

Supporting Information

ADMET polymerization of bio-based biphenyl compounds

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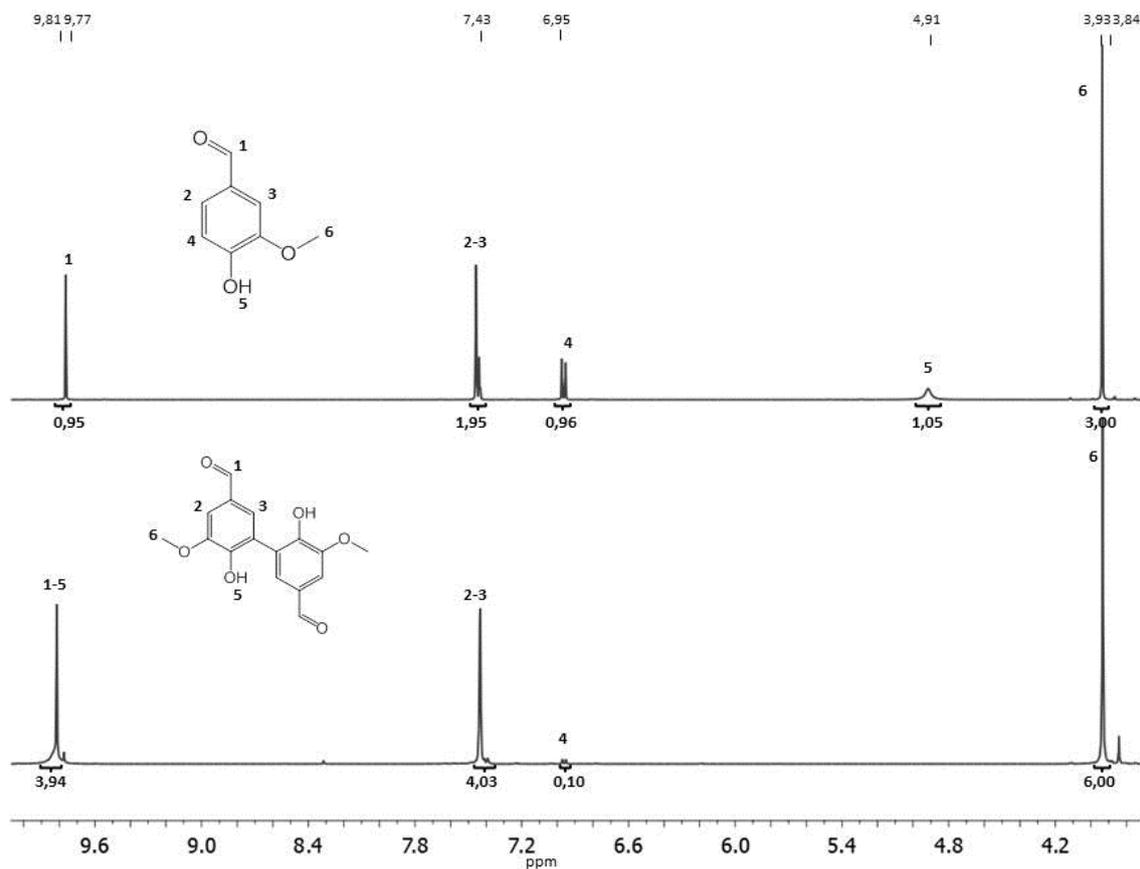


Figure S 1: ¹H NMR spectra of vanillin **1** (top) and divanillin **5** (bottom) in DMSO at room temperature

