

Fabrication of polyurethane/urea microcapsules in a microfluidic system

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It is important to make monodisperse microcapsules in many applications. To make these capsules, microfluidic system is a proper option because monodisperse microdroplets are made easily and small volumes of reactants are needed. It can also provide high throughput and isolation of reactions. Microdroplets can be easily converted to microcapsules with shells through the reactions. Microcapsules can be applied in many fields such as drug delivery systems, molecular biology analysis and functional materials. In this study, we have fabricated monodisperse polyurethane/urea microcapsules through interfacial polymerization using a microfluidic device for functional materials. Fabricated capsules were characterized to examine the final morphology.