

Supplement Figures

Title: A biostable, anti-fouling zwitterionic polyurethane-urea based on PDMS for use in blood-contacting medical devices

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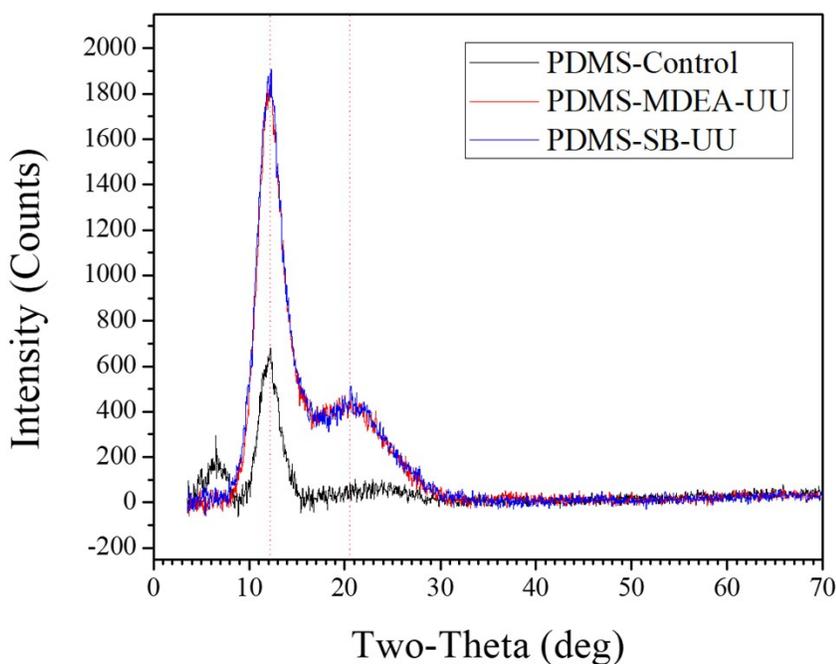
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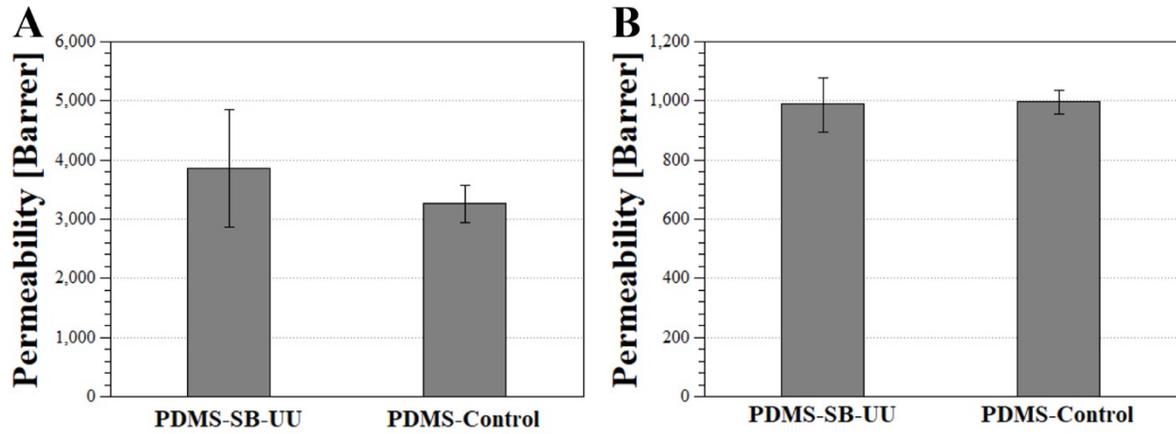
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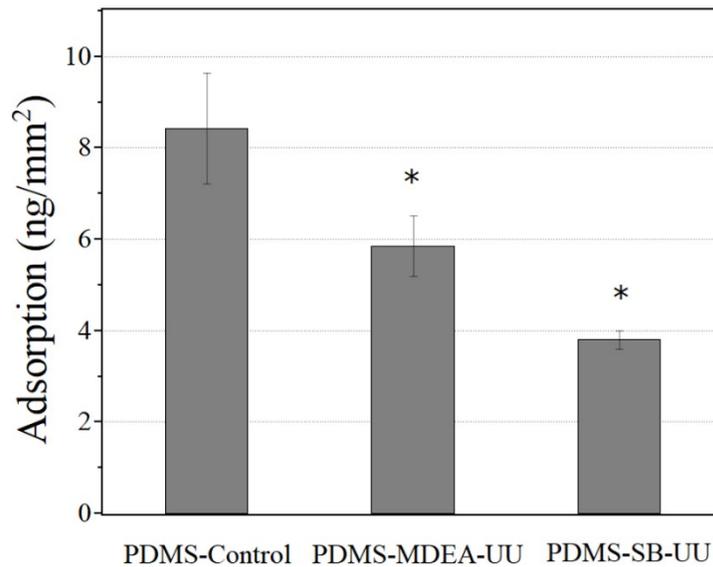
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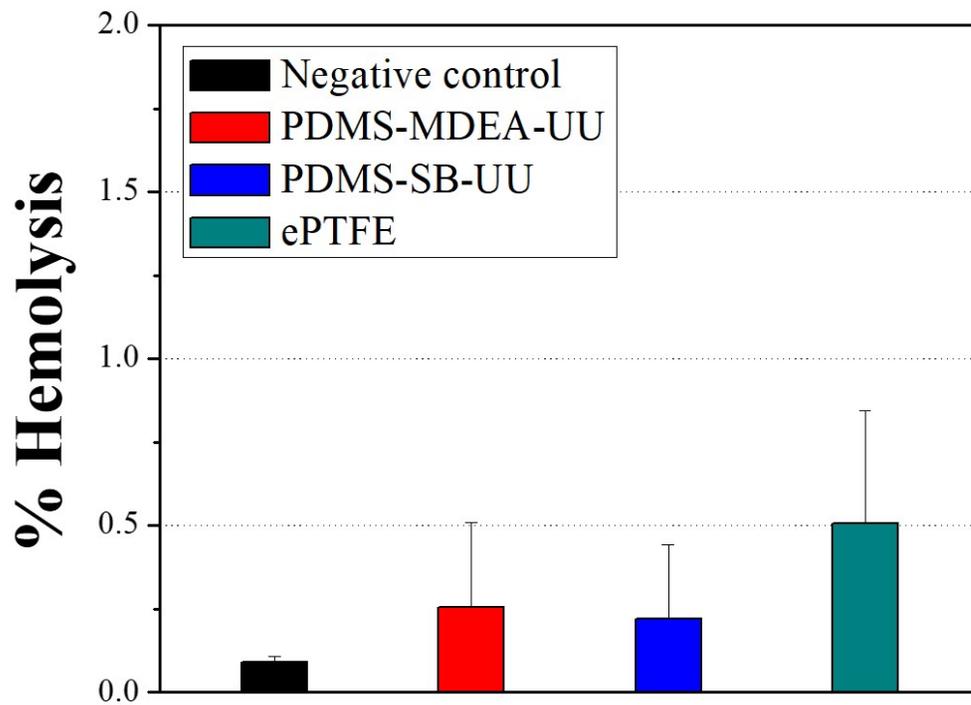
Supplement Fig. 1. X-ray diffraction (XRD) spectra of (A) control PDMS, (B) PDMS-MDEA-UU, and (C) PDMS-SB-UU solvent-cast films.



