

Electronic Supplementary Information

Facile Synthesis of Cylindrical Molecular Brushes via Lewis Pair-Mediated Polymerization

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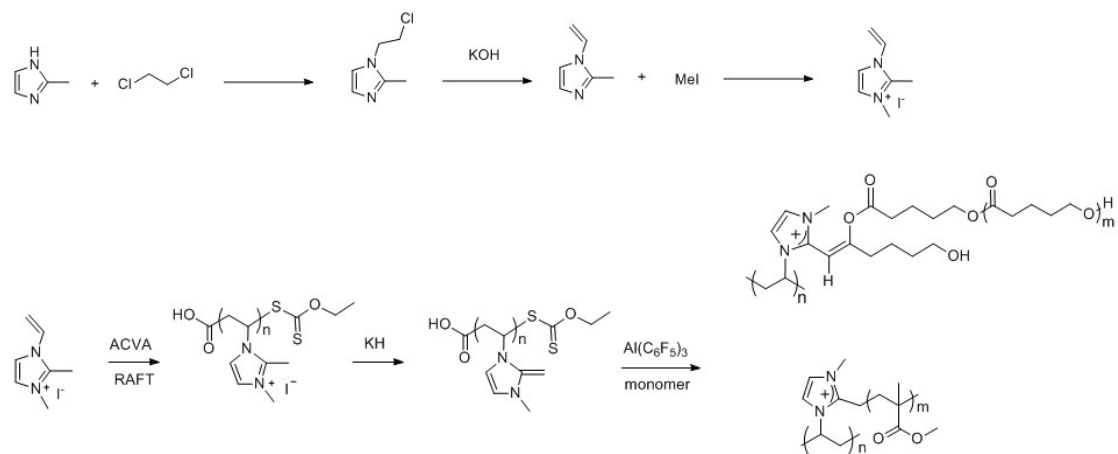
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1. Experimental Procedure

Scheme S1. Schematic illustration for the synthesis of vinylimidazolium salt and molecular brushes.



2. ¹H NMR spectra

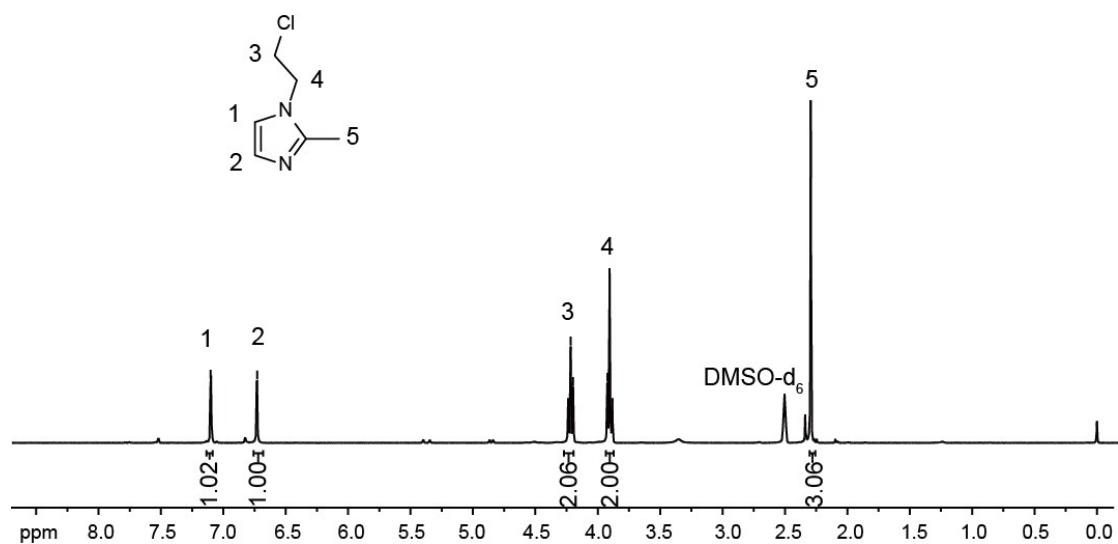


Figure S1. ¹H NMR spectrum of 1-(2-chloroethyl)-2-methyl-1*H*-imidazole. ¹H NMR (400 MHz, DMSO-*d*₆): δ=7.10 (s, 1H, CH₂NCH=), 6.73 (s, 1H, =CHN=C), 4.22 (t, 2H, -CH₂Cl), 3.90 (t, 2H, CH₂N), 2.29 (s, 3H, -CH₃).