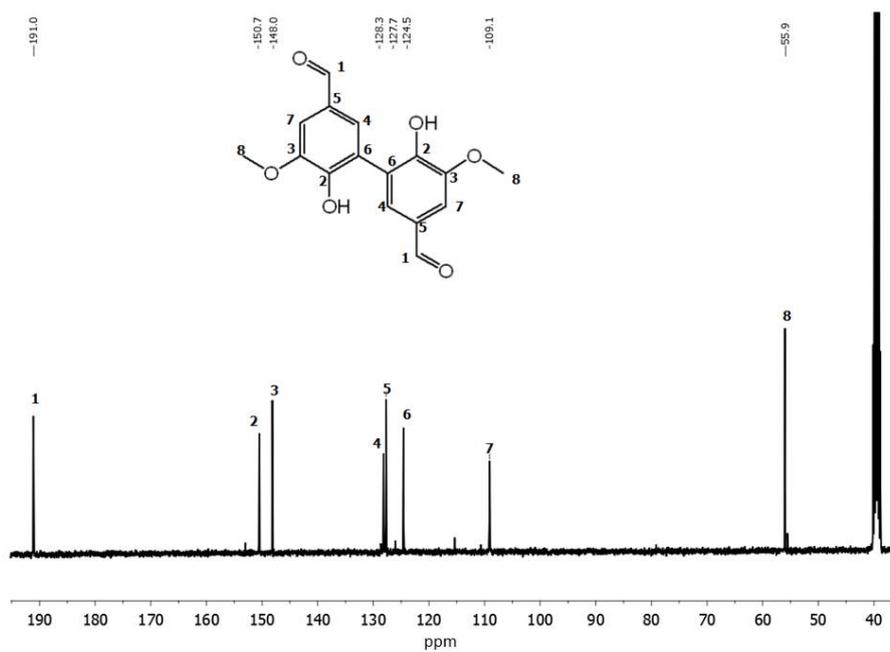


Figure S 2: ¹³C NMR spectrum of divanillin, 5, in DMSO

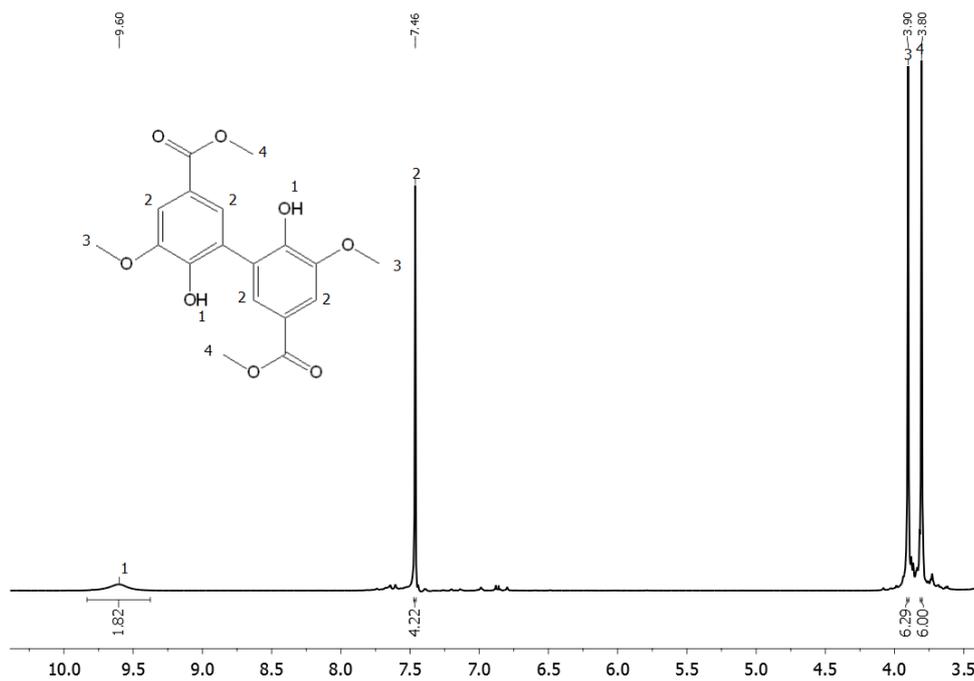


Figure S 3: ¹H NMR spectrum of dimethyl divanillate, 6, in DMSO

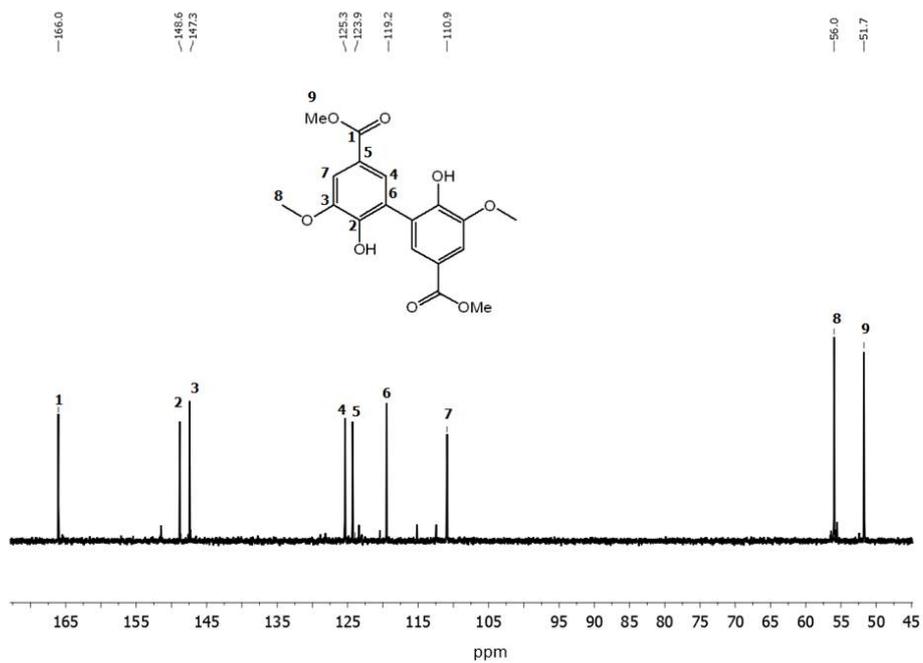


Figure S 5: ^{13}C NMR spectrum of dimethyl divanillate, 6, in DMSO

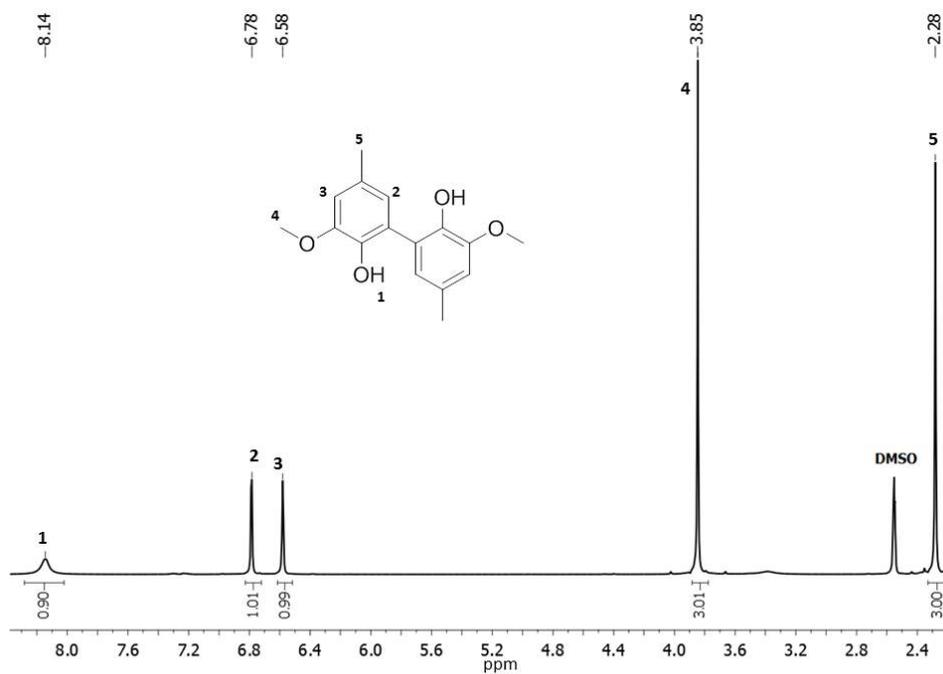


Figure S 6: ^1H NMR spectrum of 2-methoxy-4-methylphenol dimer, 7, in DMSO

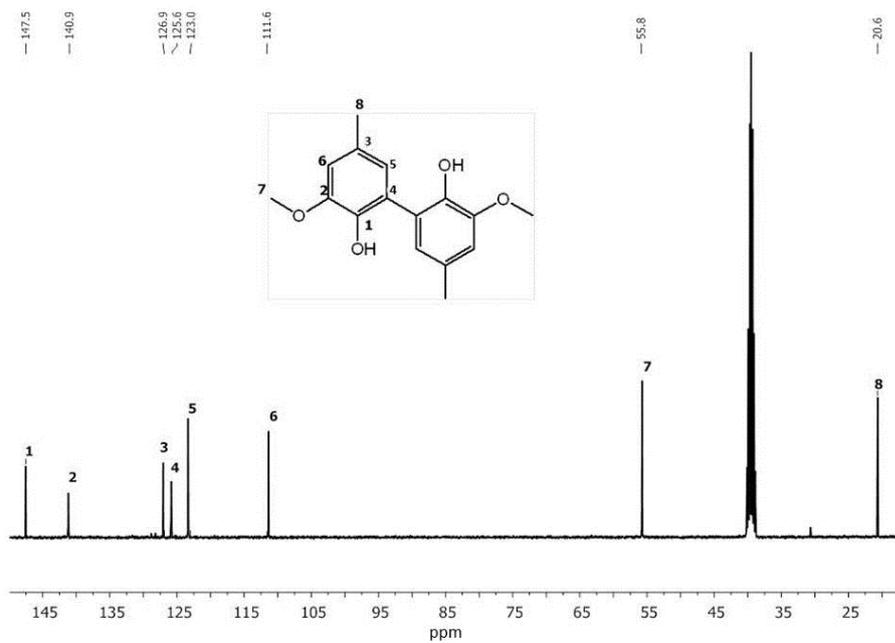


Figure S 7: ^{13}C NMR spectrum of 2-methoxy-4-methylphenol dimer, 7, in DMSO

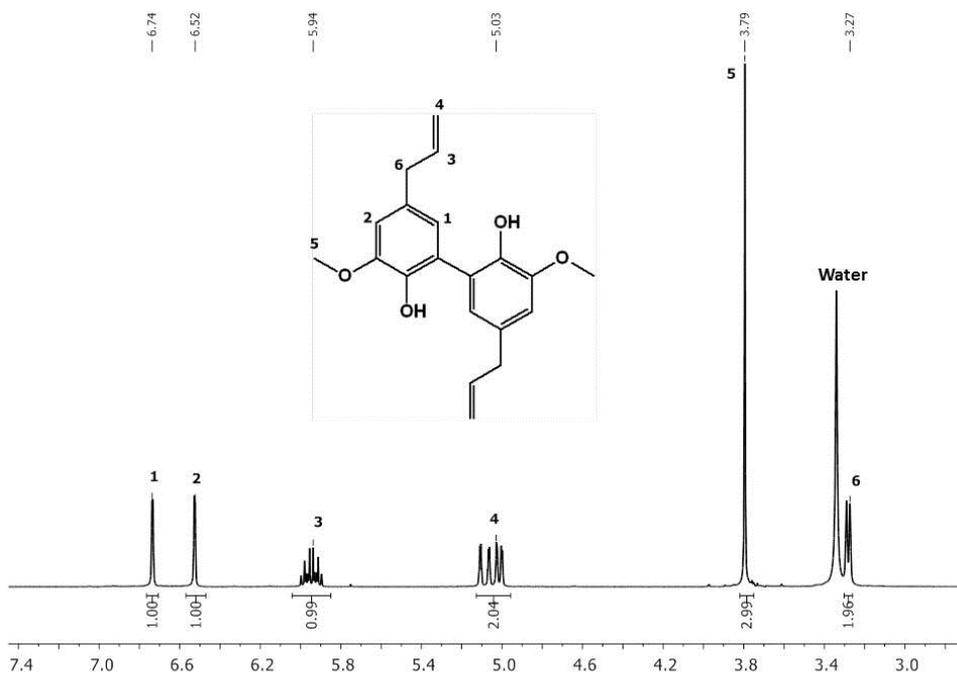


Figure S 8: ^1H NMR spectrum of dieugenol, 8, in DMSO

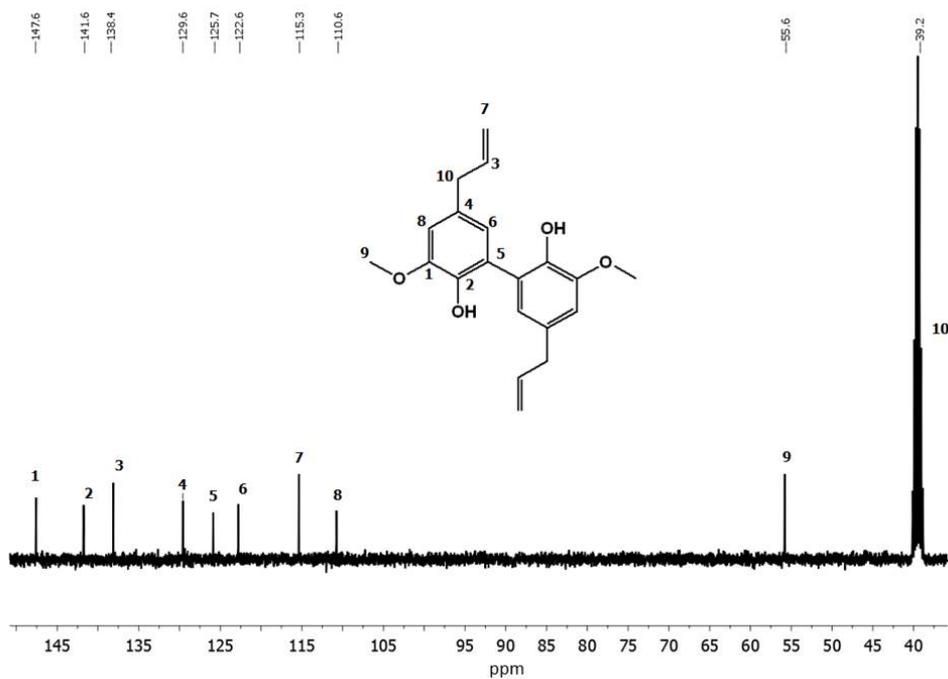


