

Figure S1. Visible absorption spectra for acetone/ethanol (50:50) solution with a Victoria Blue B concentration of 8 10<sup>-5</sup> mol l<sup>-1</sup> (blue line, pH value = 5.7) and surface-dyed polymer samples of PEU with Victoria Blue B (sd-PEU) and EBP with Victoria Blue B (sd-EBP). Surface treatment with a lower concentration of dye (7.8 10<sup>-3</sup> mol l<sup>-1</sup>) gave sorption percentages of 0.08 wt% (sd-PEU, dashed cyan line) and 0.11 wt% (sd-EBP, dotted cyan line); a higher concentration of dye (3.2 10<sup>-2</sup> mol l<sup>-1</sup>) resulted in Victoria Blue B sorption percentages of 0.17 wt% (sd-PEU, dashed blue line) and 0.18 wt% (sd-EBP, dotted blue line), at which absorbances exceeded the absorption edge (red line). The inset (top right) illustrates the bathochromic shift in sd-PEU and sd-EBP towards Victoria Blue B solution. All spectra were recorded at 23 °C.



Figure S2. DSC thermograms of the 2nd heating scan for neat PEU (black line) and surface-dyed PEU (sd-PEU, dotted blue line) (a), and for neat EBP (black line) and surface-dyed EBP (sd-EBP, dotted blue line) (b). The sorption percentages of Victoria Blue B were 0.17 wt% with PEU and 0.18 wt% with EBP, respectively.