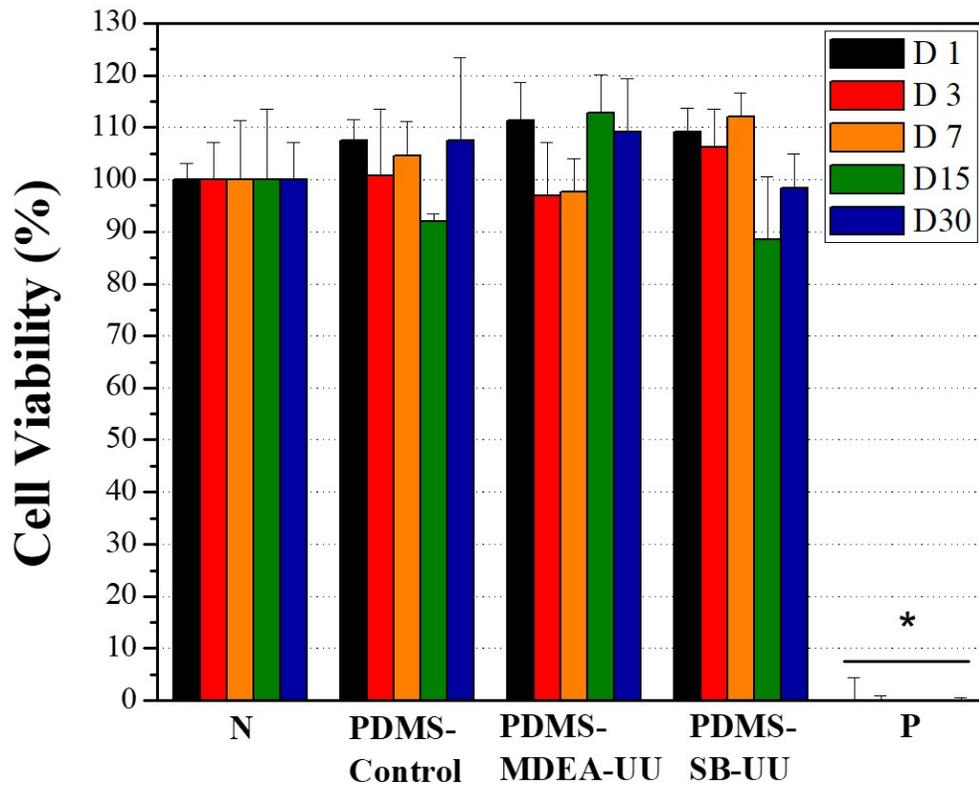
Supplement Fig. 2. *In vitro* (A) CO₂ and (B) O₂ permeability test using PDMS-SB-UU and PDMS-control films (n= 4).



