Supporting Information

Photocatalytic anti-bioadhesion and bacterial deactivation on nanostructured iron oxide films

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Fig. S1 (a) Schematic setup for anodization of steel electrode. (b) Time dependence of electrochemical potential vs. Hg/HgO reference measured on electrode when anodized in 13 M NaOH solution at 3 V for 60 min. (c) Digital photos of the electrolyte prior to anodization and after 1 h of anodization.
Fig. S2 The growth curve of *pseudomonas aeruginosa* bacteria in (a) LB medium and (b) PBS, where the red arrow indicates the bacteria harvested at 40 h with a concentration of $7.5 \times 10^9$ CFU/mL.
Fig. S3 Evolution of open-circuit potential (OCP) of BS and the anodized samples (A-2, A-10, A-30 and A-60) in PBS solution as a function of time.
Fig. S4 The absorbance intensity ($\lambda = 470$ nm) of resulted XTT-formazan in *pseudomonas aeruginosa* LB culture adding 100 μM XTT as a function of time. The estimated yield rate of $O_2^{-}$ is about 3.74 μM/h.