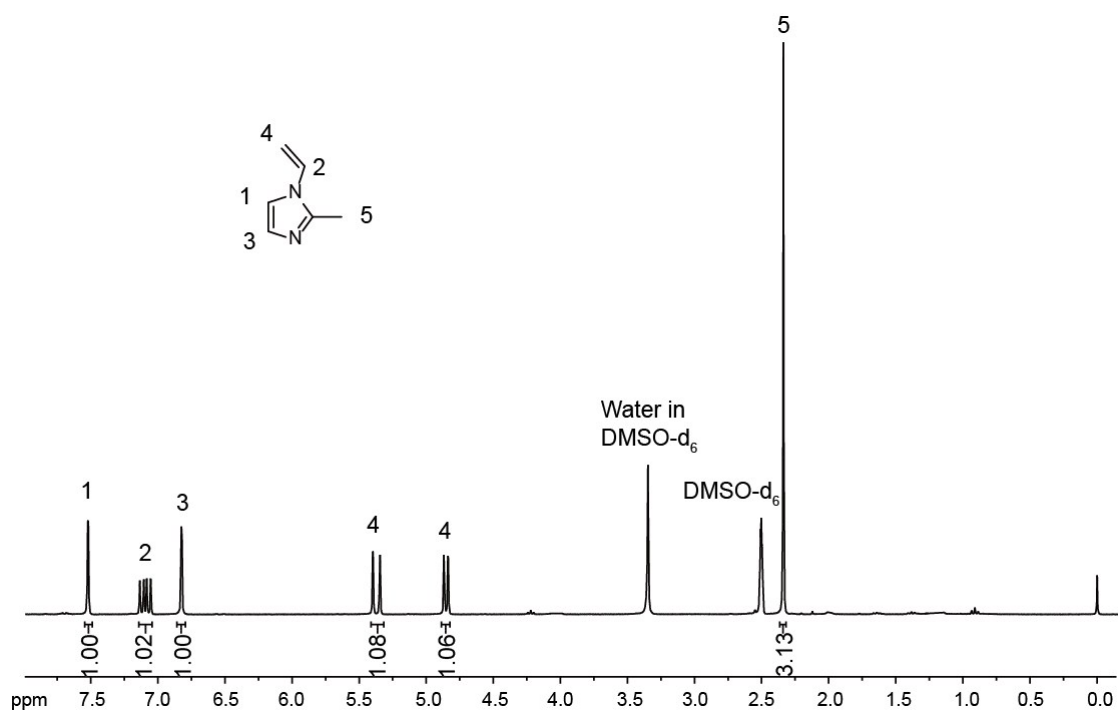


Figure S2. ¹H NMR spectrum of 2-methyl-1-vinyl-1*H*-imidazole. ¹H NMR (400 MHz, DMSO-d₆): δ=7.51 (s, 1H, NCH=CHN), 7.08 (m, 1H, CH=CH₂), 6.82 (s, 1H, NCH=CHN), 5.37, 4.85 (2H, =CH₂), 2.34 (s, 3H, CH₃).

