*Supporting Information*

*for*

# Preparation of Golgi apparatus-targeted polymer dots of high-color-purity near infrared fluorescence for long-term bioimaging

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**Characterizations**

Absorption spectra were recorded on a Shimadzu UV-2550 spectrophotometer. Fluorescence spectra were measured on a F-4600 fluorometer (Hitachi). The fluorescence lifetime and quantum yield were measured by time-correlated single-photon counting on a FLS920 spectrometer. Scanning transmission electron microscopy (STEM) experiments were performed on a Thermoscientific Talos F200X transmission microscope working at 200 kV. Atomic force microscopic (AFM) characterizations were conducted in the ScanAsyst mode under ambient conditions (Bruker). X-ray photoelectron spectroscopy (XPS) data was collected using a thermoelectron instrument (Thermo Scientific ESCALAB250). Fourier transform infrared spectroscopy (FTIR) spectrum of the samples were acquired by applying a Nicolet iS10 FTIR spectrometer. The contact angles of water on a film of CDs were measured on a JC2000D contact angle goniometer (Powereach). Confocal fluorescence and bright field images (512 × 512 pixels) were acquired with a Leica TCS-SP8 confocal laser scanning microscope. Cells images were captured using a 63× objective lens.

**Cytotoxicity evaluations**

HeLa cells were fostered at a density of ~$1\times10^4$ cells per well in 96-well plates, and grown in DMEM containing 10% fetal bovine serum, 80 U $mL^{-1}$ penicillin, and 80 μg $mL^{-1}$ streptomycin in a humid incubator with 5% $CO_2$/95% air. 12 h later, the culture media were exchanged to fresh one containing Golgi-Pdots of

different concentrations (0-100 μg $mL^{-1}$) and cultured for 48 h. As to each concentration, five independent experiments were performed. Following, 20 μL of MTT solution (1.0 mg $mL^{-1}$) was introduced into each well, cultivating for 4 h to allow the formation of formazan crystals. Subsequently, 150 μL of DMSO was injected to the wells. Absorbance (A) of the resultant hybrid at 570 nm was measured. Cellular viability values were quantified according to the following equation: cellular viability (%) = $A_{test}/A_{control} \times 100\%$, where $A_{control}$ refers to the absorbance recorded from the control group, and $A_{test}$ refers to the absorbance obtained with the existence of Golgi-Pdots.

