

Synthesis, characterization and cell selectivity of poly(quaternary ammonium chlorides): Effect of degree of quaternization and copolymer composition

Wendy Rusli,^a Periyah Mercy Halleluyah,^b Loh Xian Jun,^{*a,c} Rajamani Lakshminarayanan,^{*b} Anbanandam Parthiban^{*a}

^aInstitute of Sustainability for Chemicals, Energy and Environment (ISCE²), Agency for Science, Technology and Research (A*STAR), 1, Pesek Road, Jurong Island, Singapore 627833.

^bSingapore Eye Research Institute (SERI), The Academia, 20 College Road, Discovery Tower, Singapore 169856.

^cInstitute of Materials Research and Engineering (IMRE), Agency for Science, Technology and Research (A*STAR), 2, Fusionopolis Way, Singapore 138634.

CONTENTS

Figure S1. GPC of poly(4-vinyl benzyl chloride) (PVBC) (page 2).

Figure S2. GPC of copolymer, VBC_{0.5}-Sty_{0.5} (page 3).

Figure S3. GPC of copolymer, VBC_{0.75}-Sty_{0.25} (page 3).

Figure S4. GPC of copolymer, VBC_{0.25}-Sty_{0.75} (page 3).

Figure S5. GPC of copolymer, VBC_{0.5}-MMA_{0.5} (page 4).

Figure S6. GPC of copolymer, VBC_{0.75}-MMA_{0.25} (page 4).

Figure S7. GPC of copolymer, VBC_{0.25}-MMA_{0.75} (page 4).

Figure S8. ¹H-NMR spectrum of PVBC (page 5).

Figure S9. ¹H-NMR spectrum of HP 1 (page 5).

Figure S10. ¹H-NMR spectrum of HP 2 (page 6).

Figure S11. ¹H-NMR spectrum of HP 3 (page 6).

Figure S12. ¹H-NMR spectrum of HP 4 (page 7).

Figure S13. ¹H-NMR spectrum of HP 5 (page 7).

Figure S14. ¹H-NMR spectrum of VBC_{0.5}-Sty_{0.5} (page 8).

Figure S15. ¹H-NMR spectrum of VBC_{0.75}-Sty_{0.25} (page 8).

Figure S16. ¹H-NMR spectrum of VBC_{0.25}-Sty_{0.75} (page 9).

Figure S17. ¹H-NMR spectrum of VBC_{0.5}-MMA_{0.5} (page 9).

Figure S18. ¹H-NMR spectrum of VBC_{0.75}-MMA_{0.25} (page 10).

Figure S19. ¹H-NMR spectrum of VBC_{0.25}-MMA_{0.75} (page 10)

Figure S20. ¹H-NMR spectrum of CP 1 (page 11).

Figure S21. ¹H-NMR spectrum of CP 2 (page 11).

Figure S22. $^1\text{H-NMR}$ spectrum of CP 3 (page 12).

Figure S23. $^1\text{H-NMR}$ spectrum of CP 4 (page 12)

Figure S24. $^1\text{H-NMR}$ spectrum of CP 5 (page 13).

Figure S25. $^1\text{H-NMR}$ spectrum of CP 6 (page 13)

Figure S26. $^1\text{H-NMR}$ spectrum of CP 7 (page 14).

Figure S27. $^1\text{H-NMR}$ spectrum of CP 8 (page 14).

Figure S28. $^1\text{H-NMR}$ spectrum of CP 9 (page 15).

Figure S29. $^1\text{H-NMR}$ spectrum of CP 11 (page 15)

Figure S30. $^1\text{H-NMR}$ spectrum of CP 12 (page 16).

Figure S31. $^1\text{H-NMR}$ spectrum of CP 13 (page 16).

Figure S32. $^1\text{H-NMR}$ spectrum of CP 14 (page 17).

Figure S33. $^1\text{H-NMR}$ spectrum of CP 15 (page 17).

Figure S34. $^1\text{H-NMR}$ spectrum of CP 16 (page 18).

Figure S35. $^1\text{H-NMR}$ spectrum of CP 17 (page 18).

Figure S36. $^1\text{H-NMR}$ spectrum of CP 18 (page 19).

Figure S37. $^1\text{H-NMR}$ spectrum of CP 19 (page 19).

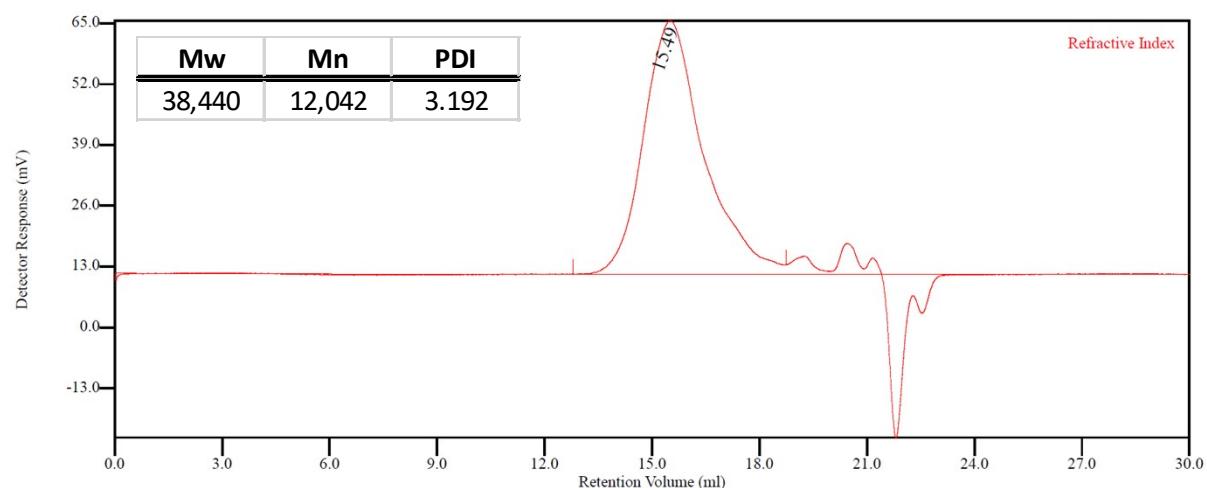


Figure S1. GPC of poly(4-vinyl benzyl chloride) (PVBC).

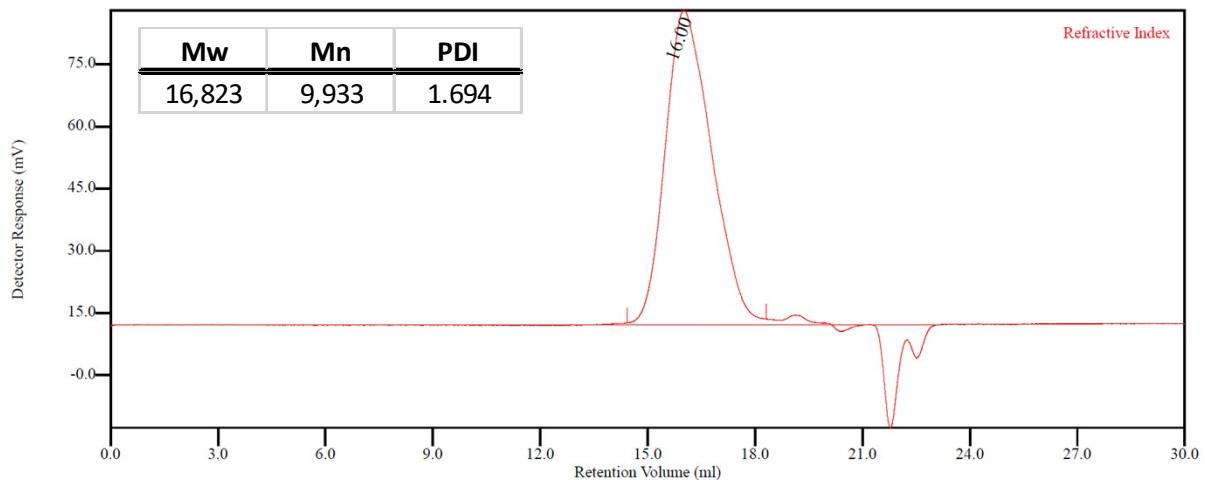


Figure S2. GPC of copolymer, $\text{VBC}_{0.5}\text{-Sty}_{0.5}$.

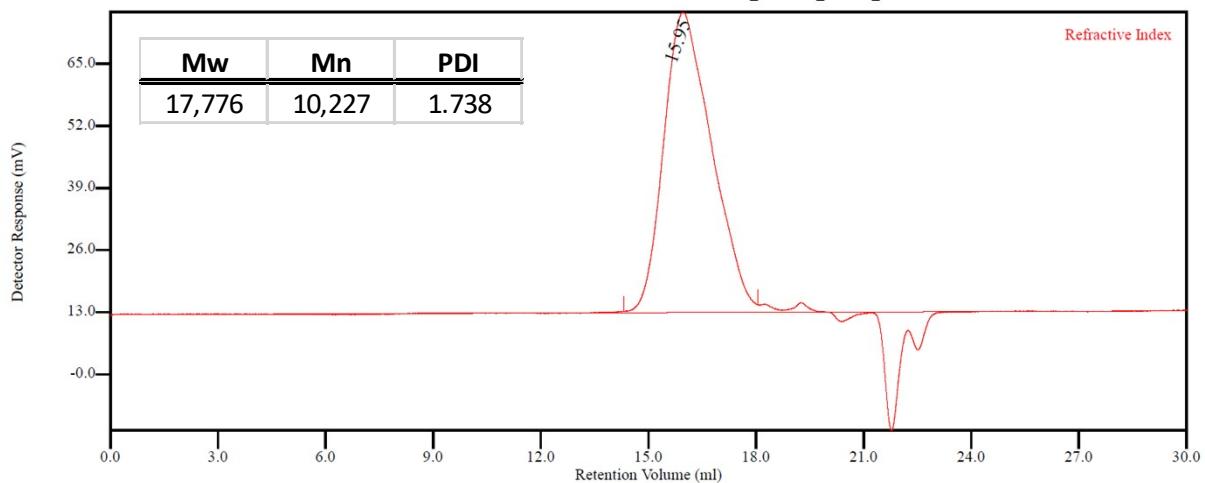


Figure S3. GPC of copolymer, $\text{VBC}_{0.75}\text{-Sty}_{0.25}$.

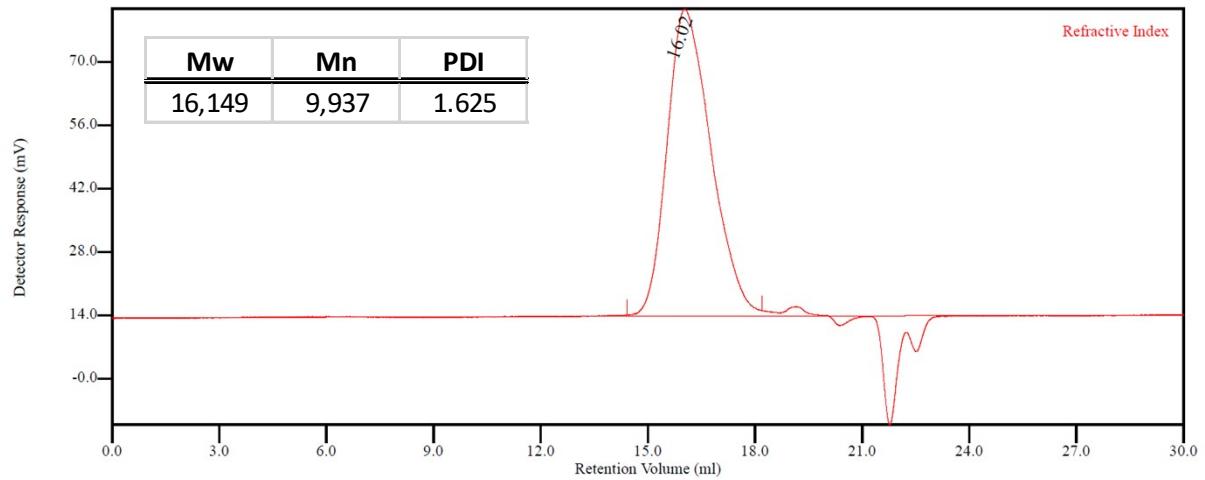


Figure S4. GPC of copolymer, $\text{VBC}_{0.25}\text{-Sty}_{0.75}$.

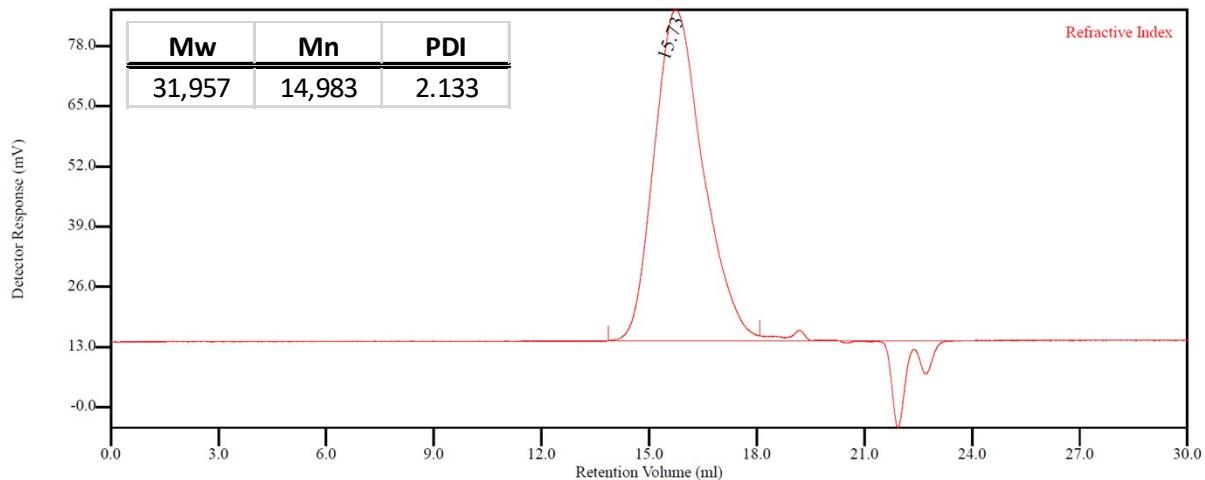


Figure S5. GPC of copolymer, $\text{VBC}_{0.5}\text{-MMA}_{0.5}$.

