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References

Abismaïl, B. et al., 1999. Emulsification by ultrasound: drop size distribution and stability. *Ultrasonics sonochemistry*, 6(1-2), pp.75–83.

Adamson, A.W. & Gast, A.P., 1997. *Physical Chemistry of Surfaces* 6th ed., New York, USA: John Wiley & Sons, Inc.

Arai, H. & Shinoda, K., 1967. The effect of mixing of oils and of nonionic surfactants on the phase inversion temperatures of emulsions. *Journal of Colloid and Interface Science*, 25(3), pp.396–400.

Arirachakaran, S. et al., 1989. An Analysis of Oil/Water Flow Phenomena in Horizontal Pipes. In *SPE Production Operations Symposium*. Oklahoma City, USA, pp. 155–167.

Baldyga, J. & Podgorska, W., 1998. Drop break-up in intermittent turbulence: Maximum stable and transient sizes of drops. *The Canadian Journal of Chemical Engineering*, 76(3), pp.456–470.

Barailler, F., Heniche, M. & Tanguy, P. a., 2006. CFD analysis of a rotor-stator mixer with viscous fluids. *Chemical Engineering Science*, 61(9), pp.2888–2894.

Berkman, P.D. & Calabrese, R. V., 1988. The Dispersion of Viscous Liquids by Turbulent Flow in a Static Mixer. *AIChE Journal*, 34(4), pp.602–609.

Brocart, B., Tanguy, P. A., Magnin, C. & Bousquet, J., 2002. Design of in-line emulsification processes for water-in-oil emulsions. *Journal of Dispersion Science and Technology*, 23(1-3), pp. 45–53.

Calabrese, R. V et al., 2000. Measurement and Analysis of Drop Size in a Batch Rotor-Stator Mixer. In *10th European Conference on Mixing*. Delft, The Netherlands, pp. 149–156.

Calabrese, R. V., Chang, T.P.K. & Dang, P.T., 1986. Drop breakup in turbulent stirred tank contactors. Part I: Effect of dispersed phase viscosity. *AIChE Journal*, 32(4), pp.657–666.

Chatzi, E.G., Boutris, C.J. & Kiparissides, C., 1991. On-Line Monitoring of Drop Size Distributions in Agitated Vessels. 1. Effects of Temperature and Impeller Speed. *Industrial & Engineering Chemistry Research*, 30(3), pp.536–543.

Chatzi, E.G., Gavrielides, A.D. & Kiparissides, C., 1989. Generalized Model for Prediction of the Steady-State Drop Size Distributions in Batch Stirred Vessels. *Industrial & Engineering Chemistry Research*, 28(11), pp.1704–1711.

Chen, H.T. & Middleman, S., 1967. Drop size distribution in agitated liquid-liquid systems. *AIChE Journal*, 13(5), pp.989–995.

Coulaloglou, C.A. & Tavlarides, L.L., 1976. Drop size distributions and coalescence frequencies of liquid-liquid dispersions in flow vessels. *AIChE Journal*, 22(2), pp.289–297.

Davies, G.A., Nilsen, F.P. & Gramme, P.E., 1996. The formation of Stable Dispersions of Crude oil and Produced Water: The Influence of Oil Type, Wax & Asphaltene Content. In SPE Annual Technical Conference and Exhibition. Denver, USA: Society of Petroleum Engineers, pp. 1–9.

Davies, J.T., 1987. A physical interpretation of drop sizes in homogenizers and agitated tanks, including the dispersion of viscous oils. *Chemical Engineering Science*, 42(7), pp.1671–1676.

Doucet, L., Ascanio, G. & Tanguy, P. a., 2005. Hydrodynamics Characterization of Rotor-Stator Mixer with Viscous Fluids. *Chemical Engineering Research and Design*, 83(10), pp.1186–1195.

Epstein, B., 1948. Logarithmico-Normal Distribution. *Industrial & Engineering Chemistry*, 40(12), pp.2289–2291.

Finn, R., 1999. Capillary Surface Interfaces. *Notices of the AMS*, 46(7), pp.770–781.

Galinat, S. et al., 2005. Drop break-up in turbulent pipe flow downstream of a restriction. *Chemical Engineering Science*, 60(23), pp.6511–6528.

Galinat, S. et al., 2007. Breakup of a Drop in a Liquid – Liquid Pipe Flow through an Orifice. *AIChE Journal*, 53(1), pp.56–68.

Gong, J. et al., 2006. A model for predicting phase inversion in oil-water two-phase pipe flow. *Journal of Hydrodynamics, Ser. B*, 18(3), pp.310–314.

Van der Graaf, S., Schroen, C. & Boom, R., 2005. Preparation of double emulsions by membrane emulsification - a review. *Journal of Membrane Science*, 251(1-2), pp.7–15.

Griffin, W.C., 1949. Classification of Surface-Active Agents by “HLB.” *Journal of the Society of Cosmetic Chemists*, 1, pp.311–326.