Figure S 9: ^{13}C NMR spectrum of dieugenol, 8, in DMSO

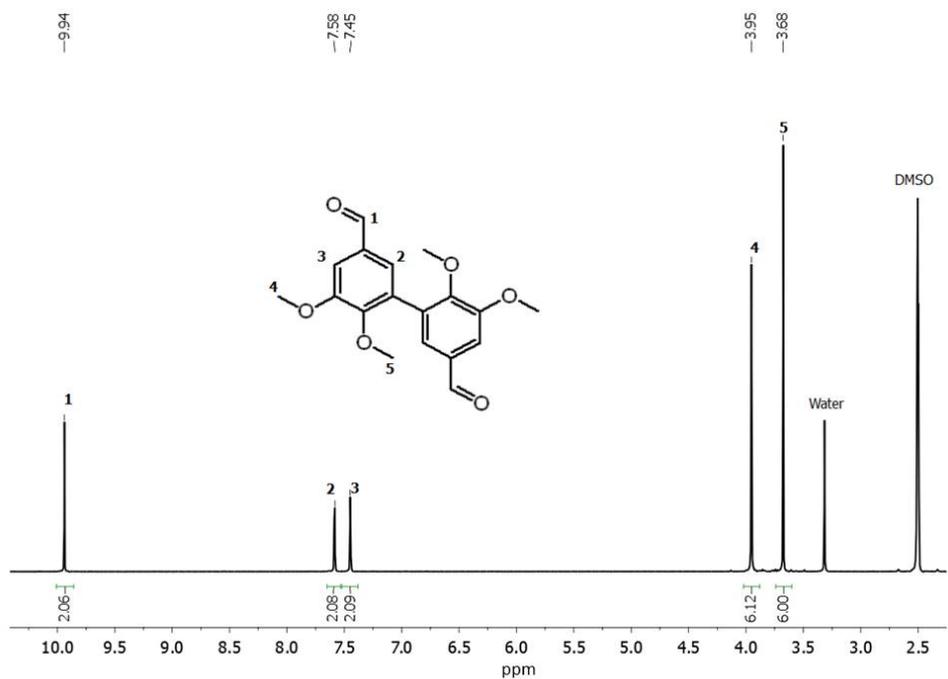


Figure S 10: ^1H NMR spectrum of methylated divanillin, 9, in DMSO

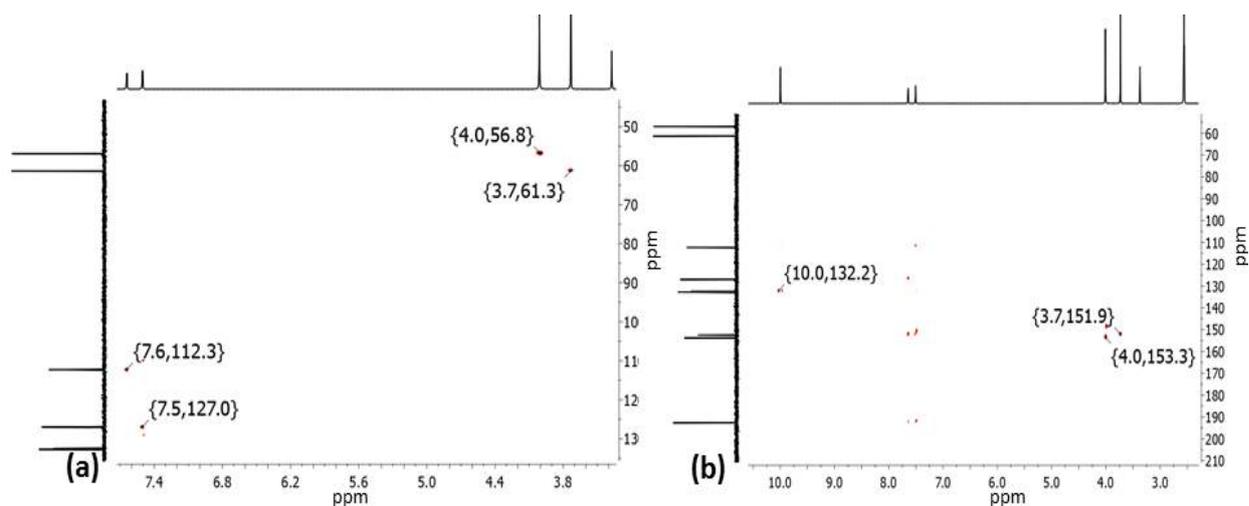


Figure S 11: HSQC (a) and HMBC (b) spectra of methylated divanillin, 9, in DMSO, at room temperature.

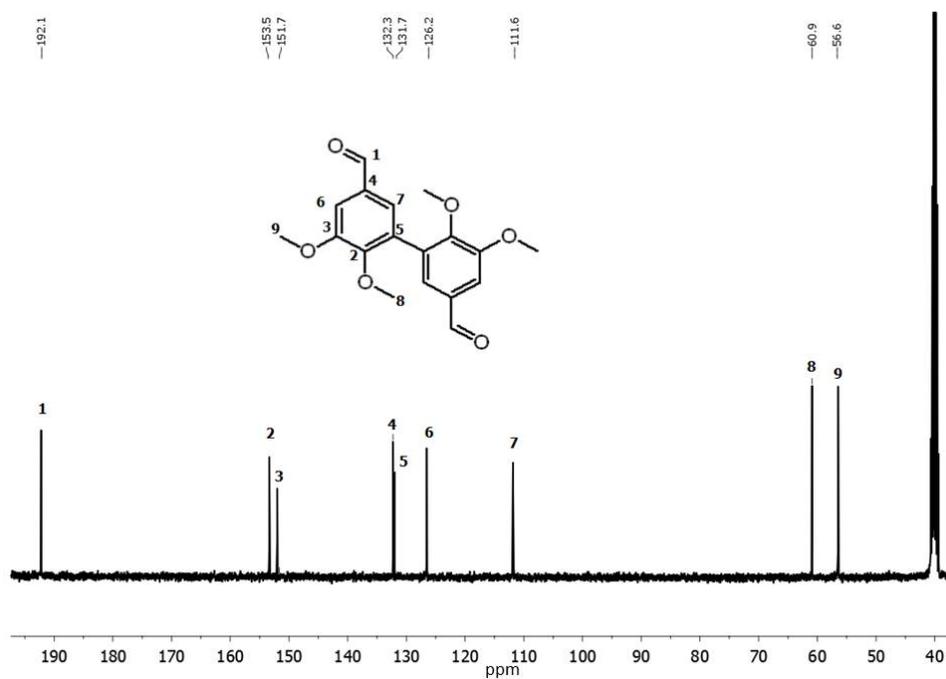


Figure S 12: ^{13}C NMR spectrum of methylated divanillin, 9, in DMSO

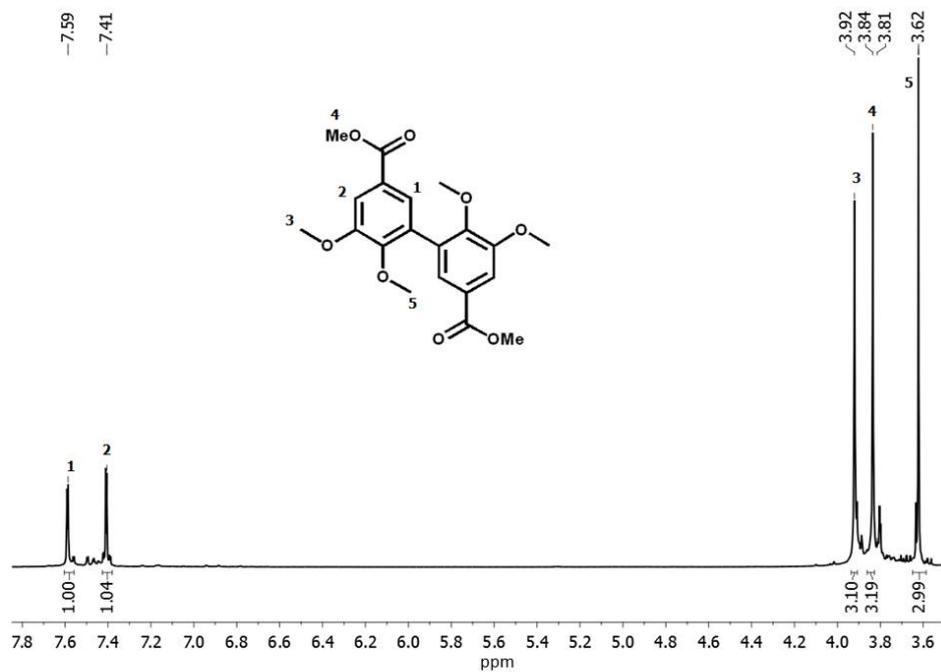


Figure S 13: ¹H NMR spectrum of methylated dimethyl divanillate, 10, in DMSO

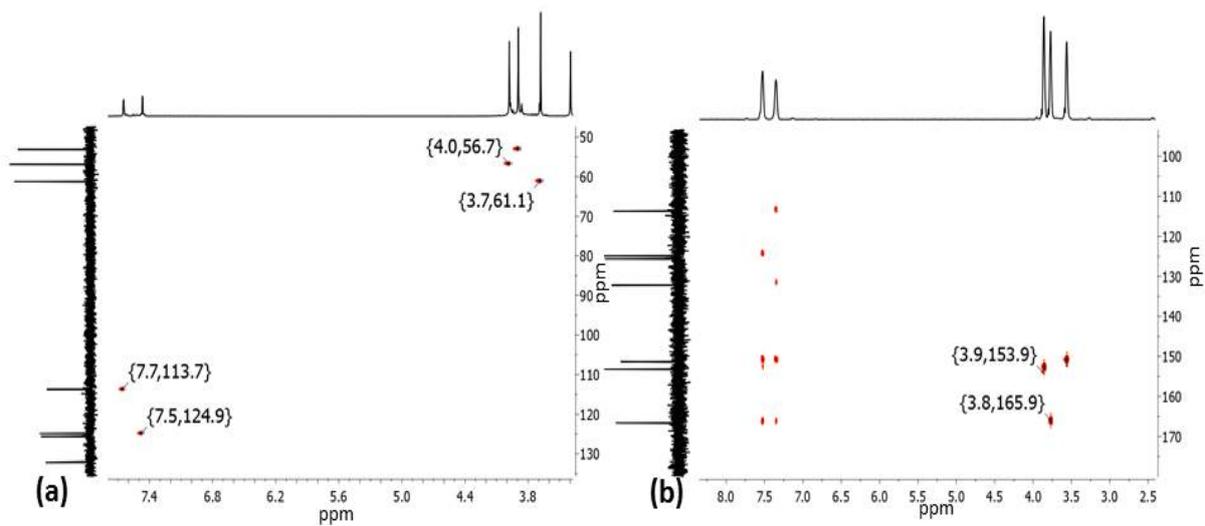


Figure S 14: HSQC (a) and HMBC (b) spectra of methylated diester, 10, in DMSO.

