A Nuclease-functionalized Poly (Styrene-b-isobutylene-b-styrene) Surface with Anti-Infection and Tissue Integration Bifunctions

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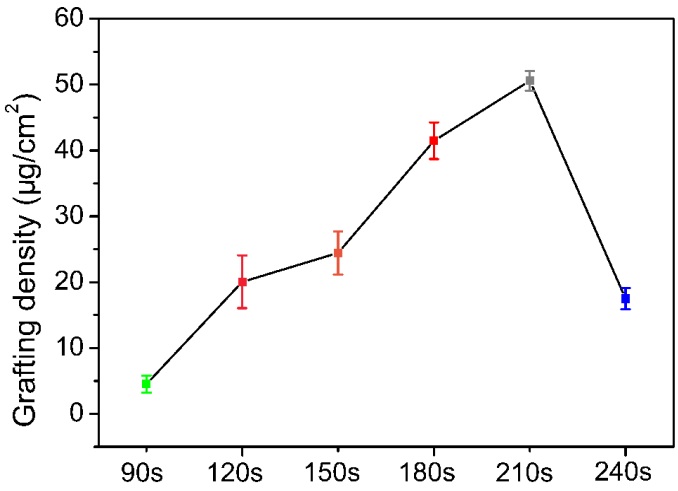


Figure S1. Grafting density of PCA versus UV irradiation time (BP concentration: 1.0 wt.%; monomer concentration: 0.2 wt.%).

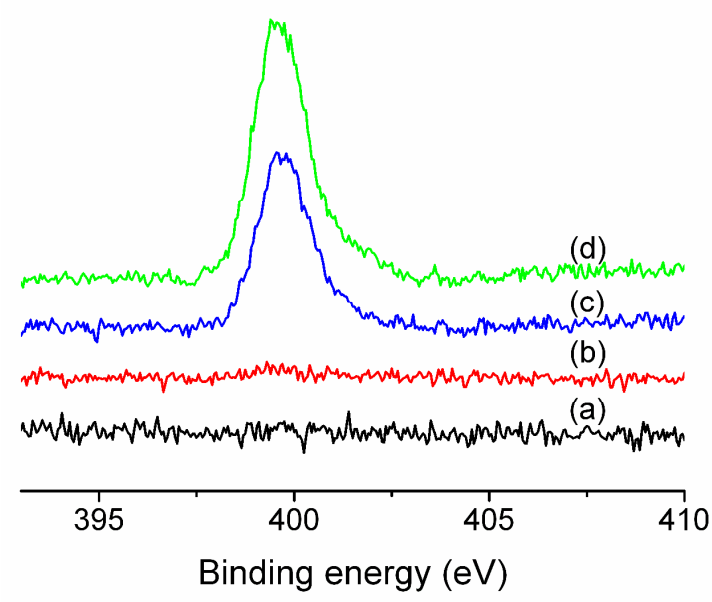


Figure S2. N_{1s} core-level spectra of the samples: (a) virgin SIBS; (b) SIBS-g-PCA; (c) SIBS-g-PCA-DNase; (d) SIBS-g-PCA-RNase.

