real-time visualization of internal and external concentration fields in multiphase systems via Laser-induced fluorescence and Rainbow Schlieren Deflectometry during and after droplet production, Chem. Ing. Tech. 93(1-2), 180-190, ISSN: 1522-2640, (doi: 10.1002/cite.202000135).
826. **Huxoll, F., Schlüter, S., Budde, R., Skiborowski, M., Petzold, M., Böhm, L., Kraume, M., Sadowski, G.** (2021): Phase Equilibria for the Hydroaminomethylation of 1-Decene J. Chem. Eng. Data 66(12), 4484–4495, ISSN: 0021-9568, (doi: 10.1021/acs.jced.1c00561).
827. **Javadi, A., Dowlati, S., Shourni, S., Rusli, S., Eckert, K., Miller, R., Kraume, M.** (2021): Enzymatic Hydrolysis of Triglycerides at the Water–Oil Interface Studied via Interfacial Rheology Analysis of Lipase Adsorption Layers, Langmuir 37(44), 12919-12928, ISSN: 0743-7463, (doi: 10.1021/acs.langmuir.1c01963).
828. **Jurtz, N., Srivastava, U., Moghaddam, A. A., Kraume, M.** (2021): Particle-Resolved Computational Fluid Dynamics as the Basis for Thermal Process Intensification of Fixed-Bed Reactors on Multiple Scales, Energies 14(10), ISSN: 1996-1073, (doi: 10.3390/en14102913).

829. **Kempin, M., Schroeder, H., Hohl, L., Kraume, M., Drews, A.** (2021): Modeling of water-in-oil Pickering emulsion nanofiltration - Influence of temperature, *J. Membr. Sci.* 636, 119547, ISSN: 0376-7388, (doi: 10.1016/j.memsci.2021.119547).
830. **Kolano, M., Danke, J., Kraume, M.** (2021): Using thrust to control the mixing process in stirred tanks with side-entering agitators and viscoelastic fluids, *Biomass Bioenergy* 152, 106180, ISSN: 0961-9534, (doi: 10.1016/j.biombioe.2021.106180).
831. **Nitzsche, R., Köchermann, J., Gröngroft, A., Kraume, M.** (2021): Nanofiltration of Organosolv Hemicellulose Hydrolyzate: Influence of Hydrothermal Pretreatment and Membrane Characteristics on Filtration Performance and Fouling, *Ind. Eng. Chem. Res.* 60(2), 916-930, ISSN: 0888-5885, (doi: 10.1021/acs.iecr.0c03256).
832. **Rešetar, I., Jurtz, N., Böhm, L., Kraume, M., Palz, N.** (2020): Integrated Framework for Digital Design and Thermal Analysis of PCM Macro-encapsulations for Passive Indoor Cooling, *Sustain. Cities Soc.* 66, 102536, ISSN: 2210-6707, (doi: 10.1016/j.scs.2020.102536).
833. **Schulz, J., Petzold, M., Böhm, L., Kraume, M.** (2021): Tropfenbewegung und Stofftransport in technischen Flüssig/flüssig-Systemen, Teil 1: Einzeltropfensedimentation ohne Grenzflächeneffekte, *Chem. Ing. Tech.* 93(3), 353-363, ISSN: 1522-2640, (doi: 10.1002/cite.202000246).
834. **Schulz, J., Petzold, M., Böhm, L., Kraume, M.** (2021): Tropfenbewegung und Stofftransport in technischen Flüssig/flüssig-Systemen, Teil 2: Auswirkung von Grenzflächeneffekten und Verunreinigungen, *Chem. Ing. Tech.* 93(8), 1214-1222, ISSN: 1522-2640, (doi: 10.1002/cite.202000247).
835. **Steinhoff, J., Charlafti, E., Leleu, D., Reinecke, L., Franken, H., Becker, K., Kalem, M., Sixt, M., Braß, M., Borchardt, D., Bäcker, W., Wegener, M., Maaß, S., Weber, M., Acher, T., Matten, C., Pfennig, A., Kraume, M., Bart, H.-J.** (2021): Energie- und Ressourceneinsparung durch Innovative und CFD-basierte Auslegung von Flüssig/Flüssig-Schwerkraftabscheidern, *Chem. Ing. Tech.* 93(7), 1152-1165, ISSN: 1522-2640, (doi: 10.1002/cite.202000083).
836. **Stock, S., Jakob, F., Röhl, S., Gräff, K., Kühnhammer, M., Hondow, N., Micklethwaite, S., Kraume, M., von Klitzing, R.** (2021): Exploring water in oil emulsions simultaneously stabilized by solid hydrophobic silica nanospheres and hydrophilic soft PNIPAM microgel, *Soft Matter* 17, 8258-8268, ISSN: 1744-6848, (doi: 10.1039/d1sm00942g).