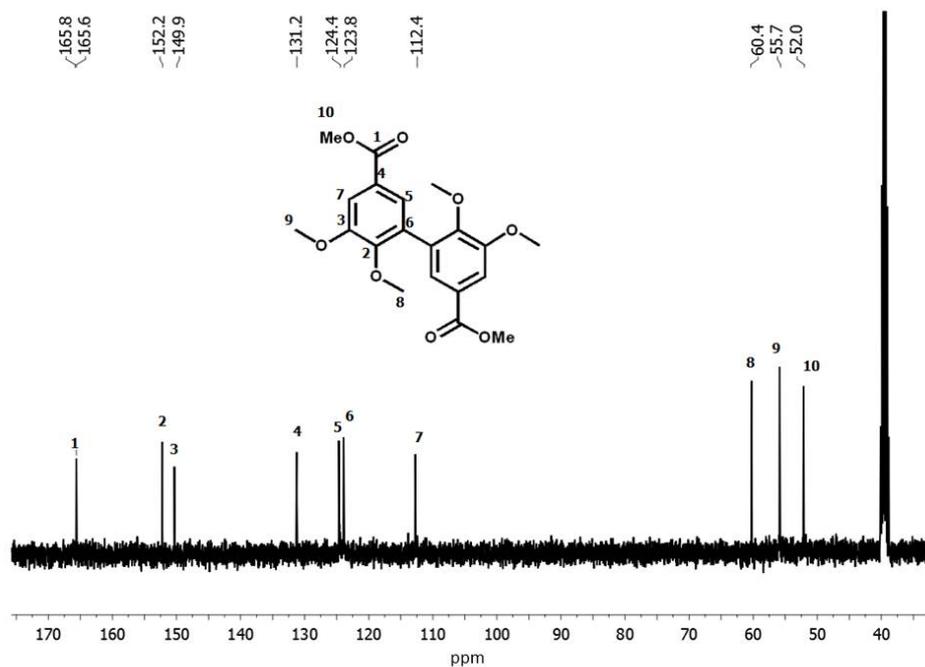


Figure S 15: ¹³C NMR spectrum of methylated dimethyl divanillate, 10, in DMSO

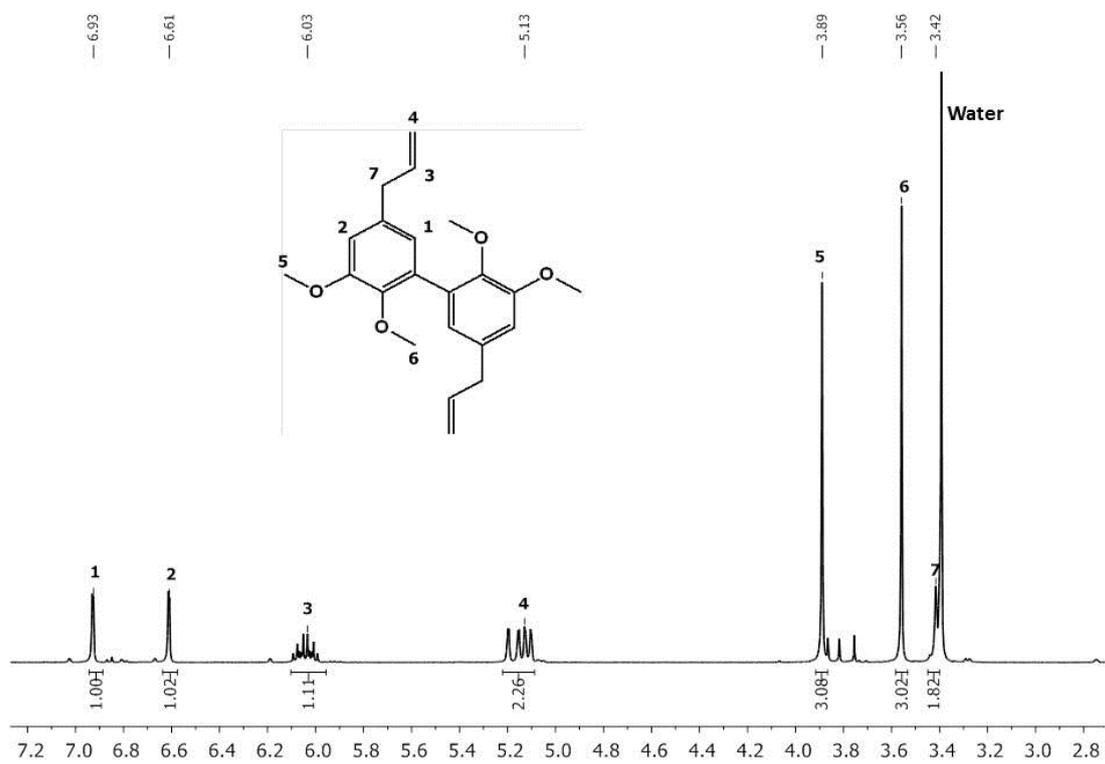


Figure S 16: ¹H NMR of methylated dieugenol, 11, in DMSO

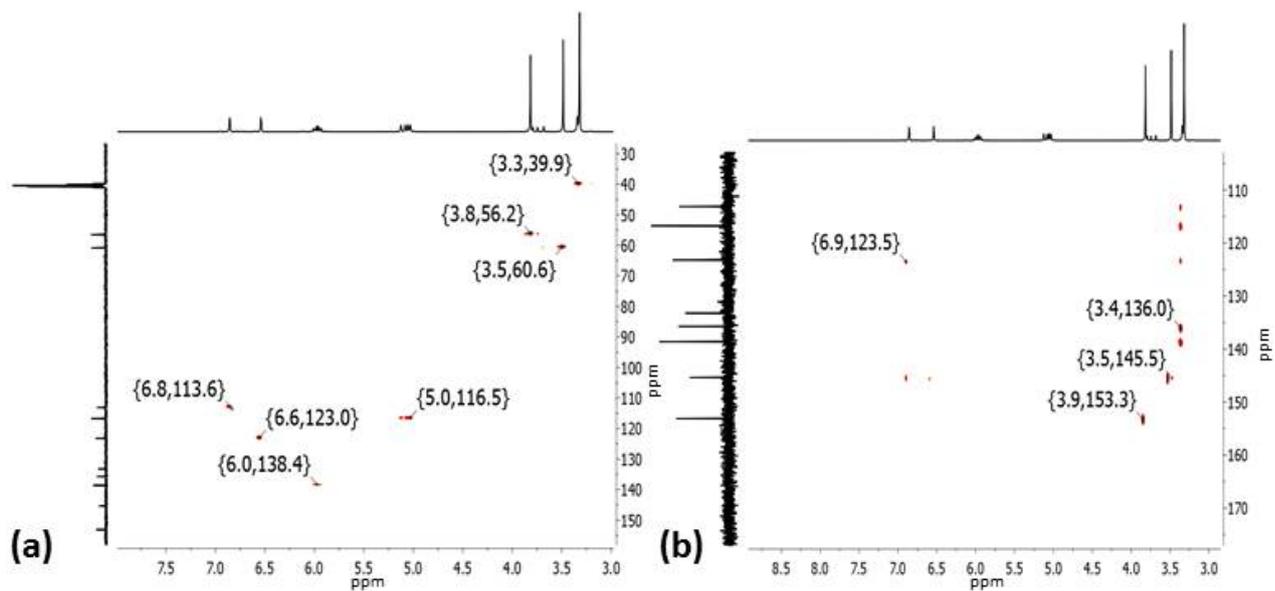


Figure S 17: HSQC (a) and HMBC (b) spectra of methylated dieugenol, 11, in DMSO.