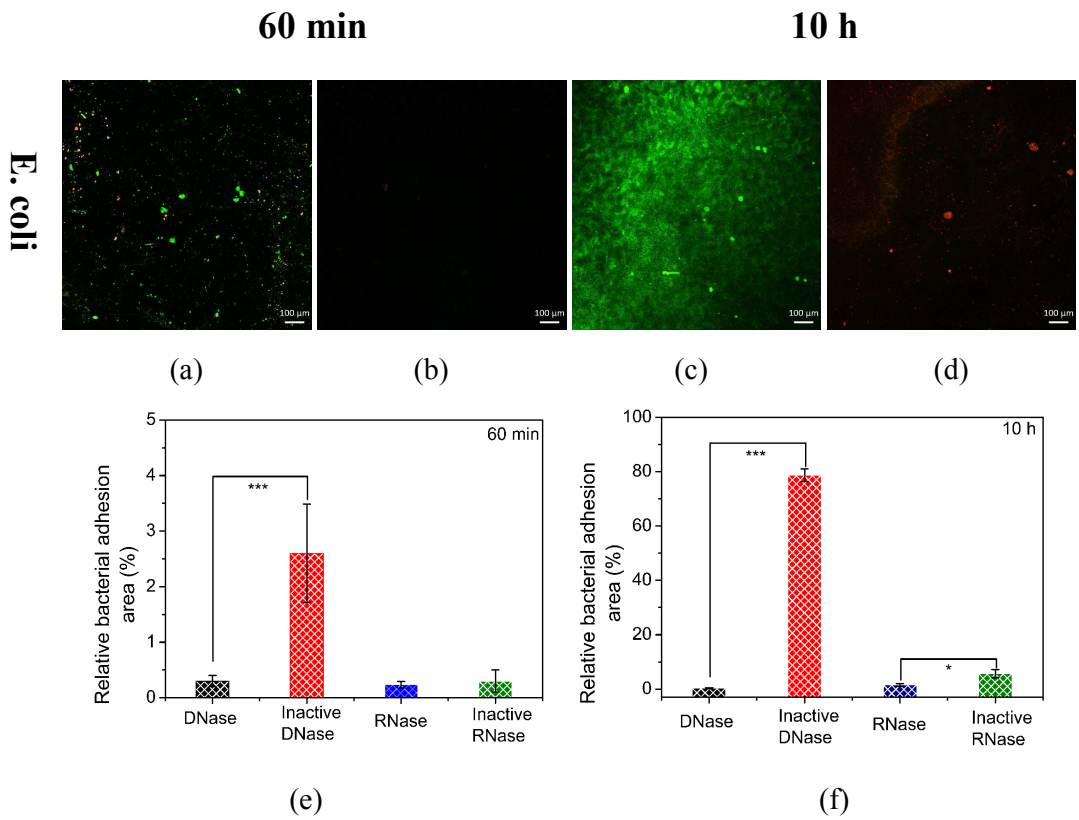


Figure S3. Representative CLSM images of E. coli adhesion (60 min) and biofilm formation (10 h) on inactive DNase- (a, c) and RNase- (b, d) functionalized samples. Percentage of occupied area of E. coli on various substrates after incubation in growth medium for 60 min (e) and 10 h (f). Significant difference (* $p < 0.05$; ** $p < 0.01$; *** $P < 0.001$).

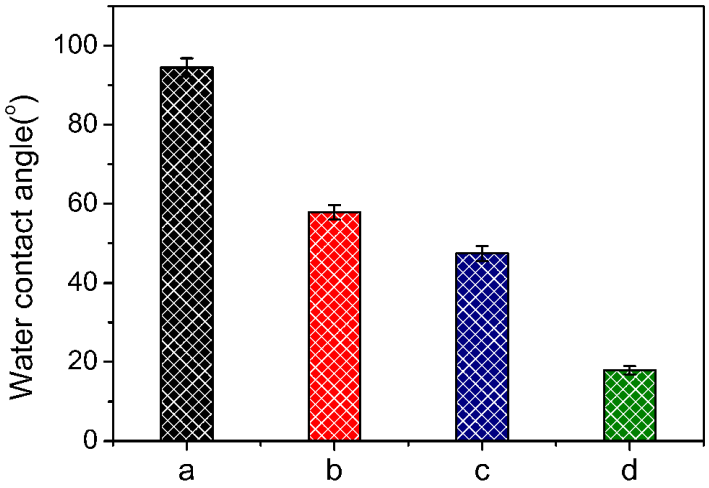
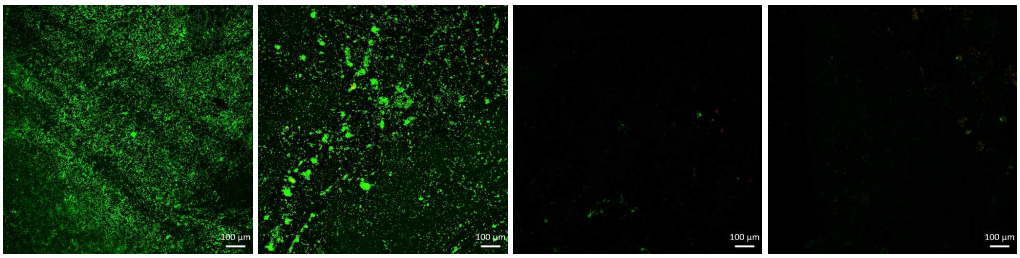


Figure S4. Water contact angles of (a) virgin SIBS, (b) SIBS-*g*-PCA, (c) SIBS-*g*-PCA-DNase, and (d) SIBS-*g*-PCA-RNase.



(a) (b) (c) (d)

Figure S5. Representative CLSM images of S. aureus adhesion on (a) virgin SIBS, (b) SIBS-*g*-PCA, (c) SIBS-*g*-PCA-DNase, and (d) SIBS-*g*-PCA-RNase surfaces after pre-treatment with 1.0 mg mL^{-1} of BFg protein solution.

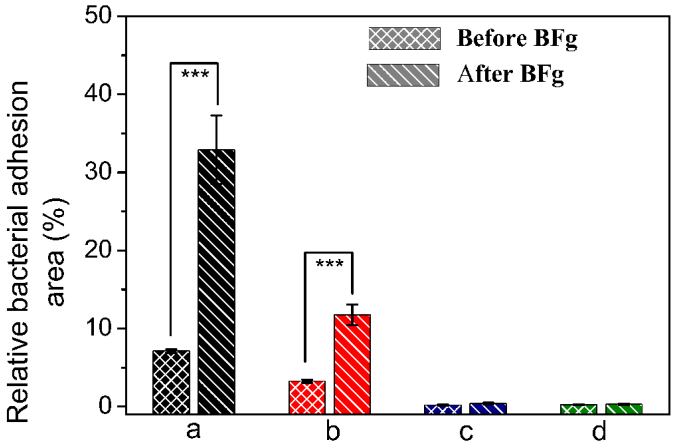


Figure S6. Percentages of bacteria area of S. aureus on various substrata before and after pre-treatment with 1.0 mg mL^{-1} of BFg protein solution for 2h at 37 ^{o}C. Significant difference (*** $P < 0.001$).