

Supporting Information

Polymer Electrolyte Membrane Based on Polyacrylate with Phosphonic Acid via Long Alkyl Side Chain

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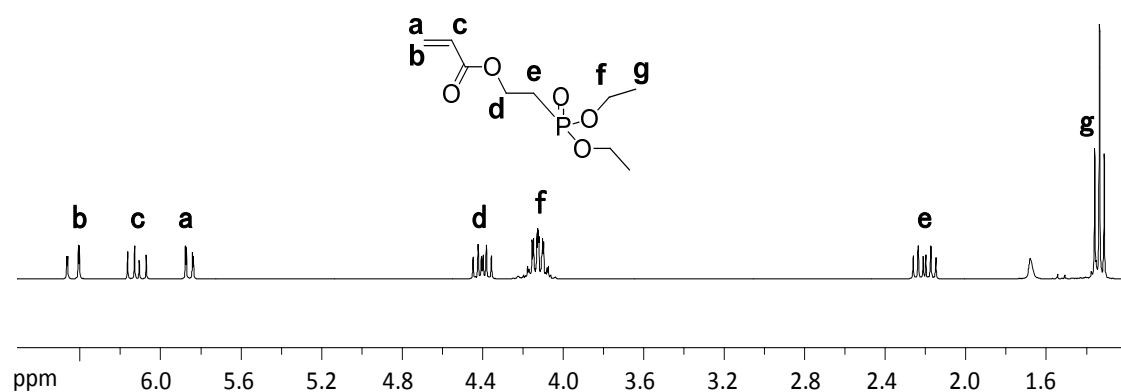


Figure S1. ¹H NMR spectrum of **AEPN**.

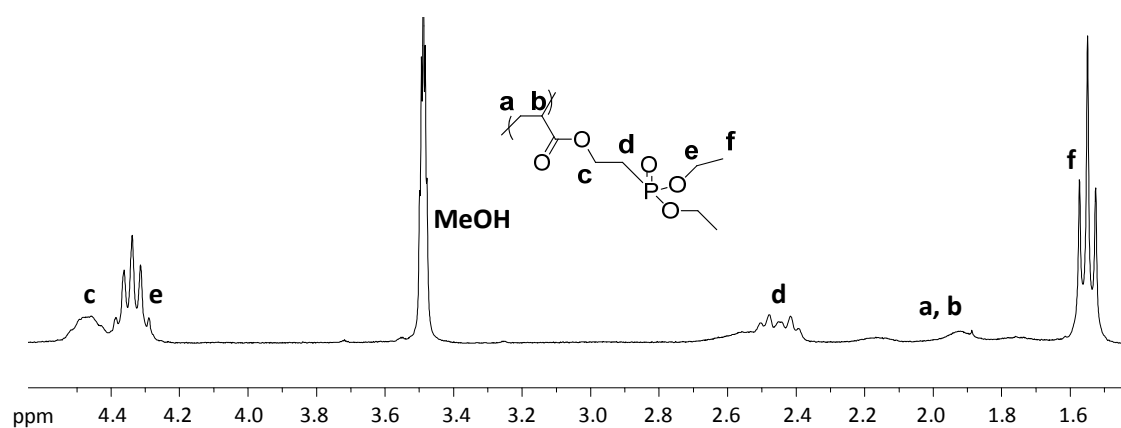


Figure S2. ¹H NMR spectrum of **PAEPN**.

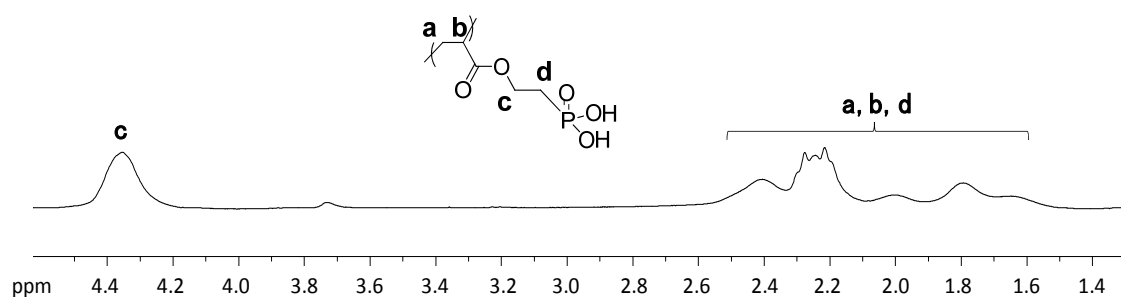


Figure S3. ¹H NMR spectrum of **PAEPA**.

