

Electronic Supplementary Information (ESI)

Novel self-assembled sandwich nanomedicine for NIR-responsive release of NO

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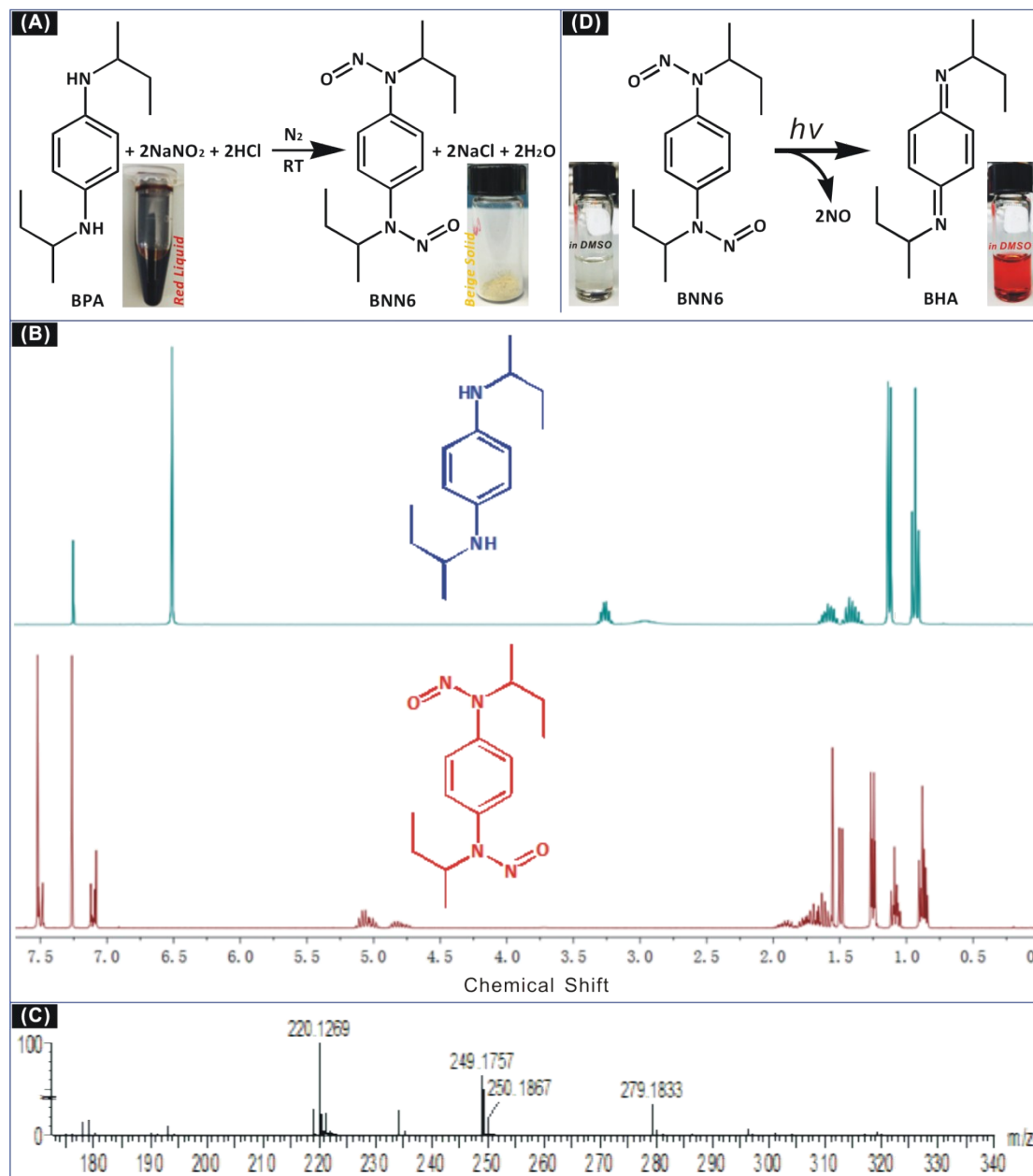


Figure S1. (A) The synthesis route of BNN6 and the change from red liquid to beige solid in the reaction process (inset digital pictures); (B) the MS of synthesized BNN6; (C) the photo-decomposition route of BNN6 and the color change during decomposition (inset digital pictures) where 279, 249/250 and 220 m/z represent the whole molecule of BNN6 and two ionized fragments of BNN6, respectively; (D) ^1H NMR spectra of the reactant BPA and the product BNN6: $\delta = 7.52$ (4H), 4.95-4.69 (2H), 2.00-1.84 (2H), 1.81-1.69 (2H), 1.48 (t, $J=7.6\text{Hz}$, 6H), 1.08 (td, $J=7.4$, 5.3Hz, 6H).

