Hyperbranched Poly(ether-siloxane)s Containing Ammonium Groups – Synthesis, Characterization and Catalytic Activity

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Supplementary materials

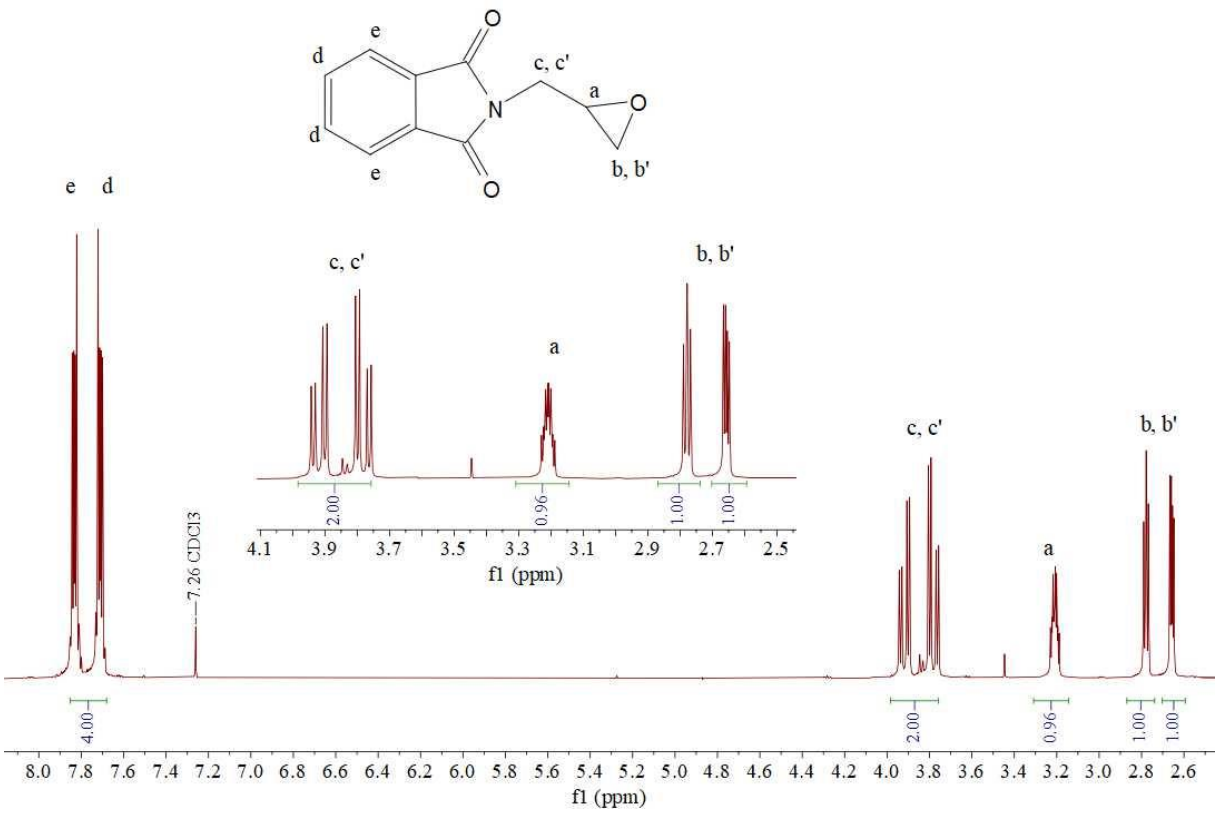

Figure S1. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of epoxy phthalimide monomer

