

Arrangement of Monomer Injection in the Characteristics of Copolymer

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Summary

Polypyrrole/Poly(vinyl acetate) (PPy/PVAc) copolymer was prepared by the copolymerization of vinyl acetate and pyrrole using FeCl₃ and benzoylperoxide as an oxidant in the presence of various surfactants such as sodium dodecylbenzenesulfonate and poly (ethylene glycol) in the aqueous/non-aqueous media. The PPy/PVAc copolymer was characterized in terms of conductivity, morphology, chemical structure, particle size and yield. The results indicate that the morphology, particle size, yield and electrical conductivity of the products are dependent on the type of surfactant and the arrangement of monomer injection. The chemical structure of obtained product was determined by FTIR spectroscopy. By comparison FTIR spectra between pure PPy and PPy/PVAc copolymer, the PPy/PVAc copolymer had additional bands. All these bands indicate the formation of copolymer.

keywords: Copolymer, surfactant, monomer injection, morphology, conductivity, structure

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