

Fabrication of pH-Sensitive Microparticles for Multiple Drug Release

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The development of controlled drug delivery systems is essential for therapy with minimum side effects. Using stop flow lithography (SFL) and acid-degradable monomers, we synthesize pH-sensitive particles for targeted drug delivery. Depending on pH values, the particles exhibit differences in degradation times from minutes to hours. The degradation times of the particles can be also adjusted by controlling the synthesis conditions such as polymerization degree and monomer compositions. To show the multi-modulated drug release, we further synthesize multi-patterned particles. The release of the beads in each compartment is programmed by designing the monomer compositions.