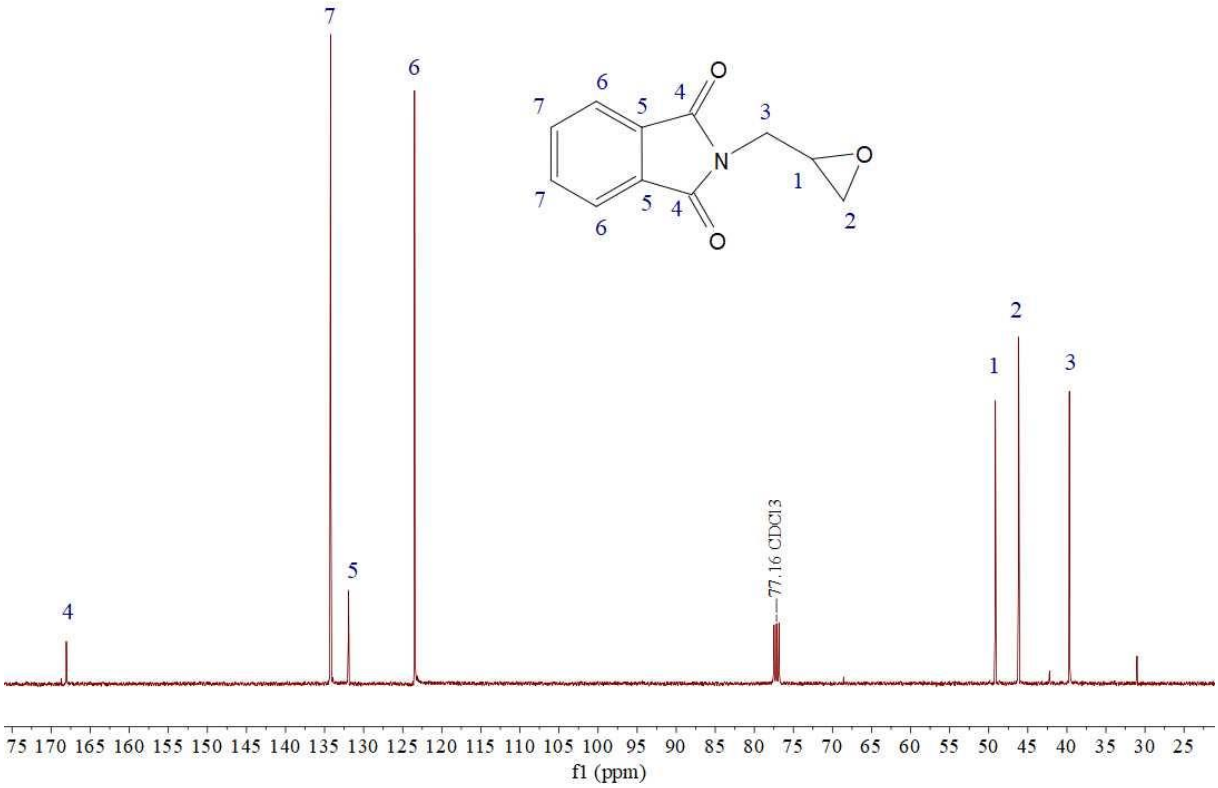

Figure S2. ^{13}C NMR spectrum of epoxy phthalimide monomer

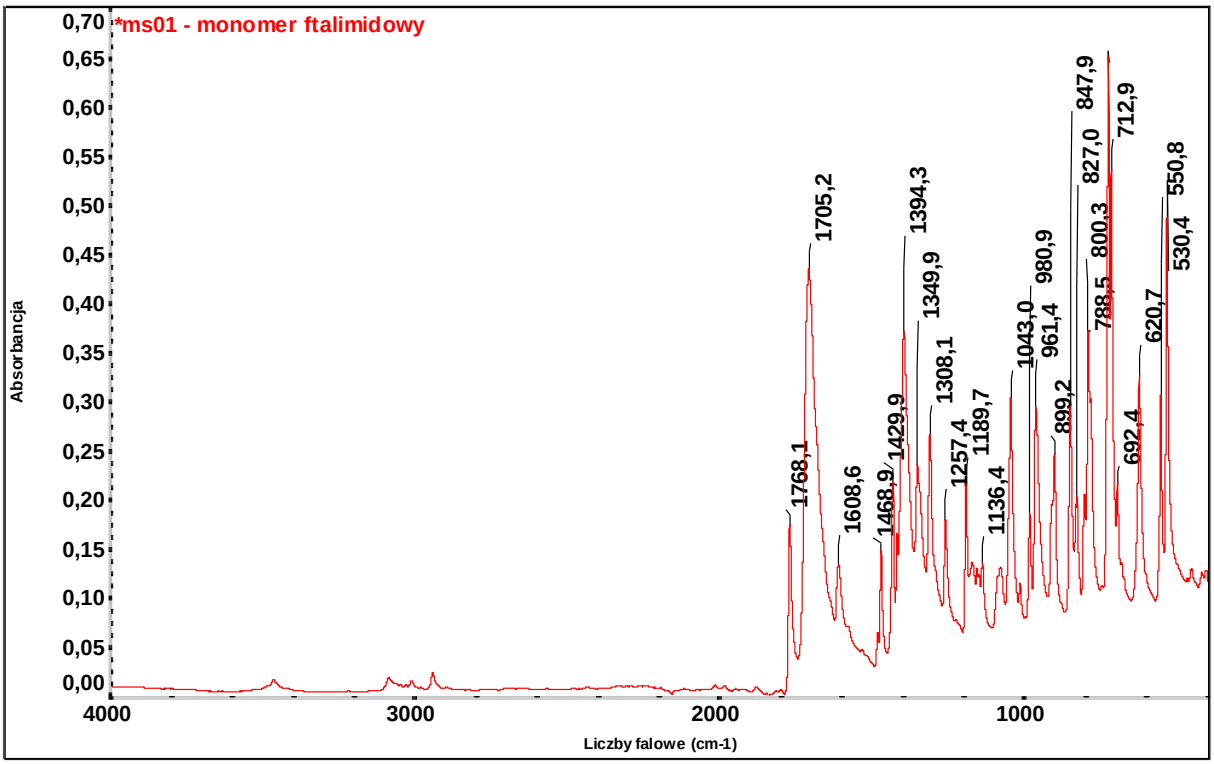

Figure S3. FTIR - ATR spectrum