

## عنوان مقاله:

Magnetic nanoparticles as Theranostic carriers for the treatment of breast cancer

## محل انتشار:

یازدهمین کنگره بین المللی سرطان پستان (سال: 1394)

تعداد صفحات اصل مقاله: 2

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## خلاصه مقاله:

Introduction: Breast cancer is the most common form of cancer (other than skin cancer) in women. 200,000 new cases of breast cancer detected each year of which 40,000 will die. Nanotechnology has provided an alternative strategy of drug delivery to prevent drug efflux by offering encapsulation or attachment of drugs to nanomaterials such as lipids, polymers and solid-core nanoparticles. Methods: Iron oxide nanoparticles were prepared by using a conventional coprecipitation method and coated with silica using a sol-gel method to afford core-shell magnetic nanoparticles. Folic acid as a targeting agent was activated and attached to Polyethyleneimine. The polymer obtained was coated on magnetic cores. The core-shell nanoparticles were characterized by different methods. Doxorubicin was loaded into the nanoparticles and the release behavior was studied in different pH conditions. Results: Doxorubicin loading 54.6% was obtained and released drug in acidic pH was obviously more than physiologic pH. Conclusion According to the results we can optimize our core-shell nanostructure as an efficient drug delivery carrier as well as MRI contrast agent for breast cancer.

## کلمات کلیدی:

Magnetic nanoparticles, polyethyleneimine, Doxorubicin , breast cancer, drug delivery

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/726785>



