Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supplementary Information

Photoinduced immobilization of 2-methacryloyloxyethyl phosphorylcholine polymers with different molecular architectures on poly(ether ether ketone) surface

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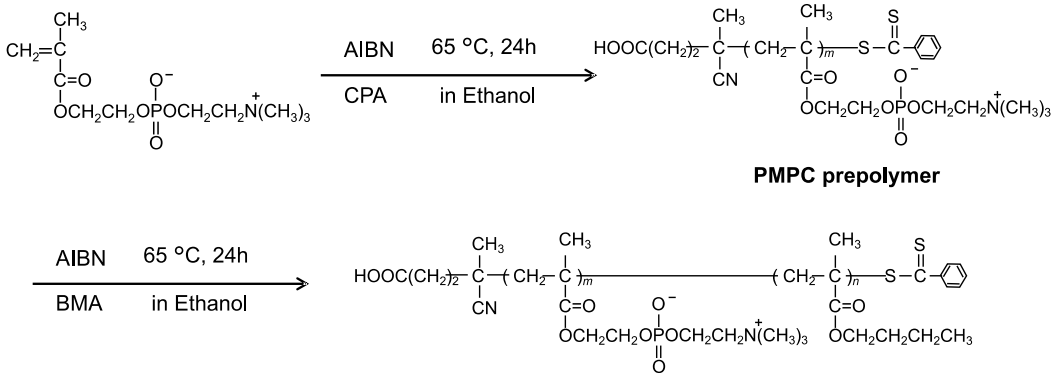
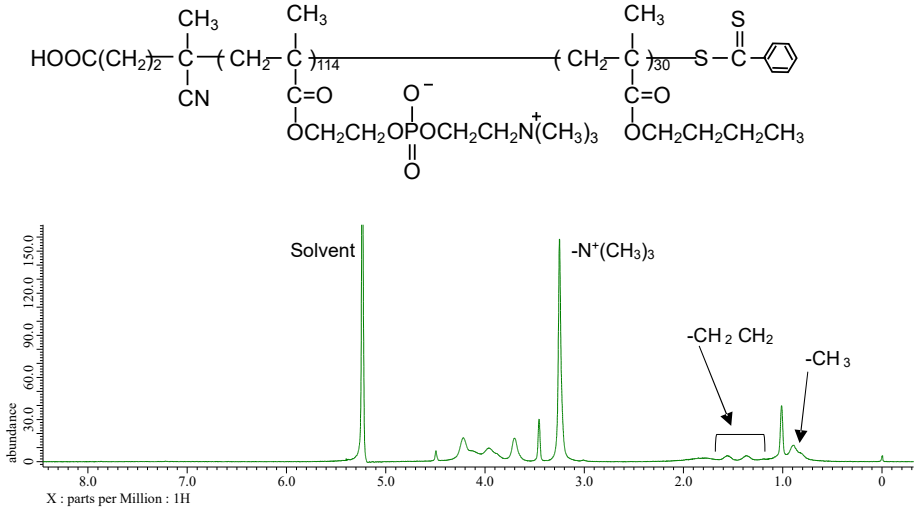
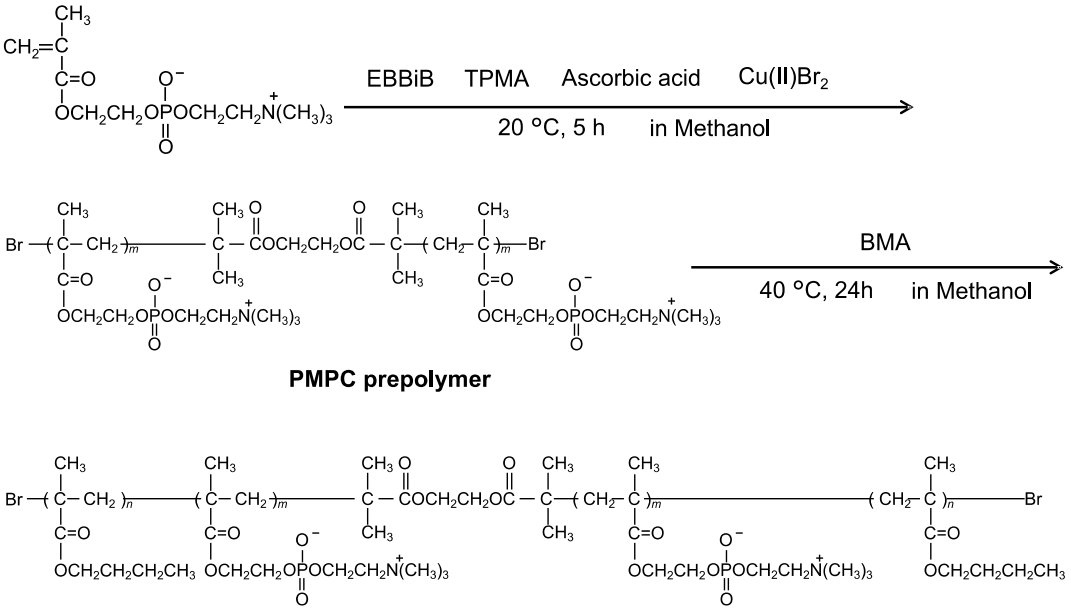