of epoxy phthalimide monomer

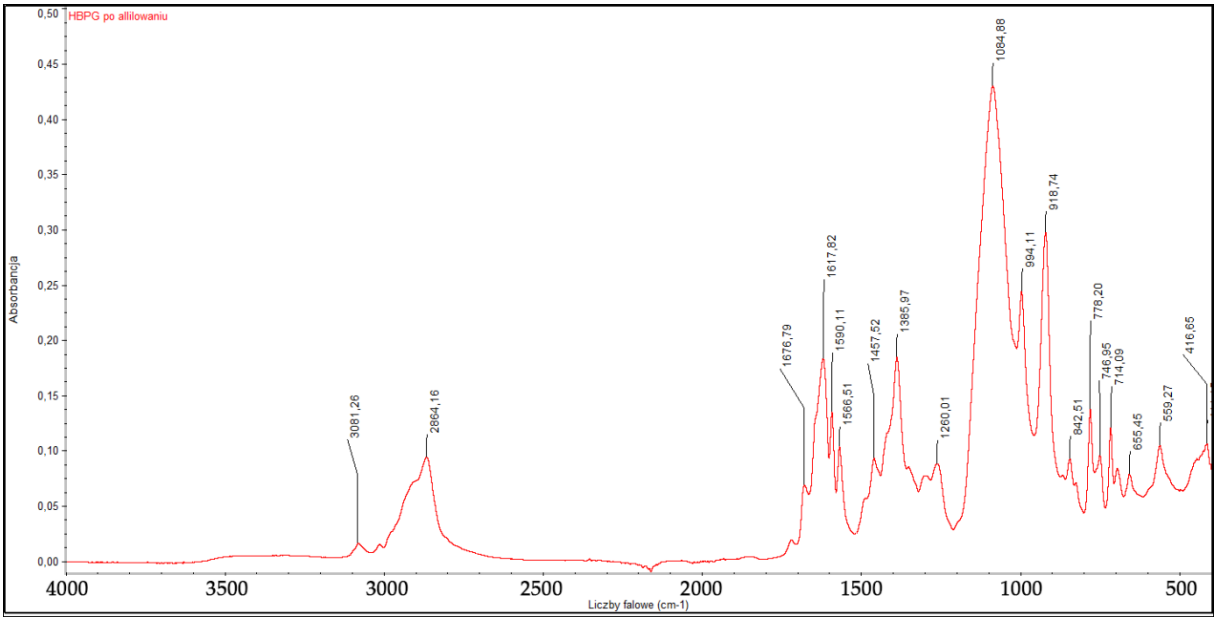

Figure S4. FTIR - ATR spectrum of allyl derivative **2a**

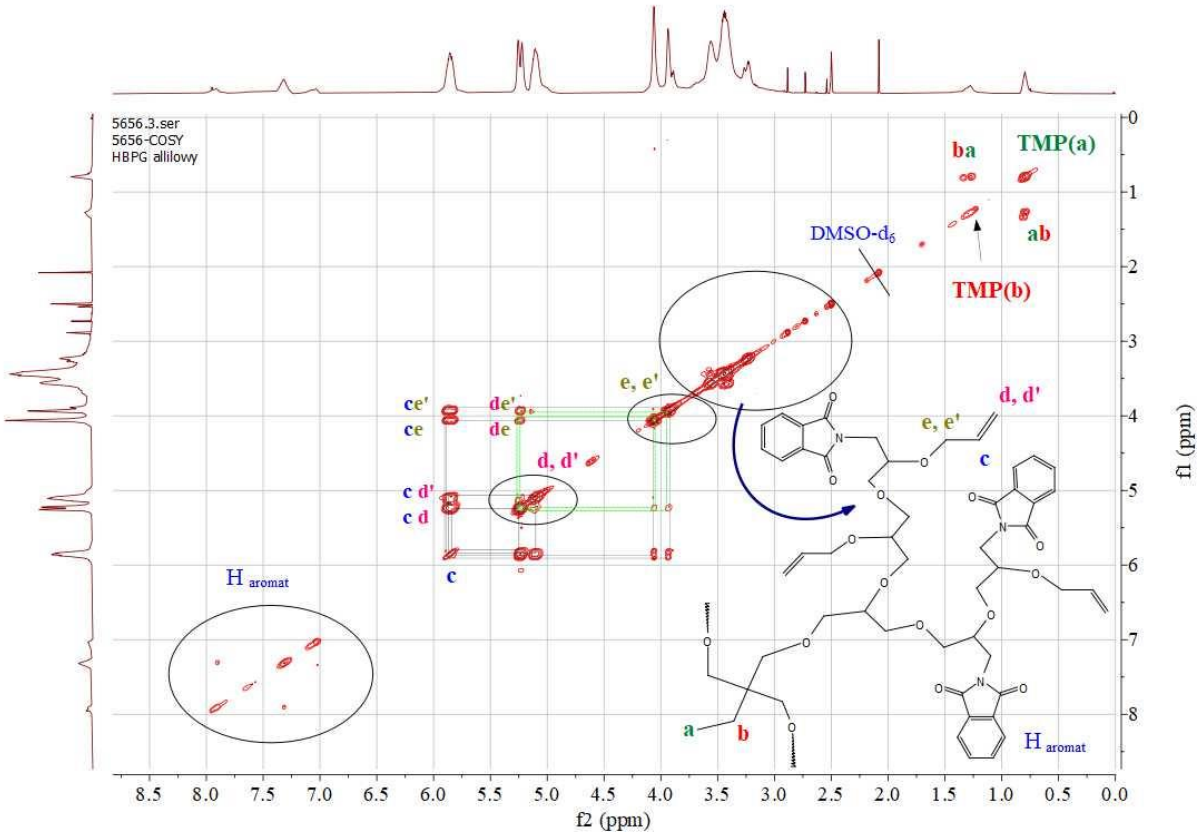

