Electronic Supplementary Material (ESI) for Polymer Chemistry.


# Supplementary Information for

## Synthesis and Properties of Temperature-Sensitive and Chemically Crosslinkingable Poly(ether-urethane) Hydrogel

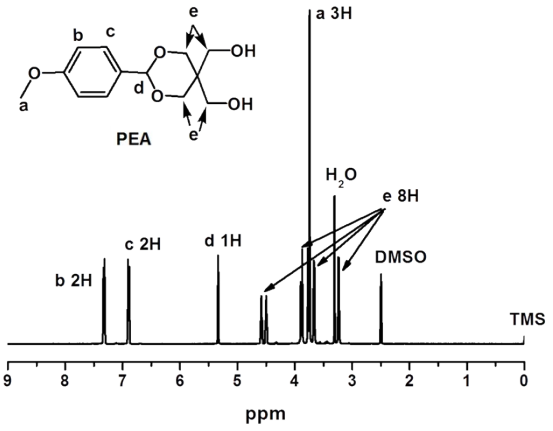


Figure S1. $^{1}$H-NMR spectrum of MAP.

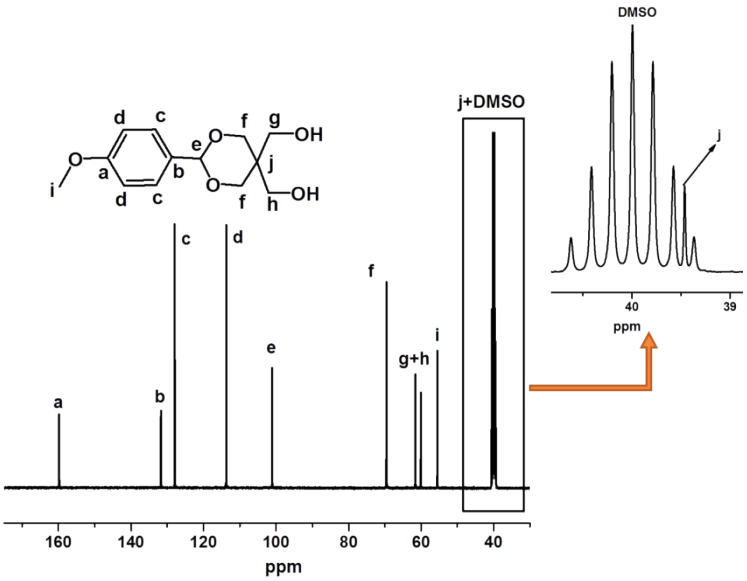


Figure S2. $^{13}$C-NMR spectrum of MAP.

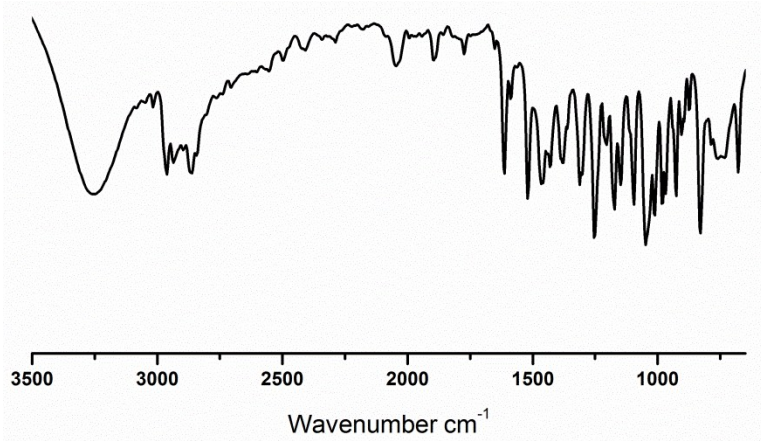


Figure S3. FT-IR spectrum of MAP.

