

Support information:

NMR Characterization

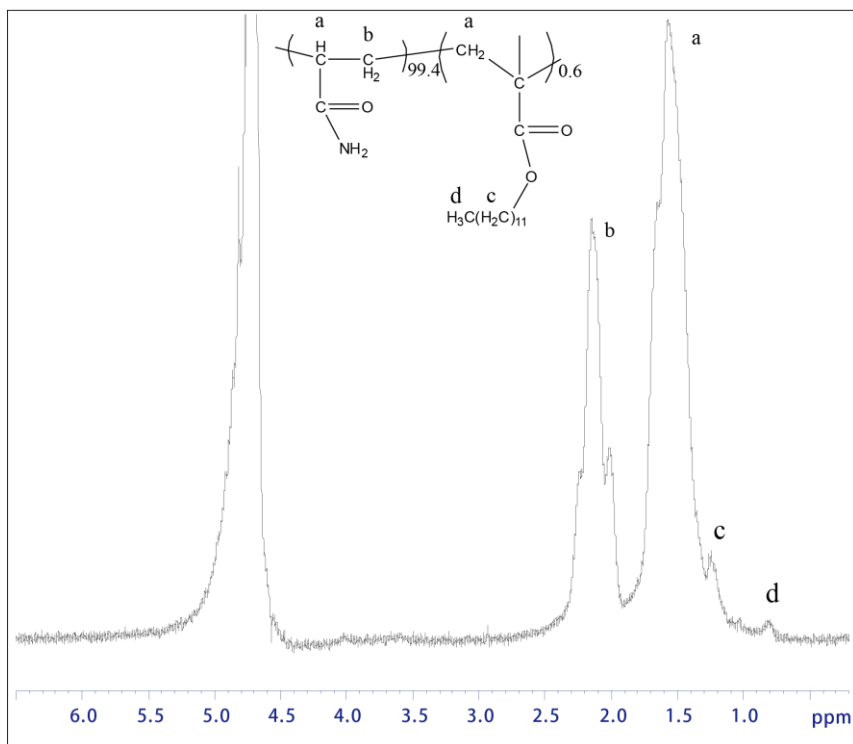


Fig.S1 Proton NMR spectra of hydrophobically modified p(AM/C₁₂) polymer. Sample is prepared in D₂O at a concentration of 5 wt % and left for at least 24 h before measurement.

Concentration dependency of HMPAM

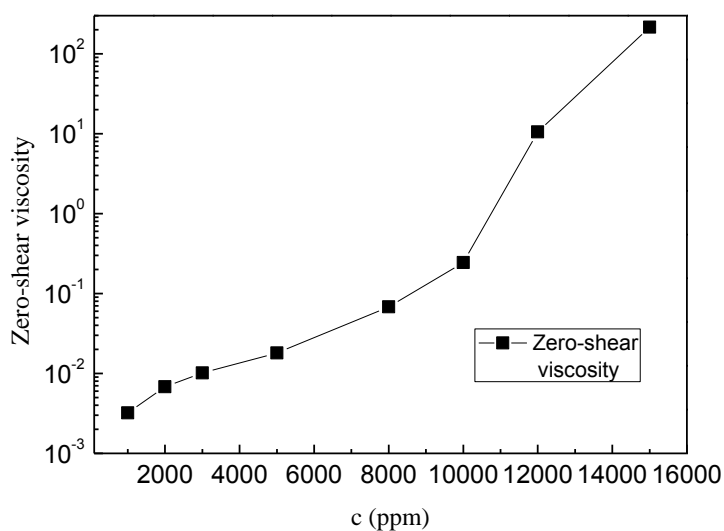


Fig.S2 Zero-shear viscosity as a function of polymer concentration.

ζ potential of NaOA

Table.S1 The ζ -potential (mV) of NaOA at different pH. ζ potentials were measured using a temperature-controlled ZetaSizer 2000 (Malvern Instruments Ltd.) potential analyzer.

pH	8.0	8.3	9.0	10.0
ζ-potential(mV)	-109	-104	-80.4	-69.5