Electronic Supplementary Material (ESI) for Nanoscale
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Targeting Polymeric Fluorescent Nanodiamond-Gold/Silver Multi-functional Nanoparticles as a Light-Transforming Hyperthermia Reagent for Cancer Cell

Supporting information

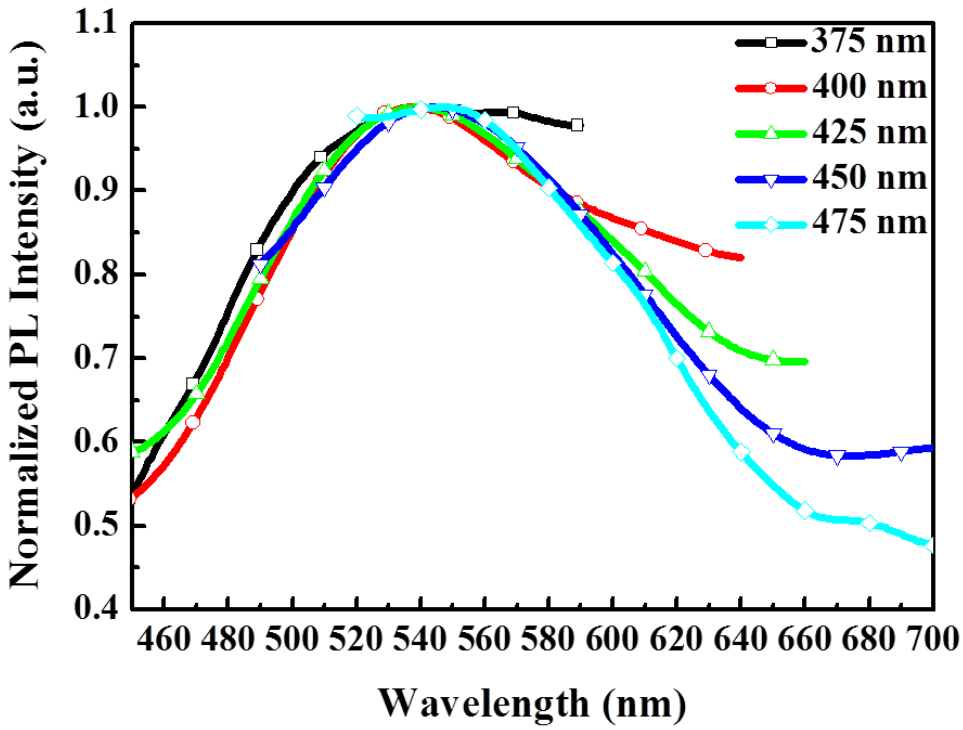

Fig. S1 The luminescence emission spectra of ND in D.I. water solution. The excitation wavelength is progressively longer wavelengths from 375 nm to 475 nm in 25 nm increments.

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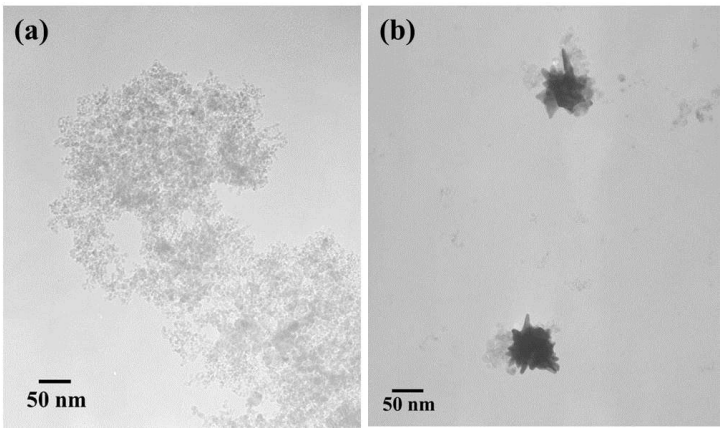

Fig. S2 TEM images of (a) ND and (b) FND-Au/Ag. The scale bars is 50 nm.

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Table S1. Zeta potential of fluorescent nanodiamond nanoparticles.

Samples	ξ potential
FND	**+13.5 (0.4)**
FND-S	**+8.4 (0.9)**
FND-Au/Ag	**+48.1 (0.7)**
FND-Au/Ag-Tf	**+43.0 (0.5)**

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Table S2. DLS sizes of fluorescent nanodiamond nanoparticles.