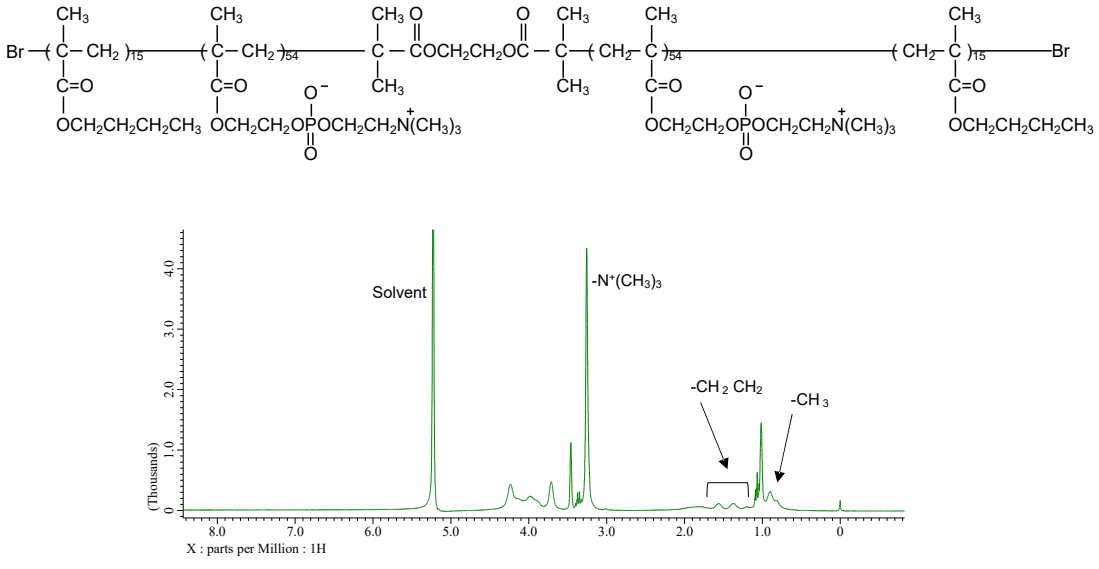
Supplement figure 1. Synthesis scheme of di-PMB.