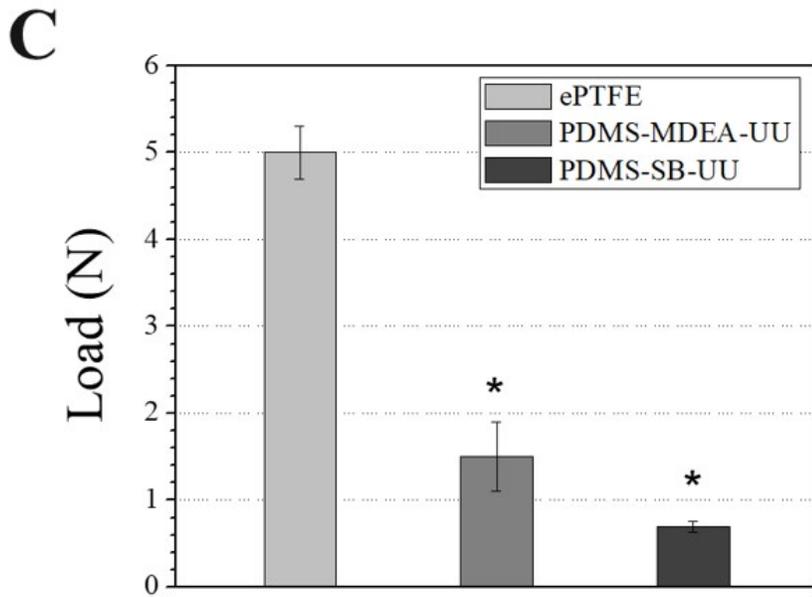
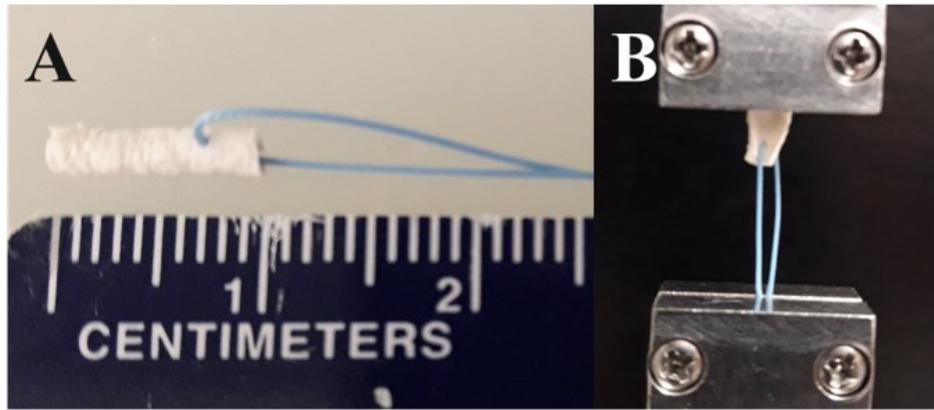
Supplement Fig. 3. Protein (fibrinogen) adsorption assay of (A) PDMS-control, (B) PDMS-MDEA-UU, (C) PDMS-SB-UU films (n=3).



