



Free Radical Polymerization

Micro-Dispersive Suspension Polymerization

1. Polymerization of methyl methacrylate in the presence of a nonpolar hydrocarbon solvent. I. Construction of a ternary phase diagram through in situ polymerization (Y.J. Jung, C. Luciani, K.Y. Choi), *J. Appl. Polym. Sci.*, **116**, 3648-3658 (2010).
2. Inverse free radical suspension polymerization as a route to encapsulate biologically active materials (C.V. Luciani, K.Y. Choi, Z. Xiao), *Chemical Engineering and Technology*, 33(11),1833-1840, 2010.
3. Polymer particles with a pomegranate-like internal structure via micro-dispersive polymerization in a geometrically confined reaction space. I. Experimental study (C. Luciani, K.Y. Choi, J.J. Han, Y.J. Jung), *Polymer*, **52**, 942-948 (2011).
4. Experimental and theoretical study of the reaction locus during the dispersion polymerization of methyl methacrylate in a nonpolar hydrocarbon solvent at low temperature (L. Emdadi, C.V. Luciani, S.Y. Lee, I.H. Baick, K.Y. Choi), *Polym. Eng. Sci.* (INVITED paper, in press, 2011).
5. Modeling of phase inversion and particle stability in the dispersion polymerization of methyl methacrylate in a nonpolar hydrocarbon solvent (C.V. Luciani, L. Emdadi, S.Y. Lee, I.H. Baick, K.Y. Choi), *Macromol. React. Eng.* (in press, 2011).

Kinetics of Multifunctional Initiator Systems

1. Modeling of free radical polymerization of styrene by bifunctional initiators (K.Y. Choi and G.D. Lei), *A.I.Ch.E.J.*, 33(12), 2067-2076 (1987).
2. Steady state behavior of a continuous stirred tank reactor for styrene polymerization with bifunctional initiators (K.Y. Choi and K.J. Kim), *Chem. Eng. Sci.*, 43(4), 965-977 (1988).
3. Kinetics of bulk styrene polymerization catalyzed by symmetrical bifunctional initiators (K.Y. Choi, W.R. Liang and G.D. Lei), *J. Appl. Polym. Sci.*, 35, 1547-1562 (1988). Modeling of free radical polymerization of styrene by unsymmetrical bifunctional initiators (K.Y. Choi and K.J. Kim), *Chem. Eng. Sci.*, 44(2), 297-312 (1989).
4. Bulk free radical polymerization of styrene with unsymmetrical bifunctional initiators (K.J. Kim, W.R. Liang and K.Y. Choi), *Ind. Eng. Chem. Res.*, 28, 131-138 (1989).
5. Kinetics of free radical styrene polymerization with a symmetrical bifunctional initiator 2,5-dimethyl-2,5-bis(2-ethyl hexanoyl peroxy) hexane (W.J. Yoon and K.Y. Choi), *Polymer*, 33(21), 4582-4591 (1992).
6. Free radical polymerization of styrene with a binary mixture of bifunctional initiators (W.J. Yoon and K.Y. Choi), *J. Appl. Polym. Sci.*, 46, 1353-1367 (1992).