Figure S5. ^{1}H-^{1}H COSY NMR (DMSO-d_6, 500 MHz) spectrum of **2a**copolymer

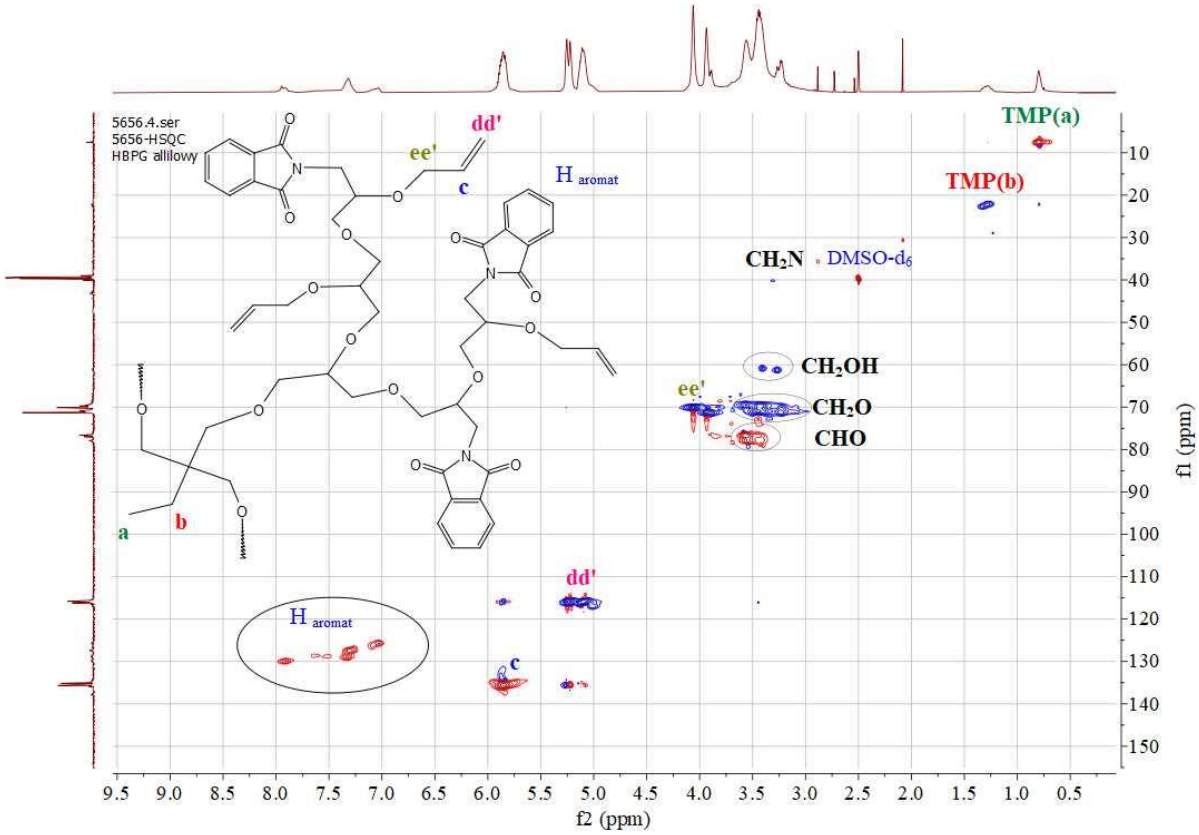

Figure S6. ^{1}H-^{13}C HSQC NMR (DMSO-d_6, 500 MHz) spectrum of **2a**copolymer