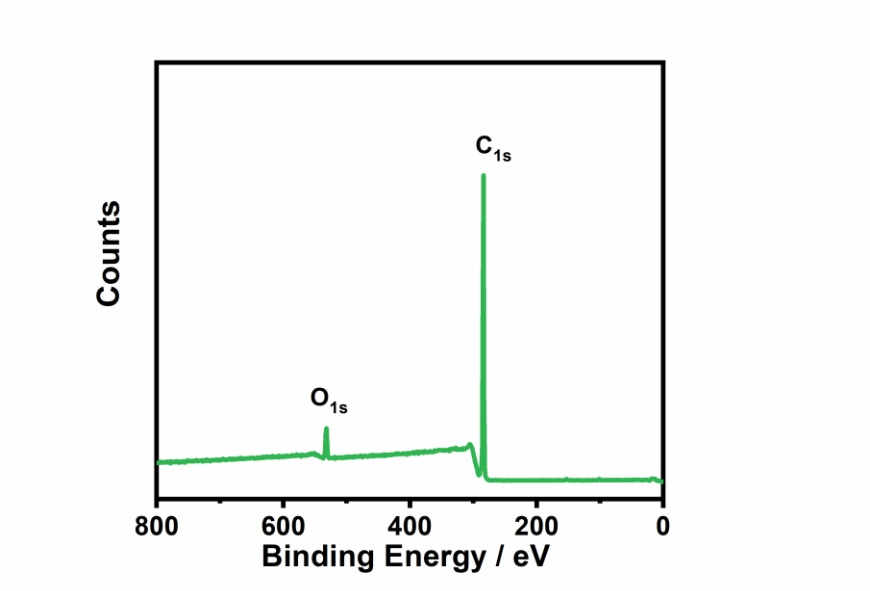


**Figure S1** XPS survey spectrum of the CDs.

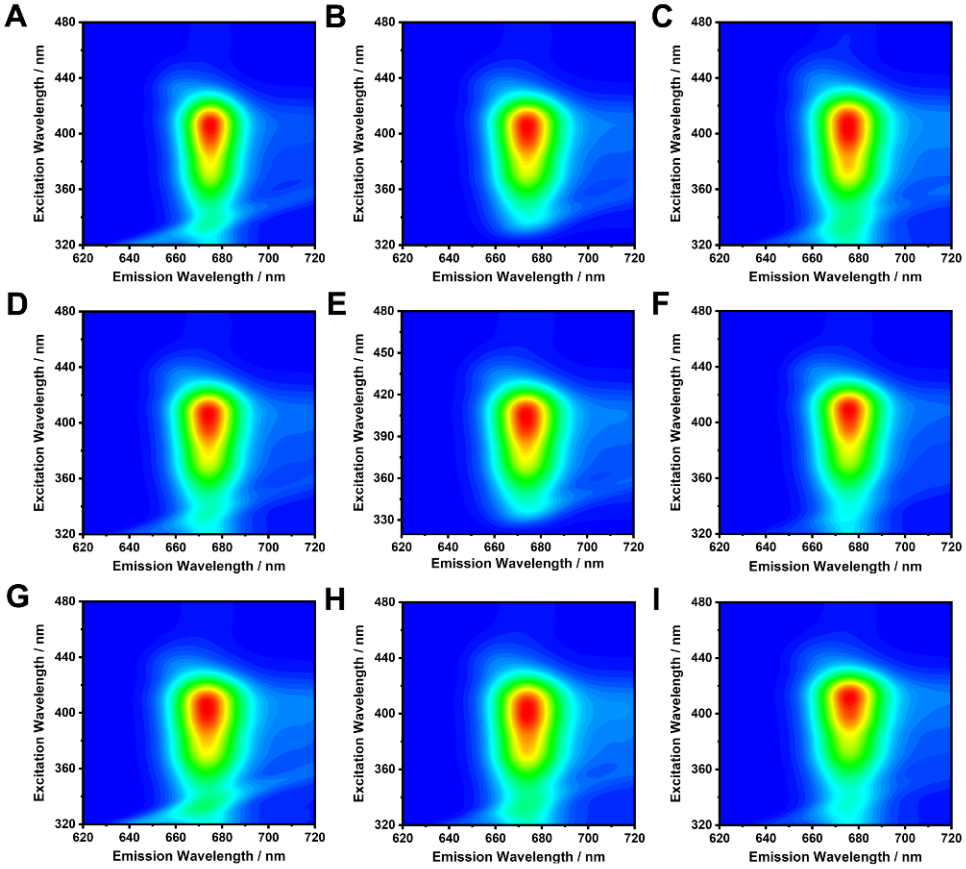


**Figure S2** Excitation-emission contour plots of the CDs in different organic solvents: (A) petroleum ether, (B) DCM, (C) n-butanol, (D) ethyl acetate, (E) dioxane, (F) acetone, (G) acetonitrile, (H) methanol, and (I) DMSO.

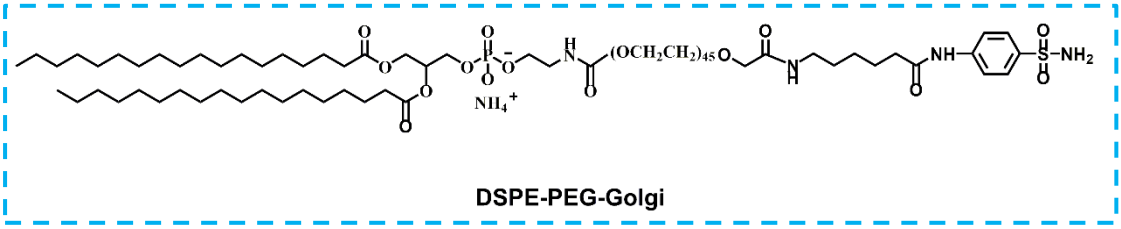


**Figure S3** Chemical structure of DSPE-PEG-Golgi.