## **Supporting information**

## A universal biocompatible coating for enhanced lubrication and

## bacterial inhibition

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**Fig. S1.** FTIR spectra of DMA-MPC-PHB coating with different feeding mass ratio. DMA-MPC-PHB-1,2,3,4 denote the DMA-MPC-PHB coatings with the mass ratio of DMA:MPC:PHB of 1:1:1, 1:1:2, 1:2:1 and 1:2:2.



**Fig. S2** (A). Representative water contact angle images of 316L SS substrates and their coated surfaces. (B). Bacterial inhibition property of bare and coated 316L SS. DMA-MPC-PHB-1,2,3,4 denote the DMA-MPC-PHB coatings with the mass ratio of DMA:MPC:PHB of 1:1:1, 1:1:2, 1:2:1 and 1:2:2. (C). Quantification of the colony of *E. coli* on different substrates. Data are presented as mean  $\pm$  SD and analyzed by one-way ANOVA, \*p < 0.05, \*\*p < 0.01 (DMA-MPC-PHB coated samples vs bare surface).



**Fig. S3.** (A). High-resolution narrow XPS narrow spectra of N signal and P signal on DMA-MPC-PHB-coated samples. (B). SEM images of bare and DMA-MPC-PHB-coated 316L/PDMS/ceramic.



Fig. S4. Water contact angle of bare and terpolymer-coated 316L/PDMS/ceramic.