Sample	DLS size (nm)
FND	**210.0**
FND-Au/Ag	**319.1**
FND-Au/Ag-Tf	**375.4**

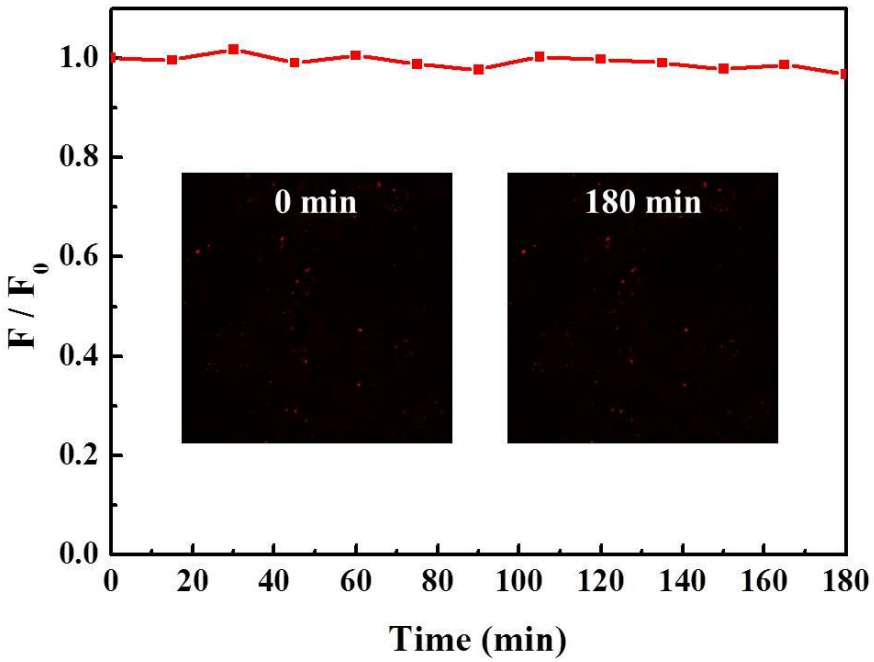

Fig. S3 Photo-stability of FND, determined by confocal microscopy. Images reveal fluorescence before and after irradiation by 561 nm laser for three hours.