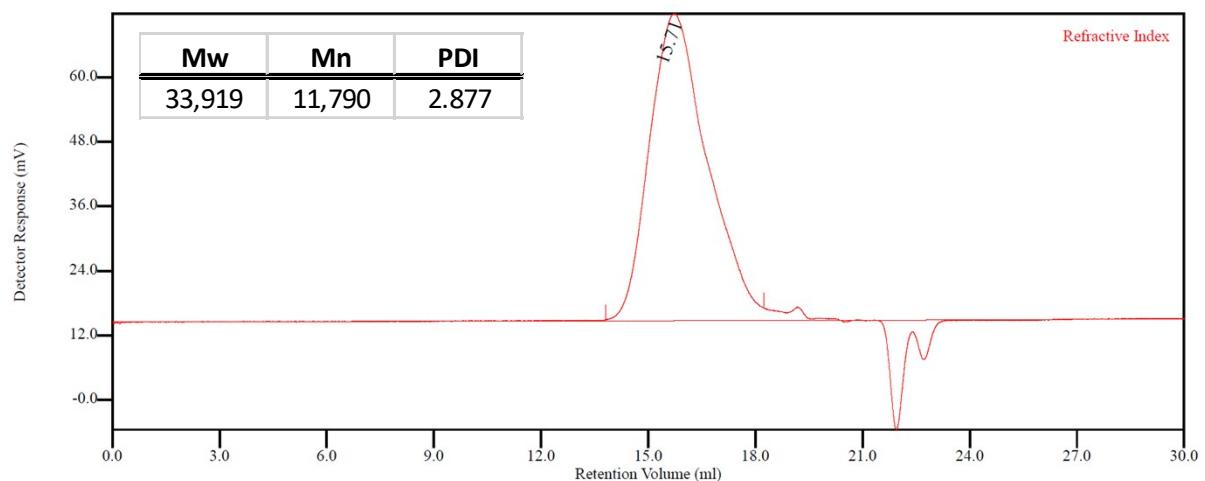


Figure S6. GPC of copolymer, $\text{VBC}_{0.75}\text{-MMA}_{0.25}$.

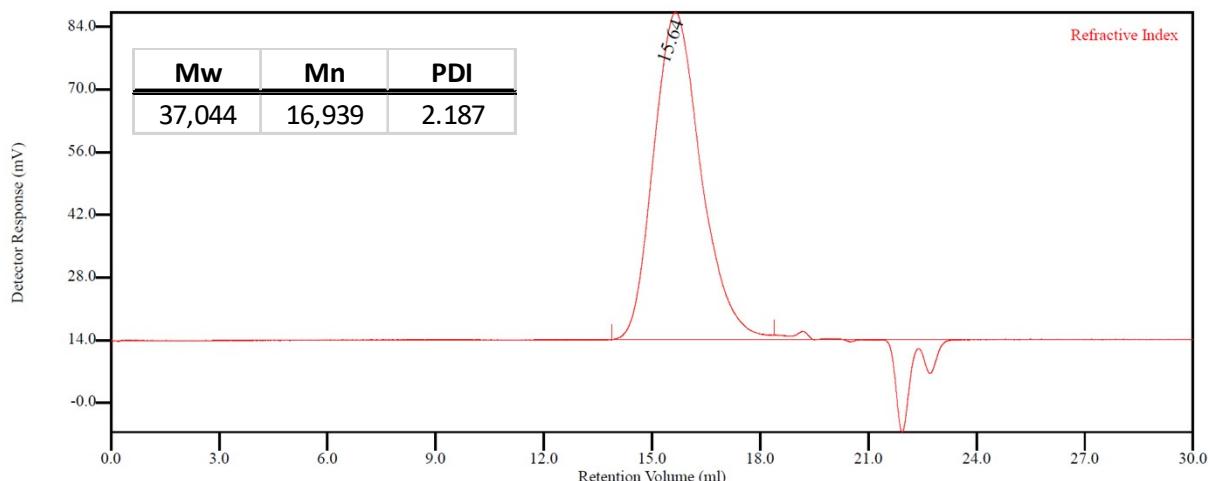


Figure S7. GPC of copolymer, $\text{VBC}_{0.25}\text{-MMA}_{0.75}$.

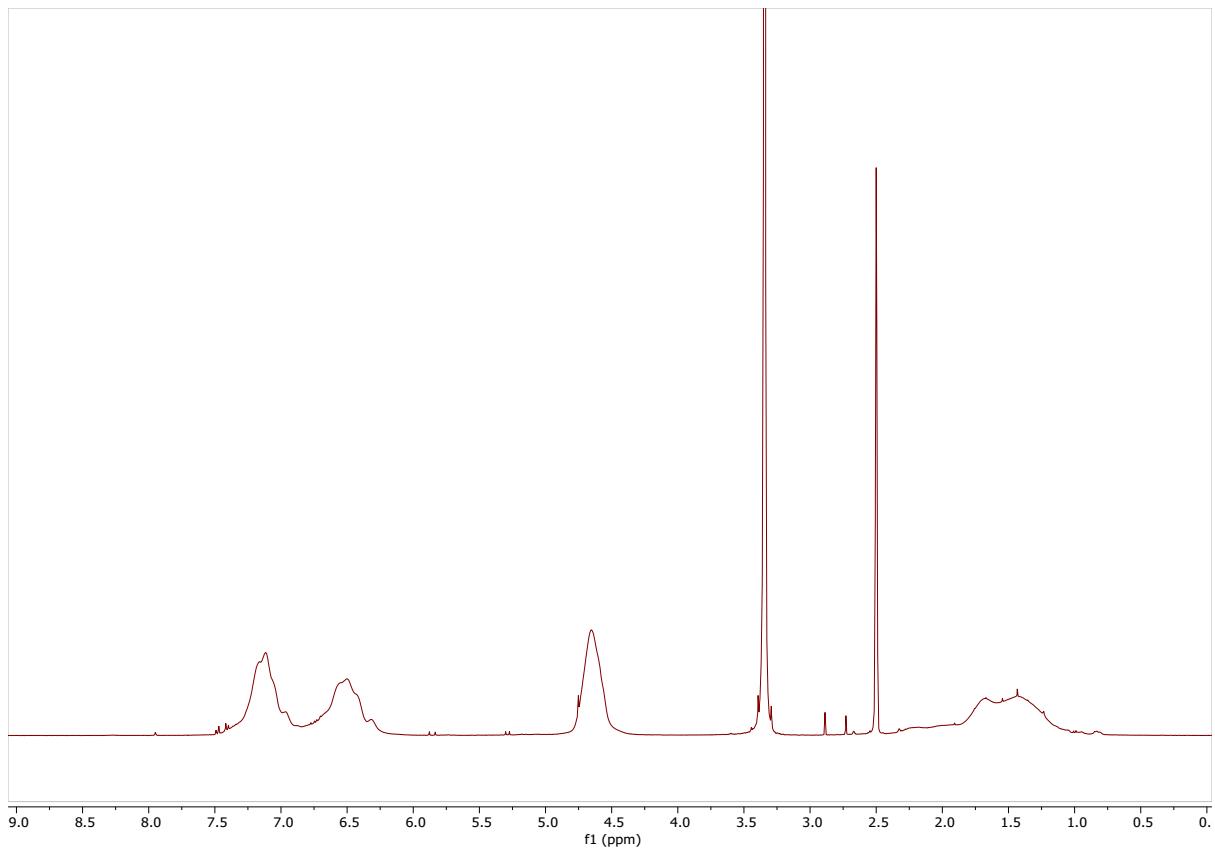


Figure S8. ¹H-NMR spectrum of PVBC (solvent: d_6 -DMSO).

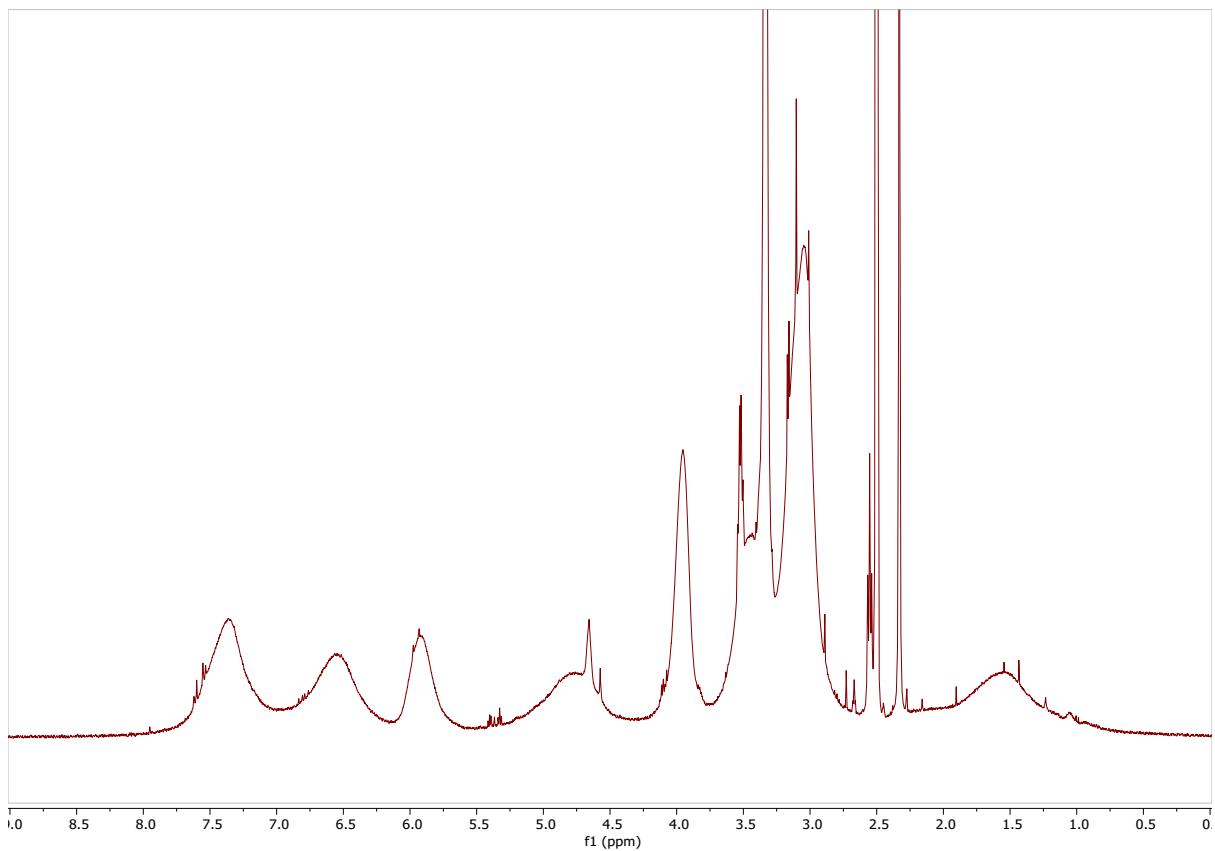


Figure S9. ¹H-NMR spectrum of HP 1 (solvent: d_6 -DMSO).

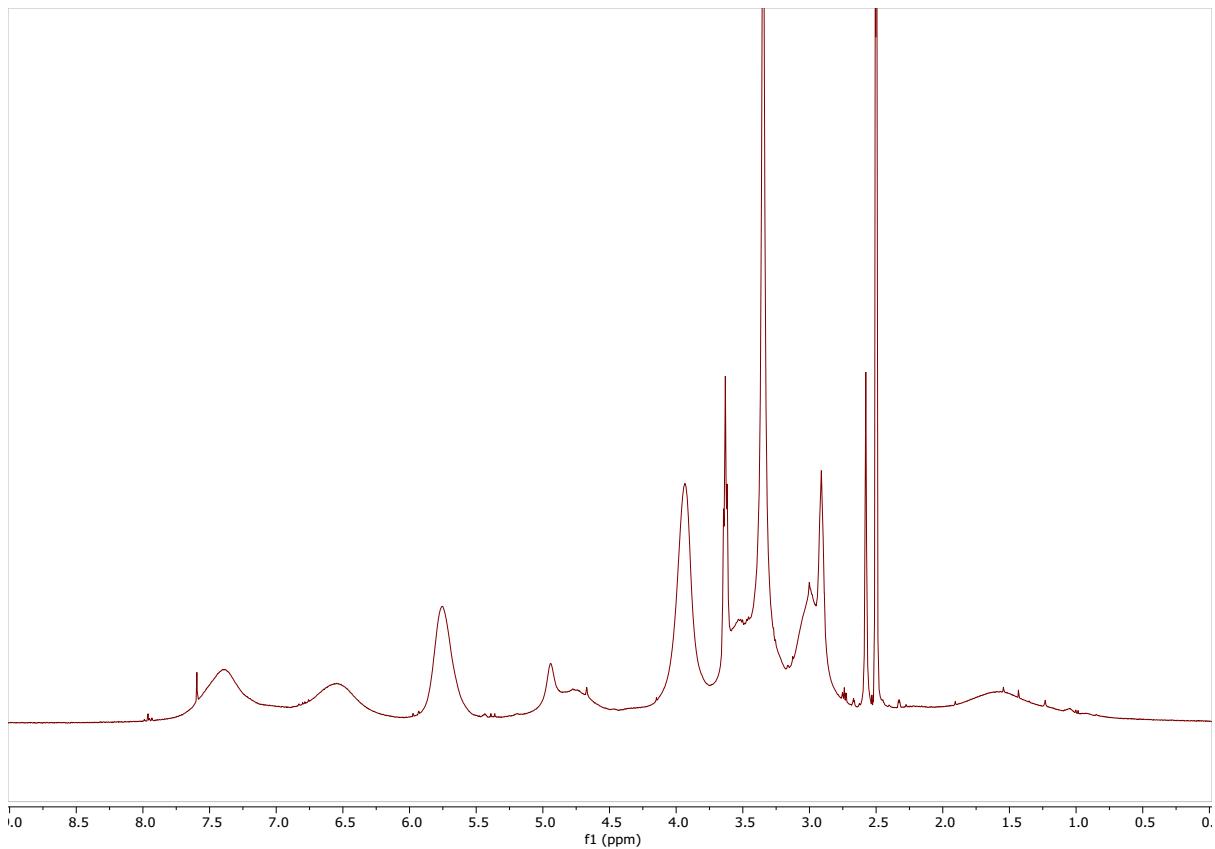


Figure S10. ¹H-NMR spectrum of HP 2 (solvent: d_6 -DMSO).