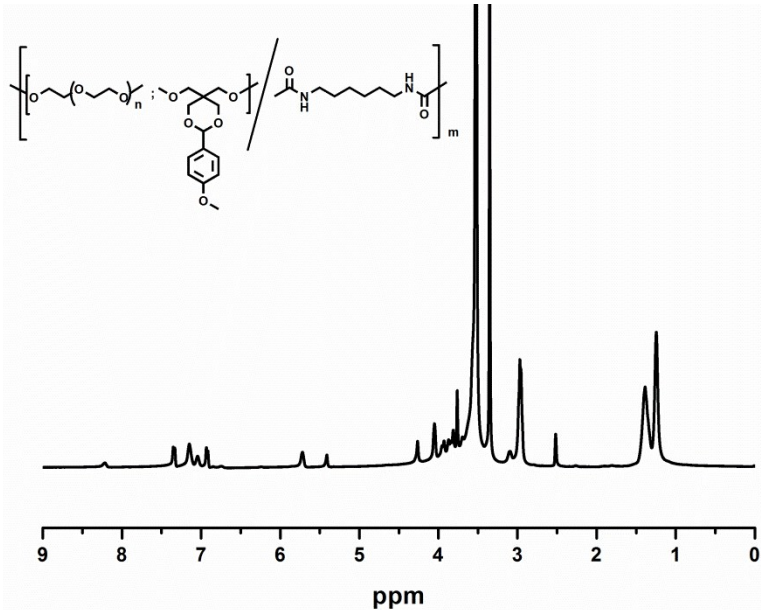


Figure S4. $^{1}$H-NMR spectrum of PEU-MAP.

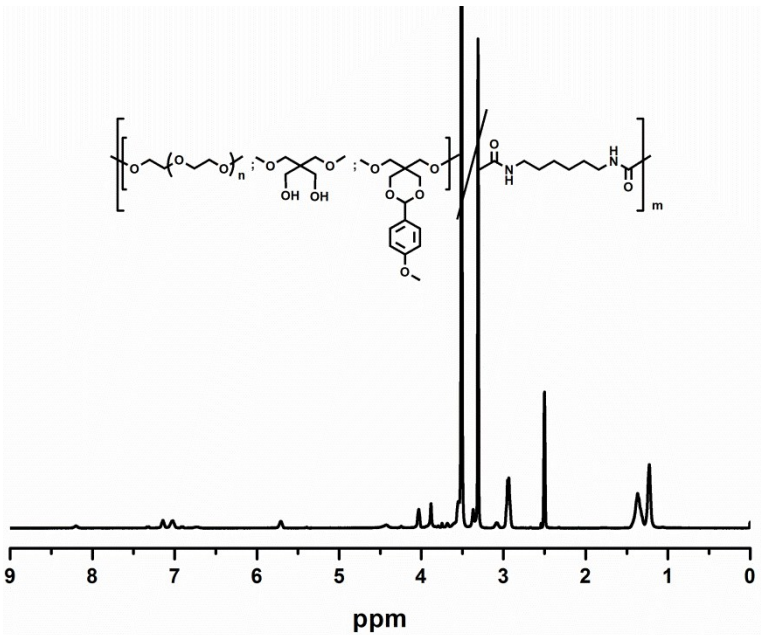


Figure S5. $^{1}$H-NMR spectrum of hydrolysed PEU-MAP.

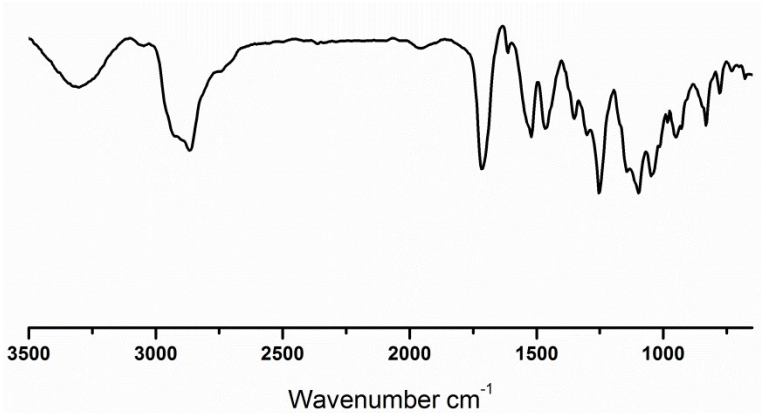


Figure S6. FT-IR spectrum of hydrolysed PEU-MAP.

