Electronic Supplementary Information

Fluorescence-guided magnetic nanocarriers for

enhanced tumor targeting photodynamic therapy

Khalilalrahman Dehvari, # Po-Ting Lin, # and Jia-Yaw Chang*

Department of Chemical Engineering, National Taiwan University of Science and Technology,

Taiwan, R.O.C.

‡ Khalilalrahman Dehvari and Po-Ting Lin contributed equally to this work.

*Corresponding author: Jia-Yaw Chang

Department of Chemical Engineering, National Taiwan University of Science and Technology,

43, Section 4, Keelung Road, Taipei, 10607, Taiwan, Republic of China

E-mail: jychang@mail.ntust.edu.tw, jcjiang@mail.ntust.edu.tw

Tel.: +886-2-27303636.

Fax: +886-2-27376644.



Fig. S1. Hydrodynamic size of HA-Fe₃O₄ dissolved in DI water using dynamic light scattering.



Fig. S2. Ce6-HA-Fe₃O₄ dispersion and stability in different media.



Fig. S3. (a) Absorption profile of series of Ce6-HA-Fe₃O₄ solutions prepared by dilution a stock solution. (b) Linear correlation between concentration and absorption at maximum wavelength (653 nm) serves as a calibration curve.



Fig. S4. ROS generation ability of Ce6-HA-Fe $_3O_4$ under 671 nm laser irradiation with different power densities.



Fig. S5. Cellular uptake and fluorescent imagining of B16F1 cells incubated with different concentrations of Ce6-HA-Fe₃O₄ and stained with DAPI as the nucleus stain agent.



Fig. S6. Flow cytometry analysis for the quantitative study of the theranostic agent cellular uptake. B16F1 cells were exposed to the different concentrations of Ce6-HA-Fe₃O₄ for 12 h. The raw data divided by the fluorescence intensities of untreated cells (control) to normalize the data.