

Support Information

1. SEM pictures of PPU prepared with different TDI feeding rate

In this set of polymerization, PPU was prepared with different TDI feeding rate, varied from $10 \text{ mL}\cdot\text{h}^{-1}$ to $30 \text{ mL}\cdot\text{h}^{-1}$. All polymerization was carried out at $30 \text{ }^\circ\text{C}$, with stirring rate of 300 r min^{-1} , total TDI of 10 wt% and in the solvent of $\text{H}_2\text{O}/\text{acetone}$ mass ratio at 3/7. SEM photos of the corresponding samples are given here below in Fig. S1.

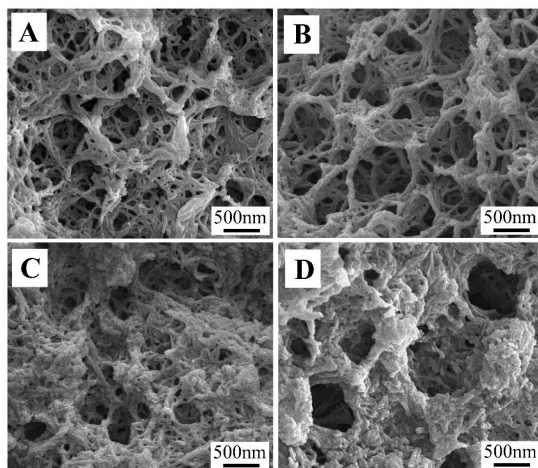


Fig. S1 SEM photos of PPU prepared with varied TDI feeding rate (A, $10 \text{ mL}\cdot\text{h}^{-1}$; B, $20 \text{ mL}\cdot\text{h}^{-1}$; C, $30 \text{ mL}\cdot\text{h}^{-1}$; D, One shot)

2. Pore size and distribution of PPU prepared at different polymerization temperature

To study the influence of polymerization temperature on the porous properties of PPU, a set of polymerization was carried out at varied temperature from $0 \text{ }^\circ\text{C}$ to $50 \text{ }^\circ\text{C}$ while keeping the other experimental unchanged ($10 \text{ wt}\%$ of TDI, feeding rate at $20 \text{ mL}\cdot\text{h}^{-1}$ and $\text{H}_2\text{O}/\text{acetone}$ mass ratio of 3/7 for the solvent). Pore size and distribution of PPU thus prepared are displayed here below in Fig. S2.

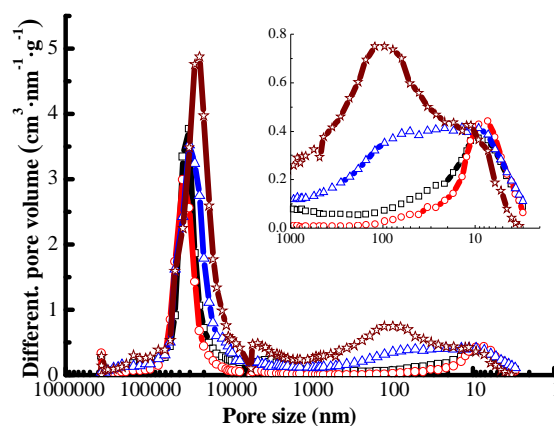


Fig. S2 Pore size and size distribution of PPU prepared at different polymerization temperature ($0 \text{ }^\circ\text{C}$, ; $20 \text{ }^\circ\text{C}$, ; $30 \text{ }^\circ\text{C}$, ; $50 \text{ }^\circ\text{C}$,)