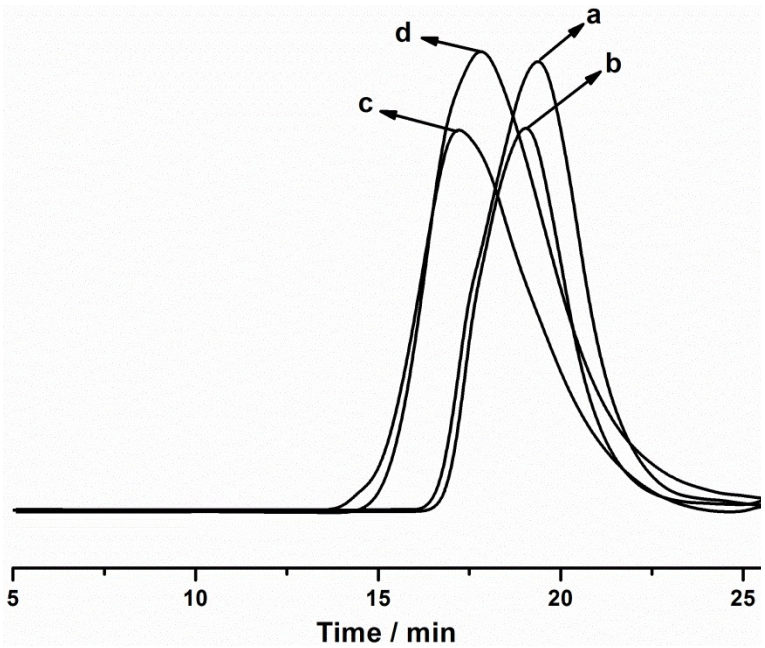


Figure S7. Stacked SEC spectra of PEU1000-MA (a), PEU2000-MA (b), PEU1000-MAP (c), and PEU2000-MAP (d).

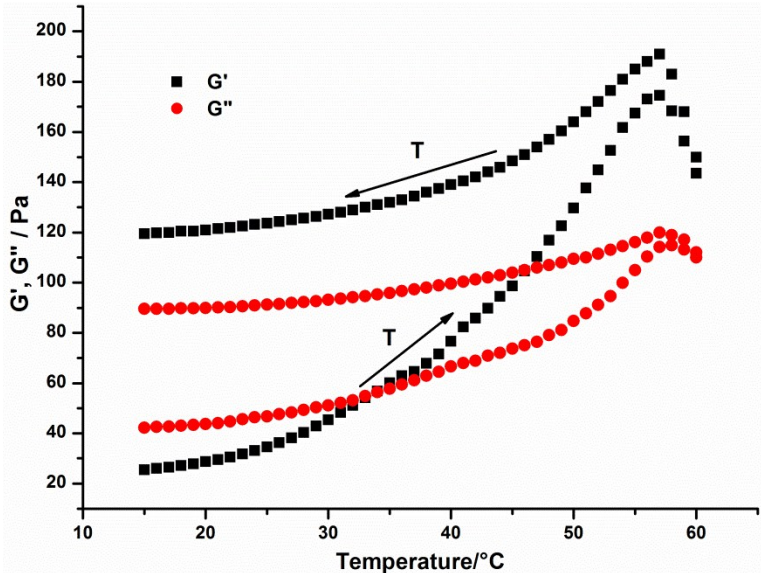


Figure S8. Rheology properties of PEU2000-100MA solutions warming from 15 to 60 °C and then cooling from 60 to 15 °C without any initiator.

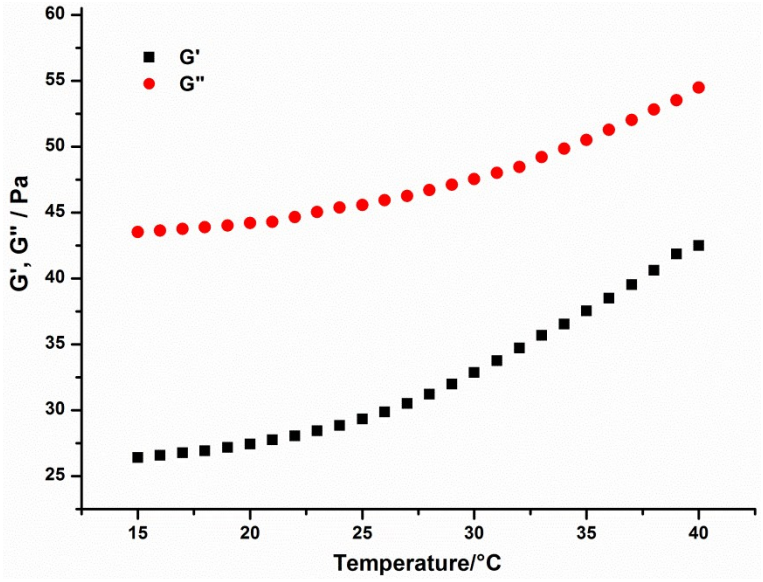


Figure S9. Rheology properties of PEU1000-100MA solutions at different temperature.

