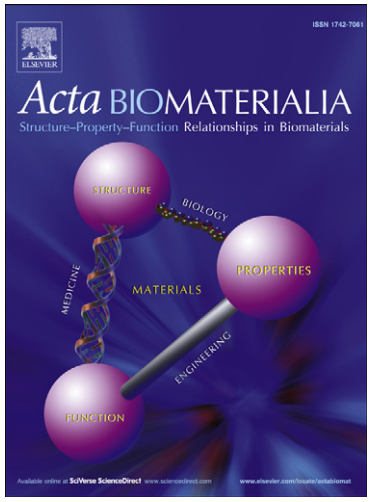

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Silica-coated calcium pectinate beads for colonic drug delivery

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Keywords

Pectin; silica-coating; hybrid beads, controlled release

Abstract

The aim of this work is to develop novel organic-inorganic hybrid beads for colonic drug delivery. For this purpose, calcium pectinate beads with theophylline are prepared by a cross-linking reaction between amidated low-methoxyl pectin and calcium ions. Then beads are covered with silica starting from tetraethyoxysilane (TEOS) by a sol-gel process. The influence of TEOS concentration (0.25, 0.50, 0.75 and 1.00 M) during the process is studied in order to modulate the thickness of the silica layer around the pectinate beads and