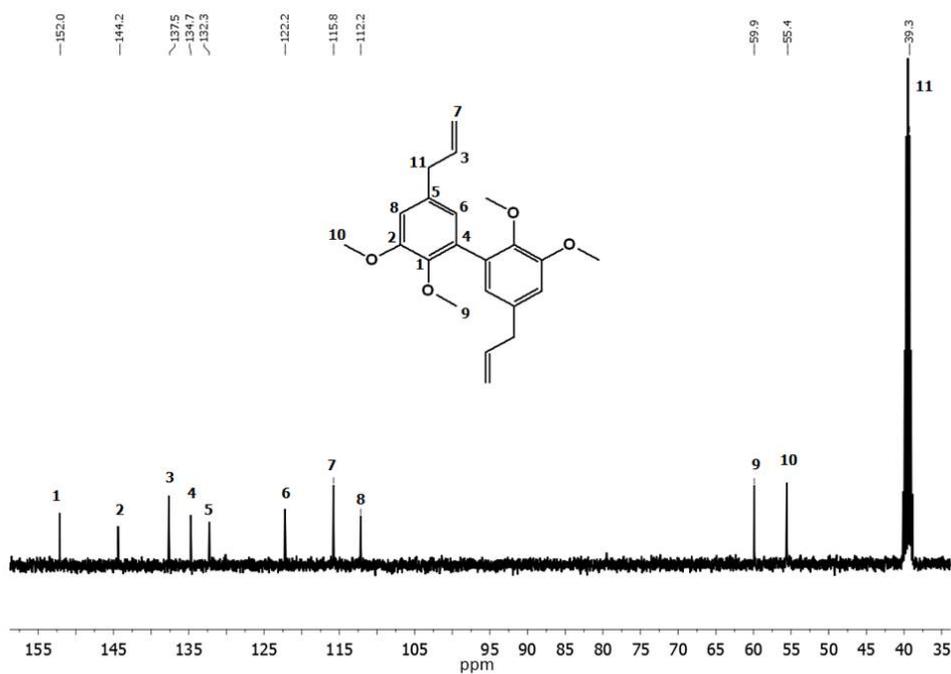


Figure S 18: ¹³C NMR of methylated dieugenol, 11, in DMSO

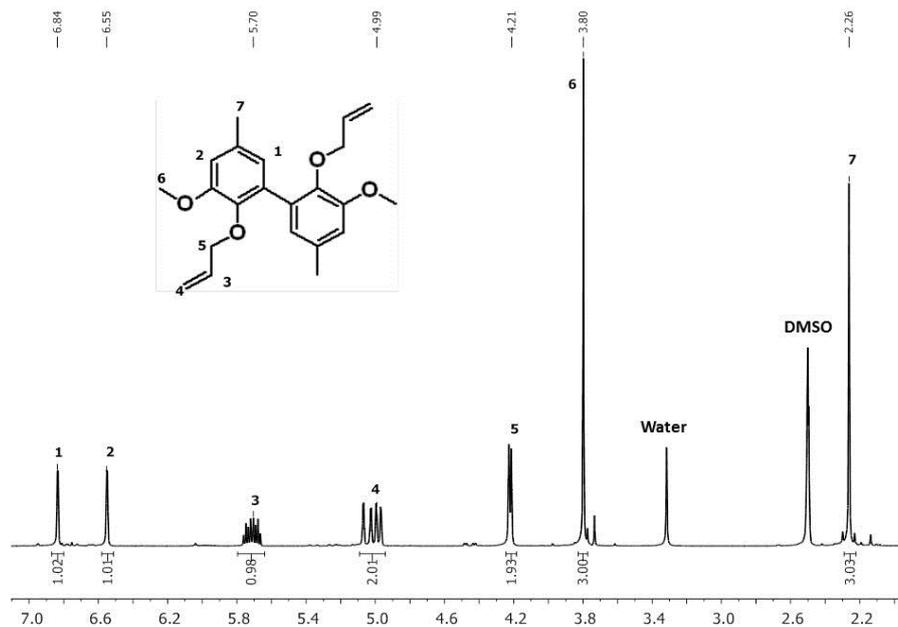


Figure S 19: ^1H NMR of allylated 2-methoxy-4-methylphenol, 12, dimer in DMSO

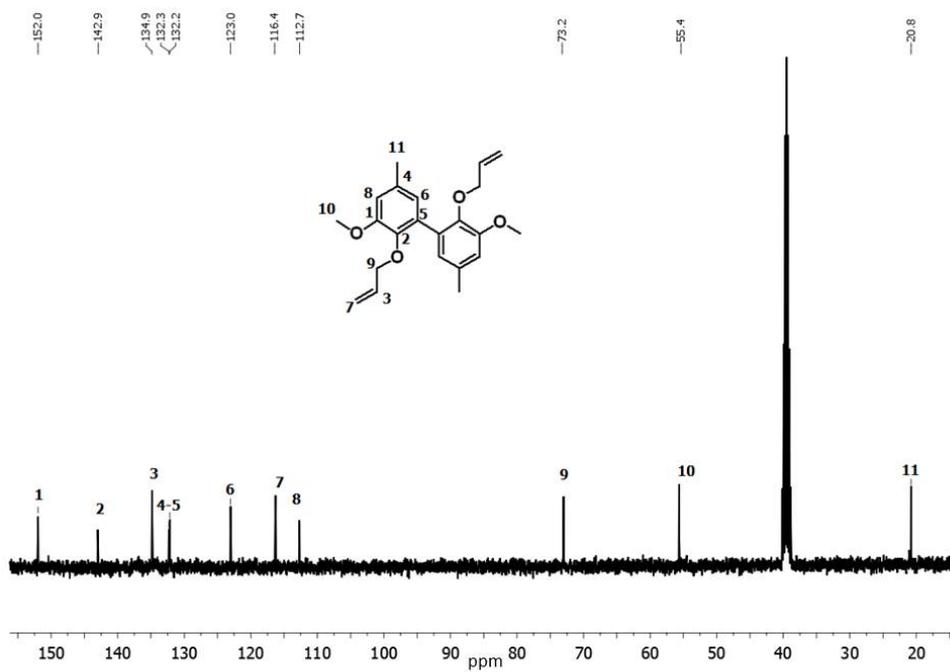


Figure S 20: ^{13}C NMR of allylated 2-methoxy-4-methylphenol dimer, 12, in DMSO

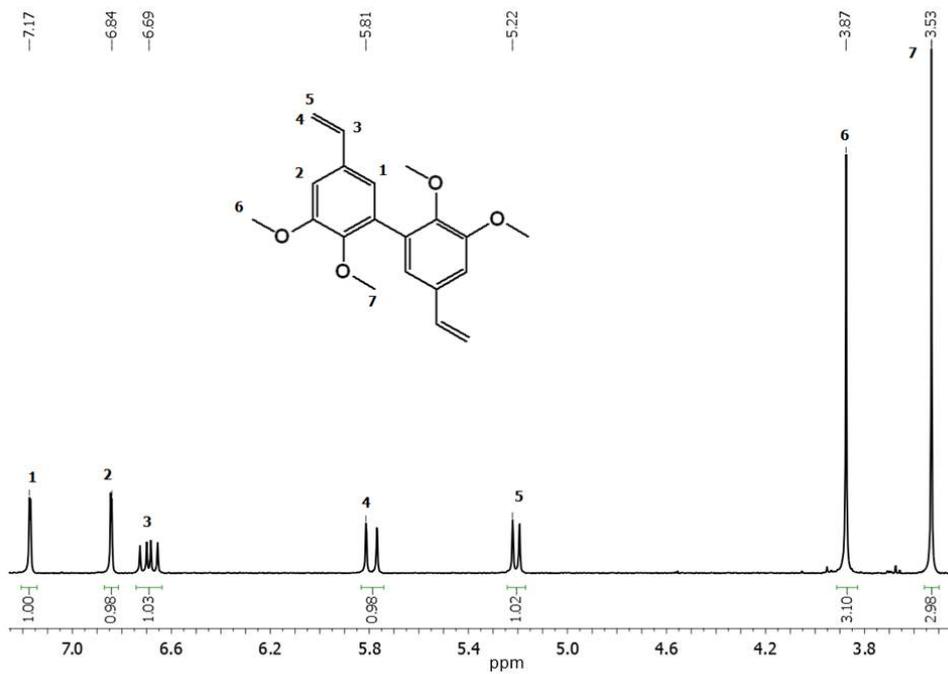


Figure S 21: ¹H NMR spectrum of divinyl, 13, in DMSO

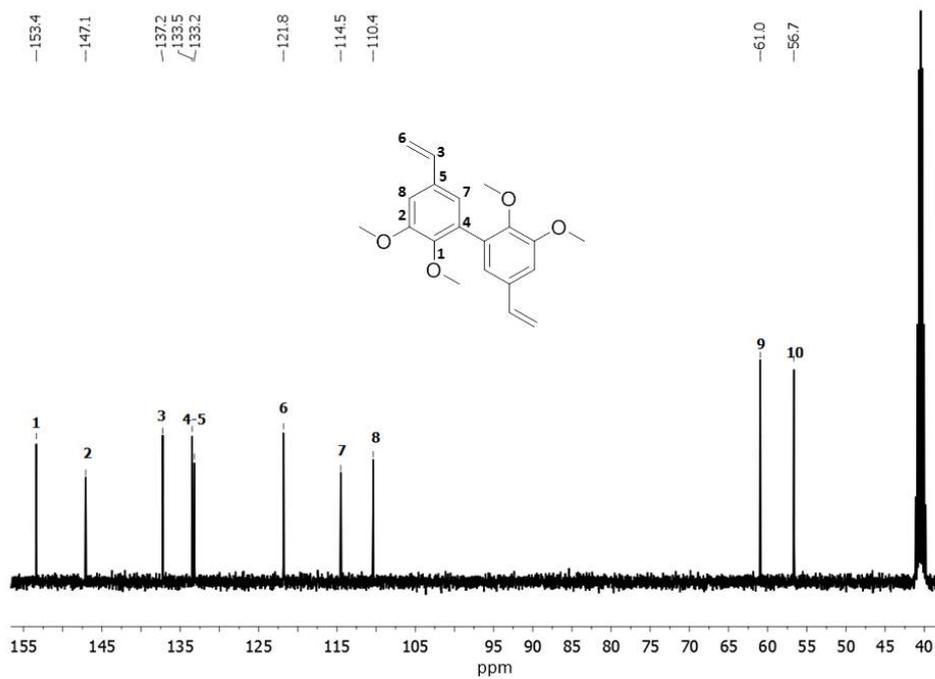


Figure S 22: ¹³C NMR of methylated divinyl, 13, in DMSO

