

## Supporting Information

Light up the interactions between bacteria and surfactants with  
aggregation-induced emission characteristics

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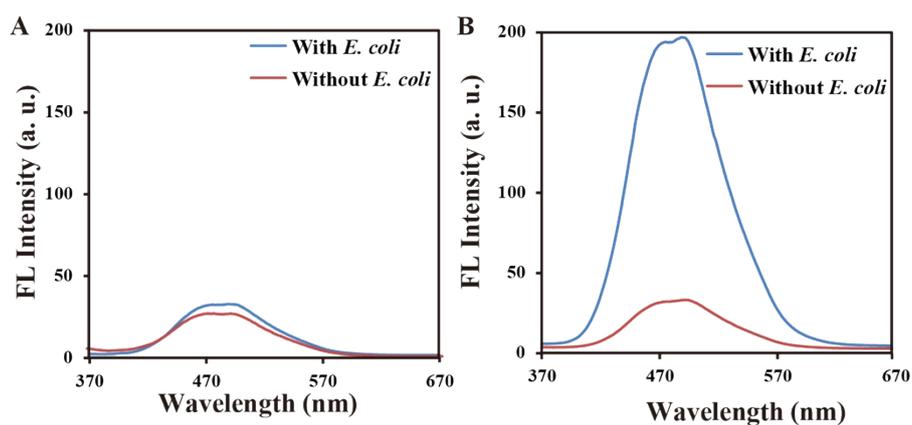


Fig. S1 Fluorescence spectra of H<sub>2</sub>O/DMSO (98:2, v/v) solution of TPE-SDS and TPE-DTAB without (blue line) and with (red line) of *E. coli*.

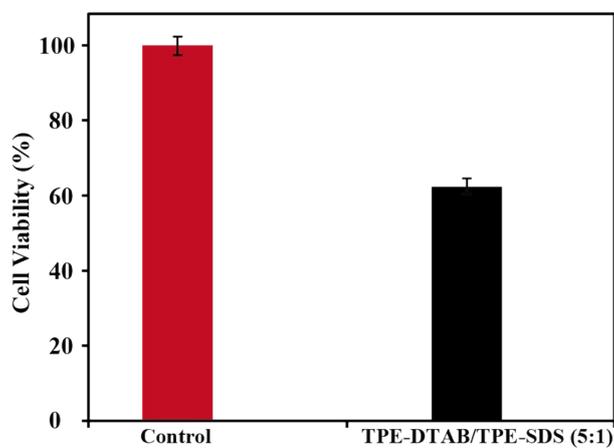


Fig. S2 Cell viability of HeLa cells incubated with TPE-DTAB/TPE-SDS (5:1, black column). Red column represent untreated cells as control group.

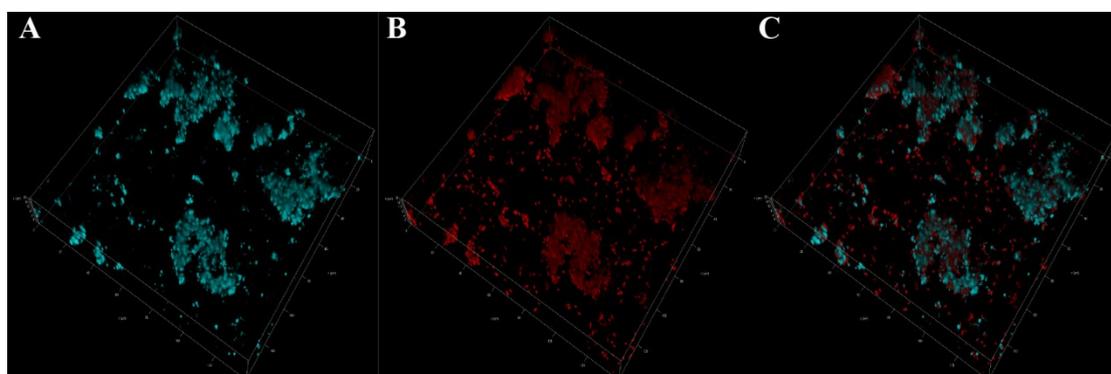


Fig. S3 3D representation of TPE-DTAB/TPE-SDS system (5:1) and *E. coli* mixtures. (A) cyan channel image; (B) red channel image; (C) the overlay image.

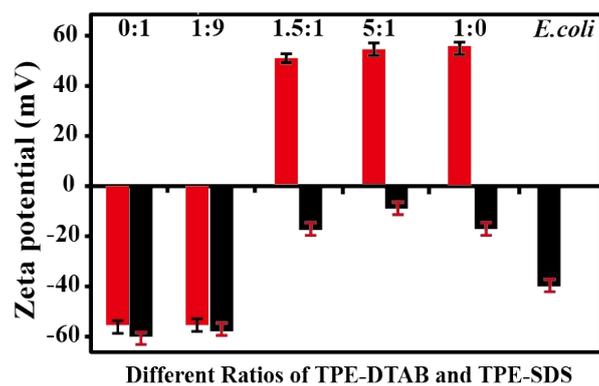


Fig. S4 Zeta potential values of *E. coli* cells (black columns) in the absence and presence of TPE-DTAB/TPE-SDS systems with ratio of 0:1, 1:9, 1:1.5, 5:1, and 1:0. Red columns represent the zeta potential values of 5 individual TPE-DTAB/TPE-SDS systems.

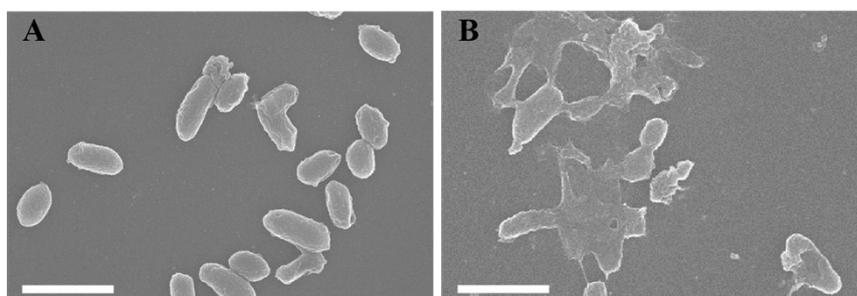


Fig. S5 SEM images of *E. coli* (A) before incubation and (B) after incubation with TPE-DTAB/TPE-SDS system with ratio of 5:1. Scale bar: 2  $\mu\text{m}$ .