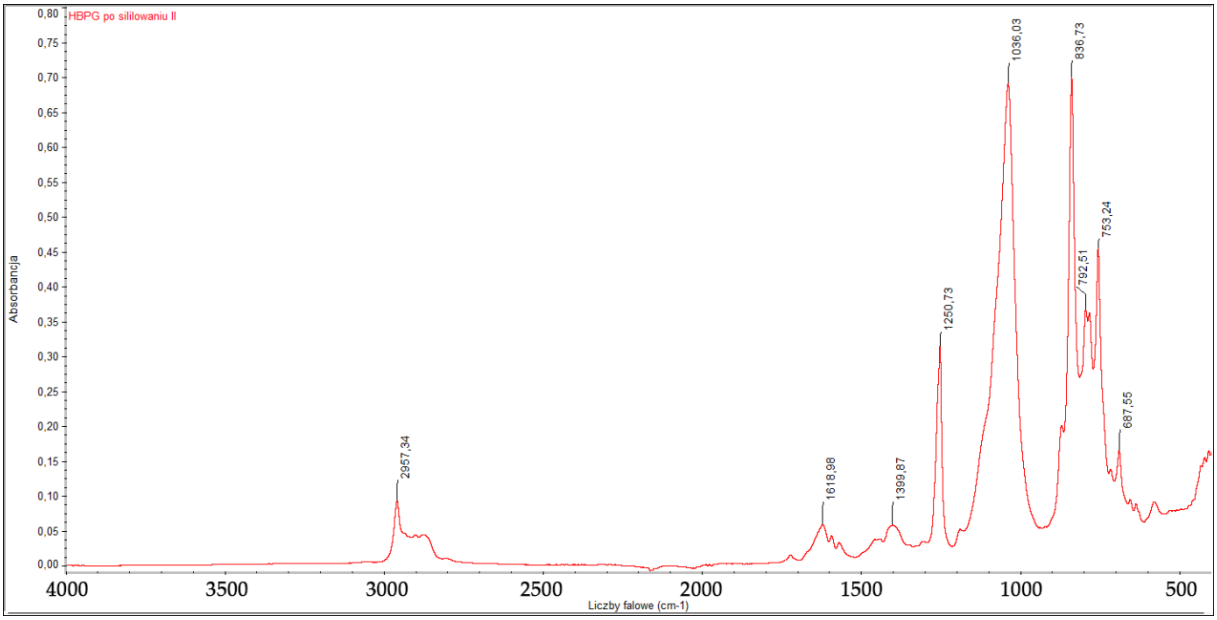

Figure S7. FTIR - ATR spectrum of siloxane derivative **3a**

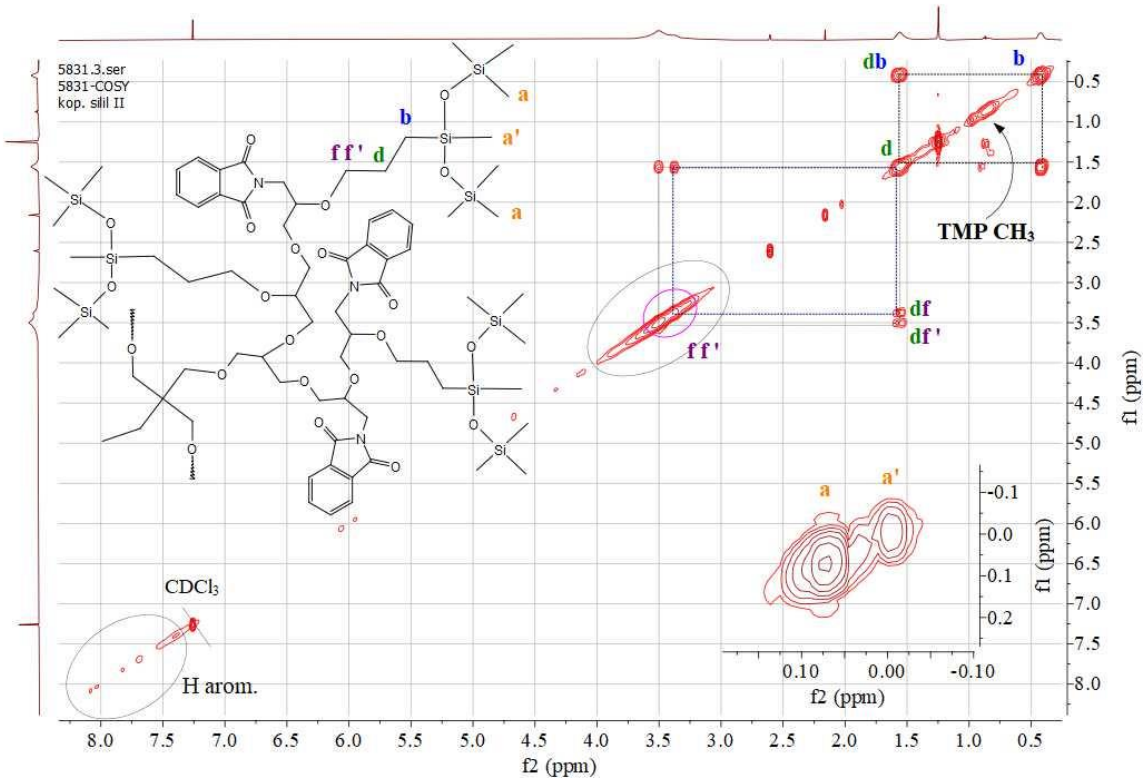

