## **Electronic Supporting Information**

## Facile preparation of albumin-stabilized gold nanostars for targeted photothermal ablation of cancer cells

Jingchao Li<sup>a, b</sup>, Rong Cai<sup>a, b</sup>, Naoki Kawazoe<sup>a</sup>, and Guoping Chen<sup>\*, a, b</sup>

<sup>a</sup> Tissue Regeneration Materials Unit, International Center for Materials Nanoarchitectonics,

National Institute for Materials Science, 1-1 Namiki, Tsukuba, Ibaraki 305-0044, Japan

<sup>b</sup> Department of Materials Science and Engineering, Graduate School of Pure and Applied Sciences,

University of Tsukuba, 1-1-1 Tennodai, Tsukuba, Ibaraki 305-8577, Japan

\* Corresponding author.

Tel: +81-29-860-4496, Fax: +81-29-860-4714, E-mail: Guoping.CHEN@nims.go.jp.



Fig. S1 FTIR spectra of BSA, BSA-FA conjugation and FA.



Fig. S2 Calibration curve of FA absorption at 365 nm versus the FA concentration.



**Fig. S3** UV-Vis spectroscopy of trisodium citrate-stabilized Au seeds (insert is the photo of Au seeds solution).



Fig. S4 TEM image (a) and size distribution histogram (b) of trisodium citrate-stabilized Au seeds.



Fig. S5 EDS spectra of BSA-AuNSs (a) and BSA-FA-AuNSs (b).



**Fig. S6** Hydrodynamic size of BSA-AuNSs and BSA-FA-AuNSs dispersed in water at different storage time (a). The photos of BSA-AuNSs and BSA-FA-AuNSs dispersed in water, PBS and cell culture medium (containing 10% FBS) over a period of 5 d (b).