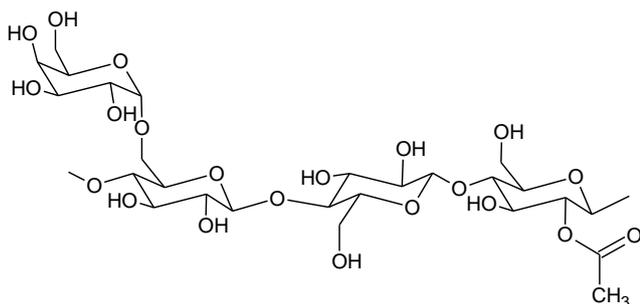


Self-assembling zwitterionic carboxybetaine copolymers via aqueous SET-LRP from hemicellulose multi-site initiators.

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10 Supplementary Information



Scheme S1. A representative structural motif of the hemicellulose
15 acetylated galactoglucomannan (AcGGM).

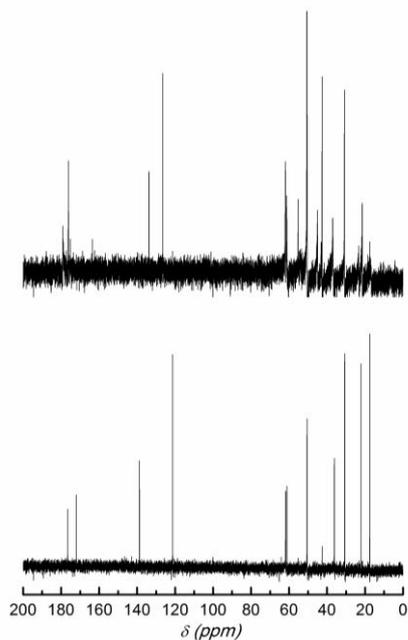


Figure S1. ¹³C-NMR of the CBMAA-3 monomer (bottom) and the AcGGM-graft-CBMAA-3 copolymer (top).

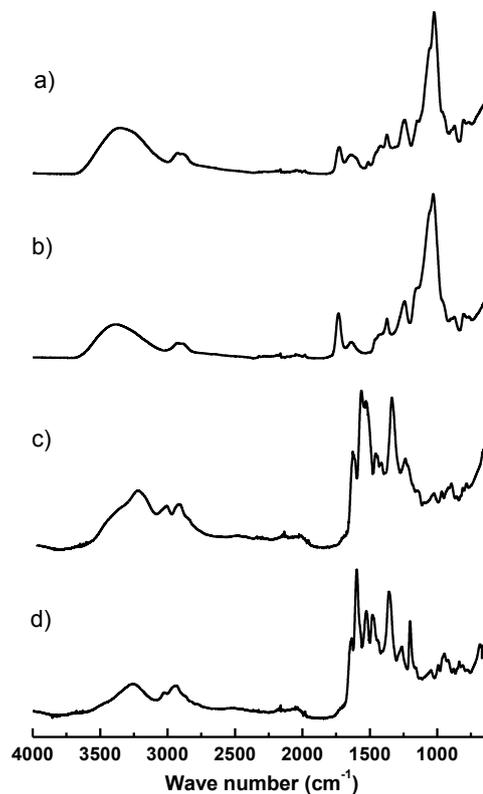


Figure S2. ATR-FTIR spectra (from top to bottom): a) AcGGM,
25 b) AcGGM-Br, c) AcGGM-graft-CBAA-3 copolymer, and d) AcGGM-graft-CBMAA-3 copolymer.

The ATR-FTIR spectra show the synthetic progress from AcGGM via a Br-functionalised macroinitiator to betaine graft
30 copolymers. A broad -OH stretching vibration band at 3600-3000 cm⁻¹ is introduced into the copolymer spectra, stemming from the hydroxyl pendant groups on each sugar ring of the AcGGM macroinitiator.

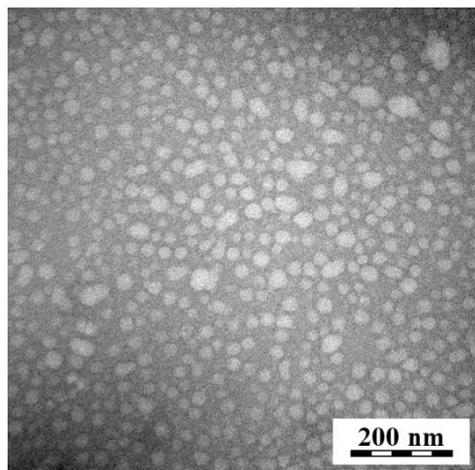


Figure S3. TEM image of nanoparticles of poly(CBAA-3) grafted from AcGGM-Br via SET-LRP. Conversion 68%.