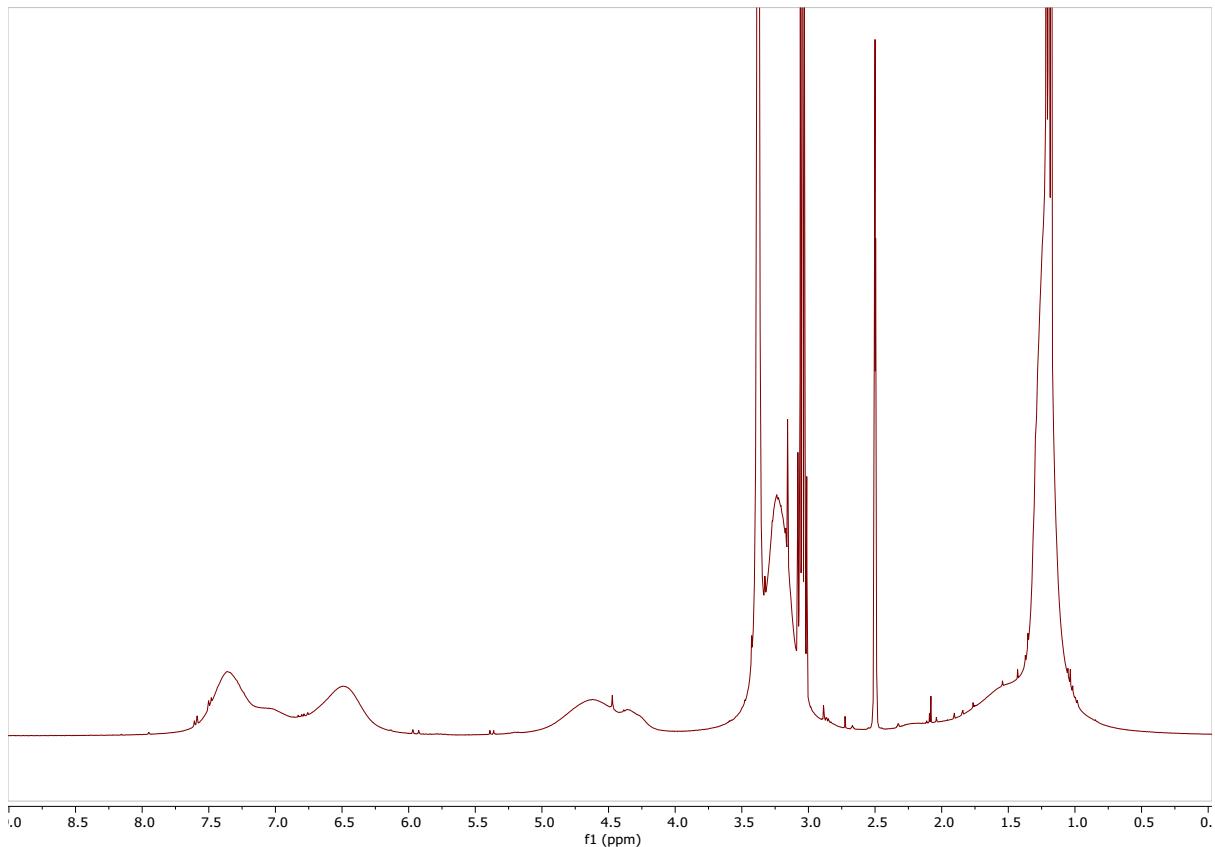


Figure S11. ¹H-NMR spectrum of HP 3 (solvent: d_6 -DMSO).

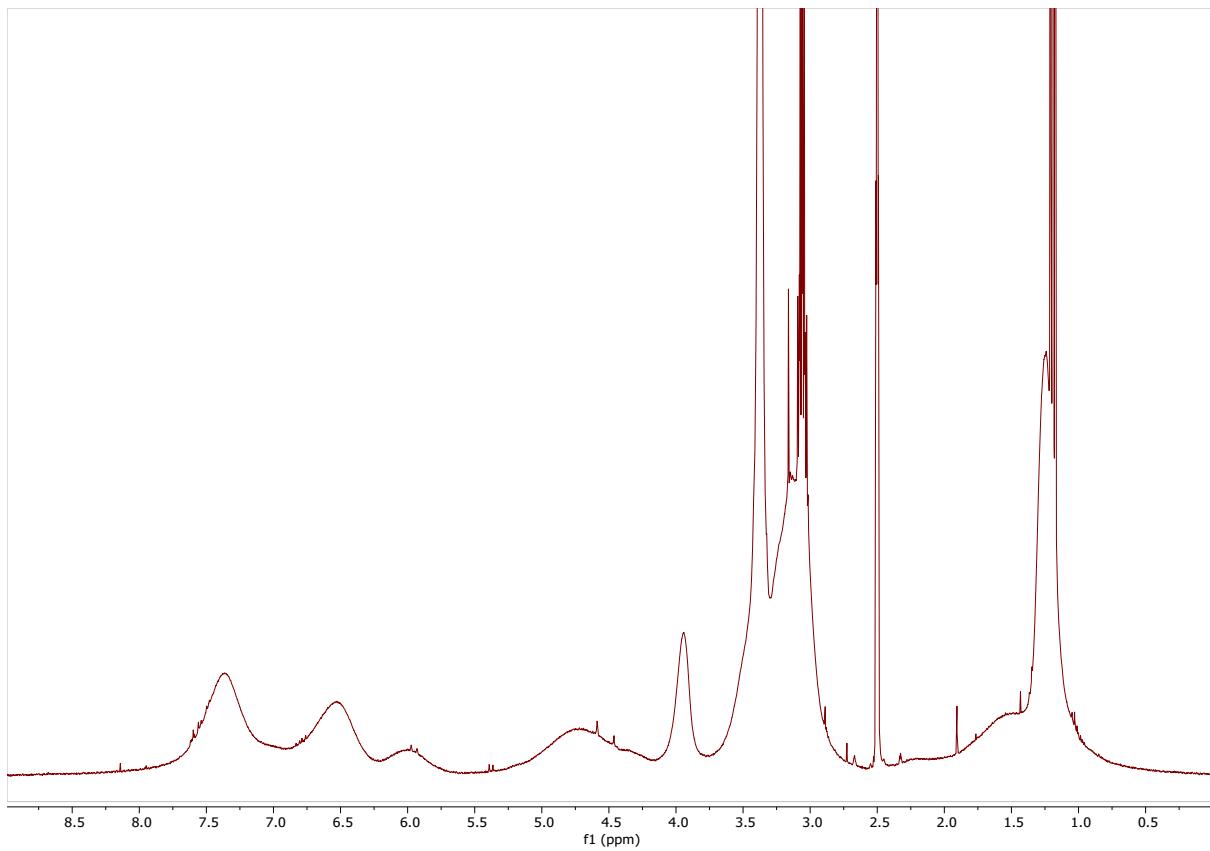


Figure S12. ¹H-NMR spectrum of HP 4 (solvent: d_6 -DMSO).

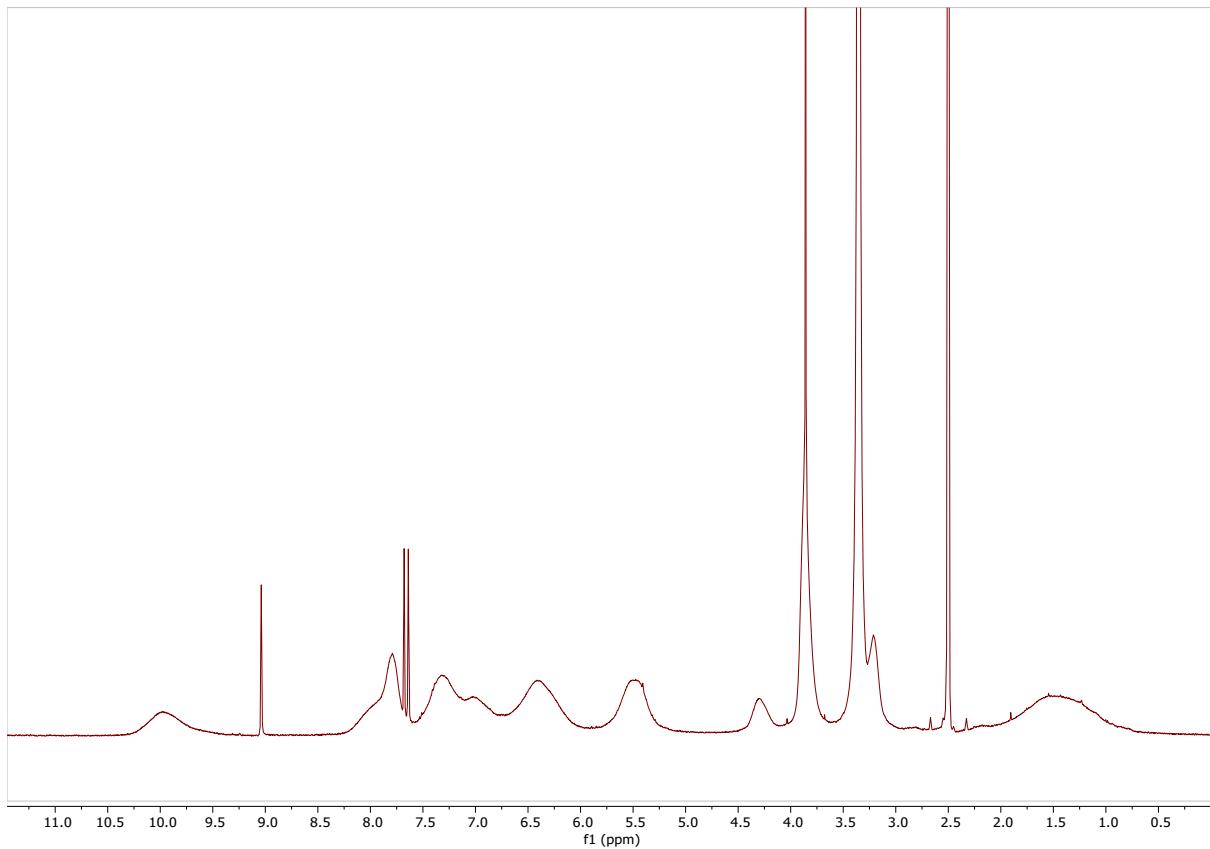


Figure S13. ¹H-NMR spectrum of HP 5 (solvent: d_6 -DMSO).

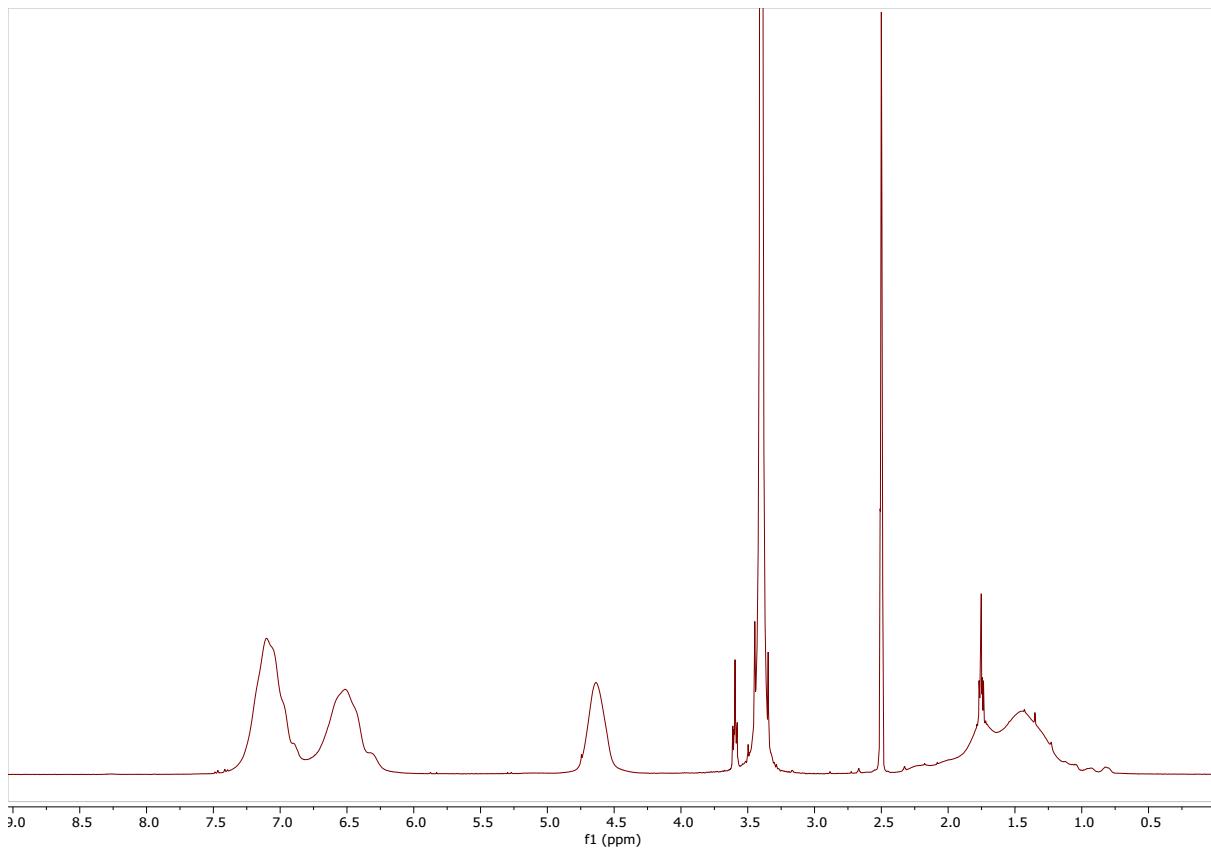


Figure S14. ¹H-NMR spectrum of VBC_{0.5}-Sty_{0.5} (solvent: *d*₆-DMSO).