Figure S8. ^{1}H-^{1}H COSY NMR ($CDCl_3$, 500 MHz) spectrum of **3a**copolymer

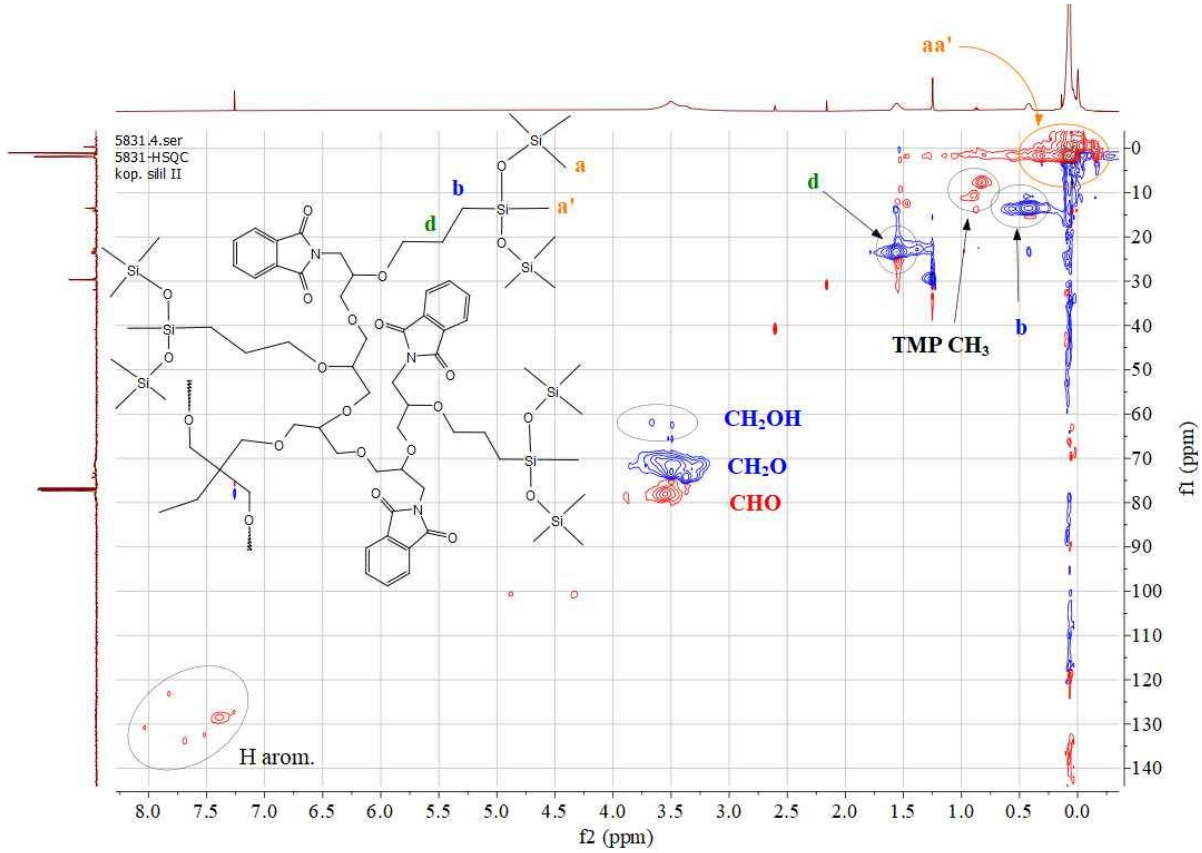

Figure S9. ^{1}H-^{13}C HSQC NMR ($CDCl_3$, 500 MHz) spectrum of **3a**copolymer