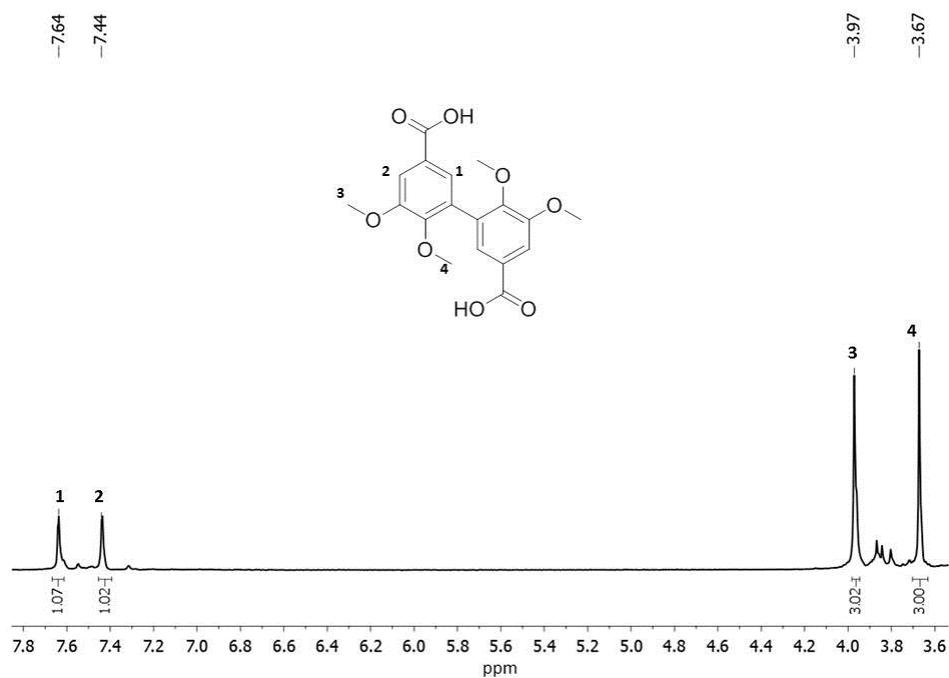


Figure S 23: ¹H NMR spectrum of methylated divanillic diacid, 14, in DMSO

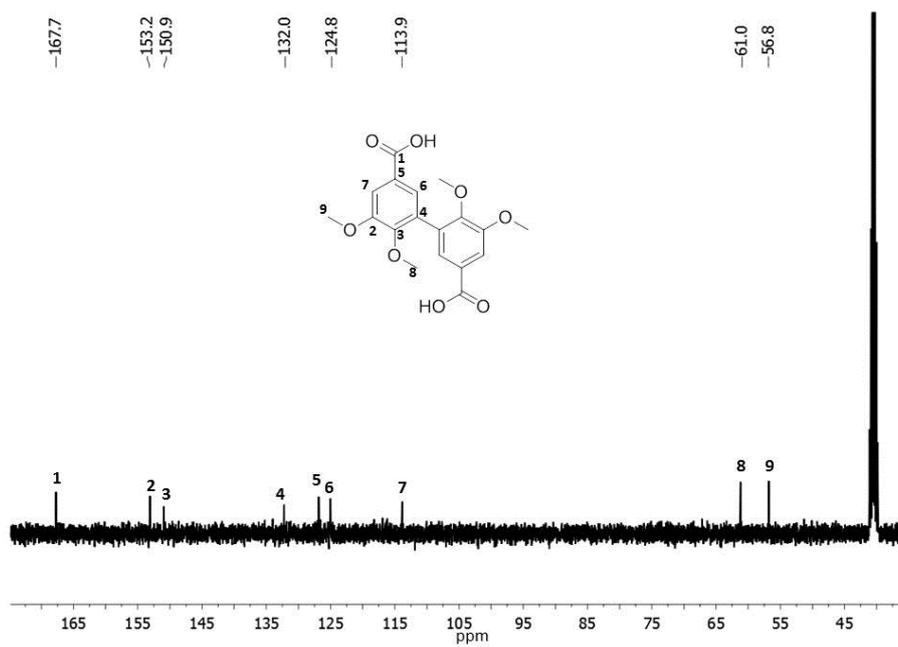


Figure S 24: ¹³C NMR spectrum of methylated divanillic diacid, 14, in DMSO

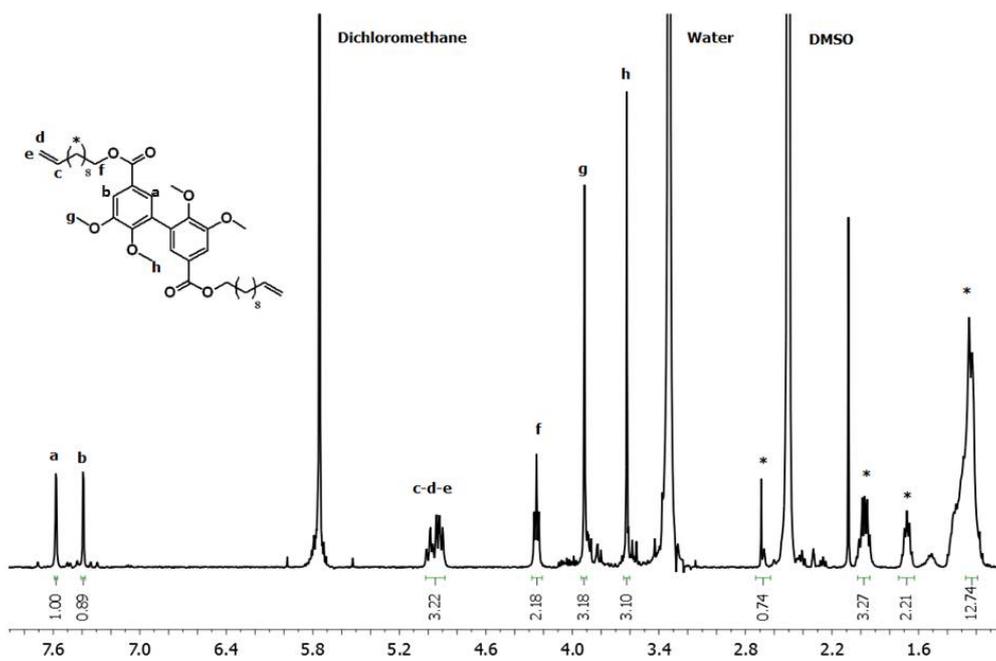


Figure S 25: ¹H NMR spectrum of bisunsaturated diester, 15, in DMSO

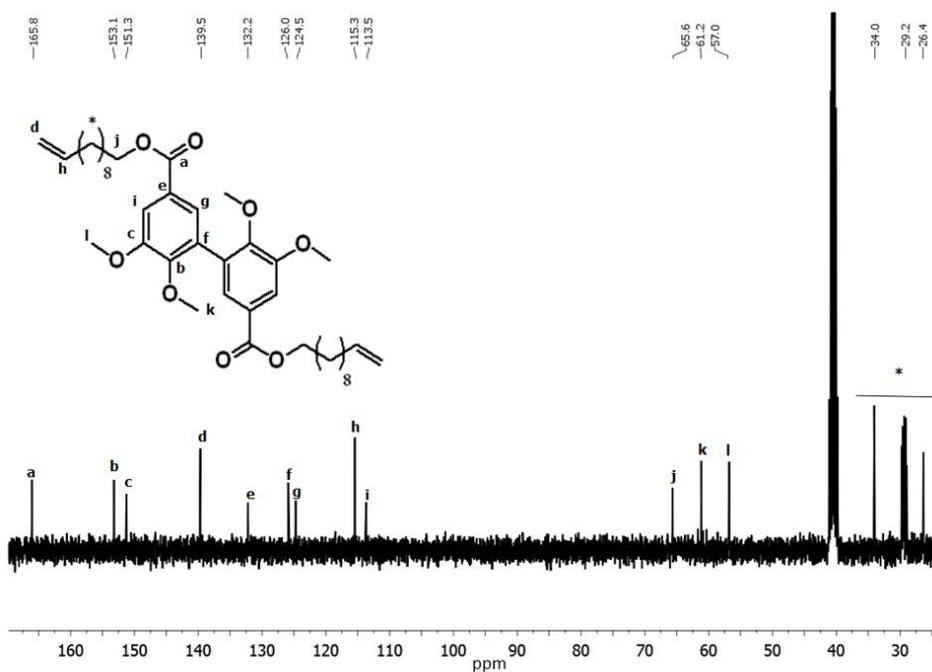


Figure S 26: ¹³C NMR spectrum of bisunsaturated diester, 15, in DMSO

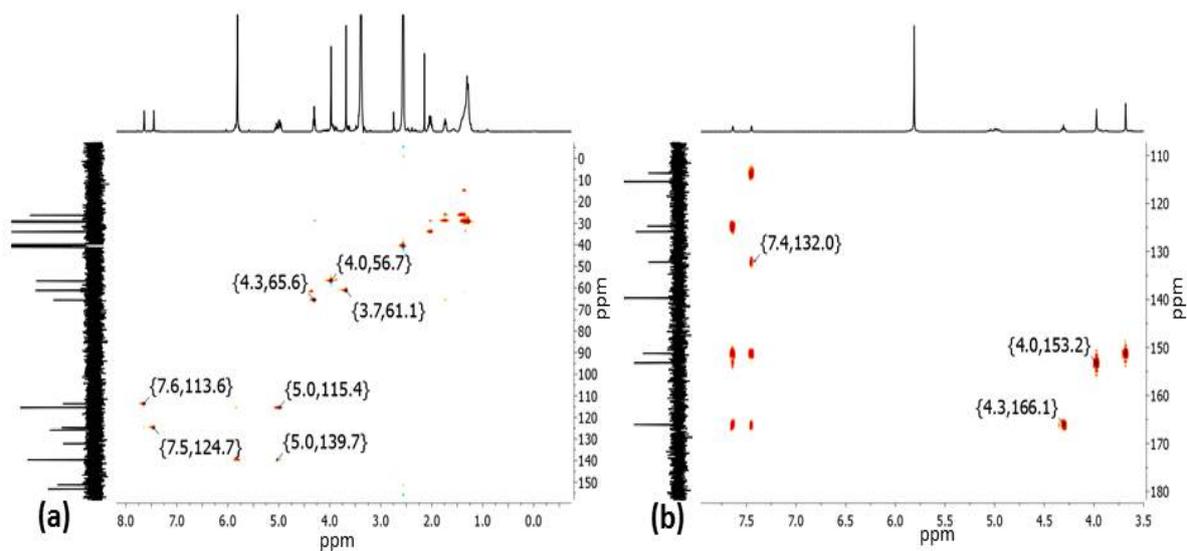