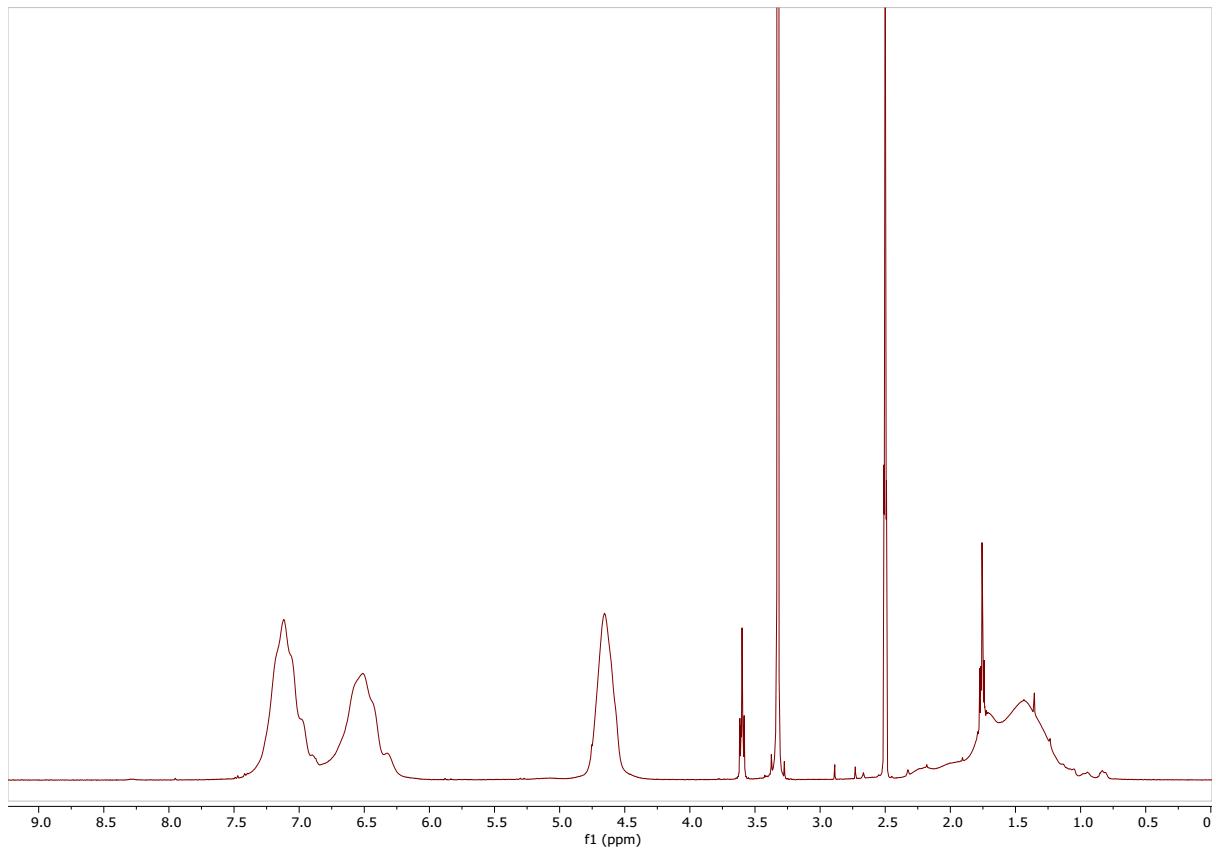


Figure S15. ¹H-NMR spectrum of VBC_{0.75}-Sty_{0.25} (solvent: *d*₆-DMSO).

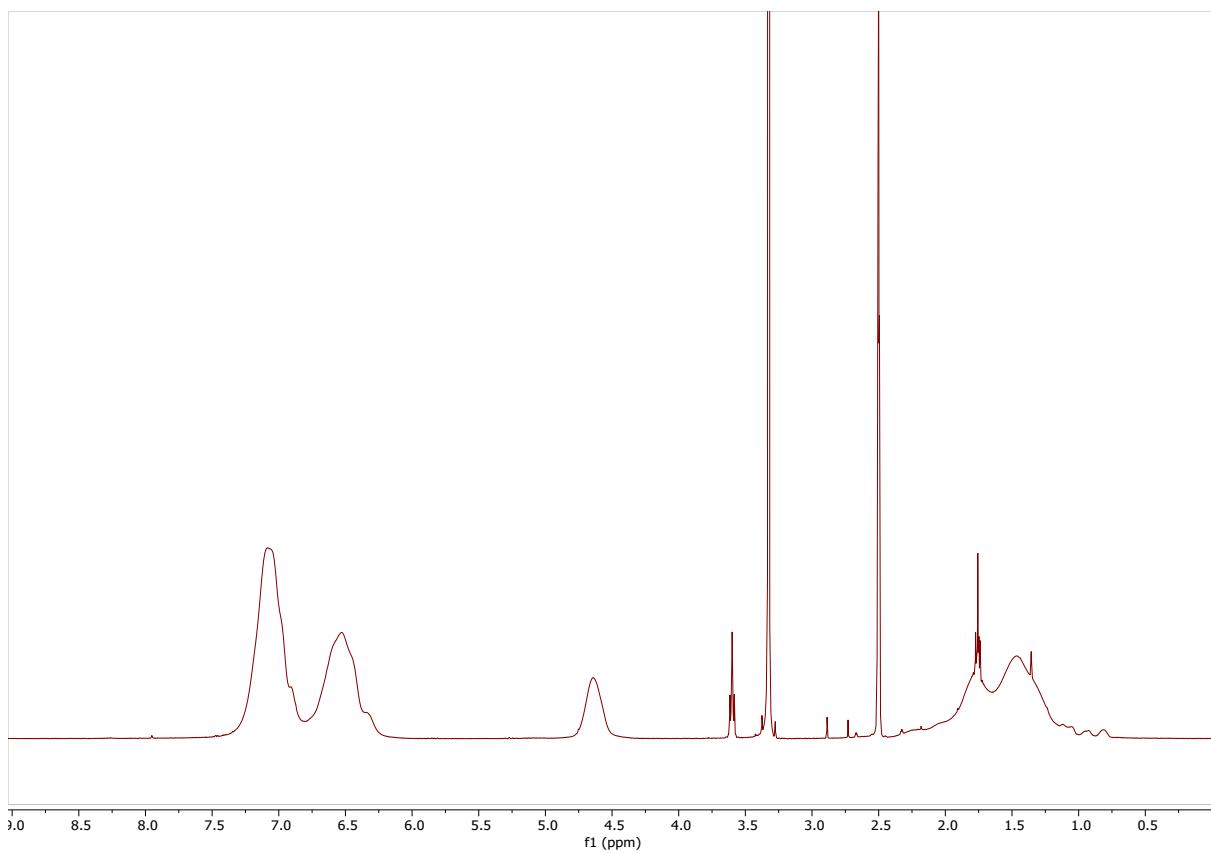


Figure S16. ¹H-NMR spectrum of VBC_{0.25}-Sty_{0.75} (solvent: *d*₆-DMSO).

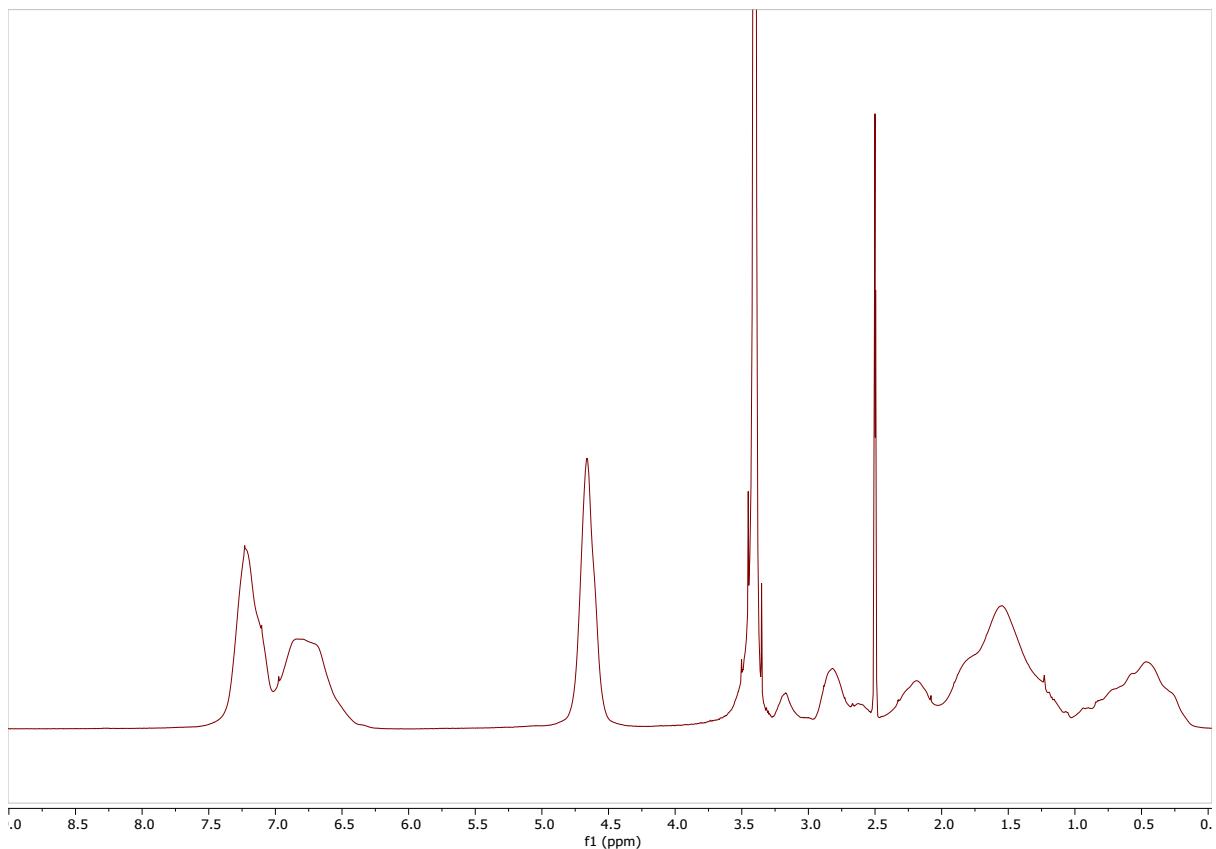


Figure S17. ¹H-NMR spectrum of VBC_{0.5}-MMA_{0.5} (solvent: *d*₆-DMSO).

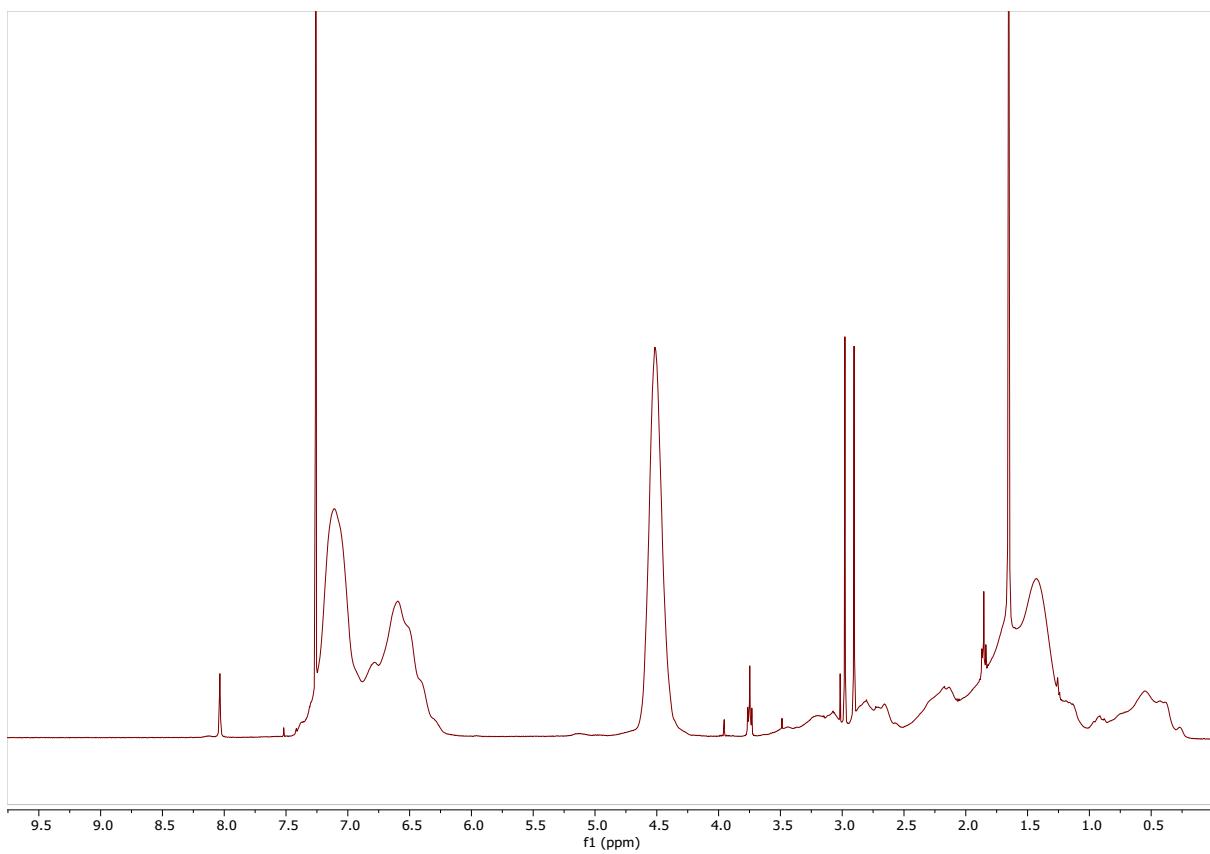


Figure S18. ¹H-NMR spectrum of VBC_{0.75}-MMA_{0.25} (solvent: CDCl₃).