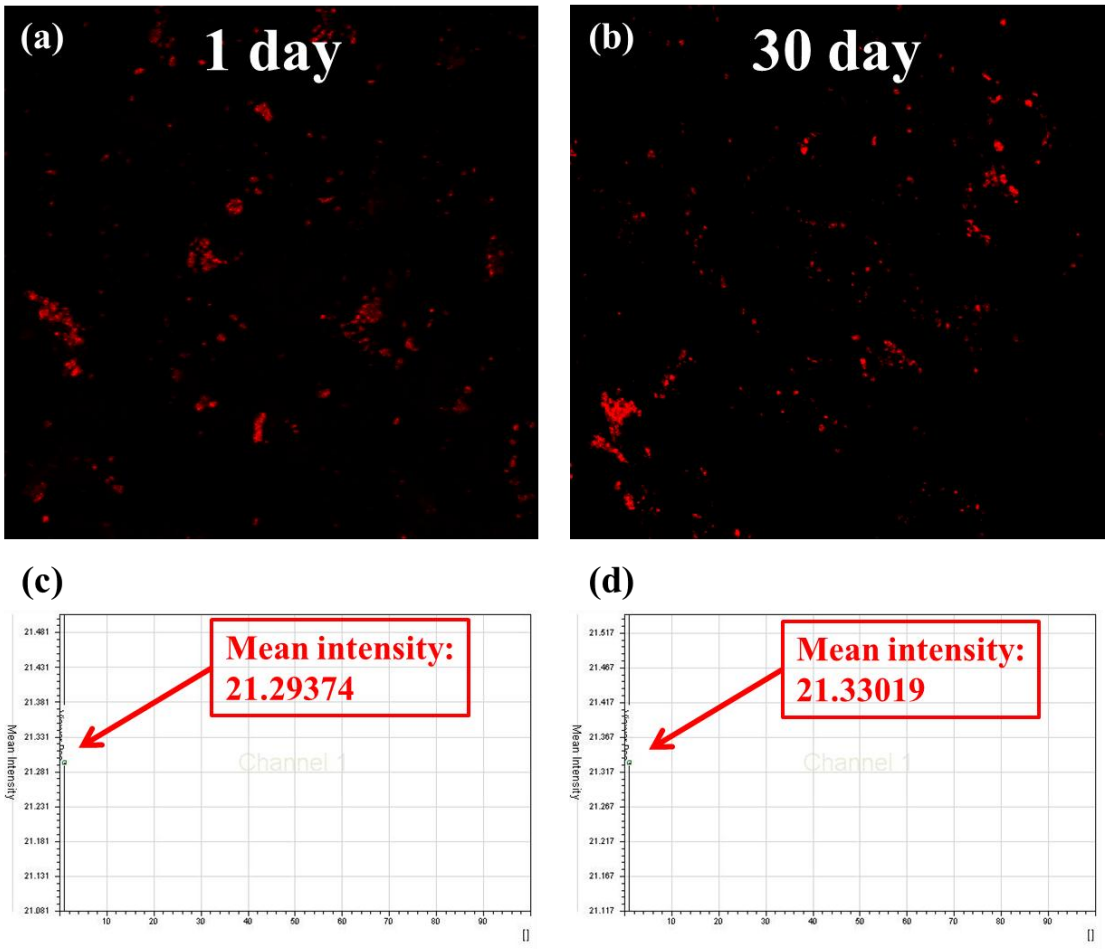

Fig. S4 Photo-stability of FND as revealed by confocal microscopy. Images display fluorescence of FND that has been stored at room-temperature for (a) one day and (b) one month and corresponding mean fluorescent intensity (c) one day and (d) one month.

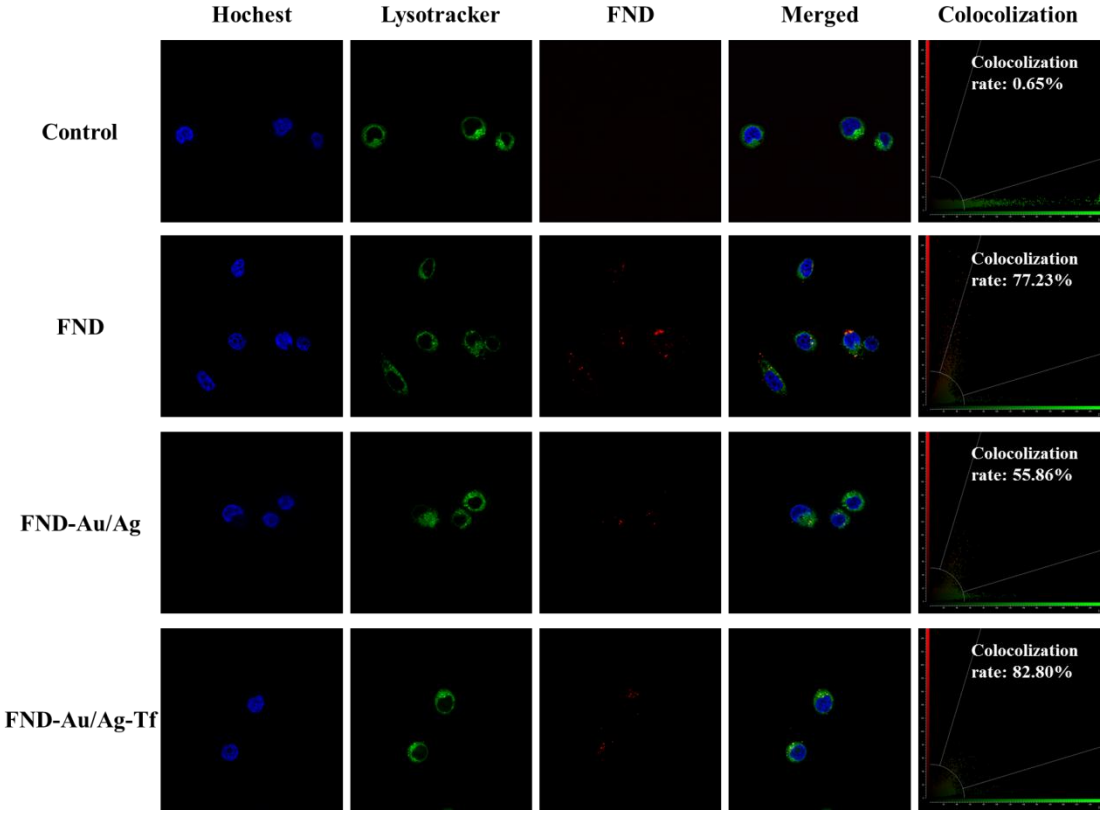

Fig. S5 Confocal microscopic images that indicate the fluorescence of nuclei (Hochest, blue), lysosome (Lysotracker, green), fluorescent nanodiamond (FND, red) and merged images of J5 cells. The colocalization images present the fluorescent overlap rate of lysotracker and FND.