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Supporting Information

One-Step Hydrophobicization of Tannic Acid for Antibacterial Coating on Catheters to Prevent Catheter-Associated Infections

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Figure S1. UV-vis curves of TA at different pH values.



Schemes S1. Schematic illustration of formation of hydrophobic TA.



Figure S2. Chemical structure of modified hydrophobic TA with different QAC. (a). FTIR and (b). ¹H NMR spectra of different TQA.



Figure S3. Solubility of TQA in water and different organic solvents.



Figure S4. ¹H NMR spectra of TBA. The degree of combination between BAC and TA was obtained through calculating the ratio of ^hH and ^aH integration.

Molar ratio of TA to BAC	1:1	1:5	1:10	1:15	1:20	1:25	1:30
Degree of combination (%)	17.6	21.6	21.2	21	21.5	21.4	21.2

Table S1. The degree of combination for BAC and TA in different mole ratios.



Figure S5. Thermo gravimetric analysis (TGA) plots of TA and TBA.



Figure S6. Static water contact angles (WAC) measurement of bare, TA and TBA coating on different substrates (Glass, PDMS, PET, TPU) were tested.



Figure S7. Surface roughness of bare and TBA coating on silicion wafer measured by 3D Optical Surface Profilers. (a) and (b): the bare silicion wafer, and (c) and (d): the TBA coating on silicion wafer.



Figure S8. Long-term stability and antibacterial ability of the TBA coated catheter in (a) 0.9% NaClsolution,(b)aqueoussolutionfor20days.