Electronic Ressource

837. **Cao, C., Kraume, M.** (2021): Axial thrust and power consumption of propellers in viscoelastic fluids exhibiting hysteresis effect, *Chem. Eng. Sci.*, 117237, ISSN: 0009-2509, (doi: 10.1016/j.ces.2021.117237).

838. **Jurtz, N., Schönherr, T. D., Kraume, M.** (2021): Numerical investigation of mechanical axial dispersion in slender fixed-beds, *AIChE J.*, ISSN: 1547-5905, (doi: 10.1002/aic.17431).
839. **Petzold, M., Paul, N., Hohl, L., Böhm, L., Kraume, M.** (2021): Gas/liquid mass transfer phenomena in micellar multiphase systems, *Chem. Eng. Process.*, 108547, ISSN: 0255-2701, (doi: 10.1016/j.cep.2021.108547).
840. **Sitanggang, A.B., Drews, A., Kraume, M.** (2021): Enzymatic membrane reactors: Designs, applications, limitations and outlook, *Chem. Eng. Process.*, 108729, ISSN: 0255-2701, (doi: 10.1016/j.cep.2021.108729).

Books/Bookchapters

841. **Böhm, L., Merker, D., Strassl, F., Herres-Pawlis, S., Oßberger, M., Klüfers, P., Schindler, S., Guhathakurta, J., Grottke, D., Simon, S., Rinke, G., Hlawitschka, M., von Kameke, A., Kexel, F., Schlüter, M., Gast, S., Tuttlies, U., Nieken, U., Hillenbrand, D., Marschall, H., Weiner, A., Bothe, D., Kraume, M.** (2021): Chemical reactions on freely ascending single bubbles, in: Schlüter, M., Bothe, D., Herres-Pawlis, S., Nieken, U. (Eds.): *Reactive Bubbly Flows - Final Report of the DFG Priority Program 1740*, ISBN: 978-3-030-72361-3, (doi: 10.1007/978-3-030-72361-3_22), Springer
842. **Gast, S., Tuttlies, U., Laurini, L., Kexel, F., Merker, D., Böhm, L., Taborda, M.A., Sommerfeld, M., Kraume, M., Schlüter, M., Herres-Pawlis, S., Nieken, U.** (2021): Investigation of Reactive Bubbly Flows in Technical Apparatuses, in: Schlüter, M., Bothe, D., Herres-Pawlis, S., Nieken, U. (Eds.): *Reactive Bubbly Flows - Final Report of the DFG Priority Program 1740*, ISBN: 978-3-030-72361-3, (doi: 10.1007/978-3-030-72361-3_24), Springer
843. **Merker, D., Böhm, L., Kraume, M.** (2021): Mass transfer around gas bubbles in reacting liquids, in: Schlüter, M., Bothe, D., Herres-Pawlis, S., Nieken, U. (Eds.): *Reactive Bubbly Flows - Final Report of the DFG Priority Program 1740*, ISBN: 978-3-030-72361-3, (doi: 10.1007/978-3-030-72361-3_11), Springer

