SUPPORTING INFORMATION

A Novel Fe_3O_4@ZnO@mSiO_2 Nanocarrier for Targeted Drug Delivery and Controllable Release with Microwave Irradiation

Hongjin Qiu, Bin Cui, Guangming Li, Jianhui Yang, Hongxia Peng, Yingsai Wang, Nini Li, Ruicheng Gao, Zhuguo Chang, Yaoyu Wang*

Key Laboratory of Synthetic and Natural Functional Molecule Chemistry (Ministry of Education), Shaanxi Key Laboratory of Physico-Inorganic Chemistry, School of Chemistry & Materials Science, Northwest University, Xi'an 710069, PR China

* Corresponding author: E-mail: cuibin@nwu.edu.cn; Tel.: +86 029 8830-2129; fax: +86 029 8830-3798

Stability properties of the nanocarriers were studied in a Zetasizer Nano-ZS90, from Malvern Instruments.

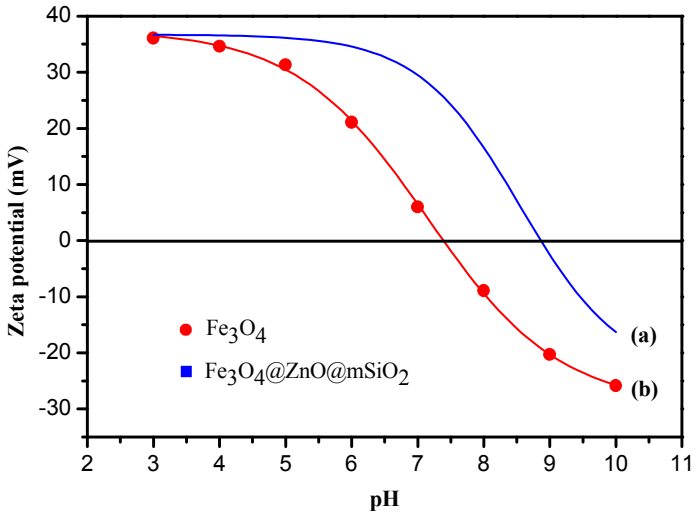

Figure 1. Zeta potential of (a) Fe_3O_4 and (b) Fe_3O_4@ZnO@$mSiO_2$

Sample	mean particle size by SEM (nm)	hydrodynamic size at pH 5 (nm)	hydrodynamic size at pH 6 (nm)	hydrodynamic size at pH 7 (nm)
Fe_3O_4	170	179.7	188.2	197.5
Fe_3O_4@ZnO	210	211.3	227.8	229.1
Fe_3O_4@ZnO@$mSiO_2$	260	275.6	279.4	286.8

Table 1. Experimental Results on Mean Particle Sizes Measured by SEM, Hydrodynamic Sizes at pH 5, pH 6 and pH 7 by DLS.

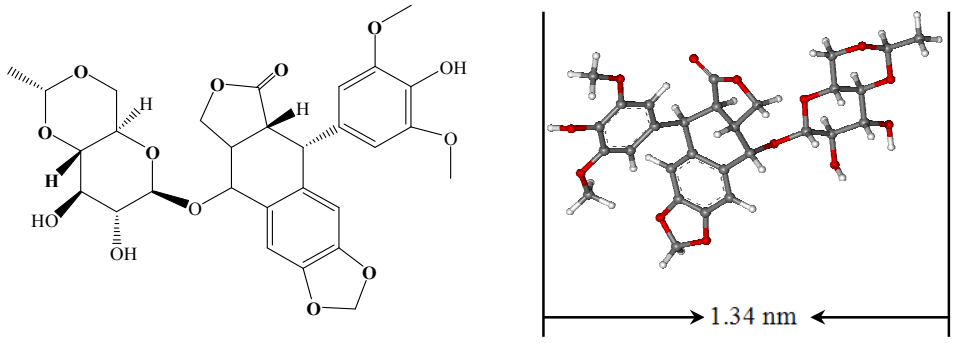

Figure 2. Molecular formula of etoposide (VP16).