Supporting Information

Bactericidal activity tunable conjugated polymers as human-friendly bactericide for treatment of wound infections

Haoping Wang, Lixia Guo, Yunxia Wang* and Liheng Feng *

School of Chemistry and Chemical Engineering, Shanxi University, Taiyuan, 030006, P.R. China

E-mail: wangyuxia@sxu.edu.cn (Wang, Y.X.); lhfeng@sxu.edu.cn (Feng, L.H.)
Fig. S1. Synthetic routes of monomers and polymers (P1-P3).
Fig. S2. (a) Normalized UV-vis absorption and fluorescence emission spectra of P1-P3 in DMSO. (b) Size distribution of P1-P3 (10 μM in RUs) in water measured by DLS. (c) Photostability of P1-P3 in aqueous solution under a white light at a density of 25mW/cm². (d) Phosphorescence attenuation processes of P1-P3.
Fig. S3. (a) HOMO and LUMO electron distributions of P1-P3. (b) HOMO and LUMO energy levels of P1-P3. (c) Cyclic voltammograms of P1-P3. The supporting electrolyte was 0.1 M Bu$_4$NClO$_4$ and the scan rate was 0.10 V/s. [P1] = [P2] = [P3] = 100.0 μM in RUs. (d) Comparison of energy levels between theory and actual for P1-P3.
Fig. S4. CLSM images of *E. coli* before and after treatment with P1 and P2 (5.0 μM in RUs) in the dark.
Fig. S5. CLSM images of E.coli before and after treatment with P1, and P2 (5.0 μM in RUs) upon irradiation of white light (25 mW/cm², 15 min). PI and SYTO9 were used to stain the bacteria as red and green fluorescence.
Fig. S6. Histological images of different organs (heart, liver, spleen, lung, and kidney) of mice with treatment of PBS and P1-P3.