Supporting Information

Novel NIR-II semiconducting molecule incorporating sorafenib for

imaging guided synergetic cancer phototherapy and anti-angiogenic therapy

Huihui Zou,^{a,c,1} Zheng Wei,^{a,c,d,1} Chuanhui Song,^{a,c} Jianchuan Ran,^{a,c} Zichen Cao,^{a,c} Chuanchao Tang,^a

Guorong Zhang,^e Yu Cai,^{*,b} Mingxing Lu,^{*,a} Wei Han^{*,a}

^a Department of Oral and Maxillofacial Surgery, Nanjing Stomatological Hospital, Medical School of Nanjing University, 30 Zhongyang Road, 210008, Nanjing, China.

^b Clinical Research Institute, Zhejiang Provincial People's Hospital, People's Hospital of Hangzhou

Medical College, No. 158 Shangtang Road, Hangzhou 310014, Zhejiang Province, P.R. China.

^c Central Laboratory of Stomatology, Nanjing Stomatological Hospital, Medical School of Nanjing University, 30 Zhongyang Road, 210008, Nanjing, China

^d Pediatric Dentistry, Nanjing Stomatology Hospital, Medical School of Nanjing University, No 30 Zhongyang Road, Nanjing, 210008, China

^e Department of Orthodontics, Nanjing Stomatological Hospital, Medical School of Nanjing University, No 30 Zhongyang Road, Nanjing, 210008, China

E-mail: iamycai@163.com; lmxnj@sina.com; doctorhanwei@hotmail.com.

¹*These authors contributed equally.*



Figure S1 Characterization and PTT properties of T8IC NPs. **A)** TEM image of T8IC NPs. **B)** DLS measurement of T8IC NPs in PBS. **C)** T8IC NPs dispersed in PBS, DMEM, and FBS standing for 0 days and 14 days. **D)** Photothermal heating curves of T8IC NPs with different laser power density (40 μg/mL). **E)** Photothermal of T8IC NPs at different concentrations in PBS. **F)** Stability of T8IC NPs with 3 cycles on-off laser irradiation.



Figure S2 Comparison of TS NPs at different ratio. **A)-C)** DLS results of TS NPs (T8IC : Sorafenib) at ratio of 1:1 (left), 1:2 (middle) and 2:1 (right). **D)** PTT of TS NPs at different ratios. **E)** UV-Vis-NIR absorption spectra of TS NPs. **F)** NIR-II images intensity of TS NPs solutions



Figure S3 Characterization of RB-TS NPs. **A)** DLS examination for the size of RB-TS NPs, photographs of RB-TS NPs distribution in PBS inserted. **B)** UV-Vis-NIR absorption spectra of RB-TS NPs. **C)** Fluorescence emission spectrum of RB-TS NPs in PBS.