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Electronic Supplementary Information

Preparation and characterizations of poly(2-methyl-2-oxazoline) based antifouling coating by thermally induced immobilization

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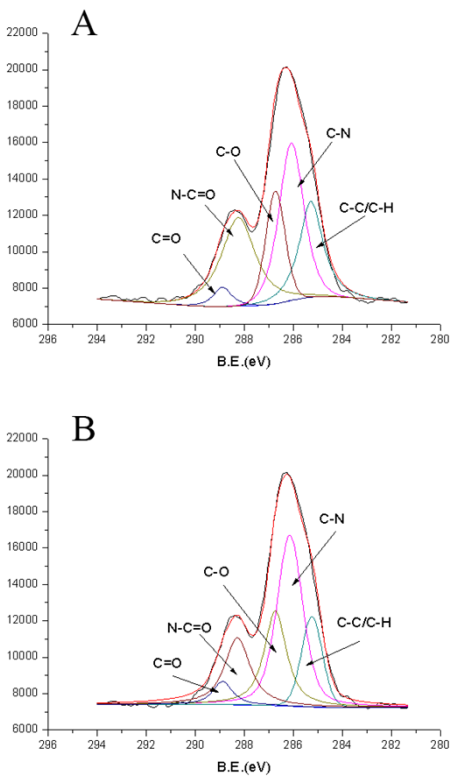

Fig S1. The high-resolution C1s for PMOXA-$r_{3/1}$-GMA-immobilized surface performed before (A) and after (B) immersing the coated surface 3 weeks in PBS at room temperature.

Preparation of PEGMA-r-GMA

Poly(ethylene glycol) methyl ether methacrylate (PEGMA, Mn=1100) (1.1 g, 1 mmol), GMA (35 μL, 0.25 mmol), and AIBN (4.1 mg, 0.025 mmol) were mixed in 10 mL of isopropanol in a 20 mL dried glass tube equipped with a magnetic stir bar. The mixture was degassed via three freeze–pump–thaw cycles and placed in an oil bath at 70 °C for 24 h with vigorous stirring. The polymerization was quenched by cooling the flask with cold water and exposure to air. Subsequently, the solvent was extracted under reduced pressure, 50 mL of deionized water was added. The mixture was dialyzed in deionized water using a dialysis membrane with a molecular mass cut-off 3000 for about 3 days in order to get rid of low molecular substances. Then the copolymer was obtained by freeze-drying from aqueous solution. ^{1}H NMR (300 MHz, D_2O/TMS) δ (ppm): 4.30–3.78 (2H, C*H*$_2$CHCH$_2$O), 3.21 (1H, CH$_2$C*H*CH$_2$O), 2.82–2.61 (2H, CH$_2$CHC*H*$_2$O), 1.94–1.87 (2H, C*H*$_2$C(CH$_3$)), 1.30–0.60 (3H,CH$_2$C(C*H*$_3$)), 2.63, 2.84(2H, -CH$_2$O-), 3.70-3.35(PEO), 3.25 (3H, C*H*$_3$OCH$_2$)

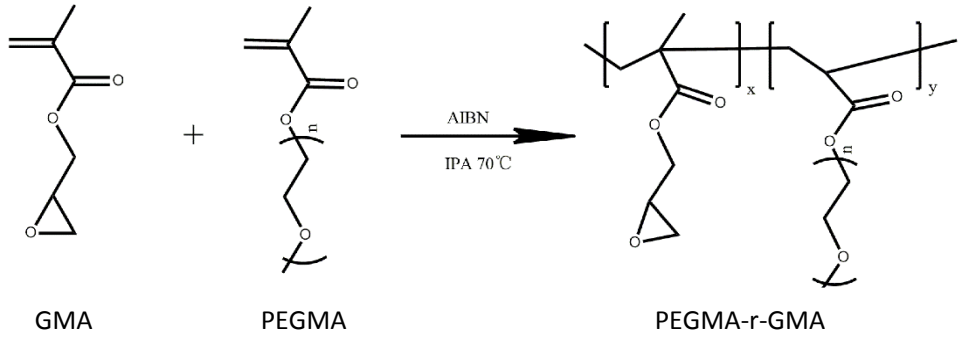

Fig S2. Synthesis of PEGMA-r-GMA

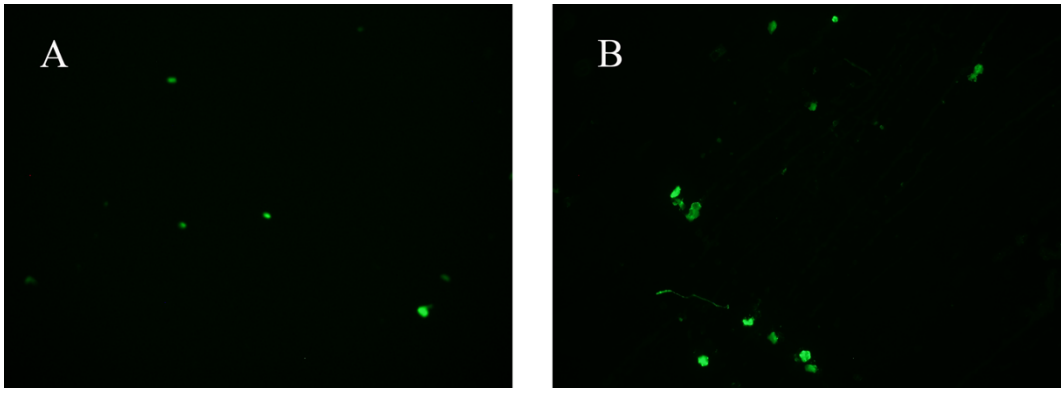

Fig S3. Fluorescence microscopy intensity results of BSA–FITC incubated PEGMA-r$_{3/1}$-GMA-immobilized surface performed before (A) and after (B) immersing the coated surface one week in PBS at room temperature.