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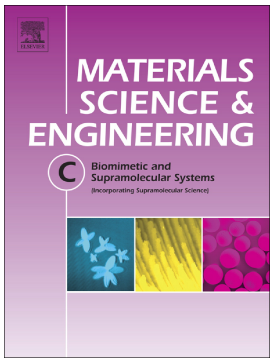

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Acid-sensitive polymeric vector targeting to hepatocarcinoma cells via glycyrrhetinic acid receptor-mediated endocytosis

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Abstract

Liver cancer is one of the top death causing cancers, traditional treatments have not settled for the requirement of patients. In this work, a smart acid-responsive micelle based on glycyrrhetinic acid modified chitosan-polyethyleneimine-4-Hydrazinobenzoic acid-doxorubicin (GA-CS-PEI-HBA-DOX) was synthesized for targeted delivery of DOX to liver cancer. A dual pH-sensitive and receptor-mediated strategy has been exploited to enhance the delivery efficiency. The micelle possesses positive charges under pH 6.8 and can be turned into negative charges above pH 7.0, which help to be accumulated in tumor tissues (pH 6.0-7.0). In the intracellular environment (pH 4.5-6.5) of tumor cells, the