Supplement Fig. 4. Hemolysis % of negative control, PDMS-MDEA-UU film, PDMS-SB-UU film, and ePTFE graft against whole ovine blood (8 g/dL of hemoglobin) (n=3).

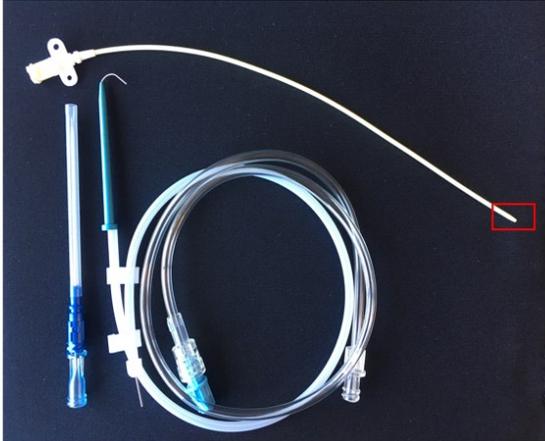


Supplement Fig. 5. *In vitro* cytotoxicity of PDMS-control, PDMS-MDEA-UU, and PDMS-SB-UU films tested with rat aorta smooth muscle cells (rSMCs). MTS assay was conducted for analyzing cell viability. Data are normalized to the negative control and expressed as mean \pm SD (n = 3). Negative control (N) includes cells cultured in the medium only. To induce cell death in positive control (P), 1 M acrylamide dissolved in regular cell culture medium was used.

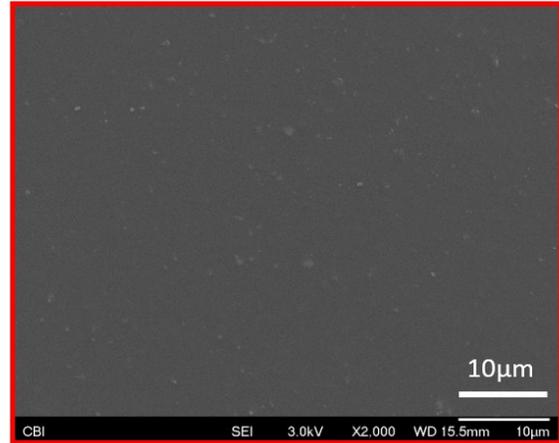


Supplement Fig. 6. Suture retention test of electrospun PDMS-SB-UU conduit. Ti-Cron™ coated Braided polyester (5x18”) was sutured at a distance of 3 mm from the sample’s (thickness: 300 μm) free end. Test Speed: 25 mm/min (n=3).