2022**Journals**

844. **Cao, C., Kraume, M.** (2022): Axial thrust and power consumption of propellers in viscoelastic fluids exhibiting hysteresis effect, *Chem. Eng. Sci.* 248(B), 117237, ISSN: 0009-2509, (doi: 10.1016/j.ces.2021.117237).
845. **Cao, C., Kraume, M.** (2022): Improved mixing of viscoelastic fluids by the use of hysteresis effect, *Chem. Eng. Sci.* 260, 117878, ISSN: 0009-2509, (doi: 10.1016/j.ces.2022.117878).
846. **Dietrich, S., Nieß, S., Rönsch, S., Kraume, M.** (2022): Synthesis of Light Hydrocarbons from Biogas and Hydrogen: Investigation of a Fe-Mn-K/MgO Catalyst (Corrigendum), *Chem. Eng. Technol.* 45(4), 768, ISSN: 1521-4125, (doi: 10.1002/ceat.202270405).
847. **Javadi, A., Dowlati, S., Shourni, S., Miller, R., Kraume, M., Kopka, K., Eckert, K.** (2022): Experimental techniques to study protein–surfactant interactions: New insights into competitive adsorptions via drop subphase and interface exchange, *Adv. Colloid Interface Sci.* 301, 102601, ISSN: 0001-8686, (doi: 10.1016/j.cis.2022.102601).
848. **Jurtz, N., Schönherr, T. D., Kraume, M.** (2022): Numerical investigation of mechanical axial dispersion in slender fixed-beds, *AIChE J.* 68(1), e17431, ISSN: 1547-5905, (doi: 10.1002/aic.17431).
849. **Nitzsche, R., Etzold, H., Verges, M., Gröngröft, A., Kraume, M.** (2022): Demonstration and Assessment of Purification Cascades for the Separation and Valorization of Hemicellulose from Organosolv Beechwood Hydrolyzates, *Membranes* 22(1), 82, ISSN: 2077-0375, (doi: 10.3390/membranes12010082).
850. **Petzold, M., Paul, N., Hohl, L., Böhm, L., Kraume, M.** (2022): Gas/liquid mass transfer phenomena in micellar multiphase systems, *Chem. Eng. Process.* 171, 108547, ISSN: 0255-2701, (doi: 10.1016/j.cep.2021.108547).
851. **Schlüter, S., Huxoll, F., Grenningloh, K., Sadowski, G., Petzold, M., Böhm, L., Kraume, M., Skiborowski, M.** (2022): Unraveling the influence of dissolved gases on permeate flux in organic solvent nanofiltration - Experimental analysis *Sep. Purif. Technol.* 295, 121265, ISSN: 1383-5866, (doi: 10.1016/j.seppur.2022.121265).
852. **Stock, S., Röhl, S., Mirau, L., Kraume, M., von Klitzing, R.** (2022): Maximum Incorporation of Soft Microgel at Interfaces of Water in Oil Emulsion Droplets Stabilized by Solid Silica Spheres, *Nanomaterials* 12(15), 2649, ISSN: 2079-4991, (doi:10.3390/nano12152649).

Electronic Resource

853. **Röhl, S., Hohl, L., Stock, S., von Klitzing, R., Kraume, M. (2022):** Impact of aluminum particles on drop size distributions and phase separation in liquid multiphase systems, Chem. Eng. Res.Des., ISSN: 0263-8762, (doi: 10.1016/j.cherd.2022.06.006).
854. **Sundmacher, K., Engell, S., Kraume, M. (2022):** Virtual Special Issue: Process Systems Engineering (PSE) meets Green Chemistry, Chem. Eng. Sci., 117571, ISSN: 0009-2509, (doi: 10.1016/j.ces.2022.117571).

Books/Bookchapters

855. **Kraume, M., Enders, S., Drews, A., Schomäcker, R., Engell, S., Sundmacher, K. (Eds.) (2022):** Integrated Chemical Processes in Liquid Multiphase Systems - From Chemical Reaction to Process Design and Operation, ISBN: 9783110709438, De Gruyter, (doi: 10.1515/9783110709858).