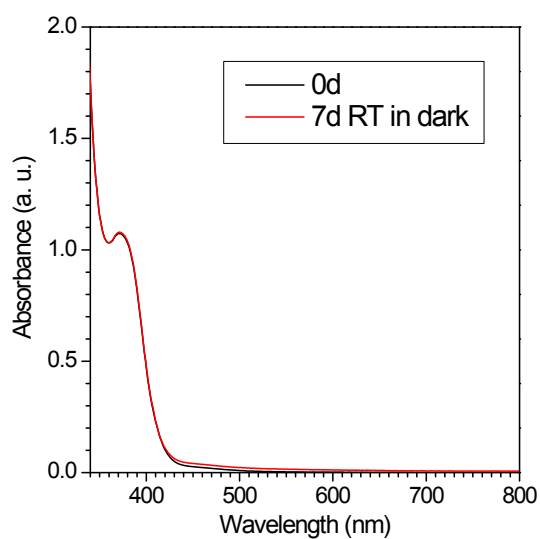


Figure S2. Comparison of UV spectra of freshly-prepared GO-BNN6 solution and one stored at RT in dark for 7 d.

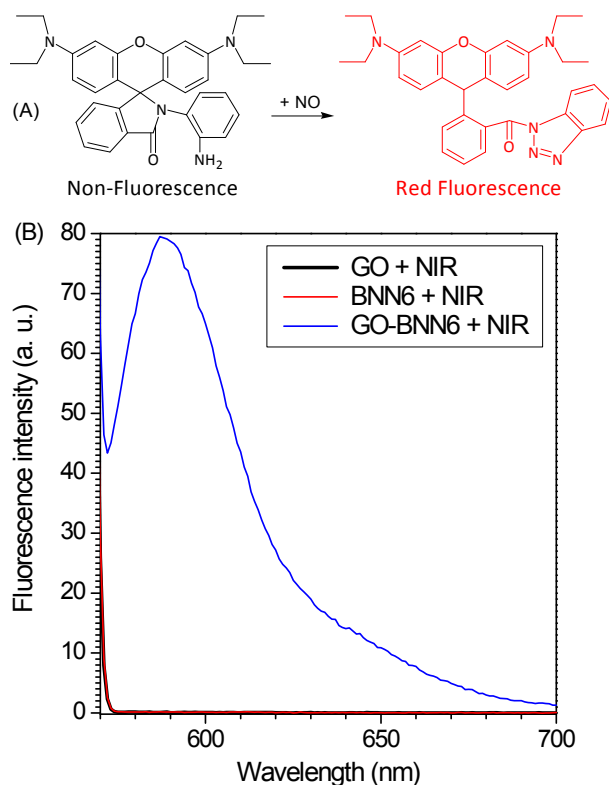


Figure S3. The mechanism for NO detection by RBSP fluorescence probe (A), and NIR-responsibility comparison of BNN6 and GO-BNN6 nanomedicine measured by using RBSP fluorescence probe (566 nm excitation) after 2-min irradiation (B).

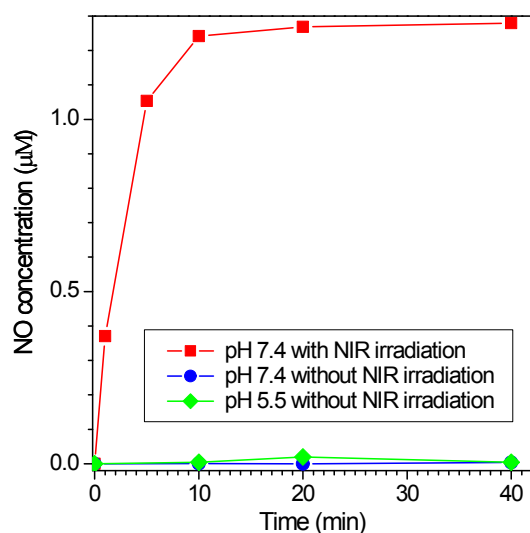


Figure S4. Stability of GO-BNN6 in pH 7.4 and 5.5 PBS solutions in the presence and absence of NIR irradiation.