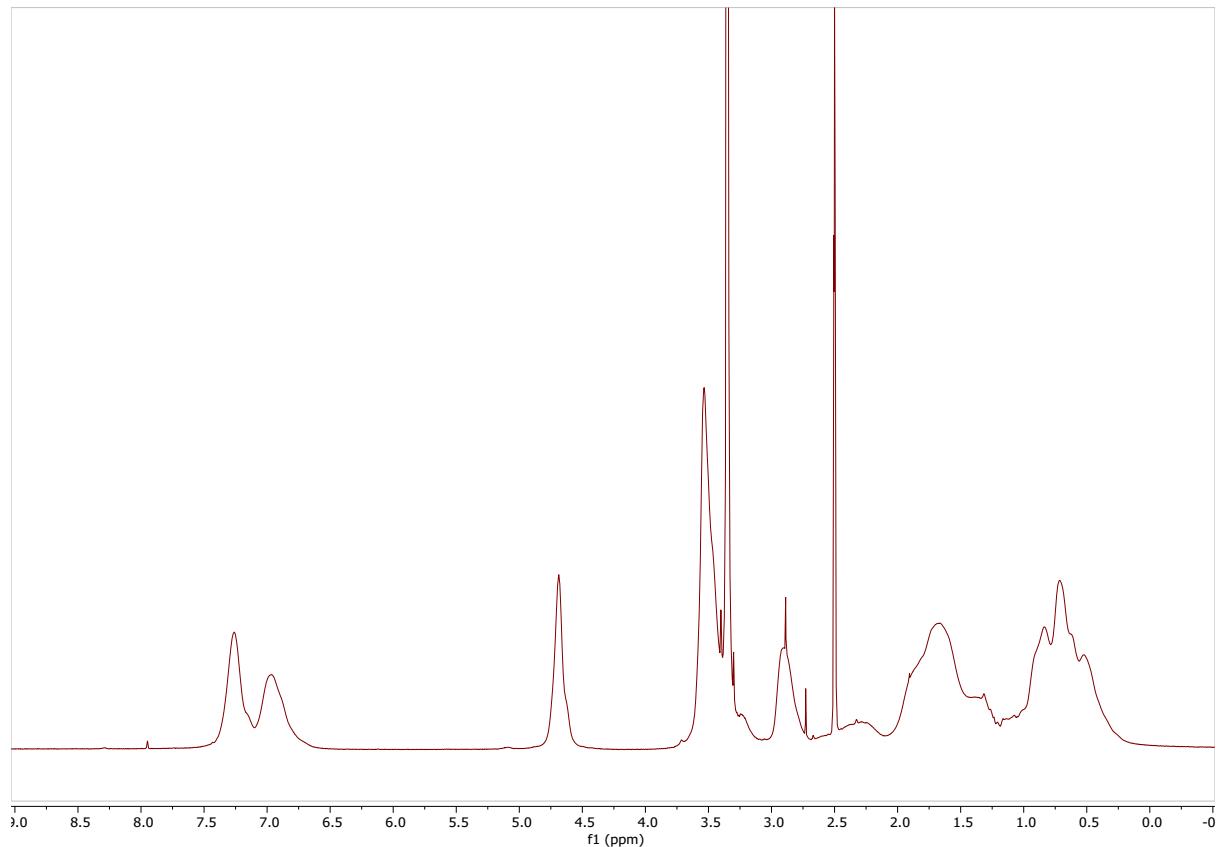


Figure S19. ¹H-NMR spectrum of VBC_{0.25}-MMA_{0.75} (solvent: *d*₆-DMSO).

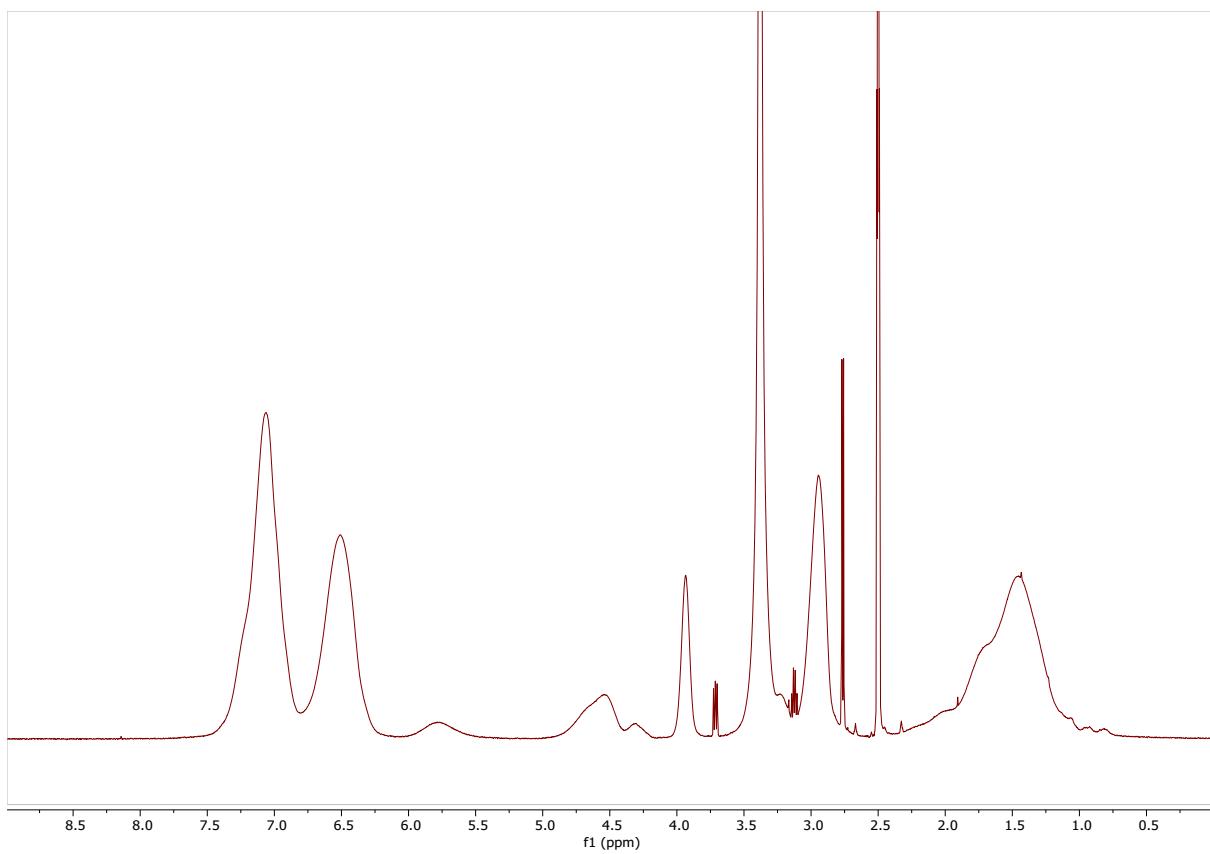


Figure S20. ¹H-NMR spectrum of CP 1 (solvent: d_6 -DMSO).

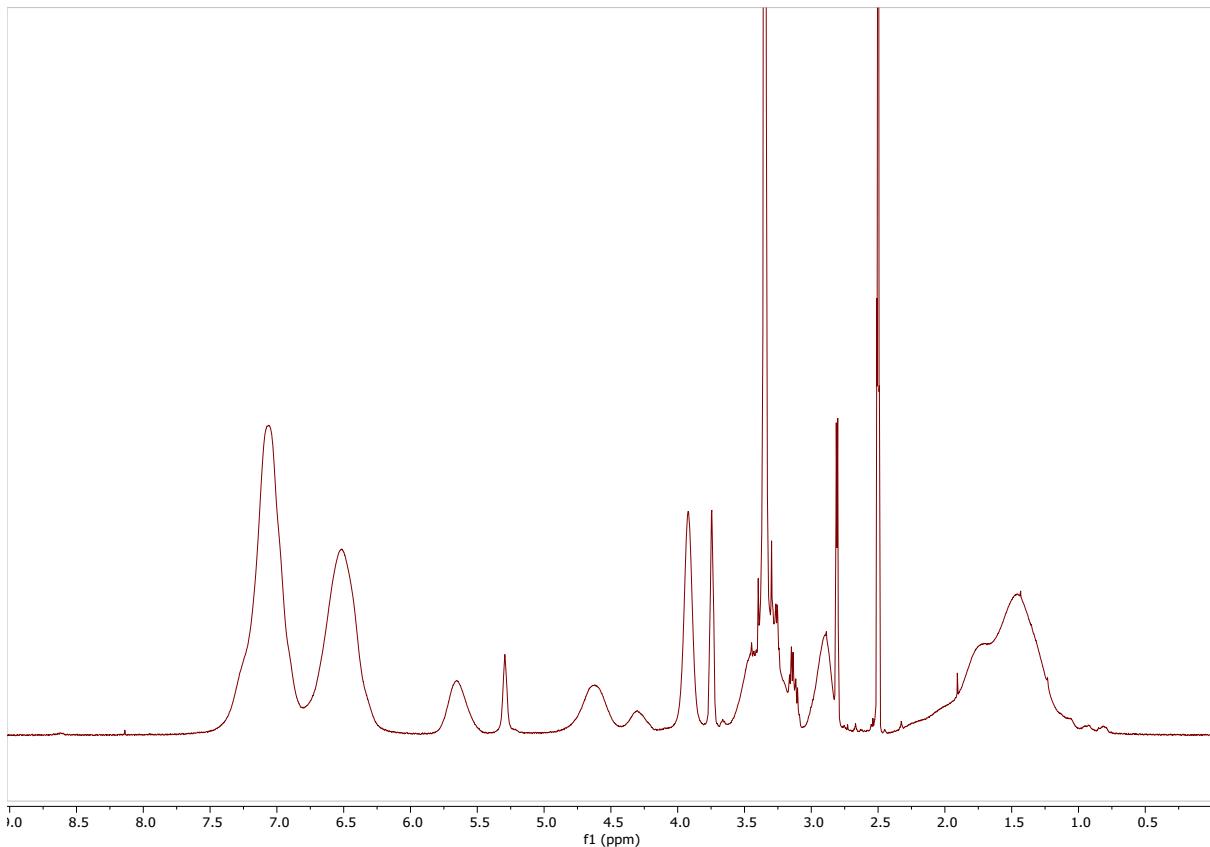


Figure S21. ¹H-NMR spectrum of CP 2 (solvent: d_6 -DMSO).

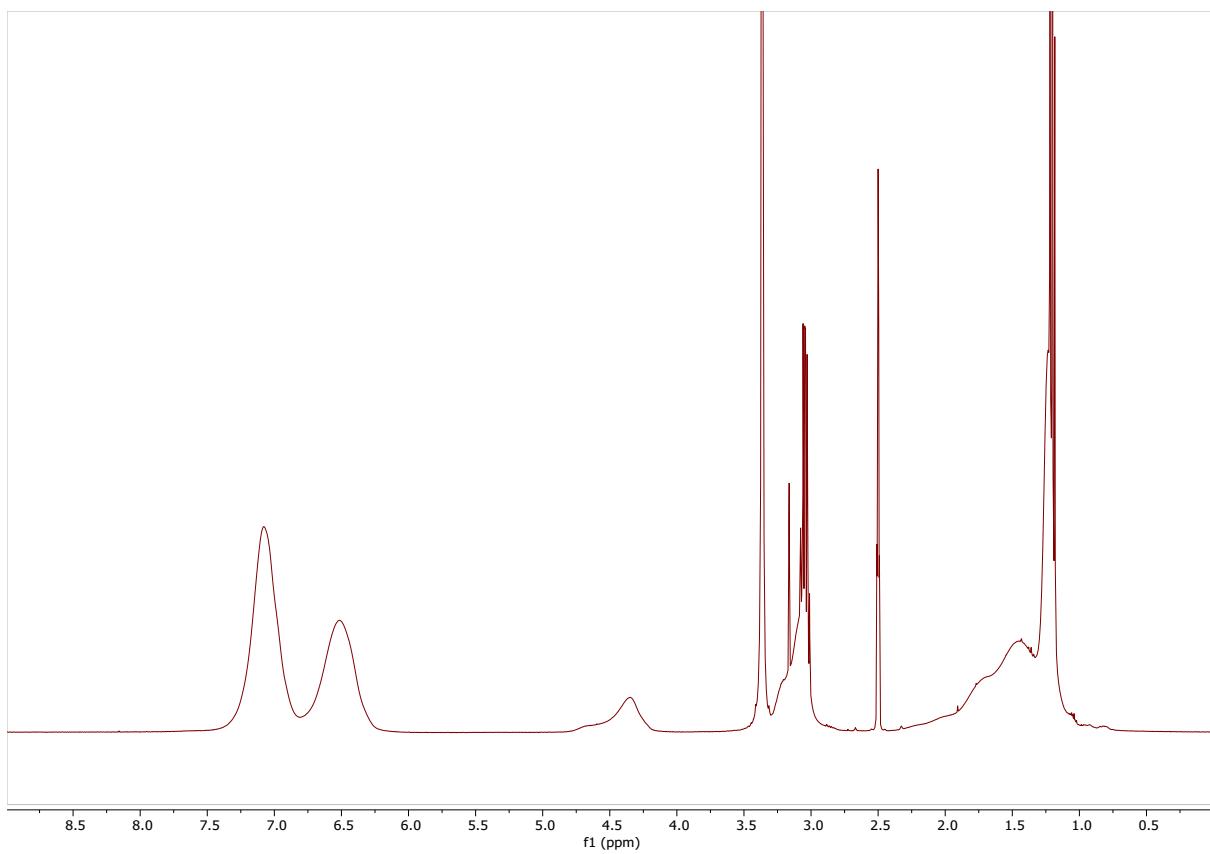


Figure S22. ¹H-NMR spectrum of CP 3 (solvent: d_6 -DMSO).

