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Electronic Supplementary Information

Substrate independent coating formation and anti-biofouling performance improvement of mussel inspired polydopamine

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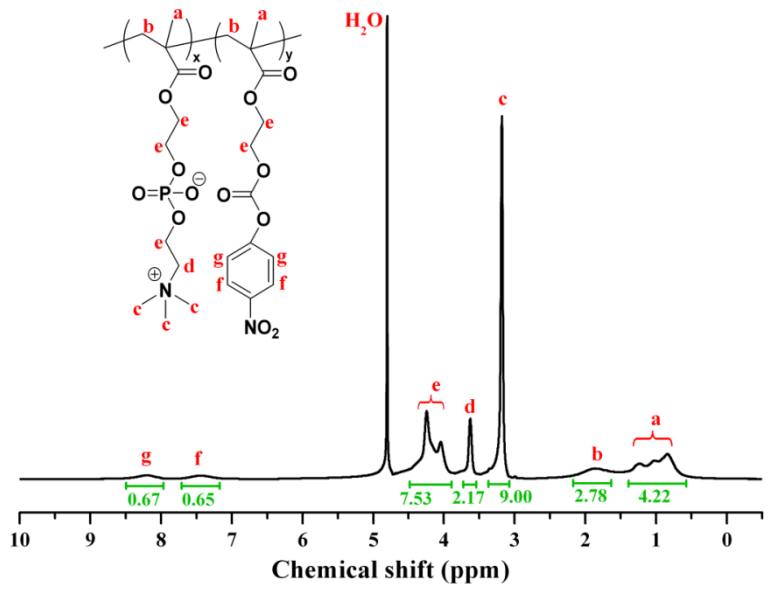

Fig. S1 The ^{1}H NMR spectra of poly(MPC-co-NPCEMA) (PMEN). The molar fraction of MPC units in the PMEN polymer was determined to be 75% by ^{1}H NMR spectroscopy, using the signals at 7.45 and 8.22 ppm attributed to protons on benzene skeleton of the NPCEMA units and 3.28 ppm attributed to the $–N^{+}(CH_3)_3$ protons of the MPC units. The molecular weight measured by GPC was ~6000 g/mol.

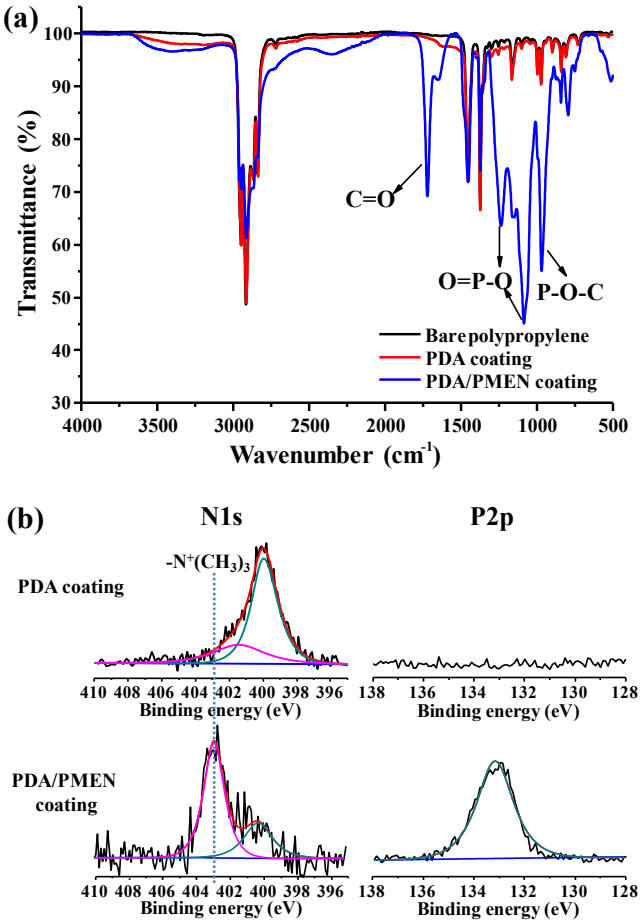

Fig. S2 (a) ATR-FTIR spectra of PDA and PDA/PMEN coatings on PP substrates. (b) High resolution N1s and P2p XPS spectra of PDA and PDA/PMEN coatings on glass substrates.

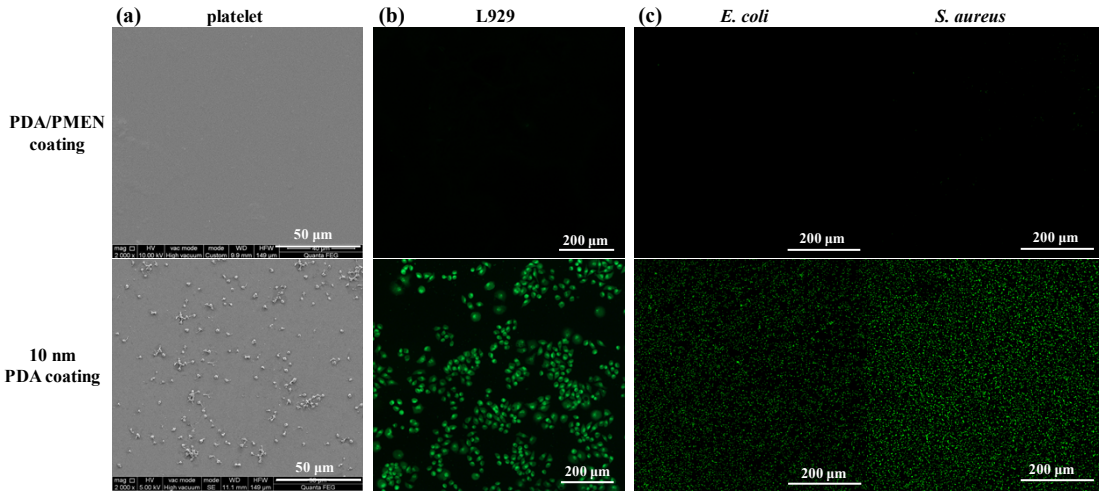

Fig. S3 (a) SEM images of adherent platelets, (b) Inverted fluorescence microscopic images of attached L929 fibroblast cells, (c) CLSM fluorescence microscopic images of attached *E. coli* and *S. aureus* on PDA/PMEN and 10 nm thick PDA coatings. The PDA coatings were prepared by immersing glass substrates in freshly prepared dopamine solutions (2 mg/ml in 10 mM Tris/HCl buffer at pH 8.5) for 3 hours and rinsing thoroughly with Millipore water. The PDA/PMEN coatings were fabricated by immersing the PDA coatings in 5 mg/ml PMEN in ethanol at 60°C for 5 hours.