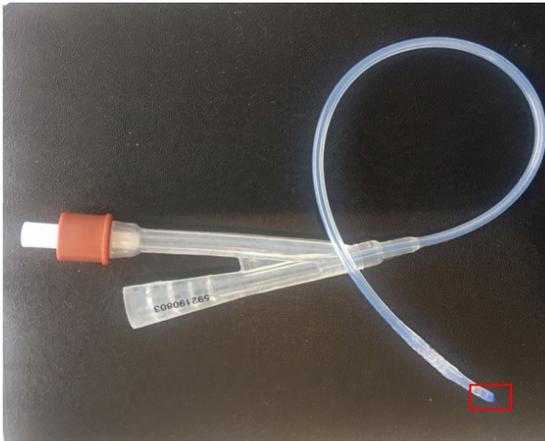
(A) Polyurethane catheter



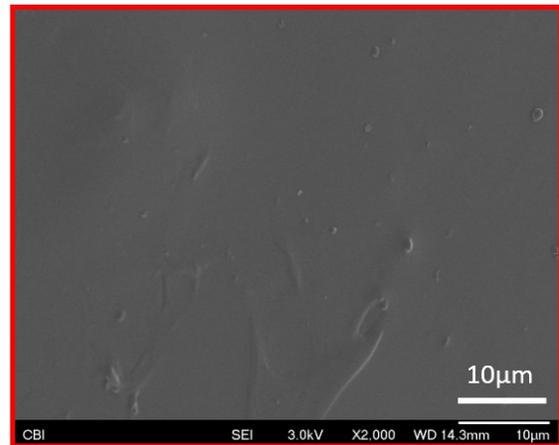
PDMS-SB-UU coated



(B) Silicone catheter

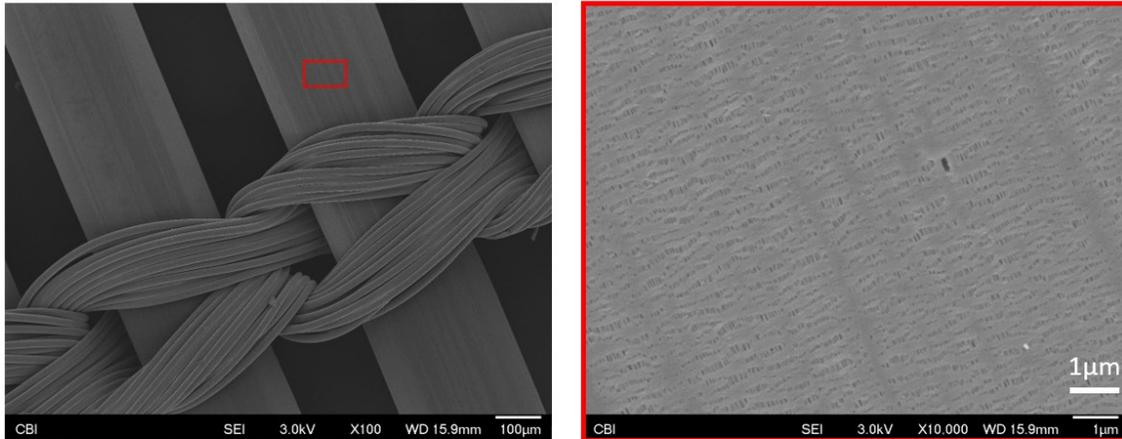


PDMS-SB-UU coated

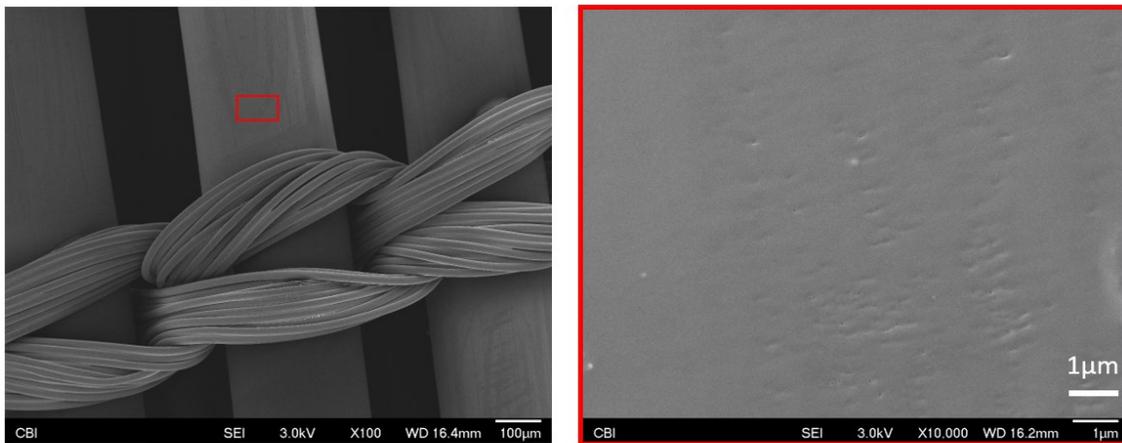


Supplement Fig. 7. (A) A central venous catheterization kit with polyurethane indwelling catheter and an electron micrograph of PDMS-SB-UU coated the polyurethane catheter surface. (B) A two-way silicone foley catheter and an electron micrograph of PDMS-SB-UU coated on the silicone catheter surface.

(A) Polypropylene Hollow fiber control



(B) PDMS-SB-UU coated



Supplement Fig. 8. Electron micrographs of (A) commercial polypropylene hollow fiber mat and the high magnification image of the hollow fiber surface of (B) PDMS-SB-UU coated polypropylene hollow fiber mat and the high magnification image of the coated hollow fiber surface.