Figure S 27: HSQC (a) and HMBC (b) spectra of bis-unsaturated diester, 15, in DMSO, at room temperature

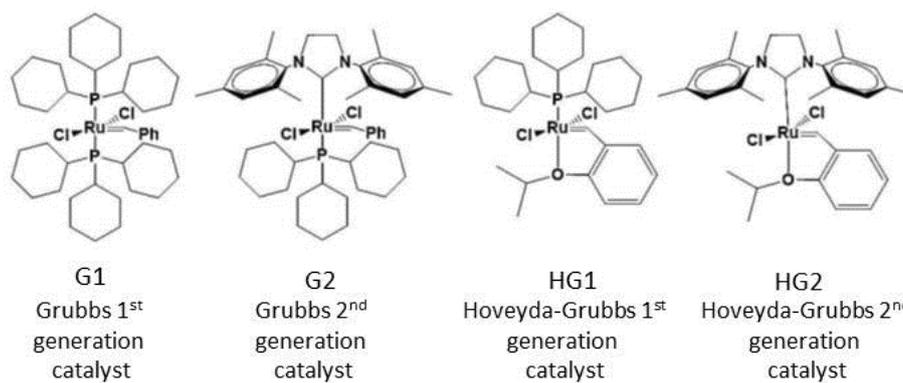


Figure S 28: Chemical structures of the first and second generation ruthenium metathesis catalysts.

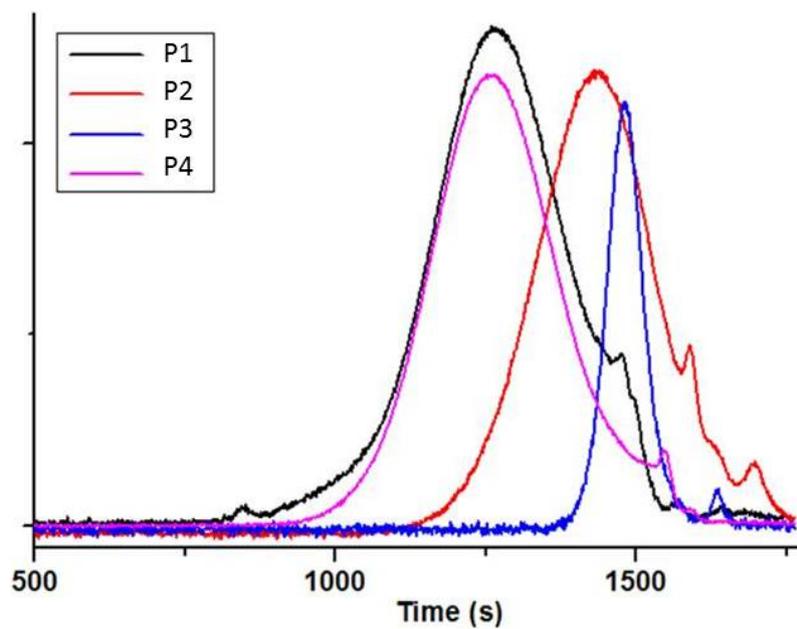


Figure S 29: SEC profiles of P1, P2, P3 and P4 synthesized by ADMET polymerization of unsaturated biphenyls, in DMF using PS calibration.

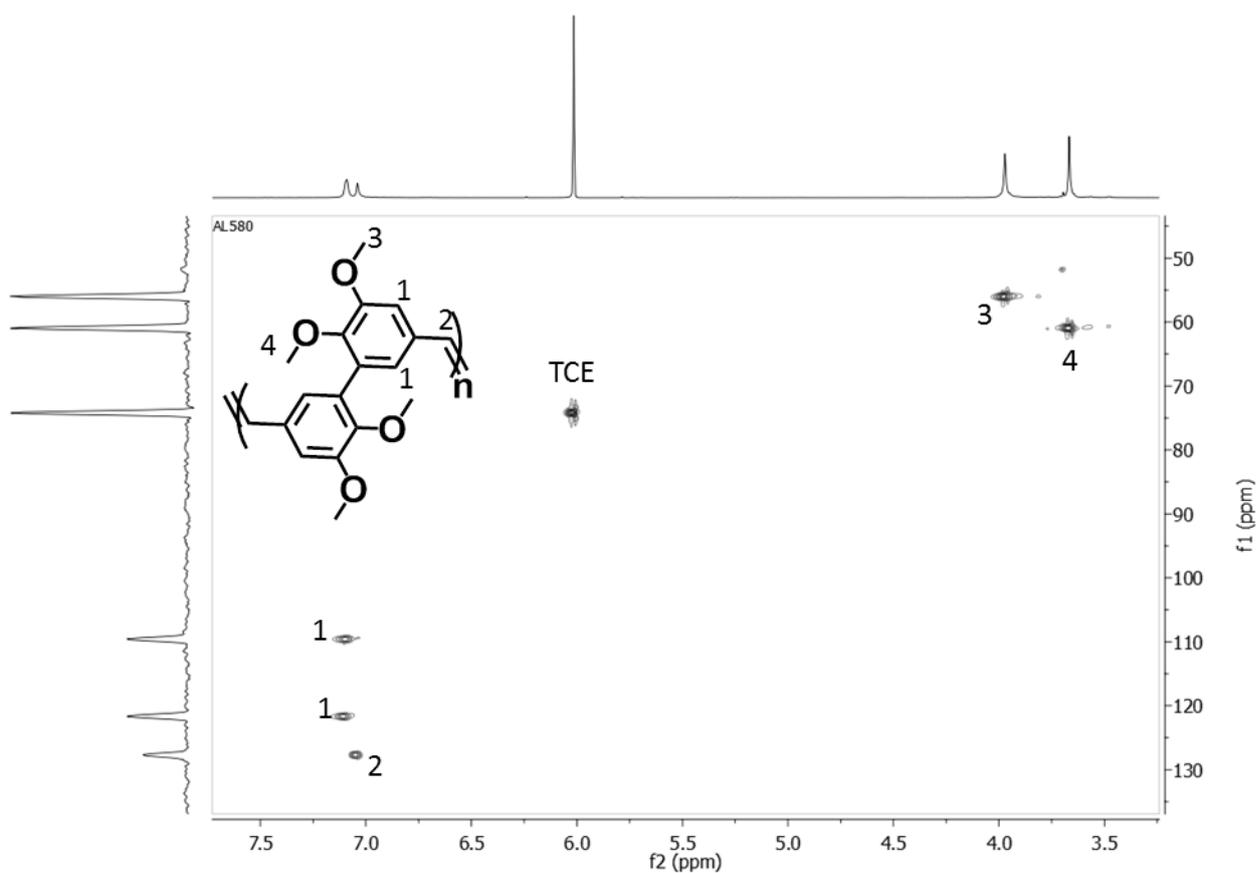


Figure S 30: HSQC spectrum of P1 in TCE, at room temperature.

