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**Electronic Supplementary Material** 

Self-assembly-induced near-infrared fluorescence nanoprobes for effective tumor molecular imaging

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## Characterization

 $^{1}$ H NMR spectra were recorded on a Bruker Avance III 400 MHz NMR spectrometer in  $D_{2}O$  solutions. High-resolution transmission electron microscopy (HR-TEM) images were collected on an electron microscope (JEM-2100, JEOL), using a 200 kV accelerating voltage. Zeta potential measurements were performed on a Zetasizer Nanoseries (ZS, Malvern).

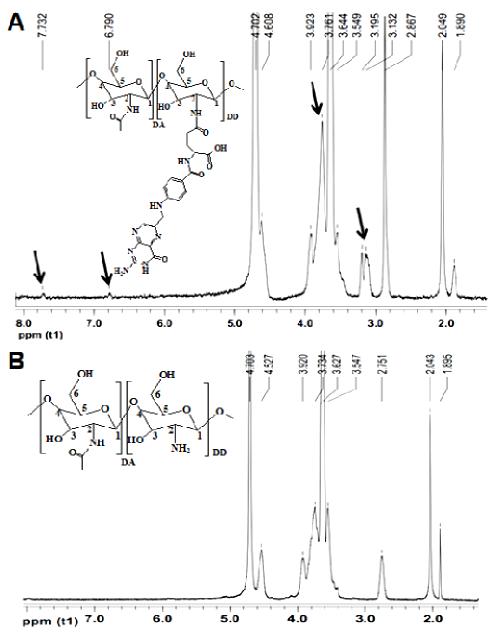
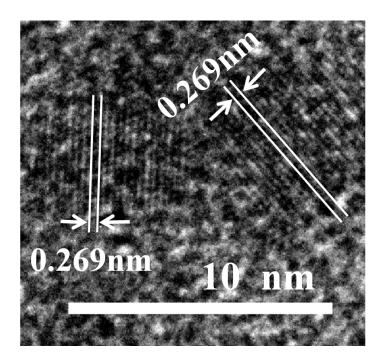


Fig. S1 in the Electronic Supplementary Material (ESM). <sup>1</sup>H NMR spectra of (A) FA-WCS and (B)

WCS. Insets show the structures of (A) FA-WCS and (B) WCS. The signals indicated by arrows are assigned to the H of folic acid.



**Fig.** S2. in the ESM. HR-TEM image shows the lattice planes of ICG-FA-WCS NPs (mass ratio of FA-WCS to ICG= 25:1) prepared in ultrapure water solution.

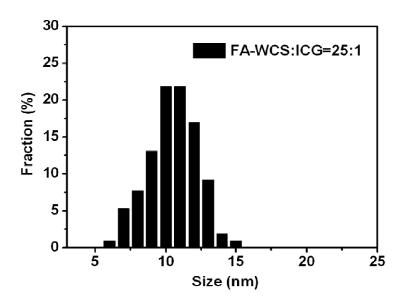
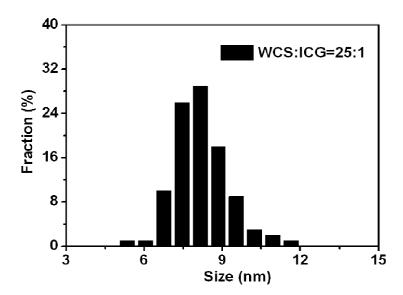
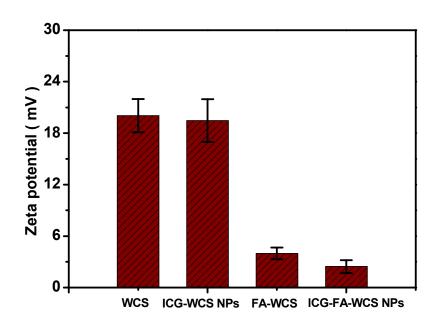