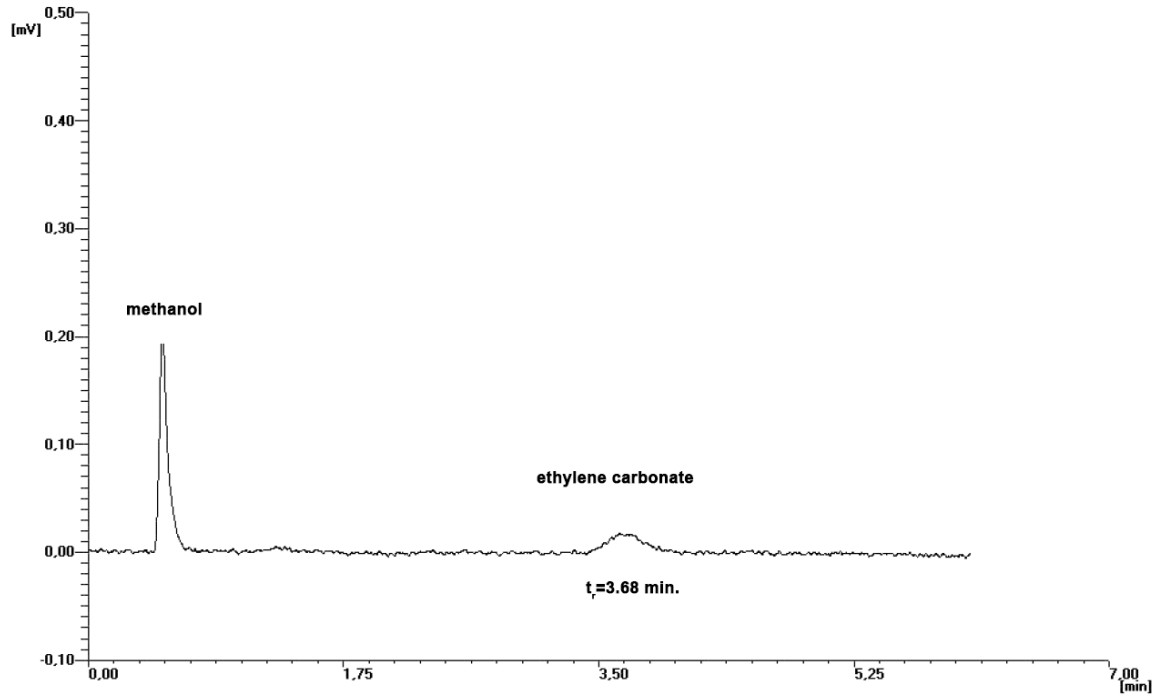

Figure S10. The GC chromatogram of the methanol solution of the product of reaction 14 (Tab.1)–ethylene carbonate