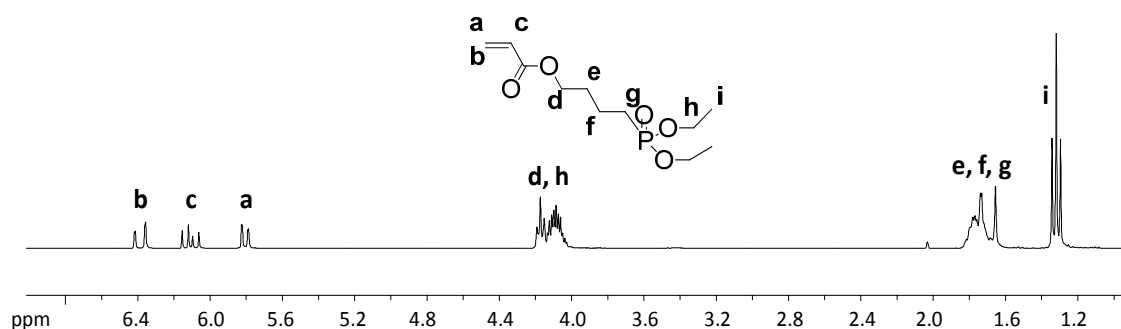


Figure S4. ^1H NMR spectrum of **ABPN**.

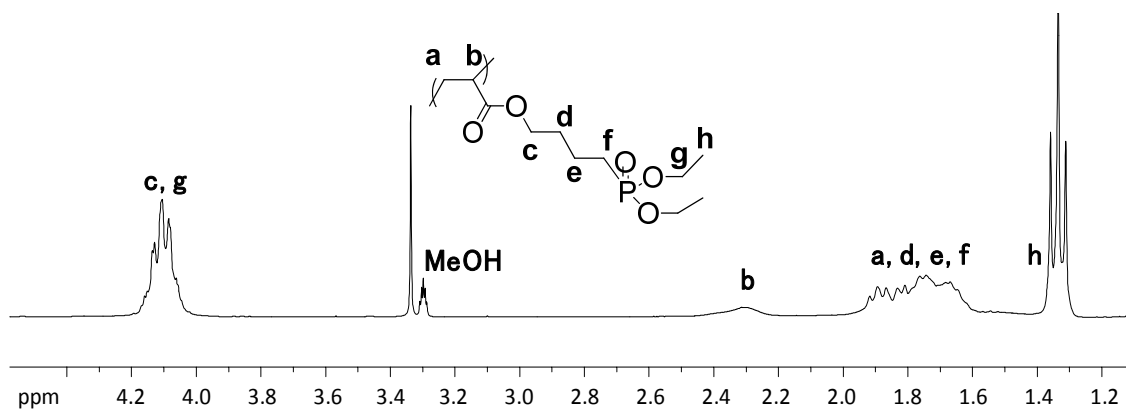


Figure S5. ^1H NMR spectrum of **PABPN**.

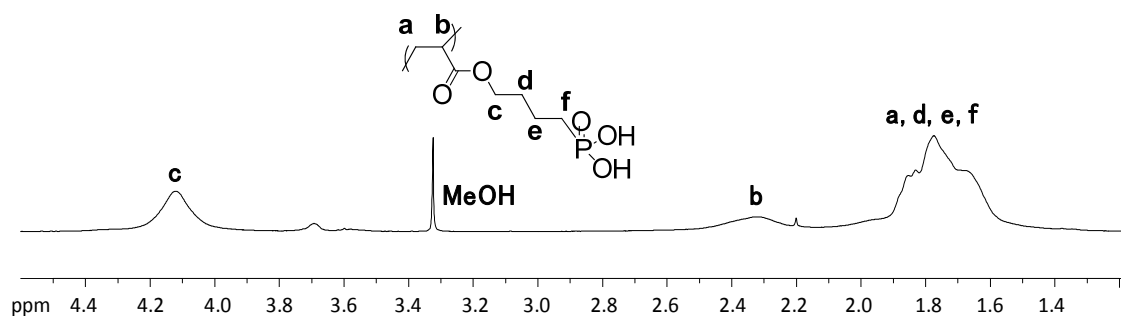


Figure S6. ^1H NMR spectrum of **PABPA**.