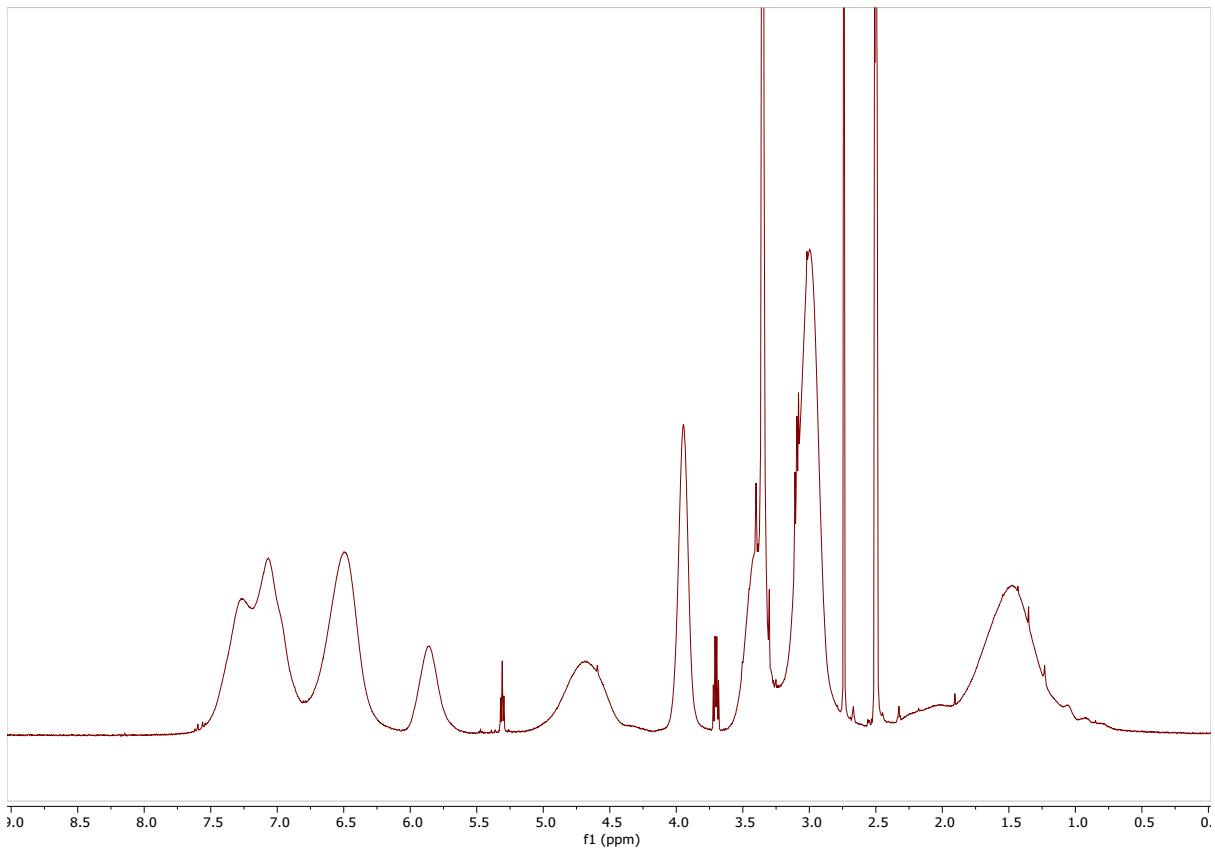


Figure S23. ¹H-NMR spectrum of CP 4 (solvent: d_6 -DMSO).

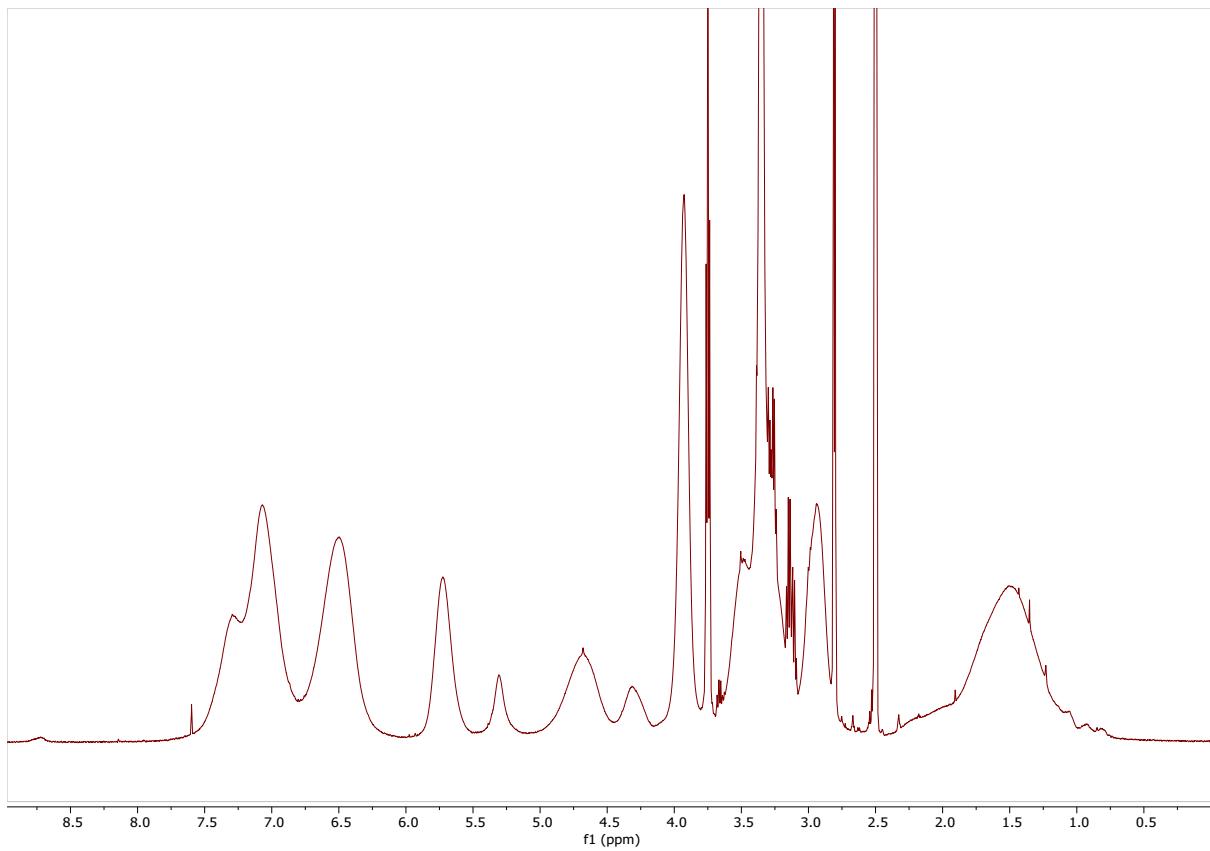


Figure S24. ¹H-NMR spectrum of CP 5 (solvent: d_6 -DMSO).

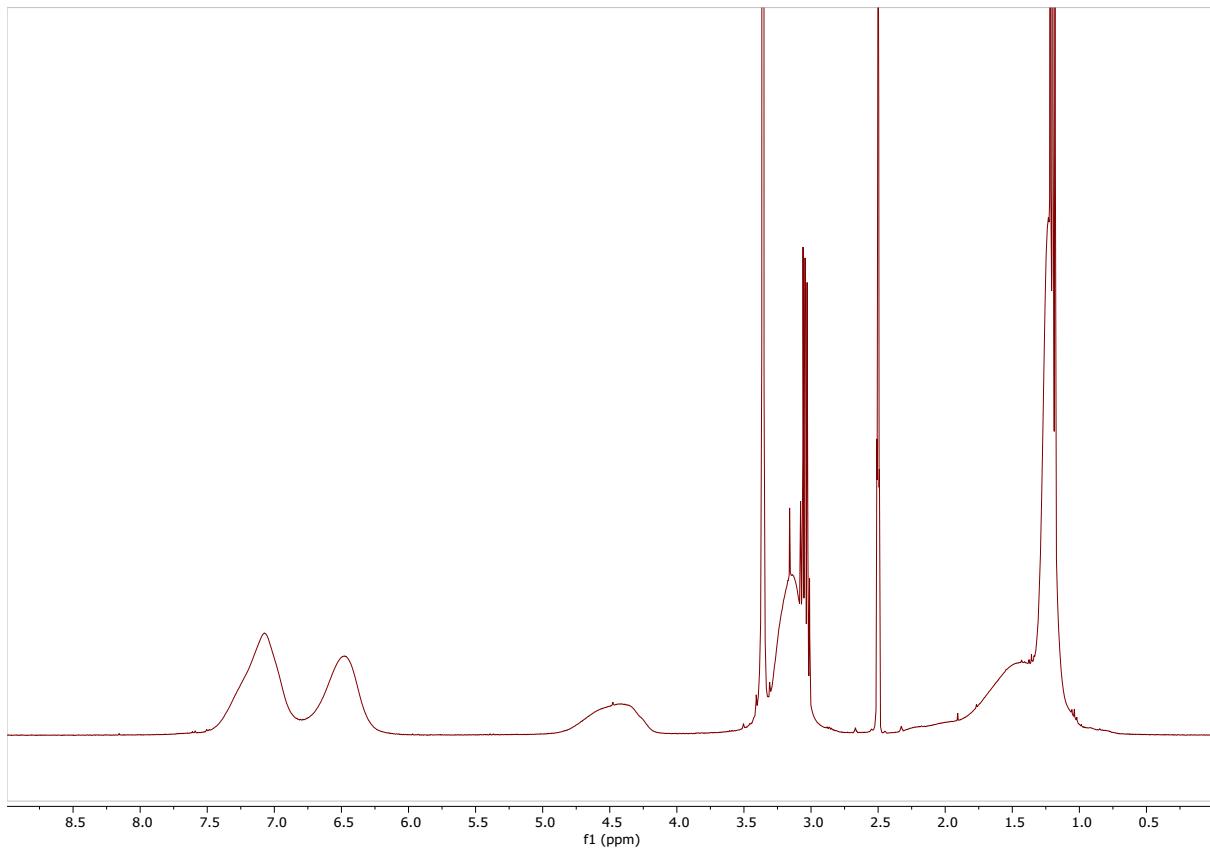


Figure S25. ¹H-NMR spectrum of CP 6 (solvent: d_6 -DMSO).

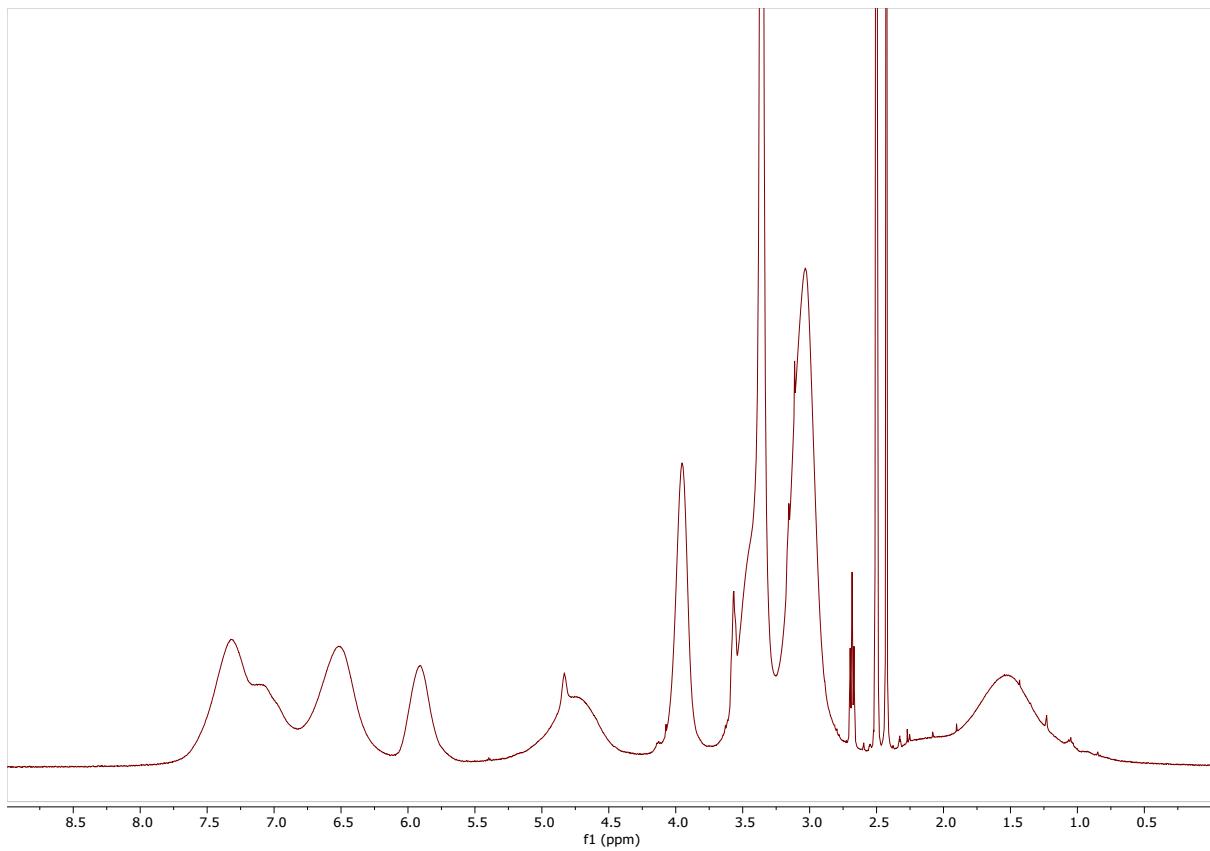


Figure S26. ¹H-NMR spectrum of CP 7 (solvent: d_6 -DMSO).