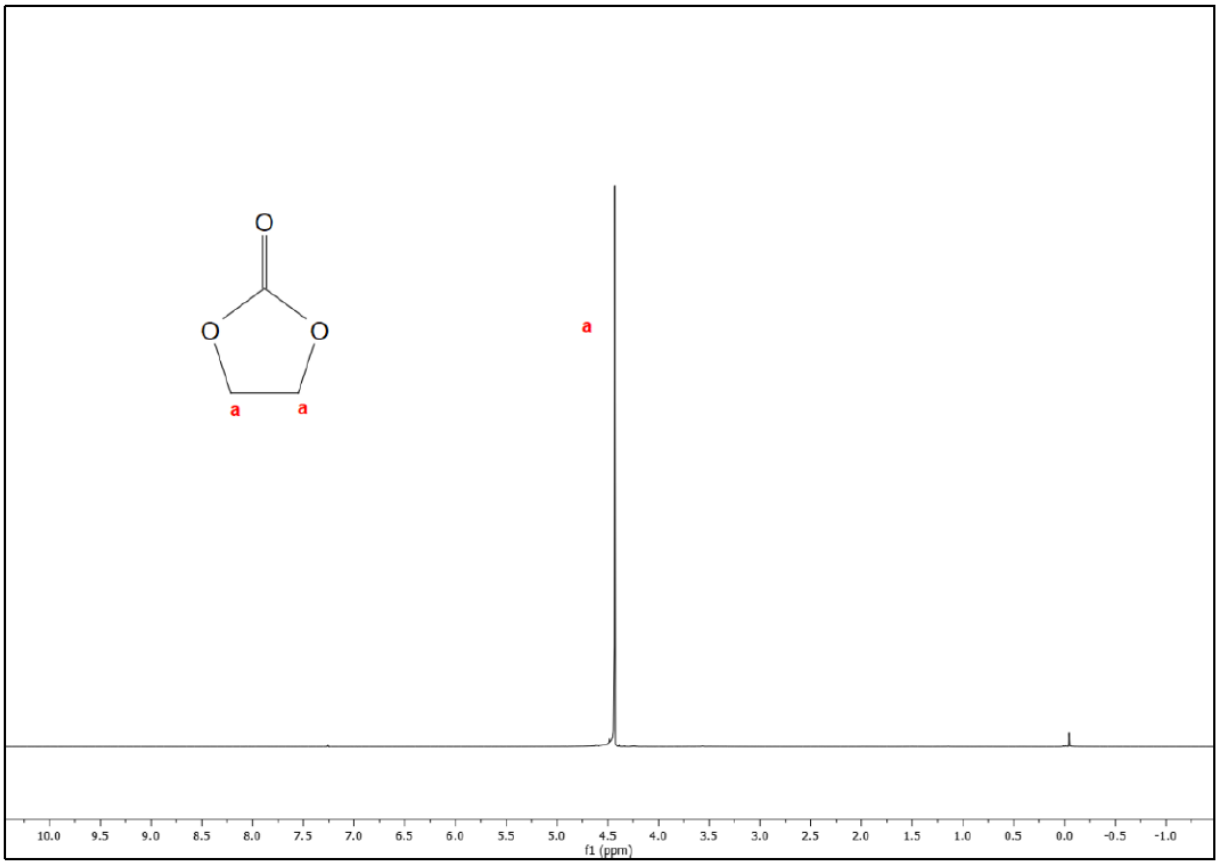

Figure S11. ^{1}H NMR (400 MHz, $CDCl_3$- high concentration, solvent signal not visible) spectrum of the product of reaction 14 (Tab.1) – ethylene carbonate

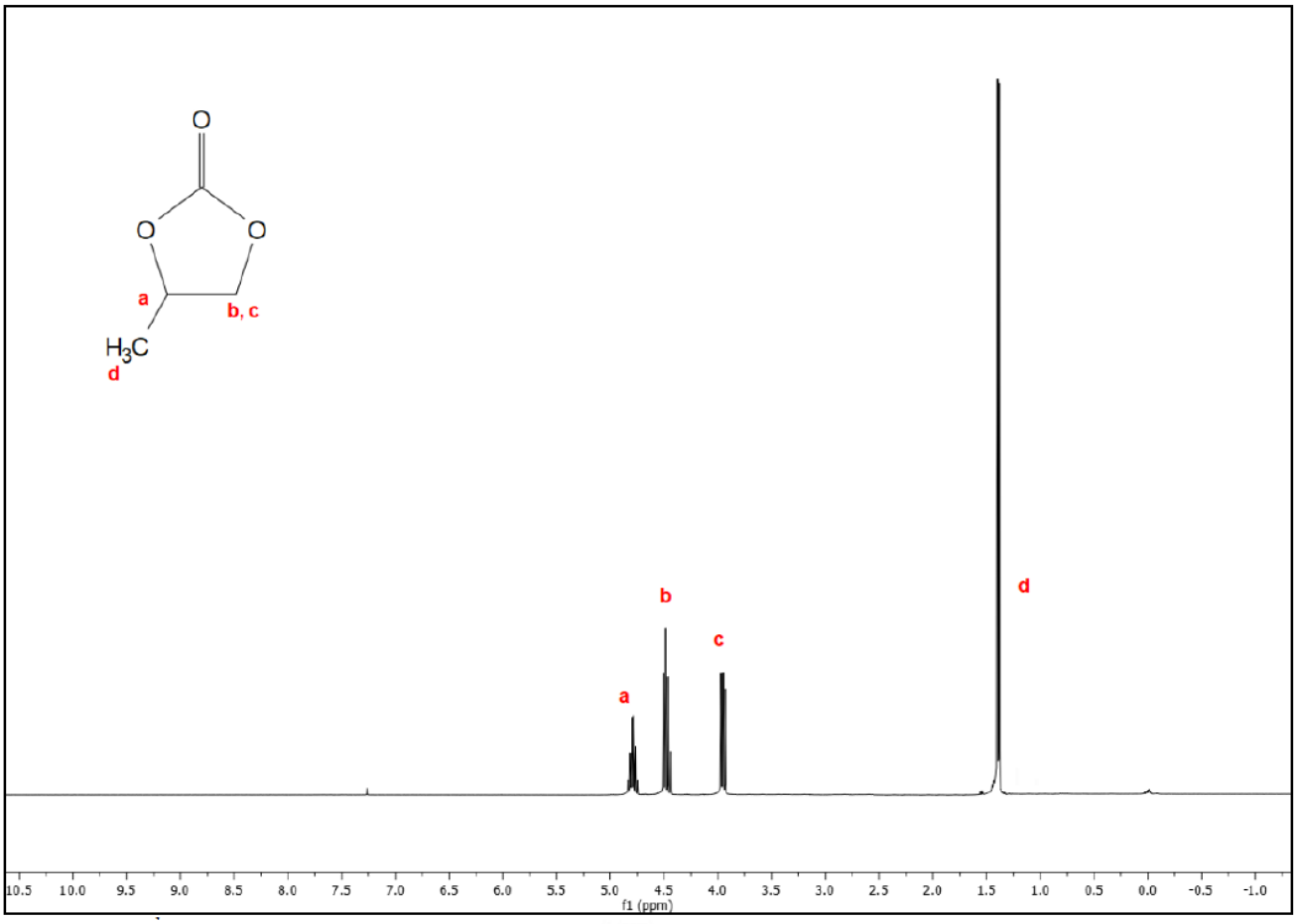

Figure S12. ^{1}H NMR (400 MHz, $CDCl_3$) spectrum of the product of reaction 21 (Tab.1) – propylene carbonate