

Accepted Manuscript

Side effects-avoided theranostics achieved by biodegradable magnetic silica-sealed mesoporous polymer-drug with ultralow leakage

Chengyi Li, Yi Wang, Yilin Du, Min Qian, Huilin Jiang, Jianxin Wang, Niren Murthy, Rongqin Huang



PII: S0142-9612(18)30684-7

DOI: [10.1016/j.biomaterials.2018.09.039](https://doi.org/10.1016/j.biomaterials.2018.09.039)

Reference: JBMT 18910

To appear in: *Biomaterials*

Received Date: 28 June 2018

Revised Date: 31 August 2018

Accepted Date: 24 September 2018

Please cite this article as: Li C, Wang Y, Du Y, Qian M, Jiang H, Wang J, Murthy N, Huang R, Side effects-avoided theranostics achieved by biodegradable magnetic silica-sealed mesoporous polymer-drug with ultralow leakage, *Biomaterials* (2018), doi: <https://doi.org/10.1016/j.biomaterials.2018.09.039>.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Side Effects-Avoided Theranostics Achieved by Biodegradable Magnetic Silica-Sealed Mesoporous Polymer-Drug with Ultralow Leakage

Chengyi Li ^a, Yi Wang ^{b,*}, Yilin Du ^a, Min Qian ^a, Huilin Jiang ^a, Jianxin Wang ^a,
Niren Murthy ^c and Rongqin Huang ^{a,*}

^a Department of pharmaceutics, School of Pharmacy, Key Laboratory of Smart Drug Delivery, Ministry of Education, Fudan University, 826 Zhangheng Road, Shanghai 201203, China.

^b Center for Advanced Low-dimension Materials, Donghua University, 2999 North Renmin Road, Shanghai 201620, China.

^c Department of Bioengineering, University of California, Berkeley, 306 Stanley Hall, Berkeley 94720-1762, USA.

Keywords: Side effects, Theranostics, Ultralow drug leakage, Targeting delivery, Biodegradable

Abstract: The development of drug delivery vehicles without side effects to normal physiological tissues represents an urgent challenge for safety and effective nanomedicine. Herein, a multifunctional drug delivery vehicle with ultralow leakage was presented, containing an ordered mesoporous resin as a polymer core and homogeneous Fe nanodots-doped silica as the biodegradable shell. In this core-shell structure, the Fe-doped silica shell acts as a compact inorganic cap to seal doxorubicin

Download English Version:

<https://daneshyari.com/en/article/11021649>

Download Persian Version:

<https://daneshyari.com/article/11021649>

[Daneshyari.com](https://daneshyari.com)