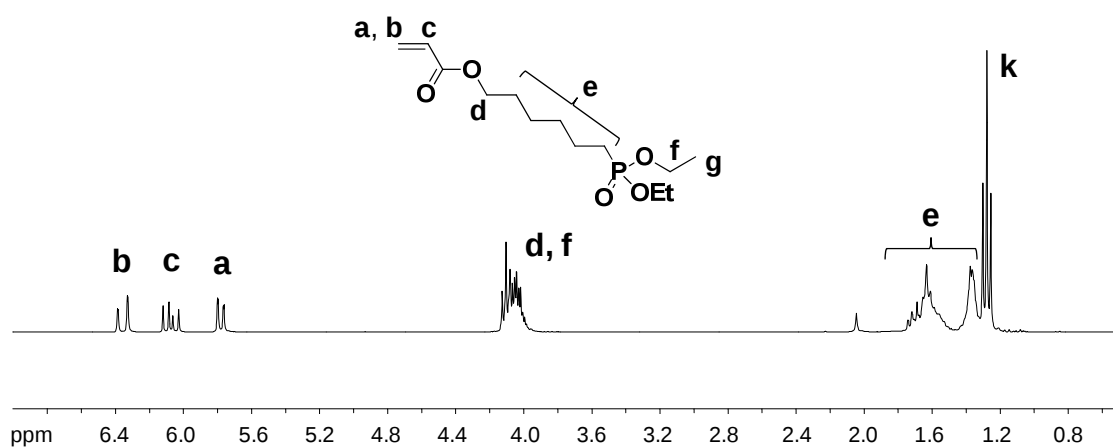


Figure S7. ^1H NMR spectrum of **AHPN**.

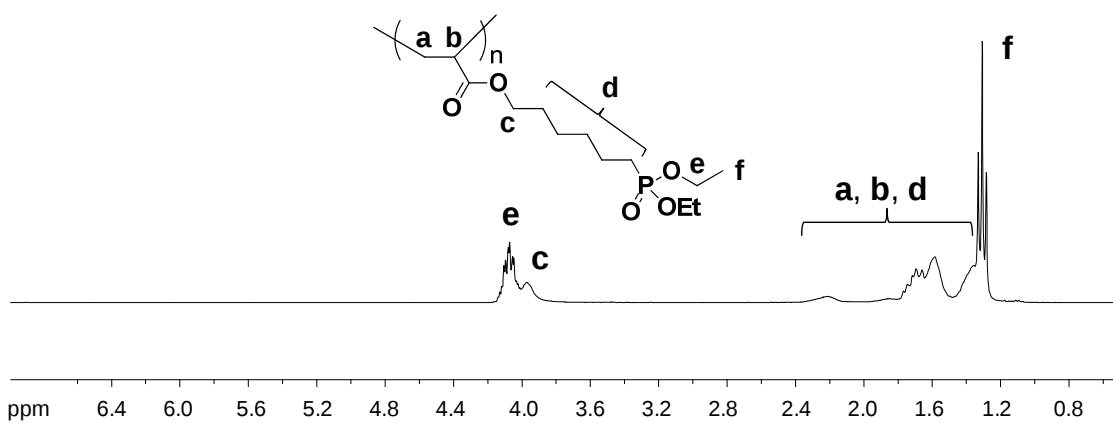


Figure S8. ^1H NMR spectrum of **PAHPN**.

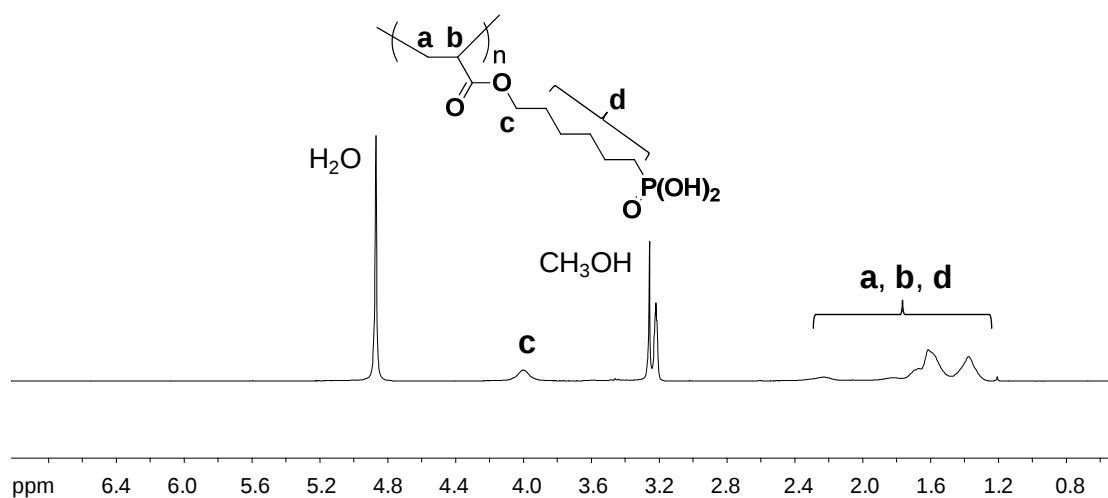


Figure S9. ^1H NMR spectrum of **PAHPA**.