Griffin, W.C., 1954. Calculation of HLB Values of Non-Ionic Surfactants. *Journal of the Society of Cosmetic Chemists*, 1, pp.249–256.

Heisenberg, W., 1948. On the Theory of Statistical and Isotropic Turbulence. *Proceedings of the Royal Society A: Mathematical and Physical Sciences*, 195(1042), pp.402–406.

Hiemenz, P.C. & Rajagopalan, R., 1997. *Principles of Colloid and Surface Chemistry* 3rd ed., New York, USA: Marcel Dekker, Inc.

Hinze, J., 1955. Fundamentals of the Hydrodynamic Mechanism of Splitting in Dispersion Processes. *AIChE Journal*, 1(3), pp.289–295.

Janssen, P.H. & Harris, C.K., 1998. Emulsion Characteristics of High Water-cut Oil Wells. In *SPE Annual Technical Conference and Exhibition*. New Orleans, USA: Society of Petroleum Engineers, pp. 405–414.

Johansen, F.C., 1930. Flow through Pipe Orifices at Low Reynolds Numbers. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 126(801), pp.231–245.

Karbstein, H. & Schubert, H., 1995. Developments in the continuous mechanical production of oil-in-water macro-emulsions. *Chemical Engineering and Processing: Process Intensification*, 34(3), pp.205–211.

Kolmogorov, A.N., 1941a. Dissipation of Energy in the Locally Isotropic Turbulence. *Dokl. Akad. Nauk SSSR*, 32(1), pp.16–18.

Kolmogorov, A.N., 1941b. The Local Structure in Incompressible Viscous Fluid for very Large Reynolds Numbers. *Dokl. Akad. Nauk SSSR*, 30(4), pp.299–303.

Kolmogorov, A.N., 1949. On the Breakage of Drops in a Turbulent Flow. *Dokl. Akad. Navk. SSSR*, 66(5), pp.825–828.

Kolmogorov, A.N., 1956. *Foundations of the Theory of Probability* 2nd ed. N. Morrison, ed., New York, USA: Chelsea Publishing Company.

Koshy, A., Das, T.R. & Kumar, R., 1988. Effect of surfactants on drop breakage in turbulent liquid dispersions. *Chemical Engineering Science*, 43(3), pp.649–654.

Kraichnan, R.H., 1967. Inertial Ranges in Two-Dimensional Turbulence. *Physics of Fluids*, 10, p.1417.

Kundu, P.K., Cohen, I.M. & Dowling, D.R., 2012. *Fluid Mechanics* 5th ed., Waltham, USA: Elsevier Ltd.

Lachaise, J. et al., 1995. A simulation of emulsification by turbulent stirring. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 94(2), pp.189–195.

Lönnqvist, I. et al., 1997. NMR Self-Diffusion Studies of the Water and the Oil Components in a W/O/W Emulsion. *Journal of colloid and interface science*, 73(192), pp.66–73.

Lucassen-Reynders, E.. & Kuijpers, K.., 1992. The role of interfacial properties in emulsification. *Colloids and Surfaces*, 65(2-3), pp.175–184.

Maniero, R. et al., 2012. Modeling and simulation of inertial drop break-up in a turbulent pipe flow downstream of a restriction. *International Journal of Multiphase Flow*, 42, pp.1–8.

Mathieu, J. & Scott, J., 2000. *An Introduction to Turbulent Flow*, Cambridge, UK: Cambridge University Press.

Mcdonough, J.M., 2007. *Introductory Lectures on Turbulence Physics, Mathematics and Modeling*, Lexington, USA: University of Kentucky.

Morrison, G.L. et al., 1993. Mean velocity and turbulence fields inside a β=0.50 orifice flowmeter. Fluid Mechanics and Transport Phenomena, 39(5), pp.745–756.

Muntinga, J.H., 1998. Study of Turbulent Break-up of Oil Droplets in Choke Valves. In *European Petroleum Conference*. The Hague, The Netherlands, pp. 1–10.

Myers, K.J., Reeder, M.F. & Ryan, D., 2001. Power Draw of a High-Shear Homogenizer. *The Canadian Journal of Chemical Engineering*, 79(1), pp.94–99.

Nagarajan, R. & Wang, C.-C., 1996. Solution Behavior of Surfactants in Ethylene Glycol: Probing the Existence of a CMC and of Micellar Aggregates. *Journal of Colloid and Interface Science*, 178(2), pp.471–482.

Nishimi, T. & Miller, C. a., 2001. Spontaneous Emulsification Produced by Chemical Reactions. *Journal of colloid and interface science*, 237(2), pp.259–266.

Pacek, A., Baker, M. & Utomo, A.T., 2007. Characterisation of Flow Pattern in a Rotor Stator High Shear Mixer. In *Proceeding of European Congress of Chemical Engineering (ECCE-6)*. Copenhagen, Denmark, pp. 16–20.

Pal, R., 2011. Rheology of simple and multiple emulsions. *Current Opinion in Colloid & Interface Science*, 16(1), pp.41–60.