Liste der Dissertationen/Habilitationen

1. **Kraume, M.** (1985): Direkter Wärmeübergang bei der Kondensation von Dampfblasen in einer Flüssigkeit, Dissertation, Universität Dortmund.
2. **Burkhardt, T.** (1999): Determination and modeling of the influence of the fluid-dynamics in hydrotreating bench scale plants, Dissertation.
3. **Piarah, W.H.** (2001): Numerische Untersuchung des instationären Stofftransports an und in umströmten Einzeltropfen, Dissertation, Verlag Dr. Köster, Berlin, ISBN: 3-89574-419-0.
4. **Ritter, J.** (2002): Dispergierung und Phasentrennung in gerührten Flüssig/flüssig-Systemen, Dissertation, <http://dx.doi.org/10.14279/depositonce-525> .
5. **Kozariszczyk, M.** (2002): Anaerobe Reinigung von Rübenmelasseschlempe in Festbettreaktoren mit verschiedenen Trägermaterialien, Dissertation, <http://dx.doi.org/10.14279/depositonce-567> .
6. **Rosenberger, S.** (2003): Charakterisierung von belebtem Schlamm in Membranbelebungsreaktoren zur Abwasserreinigung, Dissertation, Fortschritt-Berichte VDI, Reihe 3, Nr. 769, VDI-Verlag, Düsseldorf, ISBN: 3-18-376903-4.
7. **Adam, C.** (2004): Weitgehende Phosphat- und Stickstoffelimination in einer Membranbelebungsanlage mit nachgeschalteter Denitrifikationsstufe, Dissertation, Fortschritt-Berichte VDI, Reihe 15, Nr. 250, VDI-Verlag, Düsseldorf, ISBN: 3-18-325015-2.
8. **Drews, A.** (2004): Kontinuierliche Ferrichromproduktion mit *Ustilago maydis* im Membranbioreaktor, Dissertation, Fortschritt-Berichte VDI, Reihe 17, Nr. 246, VDI-Verlag, Düsseldorf, ISBN: 3-18-324617-1.
9. **Kubin, K.** (2004): Einfluss unterschiedlicher Verfahrenskonzepte auf Substratabbau und Nährstoffverwertung in Membranbelebungsanlagen, Dissertation, <http://dx.doi.org/10.14279/depositonce-1016> .
10. **Paschedag, A. R.** (2004): CFD in der Verfahrenstechnik - Allgemeine Grundlagen und mehrphasige Anwendungen, Habilitationsschrift, Wiley-VCH Weinheim. ISBN: 3-527-30994-2.
11. **Angst, R.** (2006): Dispersphasenverteilung und Fluidodynamik in Suspensionsrührbehältern, Dissertation, Fortschritt-Berichte VDI, Reihe 3, Nr. 861, VDI-Verlag, Düsseldorf, ISBN: 3-18-386103-8.
12. **Mier, P.** (2006): Experimentelle Untersuchung und numerische Simulation der Flüssigkeits-Feststoff-Strömung im Strahlenschlaufenapparat, Dissertation, <http://dx.doi.org/10.14279/depositonce-1501> .

13. **Schulze, K.** (2007): Stoffaustausch und Fluidodynamik am bewegten Einzeltröpfchen unter dem Einfluss von Marangonikonvektion, Dissertation, Verlag Dr. Müller (2008), Saarbrücken, ISBN: 978-3-8364-9812-8, <http://dx.doi.org/10.14279/depositonce-1711> .
14. **Gäbler, A.** (2007): Experimentelle Untersuchungen, Modellierung und Simulation gerührter Flüssig/flüssig-Systeme mit veränderlichen Stoff- und Betriebsparametern, Dissertation, Verlag Dr. Hut, München, ISBN: 978-3-89963-625-3.
15. **Vocks, M.** (2008): Extensive Biological Nutrients Removal in Membrane Bioreactors, Dissertation, Verlag Dr. Hut, München, ISBN: 978-3-89963-882-0.
16. **Rudolph, L.** (2008): Efficiency characterization of co-axial mixing systems to blend highly viscous and non-Newtonian fluids, Dissertation, <http://dx.doi.org/10.14279/depositonce-2097>.
17. **Wegener, M.** (2009): Der Einfluss der konzentrationsinduzierten Marangonikonvektion auf den instationären Impuls- und Stofftransport an Einzeltröpfchen, Dissertation, Verlag Dr. Hut, München, ISBN: 978-3-86853-254-8, <http://dx.doi.org/10.14279/depositonce-2322> .
18. **Drews, A.** (2010): Membrane Fouling in Membrane Bioreactors- Characterisation, Contradictions, Cause and Innovative Cures, Habilitationsschrift, Berlin.
19. **Wollny, S.** (2010): Experimentelle und numerische Untersuchungen zur Partikelbeanspruchung in gerührten (Bio-)Reaktoren, Dissertation, <http://dx.doi.org/10.14279/depositonce-2528> .
20. **Iversen, V.** (2010): Comprehensive assessment of flux enhancers in membrane bioreactors for wastewater treatment, Dissertation, <http://dx.doi.org/10.14279/depositonce-2586> .
21. **Bagherzadeh, A.** (2010): Auswirkungen der alkalischen Extraktion von elektroporierten Zuckerrüben auf das Verfahren der Zuckerproduktion, Dissertation, <http://dx.doi.org/10.14279/depositonce-2531> .
22. **Scheumann, R.** (2010): Greywater Treatment with a Submerged Membrane Sequencing Batch Reactor, Dissertation, <http://dx.doi.org/10.14279/depositonce-2596> .
23. **Büker, O.** (2010): Untersuchungen zur Darstellung und Weitergabe der Skala Volumen von Wasser mit Hilfe laseroptischer und konventioneller Messverfahren, Dissertation, <http://dx.doi.org/10.14279/depositonce-2682> .
24. **Lahidjanian, D.** (2011): Effekte einer Atmosphärendruck-Plasmabehandlung auf luftfahrt-spezifische Beschichtungsstrukturen, Dissertation, <http://dx.doi.org/10.14279/depositonce-2845> .
25. **Pawelski, A.** (2011): Stofftransport mit überlagerter chemischer Reaktion in disperser bzw. kontinuierlicher Phase eines bewegten Einzeltröpfchensystems, Dissertation, https://tu-berlin.hosted.exlibrisgroup.com:443/TUB:TUB_LOCAL:TUB_ALMA_DS21535740490002884.

