

Synthesis of PNIPAM Hydrogel Hollow Microcapsules

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We have developed a one-step, template-free synthetic method for preparing hydrogel hollow microcapsules on a super-hydrophobic surface. Aqueous micro droplets of hydrogel monomers and cross-linker solution are deposited on the super-hydrophobic surface, which is situated under the hydrocarbon oil layer containing a photo-initiator. During an exposure to UV light, the aqueous micro droplets converted to hollow microcapsules with a polymerized hydrogel shell by diffusing the initiator into the oil/water interface. This is very simple and efficient method for the preparation of hydrogel hollow microcapsules.