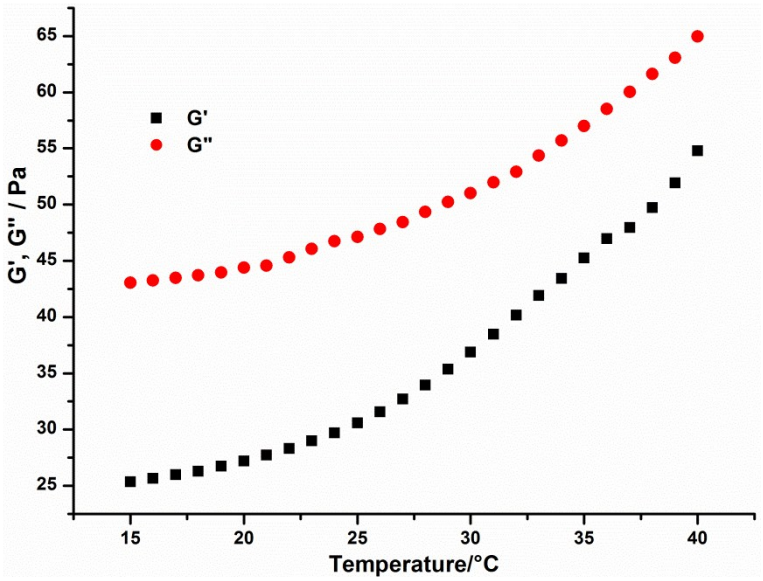


Figure S10. Rheology properties of PEU2000-56MA solutions at different temperature.

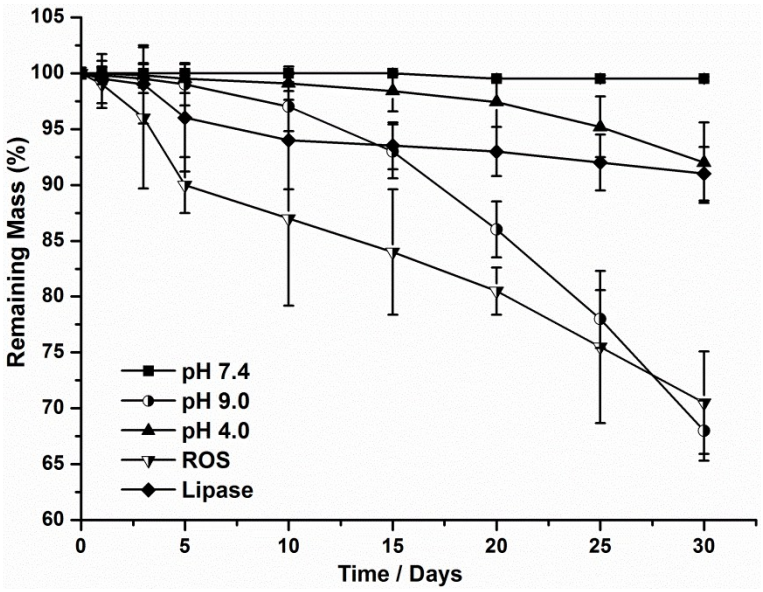


Figure S11. *In vitro* degradations of photocured PEU1000-100MA gels at different conditions.

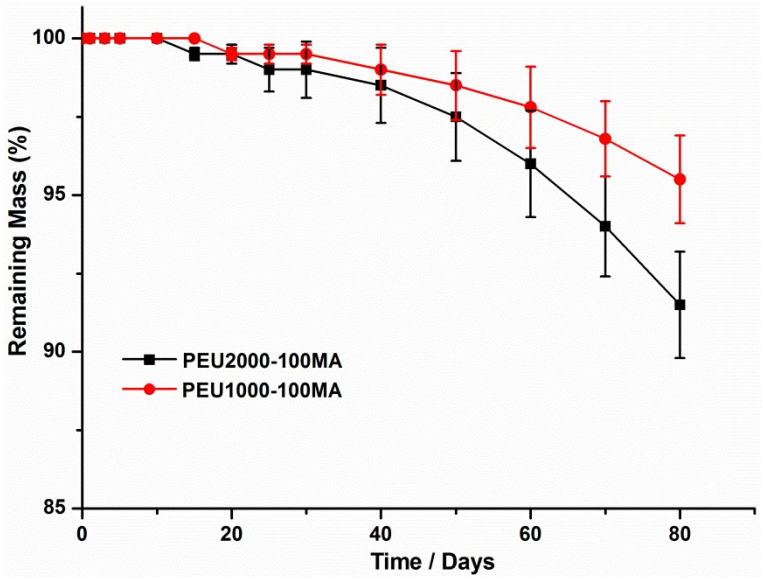


Figure S12. *In vitro* degradations of photocured PEU1000-100MA and PEU2000-100MA gels at pH 7.4 for 80 days.