26. **Bracklow, U.** (2011): Möglichkeiten der Nährstoffelimination in Membranbelebungsanlagen - die nachgeschaltete Denitrifikation, Dissertation, <http://dx.doi.org/10.14279/depositonce-3153>.
27. **Maaß, S.** (2011): Experimental analysis, modeling and simulation of drop breakage in agitated turbulent liquid/liquid dispersions, Dissertation, <http://dx.doi.org/10.14279/depositonce-3029> .
28. **Gramdorf, S.** (2011): Schmelzemulgierungen im Hochdruckhomogenisator zur Herstellung von kolloidalen festen Triglyceridpartikeln, Dissertation, <http://dx.doi.org/10.14279/depositonce-3034> .
29. **Fadl-Awad, M.** (2011): Mycological studies of the acitvated sludge from MBRs related to the biological activity of fungi in raw wastewater treatment, Dissertation, <http://dx.doi.org/10.14279/depositonce-3007> .
30. **Bhattacharya, S.** (2011): Solvent-free chemo enzymatic epoxidation: Experimental and kinetic modelling studies, Dissertation, <http://dx.doi.org/10.14279/depositonce-3172> .
31. **Kleyböcker, A.** (2012): Entwicklung neuer Verfahren der Prozesssteuerung in Co-Vergärungsanlagen der Abfallwirtschaft, Dissertation, <http://dx.doi.org/10.14279/depositonce-3284> .
32. **do Nascimento Rodrigues, D.** (2012): Entwicklung eines Verfahrens zur Generierung realitätsnaher Ablagerungen in Durchflusssensoren von Wärmemengenzählern, Dissertation, <http://dx.doi.org/10.14279/depositonce-3512> .
33. **Eichler, T.** (2012): Vergleich der "Stereo Particle Image Velocimetry" (SPIV) mit rückgeführten Messverfahren und Untersuchung definiert gestörter Strömungszustände in geschlossenen Rohrleitungen, Dissertation, <http://dx.doi.org/10.14279/depositonce-3501> .
34. **Harth, M.** (2012): Investigation of Oxygen Defect Formation in Supported Vanadium Oxide Catalysts by Impedance Spectroscopy, Dissertation, <http://dx.doi.org/10.14279/depositonce-3502> .
35. **Tawackolian, K.** (2013): Fluiddynamische Auswirkungen auf die Messabweichung von Ultraschall-Durchflussmessgeräten, Dissertation, <http://dx.doi.org/10.14279/depositonce-1141> .
36. **Al-Shamary, L.** (2013): Hydrodynamics of membrane bioreactors with Newtonian and non-Newtonian fluids, Dissertation, <http://dx.doi.org/10.14279/depositonce-3745> .
37. **De la Torre- Garcia, T.** (2013): The Quest for a Universal Indicator for MBR- Fouling, Dissertation, <http://dx.doi.org/10.14279/depositonce-3748> .
38. **Grünig, J.** (2013): Untersuchungen zur Fluidodynamik und zum Stofftransport der Filmströmung an senkrechten Drähten, Dissertation, <http://dx.doi.org/10.14279/depositonce-3798> .

