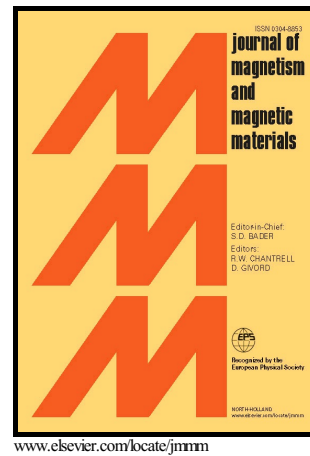


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Magnetic Graphene Oxide as a Carrier for Targeted Delivery of Chemotherapy Drugs in Cancer Therapy

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Abstract

A magnetic targeted functionalized graphene oxide (GO) complex is constituted as a nanocarrier for targeted delivery and pH-responsive controlled release of chemotherapy drugs to cancer cells. Magnetic graphene oxide (mGO) was prepared by chemical co-precipitation of Fe₃O₄ magnetic nanoparticles on GO nano-platelets. The mGO was successively modified by chitosan and mPEG-NHS through covalent bindings to synthesize mGOC-PEG. The polyethylene glycol (PEG) moiety is expected to prolong the circulation time of mGO by reducing the reticuloendothelial system clearance. Irinotecan (CPT-11) or doxorubicin (DOX) was loaded to mGOC-PEG

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