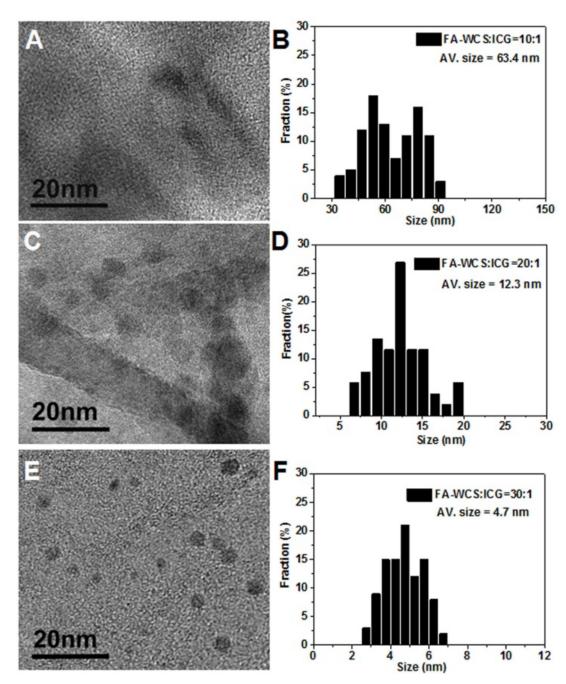
Fig. S3 in the ESM. Particle size distribution curve of the ICG-FA-WCS (mass ratio of FA-WCS to ICG= 25:1) NPs prepared in ultrapure water solution. The average particle size was calculated by analysis of 200 particles.



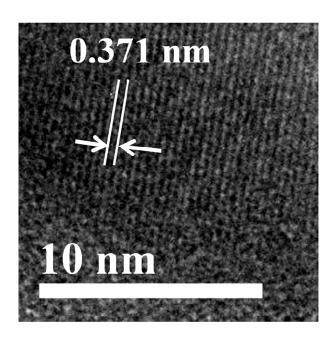
**Fig.** S4 in the ESM. Particle size distribution curve of the ICG-WCS (mass ratio of WCS to ICG= 25:1) NPs prepared in ultrapure water solution. The average particle size was calculated by analysis of 200 particles.



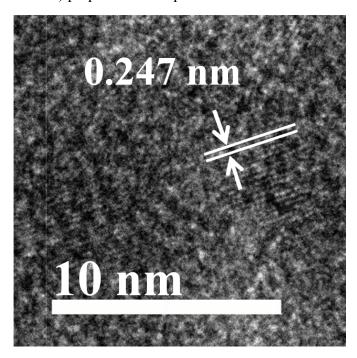
**Fig.** S5 in the ESM. Zeta potential of the WCS and ICG-WCS NPs; FA-WCS, ICG-FA-WCS NPs (mass ratio of WCS or FA-WCS to ICG = 25:1) in ultrapure water. (N = 3).



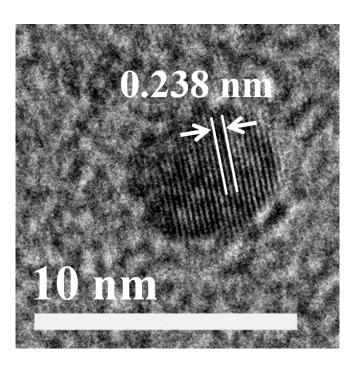
**Fig. S6** in the ESM. HR-TEM images of the ICG-FA-WCS NPs with mass ratio of FA-WCS to ICG = 10:1 (A), 20:1 (C) and 30:1 (E) prepared in ultrapure water solution. Particle size distribution curve of the ICG-FA-WCS NPs with mass ratio of FA-WCS to ICG = 10:1 (B), 20:1(D) and 30:1(F) based on the analysis of 200 particles.



**Fig.** S7 in the ESM. HR-TEM image shows the lattice planes of ICG-FA-WCS NPs (mass ratio of FA-WCS to ICG= 10:1) prepared in ultrapure water solution.



**Fig.** S8 in the ESM. HR-TEM image shows the lattice planes of ICG-FA-WCS NPs (mass ratio of FA-WCS to ICG= 20:1) prepared in ultrapure water solution.



**Fig.** S9 in the ESM. HR-TEM image shows the lattice planes of ICG-FA-WCS NPs (mass ratio of FA-WCS to ICG= 30:1) prepared in ultrapure water solution.