Patist, A. et al., 2002. Importance of micellar kinetics in relation to technological processes. *Journal of colloid and interface science*, 245(1), pp.1–15.

Paul, E.L., Atiemo-obeng, V.A. & Kresta, S.M., 2004. *Handbook of Industrial Mixing: Science and Practics*, Hoboken, USA: John Wiley & Sons, Inc.

Peña, A. a & Miller, C. a, 2006. Solubilization rates of oils in surfactant solutions and their relationship to mass transport in emulsions. *Advances in colloid and interface science*, 123(126), pp.241–57.

Percy, J.S. & Sleicher, C.A., 1983. Drop breakup in the flow of immiscible liquids through an orifice in a pipe. *AIChE Journal*, 29(1), pp.161–164.

R. Plat, 1994. Gravitational & Centrifugal Oil-Water Separators With Plate Pack Internals. Delft University of Technology.

Pope, S.B., 2000. *Turbulent Flows*, Cambridge, UK: Cambridge University Press.

Salager, J.L. et al., 1983. Surfactant-Oil-Water Systems near the Affinity Inversion Part III: The Two Kinds of Emulsion Iversion. *Journal of Dispersion Science and Technology*, 4(3), pp.313–328.

Salager, J.-L. et al., 2004. Using emulsion inversion in industrial processes. *Advances in colloid and interface science*, 108, pp.259–72.

Sarbar, M.A. & Wingrove, M.D., 1997. Physical And Chemical Characterization Of Saudi Arabian Crude Oil Emulsions. In SPE Annual Technical Conference and Exhibition. San Antonio, USA: Society of Petroleum Engineers, pp. 1–11.

Shinnar, R. & Church, J.M., 1960. Statistical theories of turbulence in predicting particle size in agitated dispersions. *Industrial & Engineering Chemistry*, 52(3), pp.253–256.

Shinoda, K. & Arai, H., 1964. The Correlation between Phase Inversion Temperature In Emulsion and Cloud Point in Solution of Nonionic Emulsifier. *The Journal of Physical Chemistry*, 68(12), pp.3485–3490.

Sverdrup, H.U., Johnson, M.W. & Fleming, R.H., 1942. Physical Properties of Sea Water. In *The Oceans Their Physics, Chemistry, and General Biology*. New York, USA: Prentice Hall, pp. 47–97.

Taylor, G.I., 1935. Statistical Theory of Turbulence. *Proceedings of the Royal Society A: Mathematical and Physical Sciences*, 151(873), pp.421–444.

Tcholakova, S., Denkov, N.D. & Danner, T., 2004. Role of surfactant type and concentration for the mean drop size during emulsification in turbulent flow. *Langmuir : the ACS journal of surfaces and colloids,* 20(18), pp.7444–58.

Tjaberinga, W.J., Boon, A. & Chesters, A.K., 1993. Model experiments and numerical simulations on emulsification under turbulent conditions. *Chemical Engineering Science*, 48(2), pp.285–293.

Utomo, A., Baker, M. & Pacek, A.W., 2009. The effect of stator geometry on the flow pattern and energy dissipation rate in a rotor–stator mixer. *Chemical Engineering Research and Design*, 87(4), pp.533–542.

Walstra, P., 1993. Principles of emulsion formation. *Chemical Engineering Science*, 48(2), pp.333–349.

Walstra, P., 2005. Emulsions. In J. Lyklema, ed. *Fundamentals of Interface and Colloid Science*. Amsterdam, The Netherlands: Elsevier Ltd, pp. 8.1–8.94.

Wang, C.Y. & Calabrese, R. V., 1986. Drop breakup in turbulent stirred tank contactors. Part II: Relative influence of viscosity and interfacial tension. *AIChE Journal*, 32(4), pp.667–676.

Weiss, J., Canceliere, C. & McClements, D.J., 2000. Mass Transport Phenomena in Oil-in-Water Emulsions Containing Surfactant Micelles: Ostwald Ripening. *Langmuir*, 16(17), pp.6833–6838.

Young, G.A.B. et al., 1994. Oil-water separation using hydrocyclones: An experimental search for optimum dimensions. Journal of Petroleum Science and Engineering, 11(1), pp.37–50.

Van der Zande, M.J. & van der Broek, W.M., 1998. Break-up of oil droplets in the production system. In *ASME Energy Sources Technology Conference and Exhibition*. Houston, USA, pp. 2–4.

Van der Zande, M.J., Muntinga, J.H. & van der Broek, W.M., 1998. Emulsification of Production Fluids in the Choke Valve. In *SPE Annual Technical Conference and Exhibition*. New Orleans, USA: Society of Petroleum Engineers, pp. 1–8.

Van der Zande, M.J. et al., 1999. Effect of Flow Through a Choke Valve on Emulsion Stability. In *SPE Annual Technical Conference and Exhibition*. Houston, USA: Society of Petroleum Engineers, pp. 1–8.

Van der Zande, M.J., 2000. *Droplet break-up in turbulent oil-in-water flow through a restriction*. Delft University of Technology.