39. **Francke, H.** (2014): Thermo-hydraulic model of the two-phase flow in the brine circuit of a geothermal power plant, Dissertation, <http://dx.doi.org/10.14279/depositonce-3944> .
40. **Paul, N.** (2014): Theoretische und experimentelle Untersuchungen von Transport- und Grenzflächenphänomenen in mizellaren Flüssig/flüssig-Systemen, Dissertation, <http://dx.doi.org/10.14279/depositonce-4112> .
41. **Gaitzsch, F.** (2014): Koaleszenzphänomene in Wasser-in-Öl-in-Wasser-Doppemulsionen, Dissertation, <http://dx.doi.org/10.14279/depositonce-4173> .
42. **Elseberg, C.** (2014): Prozessintensivierung bei der Herstellung von stammzellbasierten (hMSC-TERT) Implantaten für die Zelltherapie – Anwendung der dielektrischen Spektroskopie: Produktionsprozesse von hMSC-TERT im Festbettreaktor und im gerührten System unter Betrachtung von Process Analytical Technology (PAT), Dissertation, Shaker Verlag, Aachen, ISBN: 978-3-8440-2858-4.
43. **Lyagin, E.** (2014): Entwicklung eines Screening-Systems für die kontinuierlichen biokatalytischen Prozesse, Dissertation, <http://dx.doi.org/10.14279/depositonce-4244> .
44. **Kaiser, S.** (2015): Characterization and optimization of single-use bioreactors and biopharmaceutical production processes using computational fluid dynamics, Dissertation, <http://dx.doi.org/10.14279/depositonce-4313> .
45. **Böhm, L.** (2015): Comparison of single bubble and bubble swarm behavior in narrow gaps inside flat sheet membrane modules, Dissertation, <http://dx.doi.org/10.14279/depositonce-4486> .
46. **Juling, M.** (2016): Rückgeführte Volumenstrommessung mittels ortsaufgelöster Laser-Doppler-Anemometrie, Dissertation, <http://dx.doi.org/10.14279/depositonce-5170> .
47. **Sitanggang, A.B.** (2016): Development of Continuous Lactulose Production in Parallel Membrane Reactors, Dissertation, <http://dx.doi.org/10.14279/depositonce-5165> .
48. **Heiser, M.** (2016): Experimentelle und numerische Charakterisierung des Leistungseintrags und der Homogenisierzeit eines Koaxialrührwerks aus Wendeln- und Schrauberrührer, Dissertation, https://tu-berlin.hosted.exlibrisgroup.com:443/TUB:TUB_LOCAL:TUB_ALMA_DS21570091570002884.
49. **Schaller, J.** (2016): Reduzierung der Überschussschlammmenge in dezentralen Kläranlagen unter Verwendung von Membranen, Dissertation, https://tu-berlin.hosted.exlibrisgroup.com:443/TUB:TUB_LOCAL:TUB_ALMA_DS21543657950002884.
50. **Wehinger, G.** (2016): Particle-resolved CFD simulations of catalytic flow reactors, Dissertation, <http://dx.doi.org/10.14279/depositonce-5432>.
51. **Cordova Murillo, M.** (2016): Characterization and validation of the heat meter calibration facility of the PTB, Dissertation, <http://dx.doi.org/10.14279/depositonce-5532>.