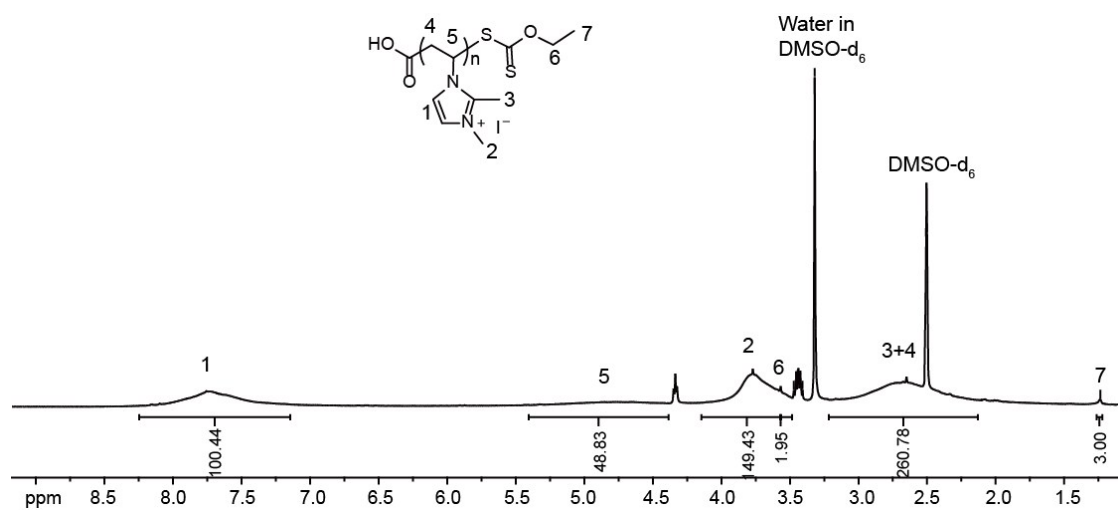


Figure S3. ¹H NMR spectrum of polyimidazolium salt (PDMVII-2).

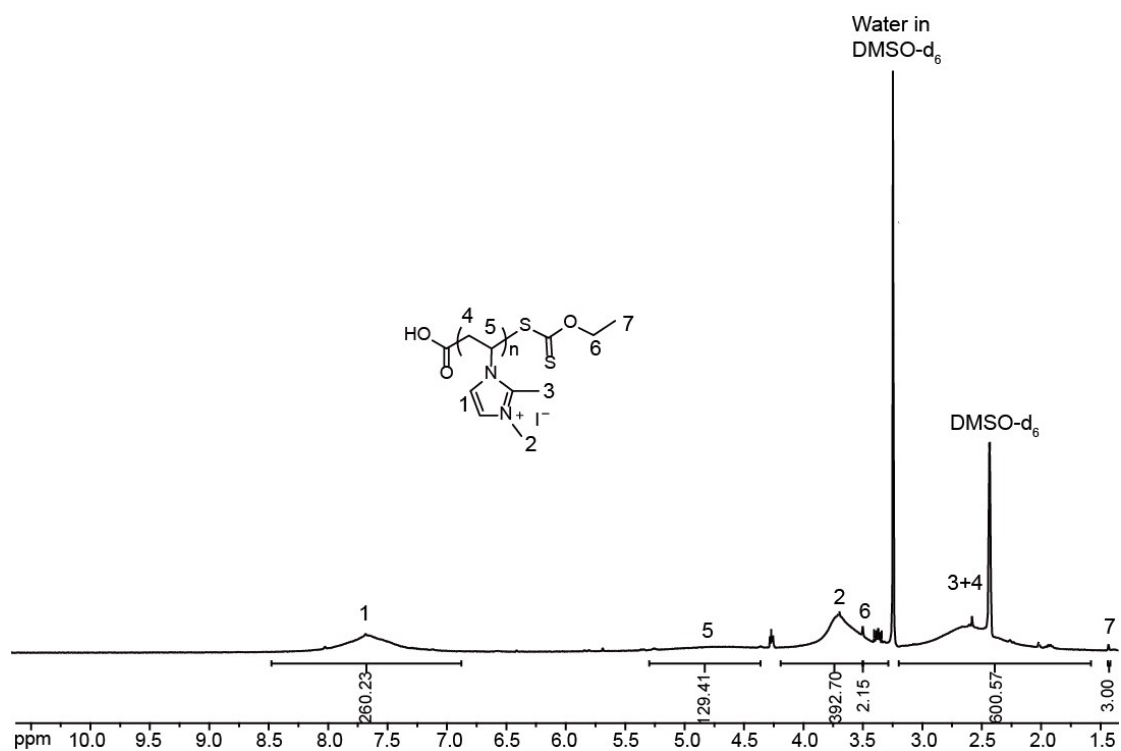


Figure S4. ^1H NMR spectrum of polyimidazolium salt (PDMVII-3).