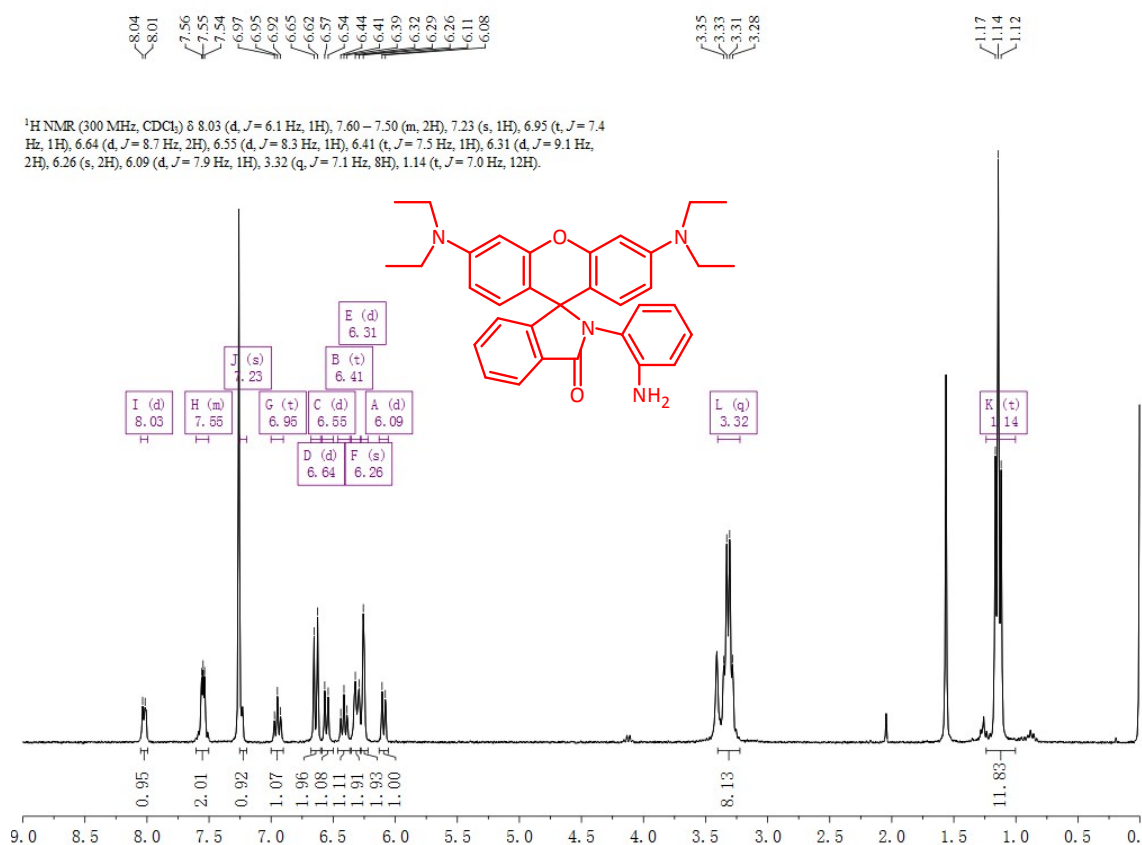


Figure S5. ¹H NMR spectrum of RBSP (300 MHz, CDCl₃): δ 8.03 (d, *J* = 6.1 Hz, 1H), 7.60 – 7.50 (m, 2H), 7.23 (s, 1H), 6.95 (t, *J* = 7.4 Hz, 1H), 6.64 (d, *J* = 8.7 Hz, 2H), 6.55 (d, *J* = 8.3 Hz, 1H), 6.41 (t, *J* = 7.5 Hz, 1H), 6.31 (d, *J* = 9.1 Hz, 2H), 6.26 (s, 2H), 6.09 (d, *J* = 7.9 Hz, 1H), 3.32 (q, *J* = 7.1 Hz, 8H), 1.14 (t, *J* = 7.0 Hz, 12H).