52. **Nachtigall, S.** (2016): Analyse der Tropfendeformation und des Tropfenbruchs in turbulenter Strömung, Dissertation, <http://dx.doi.org/10.14279/depositonce-5421>
53. **Ziegenhein, T.** (2016): Fluid dynamics of bubbly flows, Dissertation, <http://dx.doi.org/10.14279/depositonce-5399>
54. **Kramer, V.** (2016): Löslichkeitsselektive Mixed Matrix Membranen zur Gaspermeation - Experimentelle Untersuchung und Entwicklung eines Stofftransportmodells, Dissertation, <http://dx.doi.org/10.14279/depositonce-5719> .
55. **Druzinec, D.** (2017): Heterologe Expression eines von *Galleria mellonella* abgeleiteten antimikrobiellen Peptids (AMP) mittels insektenzellbasierter Expressionssysteme, Dissertation Shaker Verlag, Aachen, ISBN: 978-3-8440-5265-7.
56. **Kamp, J.** (2017): Systematic coalescence investigations in liquid/liquid systems - From single drops to technical applications, Dissertation, <http://dx.doi.org/10.14279/depositonce-6528>
57. **Busse, N.** (2018): Enzyme membrane reactor system (EMRS) for the bioconversion of lignin-containing substrates by a novel heme peroxidase, Dissertation Shaker Verlag, Aachen, ISBN: 978-3-8440-5854-3.
58. **Gienau, T.** (2018): Energieeffiziente Gärrestaufbereitung - Auswirkung verschiedener Vorbehandlungen auf die Ultrafiltration und Umkehrosmose von Gärresten, Dissertation, <http://dx.doi.org/10.14279/depositonce-6958>.
59. **Hohl, L.** (2018): Dispersion and phase separation in liquid multiphase systems: Influence of three phase conditions on drop size distributions, Dissertation, <http://dx.doi.org/10.14279/depositonce-8124>.
60. **Schlick-Hasper, E.** (2018): Analyse, Charakterisierung und Modellierung der Gasleckageraten repräsentativer Bauarten von Gefahrgutverpackungen, Dissertation. https://tu-berlin.hosted.exlibrisgroup.com:443/TUB:TUB_LOCAL:TUB_ALMA_DS21581640120002884.
61. **Altwasser, S.** (2018): Möglichkeiten und Grenzen von Modellstoffsyste men zur hydrodynamischen Charakterisierung zentral gerührter Biogasanlagen, Dissertation, <http://dx.doi.org/10.14279/depositonce-7564>.
62. **Villwock, J.** (2019): Systematische Analyse des Koaleszenzverhaltens in zweiphasigen Flüssigsystemen bei Ionenzugabe, Dissertation, <http://dx.doi.org/10.14279/depositonce-8342>.
63. **Meyer-Waßewitz, J.** (2019): Development of a continuous process and dynamic modeling of the chemo-enzymatic epoxidation of α -pinene, Dissertation, <http://dx.doi.org/10.14279/depositonce-9414>.
64. **Hülagü, D.** (2019): Development of solubility selective mixed-matrix membranes for n-butane/methane separation, Dissertation, <http://dx.doi.org/10.14279/depositonce-9379>.

65. **Fechter, M.** (2019): Technischer Vergleich von Aufbereitungsverfahren für Gärreste in der Biogastechnik, Dissertation, <http://dx.doi.org/10.14279/depositonce-9398>.
66. **Heyse, A.** (2019): Filterability and rheological behavior of lipase containing water-in-oil Pickering emulsions stabilized with silica particles for the application in continuous biphasic biocatalysis in a membrane reactor, Dissertation, <http://dx.doi.org/10.14279/depositonce-10808>.
67. **Jossen, V.** (2020): Bioengineering aspects of microcarrier-based hMSC expansions in different single-use bioreactors, Dissertation, <http://dx.doi.org/10.14279/depositonce-9775>.
68. **Foix-Cablé, M.** (2020): Combination of an anaerobic membrane bioreactor (AnMBR) with microalgae production for decentralized wastewater treatment, Dissertation, <http://dx.doi.org/10.14279/depositonce-10434>.
69. **Brehmer, M.** (2020): Experimentelle Grundlagenuntersuchungen zur Bestimmung charakteristischer, messbarer Kennwerte für die Automatisierung des Mischprozesses in Biogasanlagen, Dissertation, <http://dx.doi.org/10.14279/depositonce-11398>.
70. **Schmit, P.** (2021): Reaktionskinetik und Reaktorverhalten eines biotechnologischen Verfahrens zur Synthese von Methan aus Wasserstoff und Kohlenstoffdioxid, Dissertation, <http://dx.doi.org/10.14279/depositonce-12209>.
71. **Müller, M.** (2021): Heat Transfer in Single-Use Bioreactors and E.coli Bioprocesses, Dissertation, <https://doi.org/10.14279/depositonce-12454>.
72. **Straka, M.** (2021): Vergleich realer und synthetisch generierter Strömungszustände in Rohrleitungen mittels numerischer und laser-optischer Verfahren, Dissertation, <http://dx.doi.org/10.14279/depositonce-12562>.
73. **Jurtz, N.** (2022): Particle-resolved CFD as tool for multi-scale design exploration for process intensification in slender fixed-beds, Dissertation, <http://dx.doi.org/10.14279/depositonce-14894>.
74. **Kempin, M.** (2022): Systematic study on membrane filtration and characterization of silica stabilized water-in-oil Pickering emulsions for the application in continuous multiphase processes - experimental and modeling approach, Dissertation.