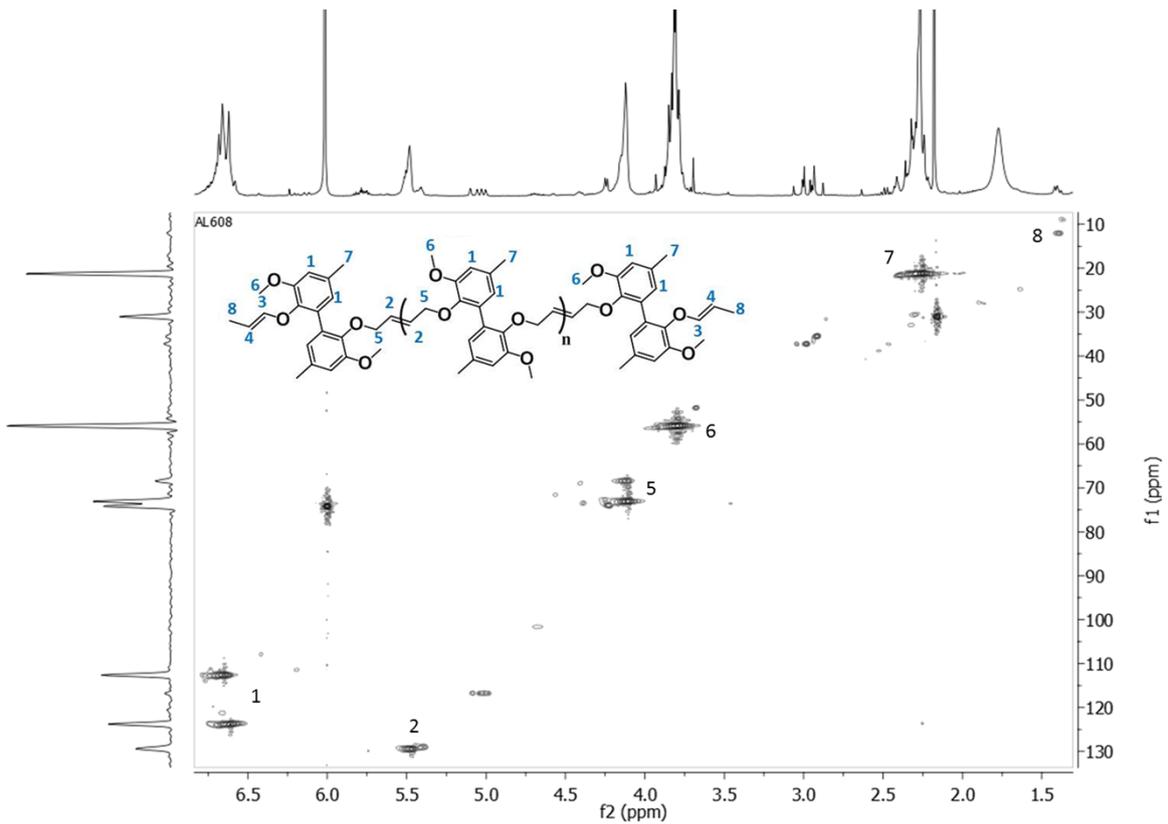


Figure S 31: HSQC spectrum of P3 in TCE, at room temperature.

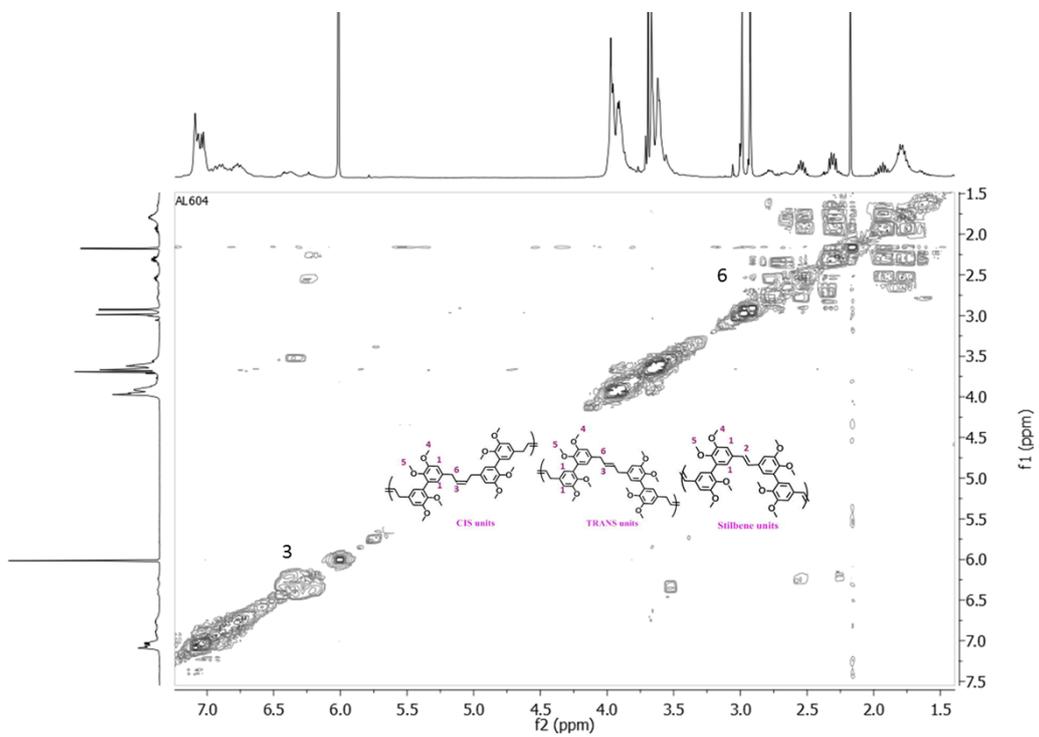


Figure S 32: COSY spectrum of P4 in TCE, at room temperature.

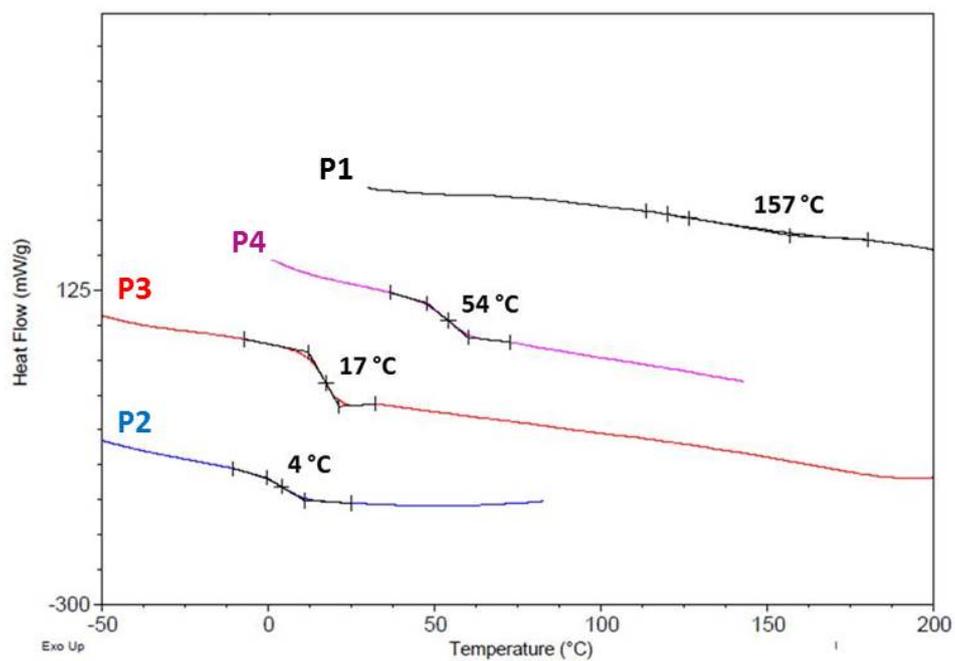


Figure S 33: DSC analyses of P1, P2, P3 and P4, second heating cycle.

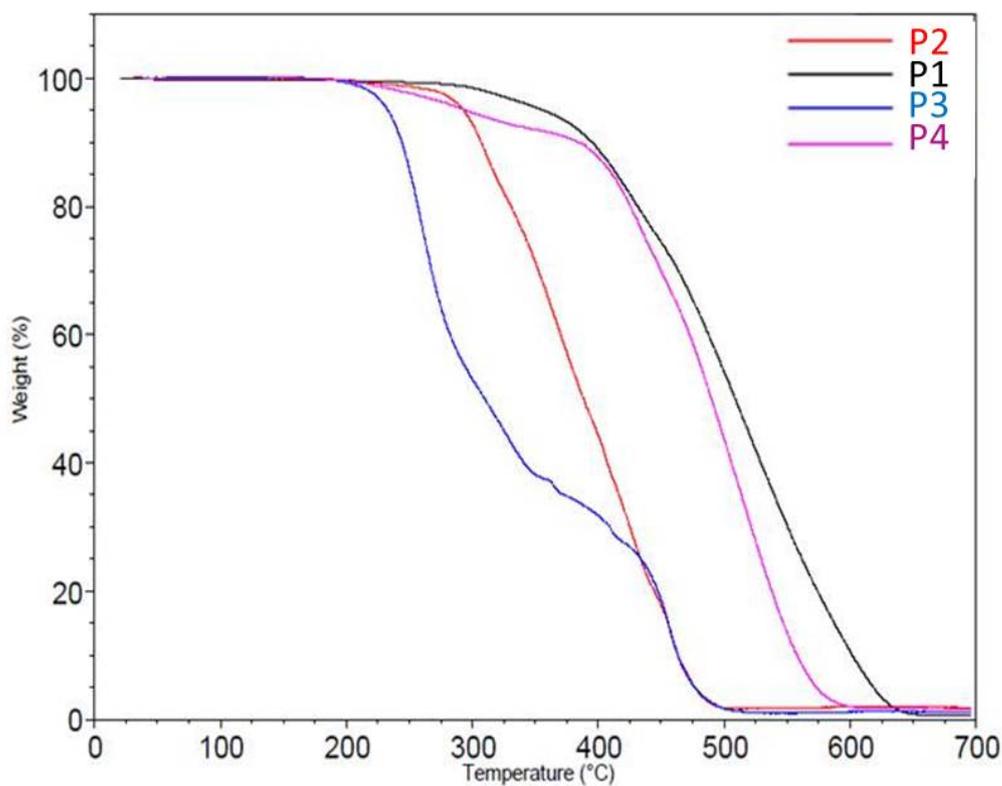


Figure S 34: TGA analyses under air of ADMET polymers, P1, P2, P3 and P4.