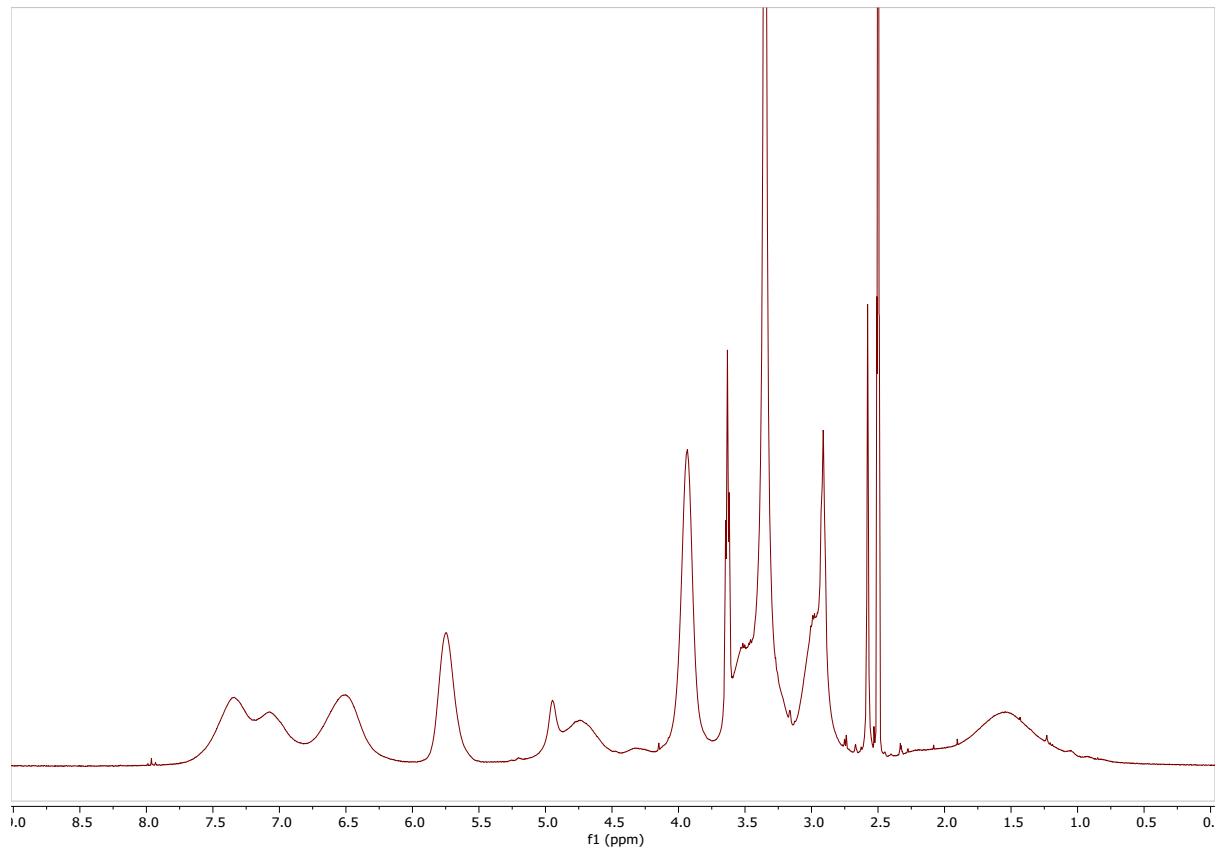


Figure S27. ¹H-NMR spectrum of CP 8 (solvent: d_6 -DMSO).

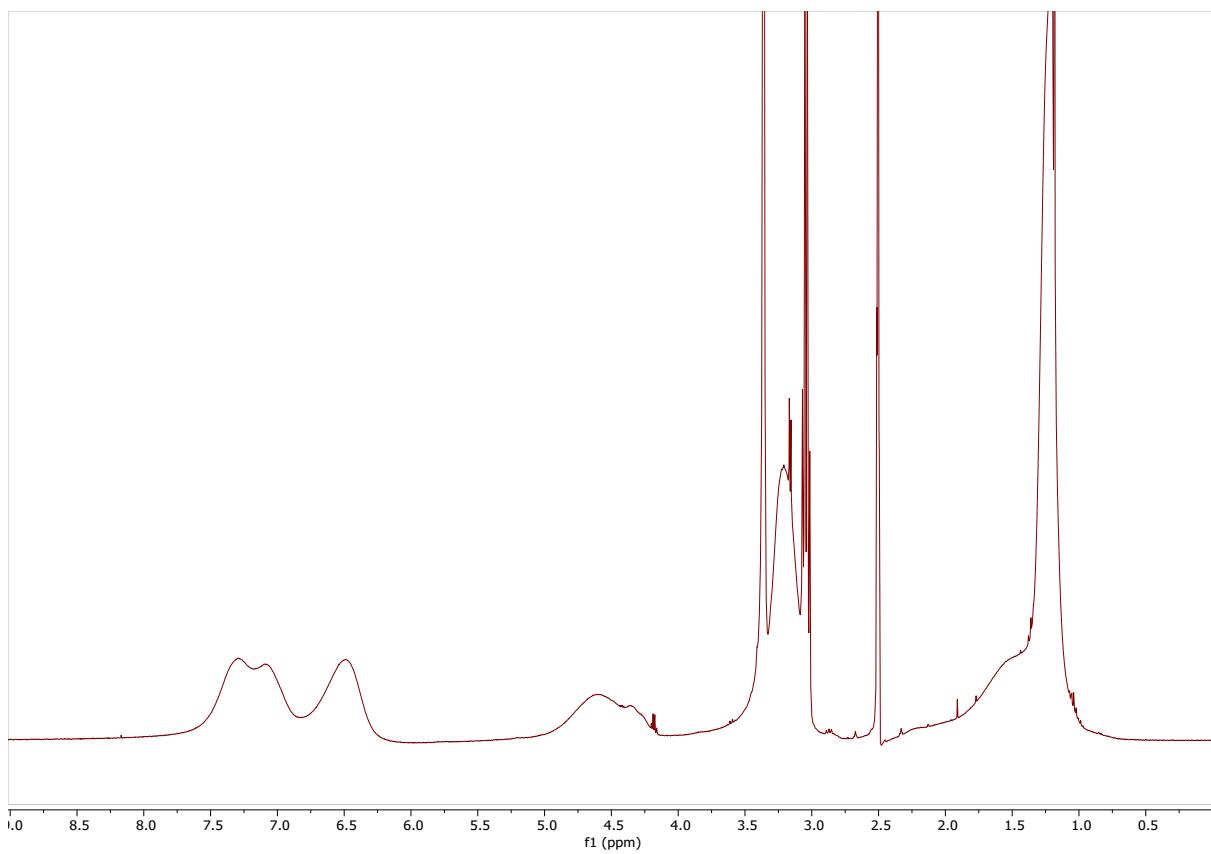


Figure S28. ¹H-NMR spectrum of CP 9 (solvent: d_6 -DMSO).

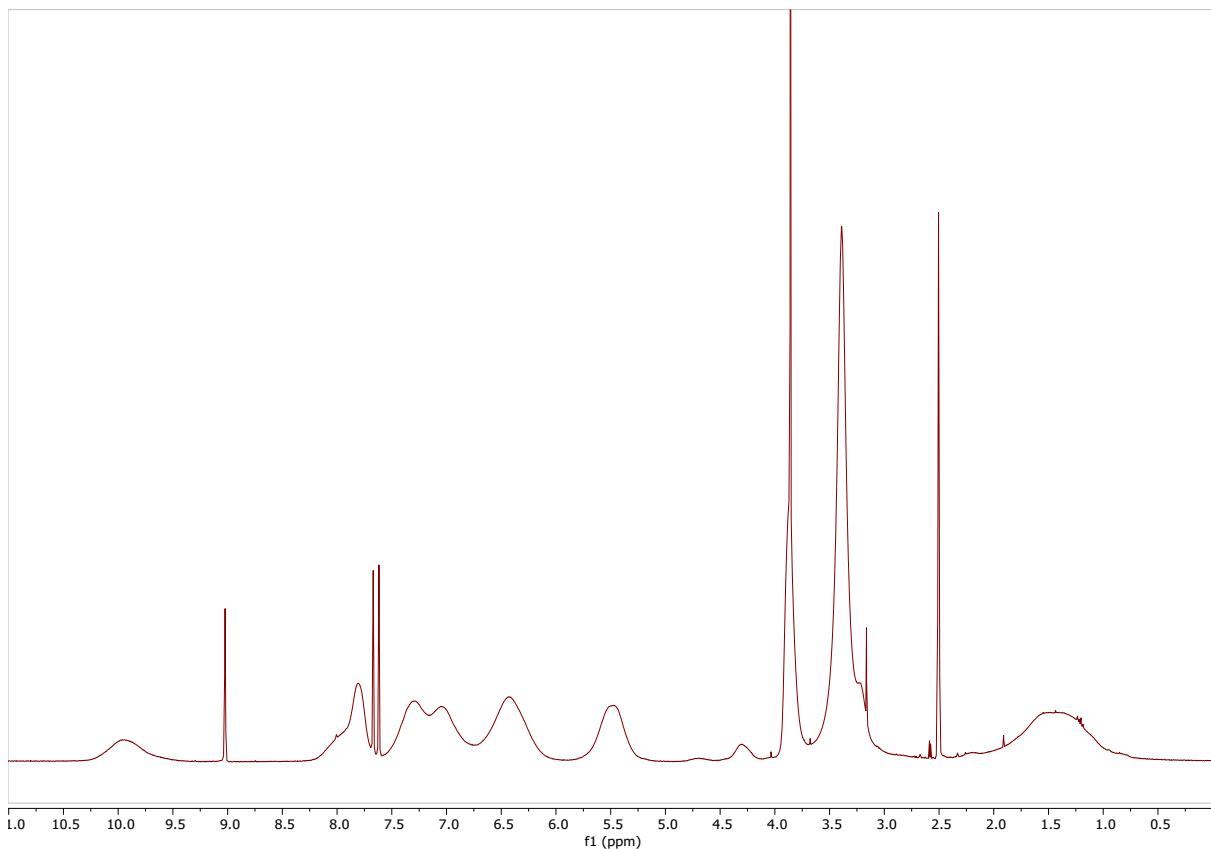


Figure S29. ¹H-NMR spectrum of CP 11 (solvent: d_6 -DMSO).

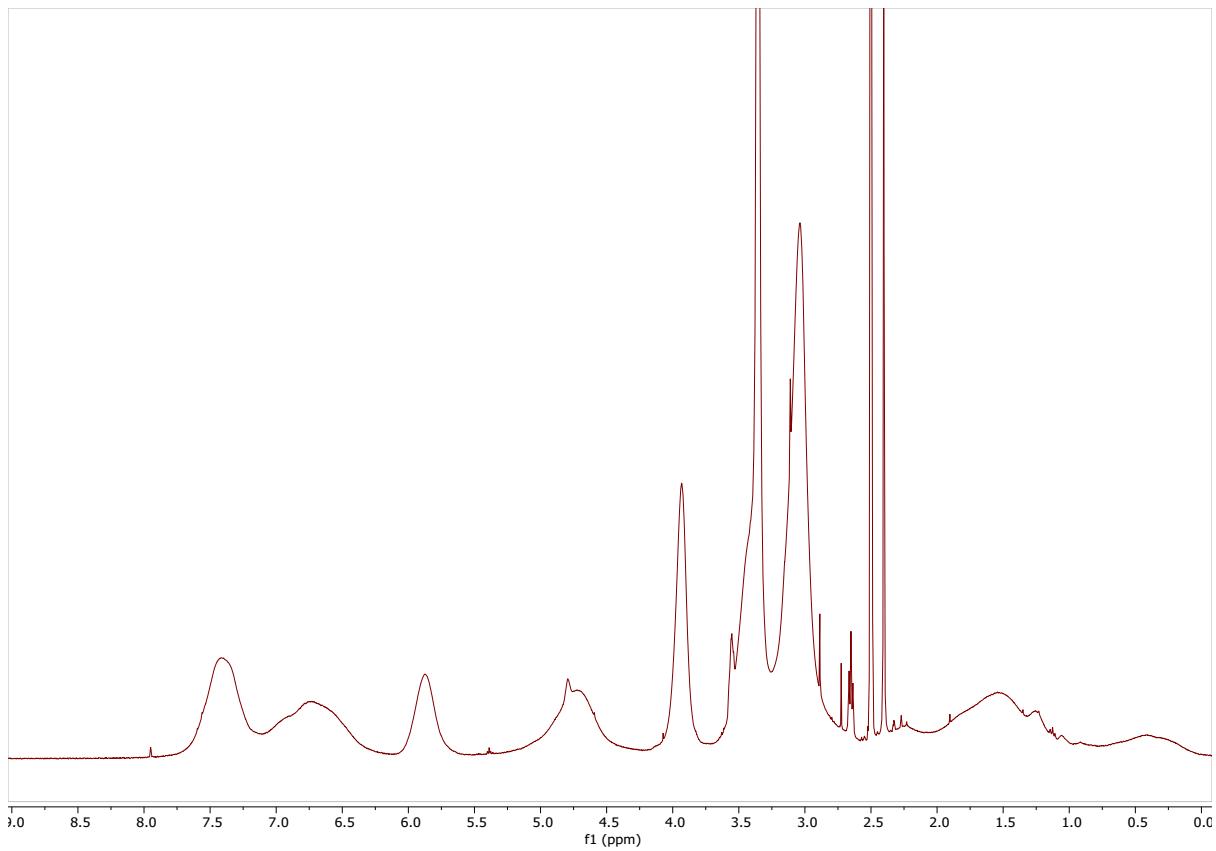


Figure S30. ¹H-NMR spectrum of CP 12 (solvent: d_6 -DMSO).