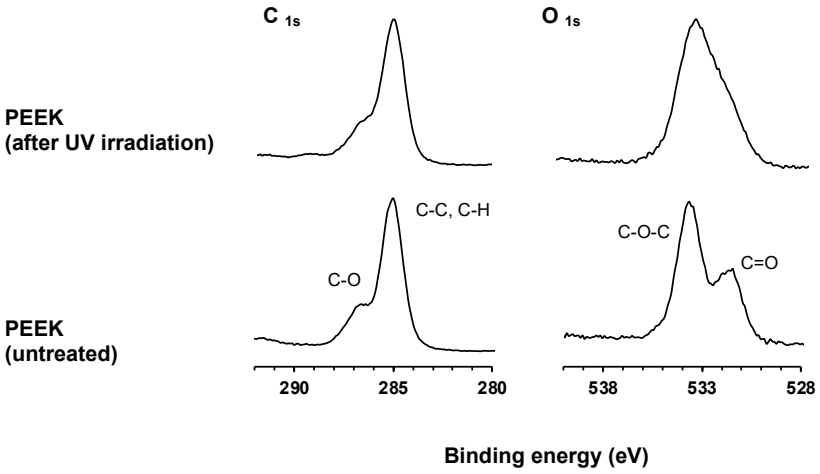
Supplement figure 2. NMR spectrum of di-PMB.



Supplement figure 3. Synthesis scheme of tri-PMB.



Supplement figure 4. NMR spectrum of tri-PMB.



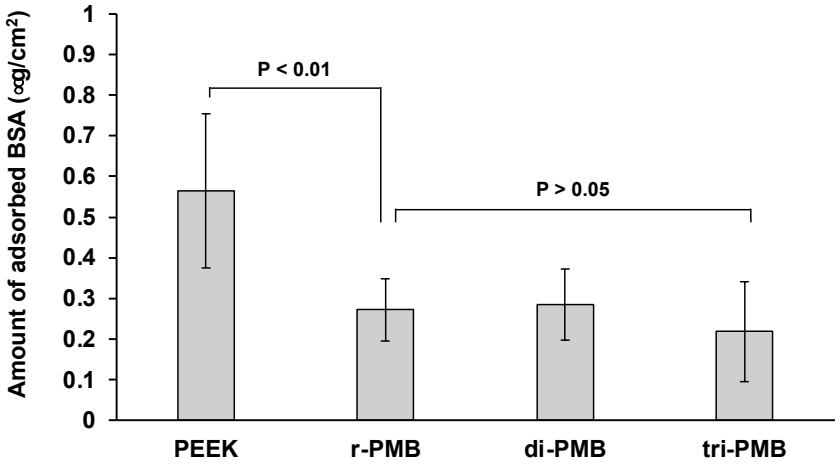
Atomic concentration	C	O	O/C
PEEK (untreated)	84.8	15.2	0.18
PEEK (after UV irradiation	81.3	18.7	0.23

Supplement figure 5. XPS spectra of untreated and UV irradiated PEEK surfaces.

Protein adsorption experiment

The amount of adsorbed protein was determined using a micro bicinchoninic acid (BCA) protein assay kit (Micro BCA Protein Assay Kit, #23235, Thermo Fisher Scientific Inc., IL, USA). After the photoreaction of the PMBs, the back side of the PEEK substrates was covered with a polyimide tape and immersed in PBS overnight to allow for surface equilibration. The samples were then exposed to BSA in PBS (4.5 mg/mL) for 2 h at 37 °C. The weakly adhered BSA was removed from the surface by immersing the substrate in PBS 50 times, and then the polyimide tape was removed from the samples. Each sample was transferred to a 24-well plate, and the SDS solution (0.5 mL of 1.0 wt%) was added. After sonication for 20 min, SDS (150 μL) and BCA reagent (150 μL) solutions were mixed, and the absorbance at 562 nm was measured using a microplate reader (Varioskan™, Thermo

Fisher Scientific, MA). The concentration of BSA in the solution was determined using a calibration curve. Five specimens of each PMB-modified PEEK sample were prepared.



Supplement figure 6. The amount of BSA adsorbed on PEEK substrates.