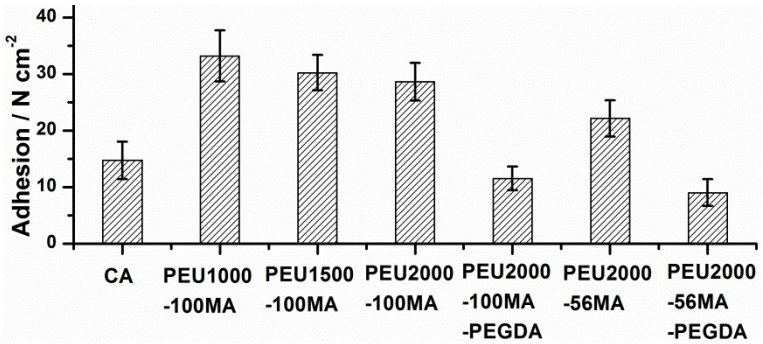


Figure S13. Adhesions on the glass slide with different PEU dried hydrogels and medical-grade cyanoacrylate (CA), which were dried under vacuum at 50 °C.

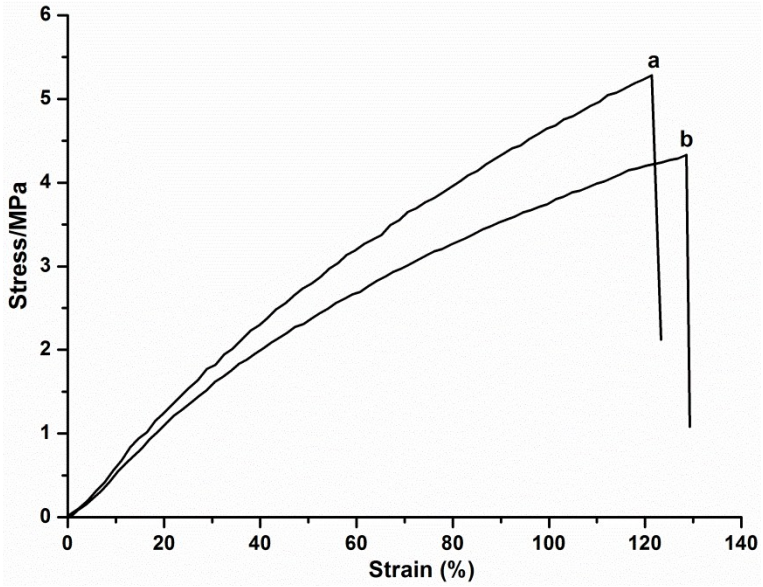


Figure S14. Stress-strain curves of the gel membranes of PEU2000-21MA (a), PEU2000-21MA-PEGDA (b)

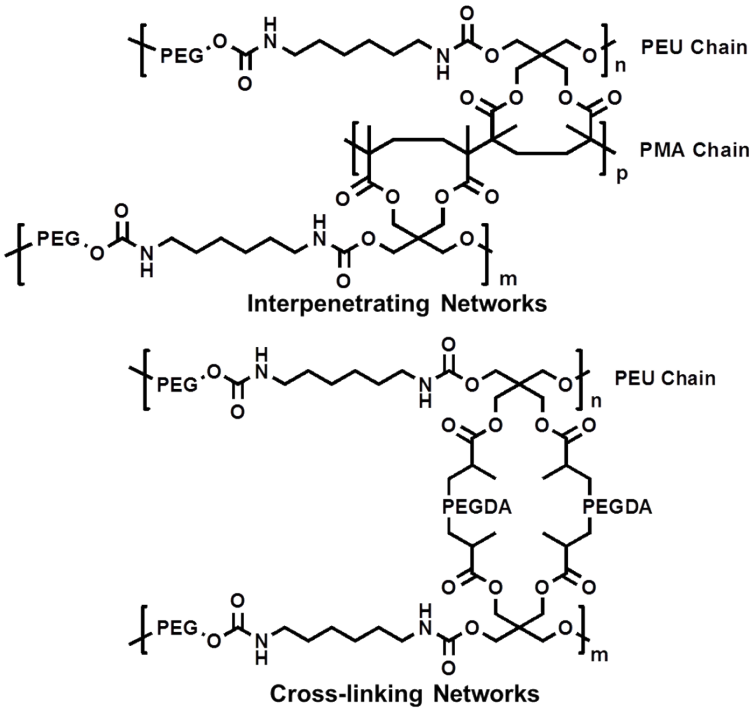


Figure S15. Different networks of PEU-MA and PEU-MA-PEGDA.