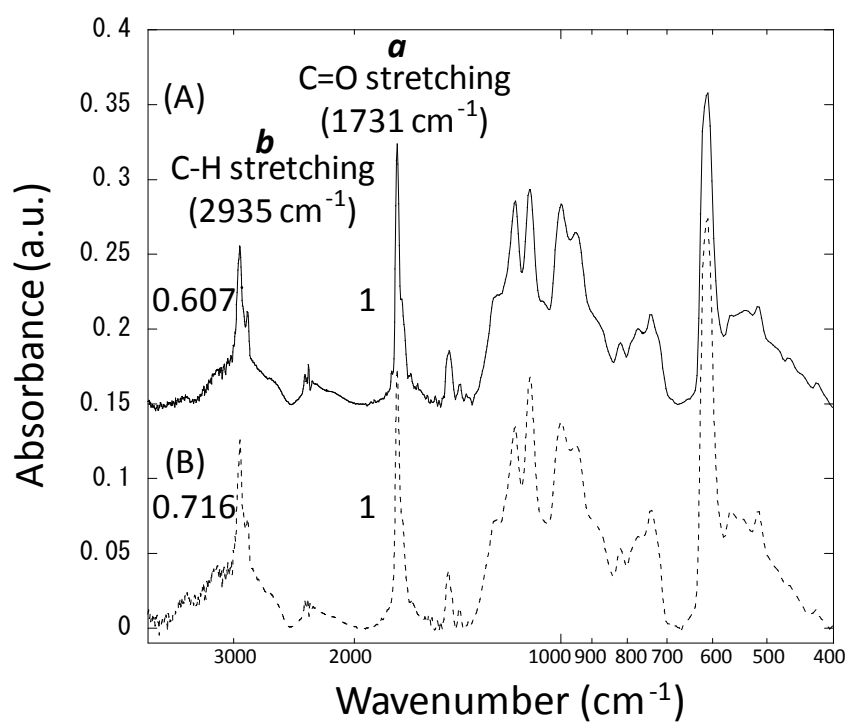


Figure S10. Normalized FT-IR spectra of the cross-linked **PAHPA** membrane (A) after and (B) before cross-linking reaction.

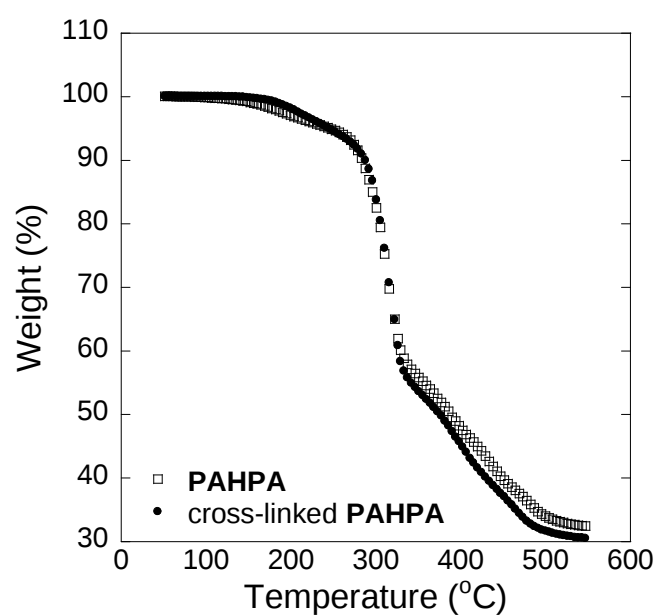


Figure S11. TG curves of **PAHPA** and cross-linked **PAHPA**.

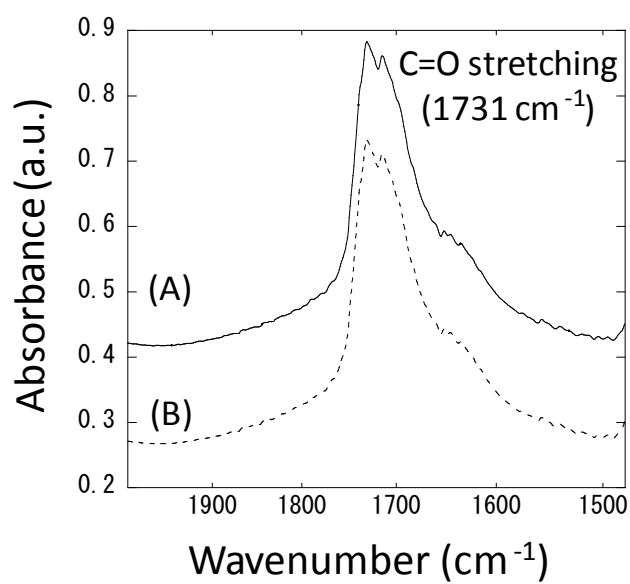


Figure S12. FT-IR spectra of the cross-linked **PAHPA** membrane (A) after and (B) before the stability test for hydrolysis.