**Internal cross-linked polymeric nanoparticles with dual sensitivity for combination therapy of muscle-invasive bladder cancer**

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Figure S1. Size change of PEG-PCL-SS NPs, cross-linked PEG-PCL-SS NPs and drug-loaded PEG-PCL-SS NPs.



Figure S2. XPS spectra of five samples (free DOX, free IR780, physical mixture, PEG-PCL-SS and DOX&IR780@PEG-PCL-SS NPs).



Figure S3. Particle size and stability of different nanoparticles. PEG-PCL NPs and PLGA NPs precipitated after 72 hours while Albumin NPs precipitated after one week.



Figure S4. Cell viability of IR780&DOX nanoparticles in bladder normal mucosa cells (SV-HUC-1).



Figure S5. Pharmacokinetics of different carriers-based NPs in mice after intravenous injection determined based on IR780 absorption. A-C) Blood circulation curves of PEG-PCL-SS, PEG-PCL, Albumin and PLGA NPs at interval times (n=3). PK Solver Version 2.0, was used to calculate pharmacokinetic parameters [1].

Reference

[1] Zhang, Y., Huo, M., Zhou, J. & Xie, S. PKSolver: An add-in program for pharmacokinetic and pharmacodynamic data analysis in Microsoft Excel. Comput Methods Programs Biomed 99, 306-314 (2010).