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INVERSE SUSPENSION POLYMERIZATION OF ITACONIC ACID TO PREPARE BIODEGRADABLE SUPERABSORBENT POLYMERS

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Crosslinked poly(itaconic acid) was synthesized by inverse suspension polymerization. This process was investigated to determine the influence of different parameters like temperature, stirring speed, and crosslinker. An aqueous phase containing partially neutralized itaconic acid, crosslinking agent, and initiator agent was dispersed in an organic phase and stabilized by a surfactant. The inverse suspension was carried out with varying conditions, such as organic solvent, pH, cross-linker concentration, stirring speed, and additives. These results led to optimization of swelling and absorption behaviours.

Biography

Young-Je Kwark is a Professor of Organic Materials and Fiber Engineering in Soongsil University. He received his PhD in Polymer Science and Engineering from the University of Massachusetts, Amherst in 2001 in the area of atom transfer radical polymerization. After spending his Post-doctoral years at Cornell University, he joined the Soongsil University as a faculty member. He has published many papers on polymer chemistry and worked in various academic societies, which includes his position as an Associate Editor of *Macromolecular Research*. His research interests include: photo-initiated raft process of unconjugated monomers, organic-inorganic nanohybrids and superabsorbent polymers.

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