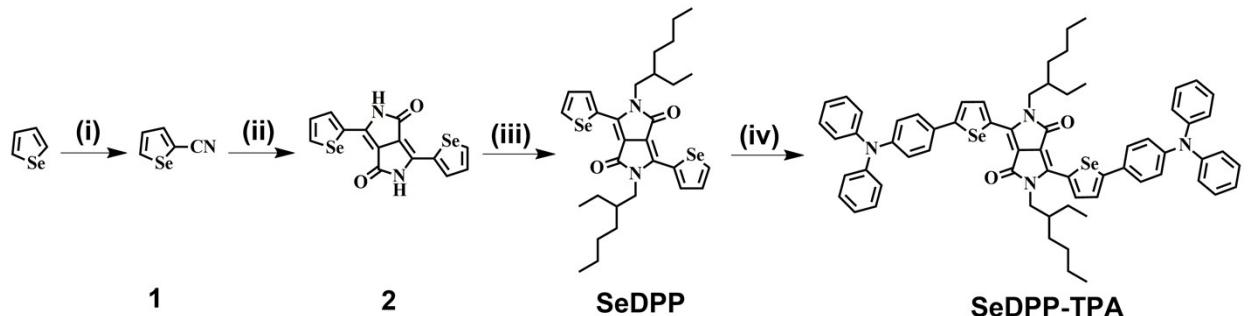


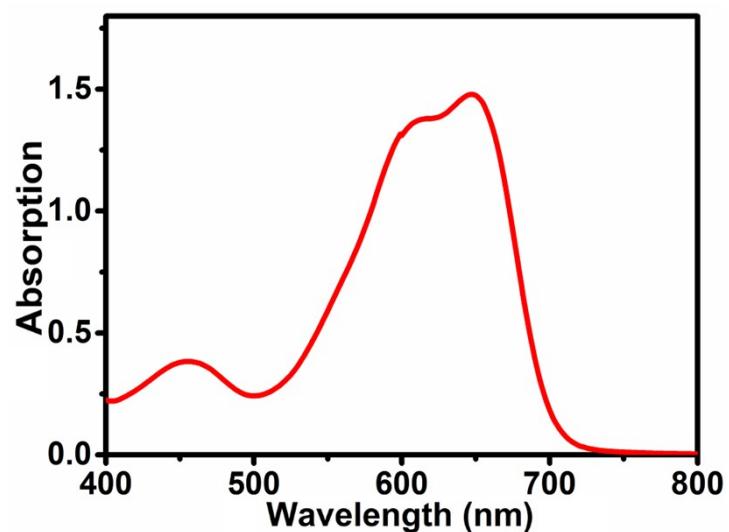
## Supporting Information

# Selenophene Substituted Diketopyrrolopyrrole Nanotheranostic Agent for Highly Efficient Photoacoustic/Infrared-thermal Imaging-Guided Phototherapy

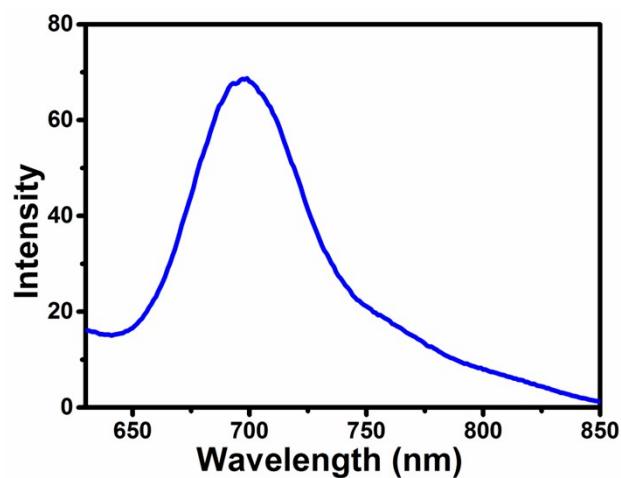
Yu Cai,<sup>a</sup> Pingping Liang,<sup>a</sup> Weili Si,<sup>a</sup> Baomin Zhao,<sup>d</sup> Jinjun Shao,<sup>a</sup> Wei Huang,<sup>a</sup> Yewei Zhang,<sup>\*c</sup> Qi Zhang,<sup>\*b</sup> Xiaochen Dong<sup>\*a</sup>



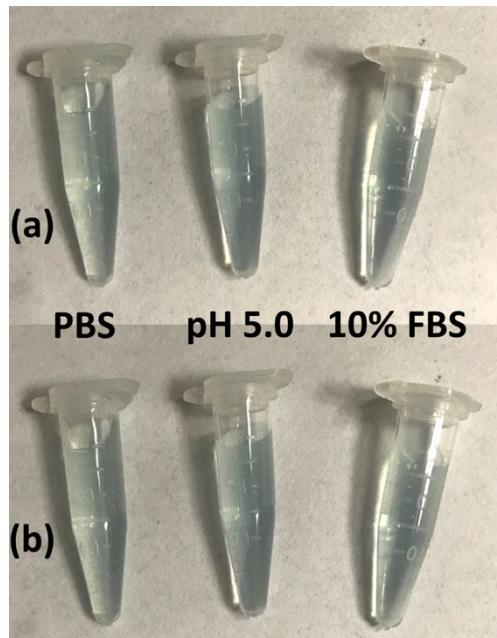
**Scheme S1.** Synthetic route of SeDPP-TPA. (i) Chlorosulfonyl isocyanate, dimethylformamide, 0 °C, 2 hours, 62.4% (ii) Sodium, iron(III) chloride, 2-methylbutan-2-ol, diisopropyl succinate, 90 °C, 6 hours, 37% (iii) 3-(bromomethyl)heptane,  $K_2CO_3$ , dimethylformamide, 120 °C, 24 hours, 39%. (iv)  $K_2CO_3$ , pivalic acid,  $Pd(OAc)_2$ , 4-bromo-N,N-diphenylaniline, anhydrous dimethylacetamide, 110 °C, 4 hours, 76%.



**Figure S1.** UV-Vis absorption spectrum of SeDPP-TPA in dichloromethane.



**Figure S2.** Fluorescence emission spectrum of SeDPP-TPA in dichloromethane.



**Figure S3.** Photographs of SeDPP-TPA NPs ( $40 \mu\text{g}/\text{mL}$ ) in PBS (pH 7.4), PBS (pH 5.0), and PBS (pH 7.4) containing 10% FBS, respectively. (a) Samples stand for 0 h. (b) Samples stand for 48 h.