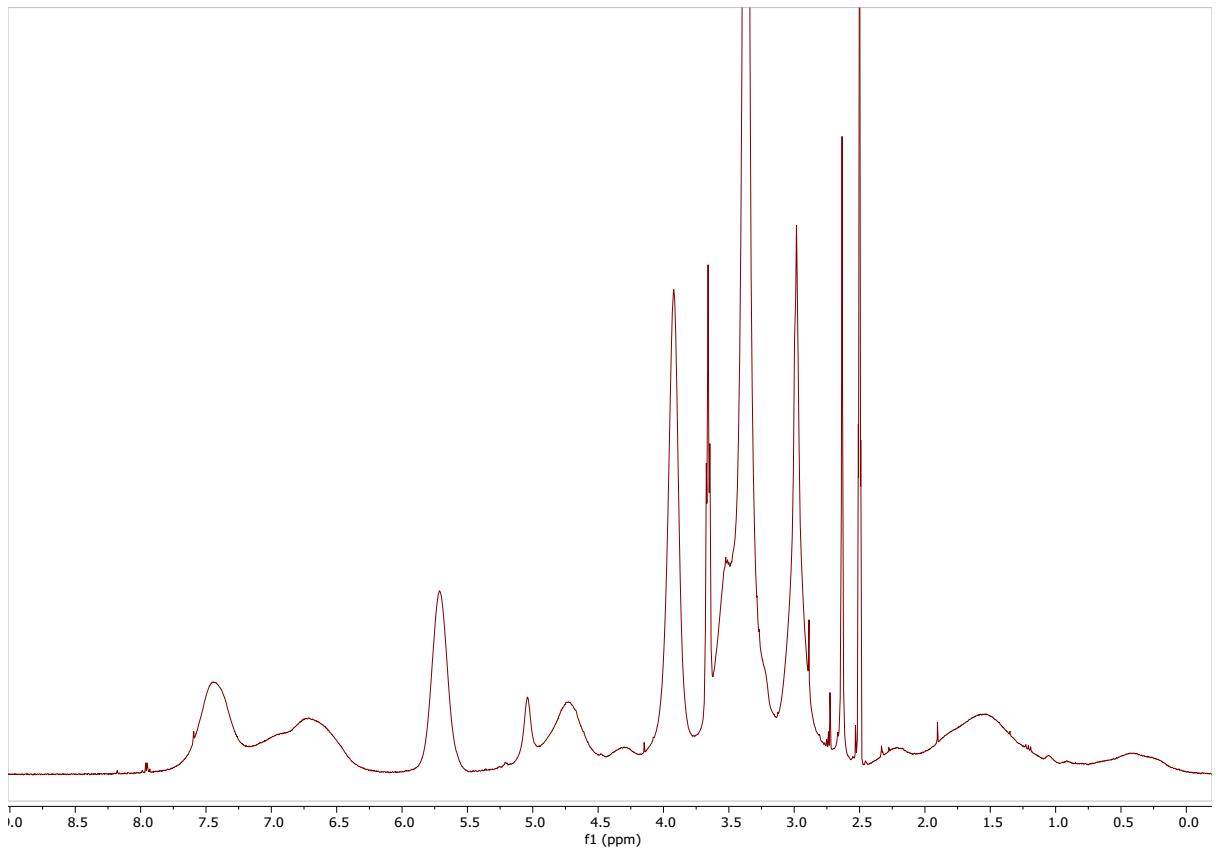


Figure S31. ¹H-NMR spectrum of CP 13 (solvent: d_6 -DMSO).

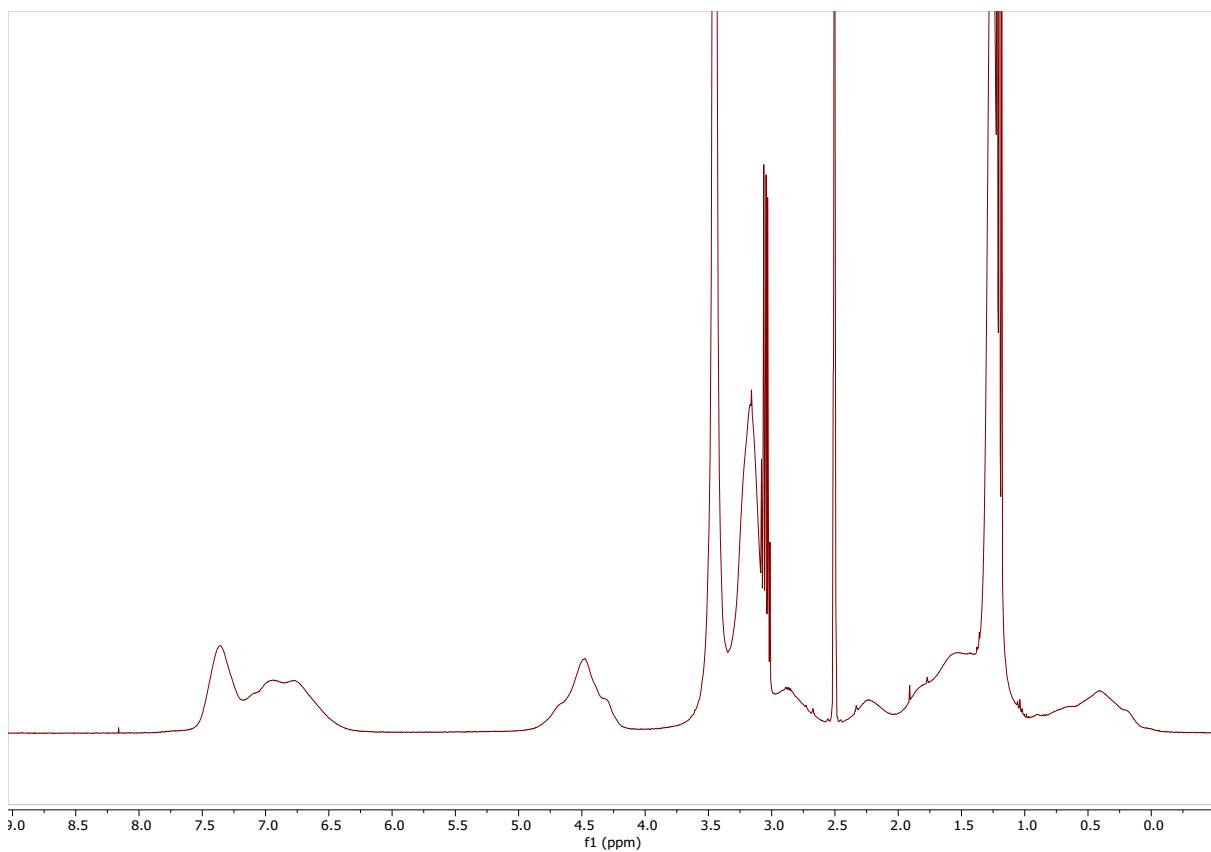


Figure S32. ¹H-NMR spectrum of CP 14 (solvent: d_6 -DMSO).

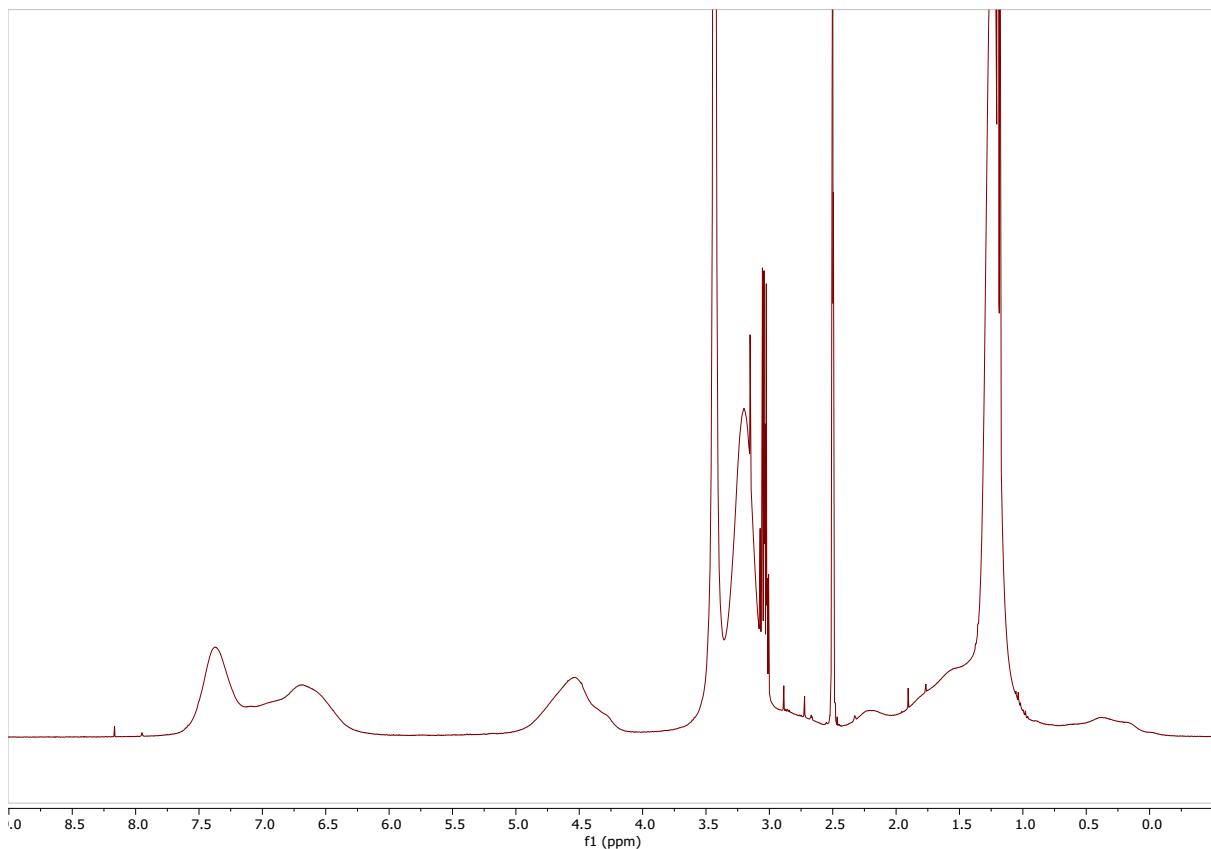


Figure S33. ¹H-NMR spectrum of CP 15 (solvent: d_6 -DMSO).

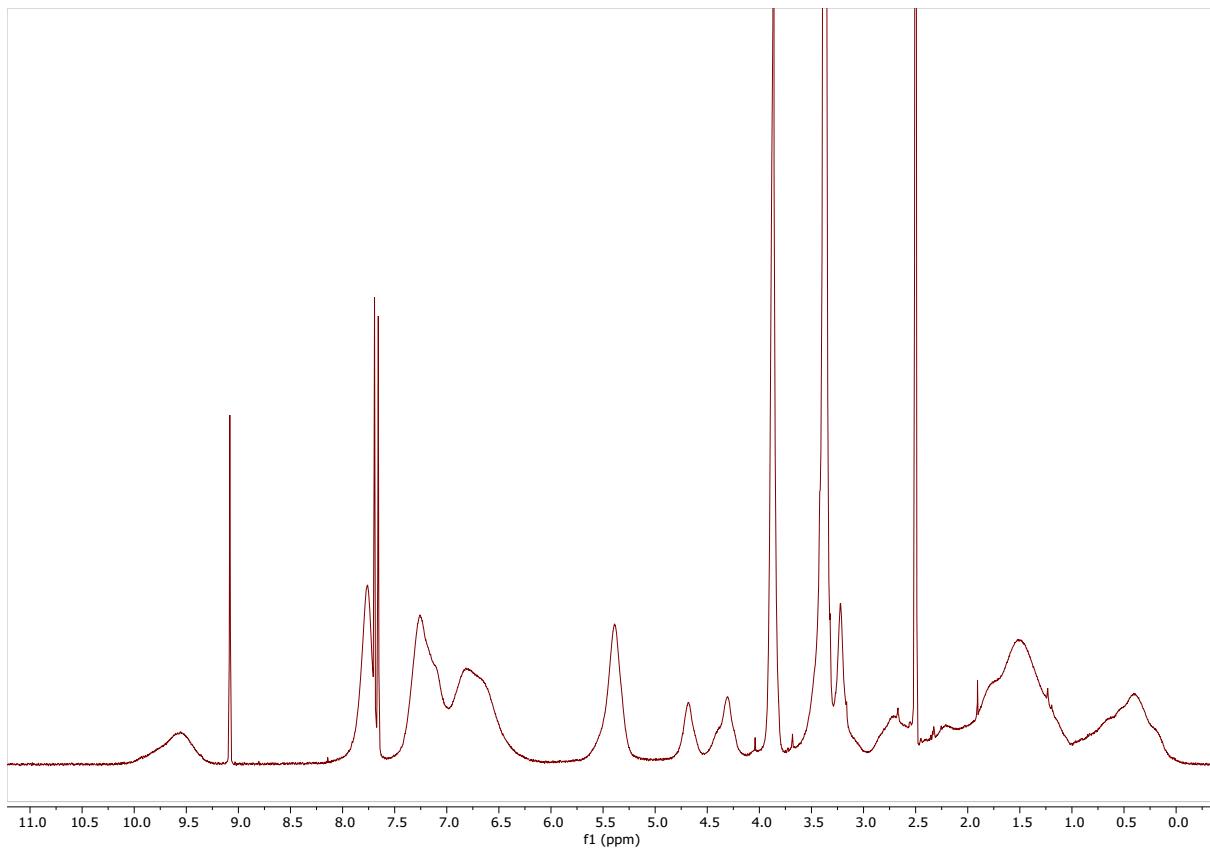


Figure S34. ¹H-NMR spectrum of CP 16 (solvent: d_6 -DMSO).

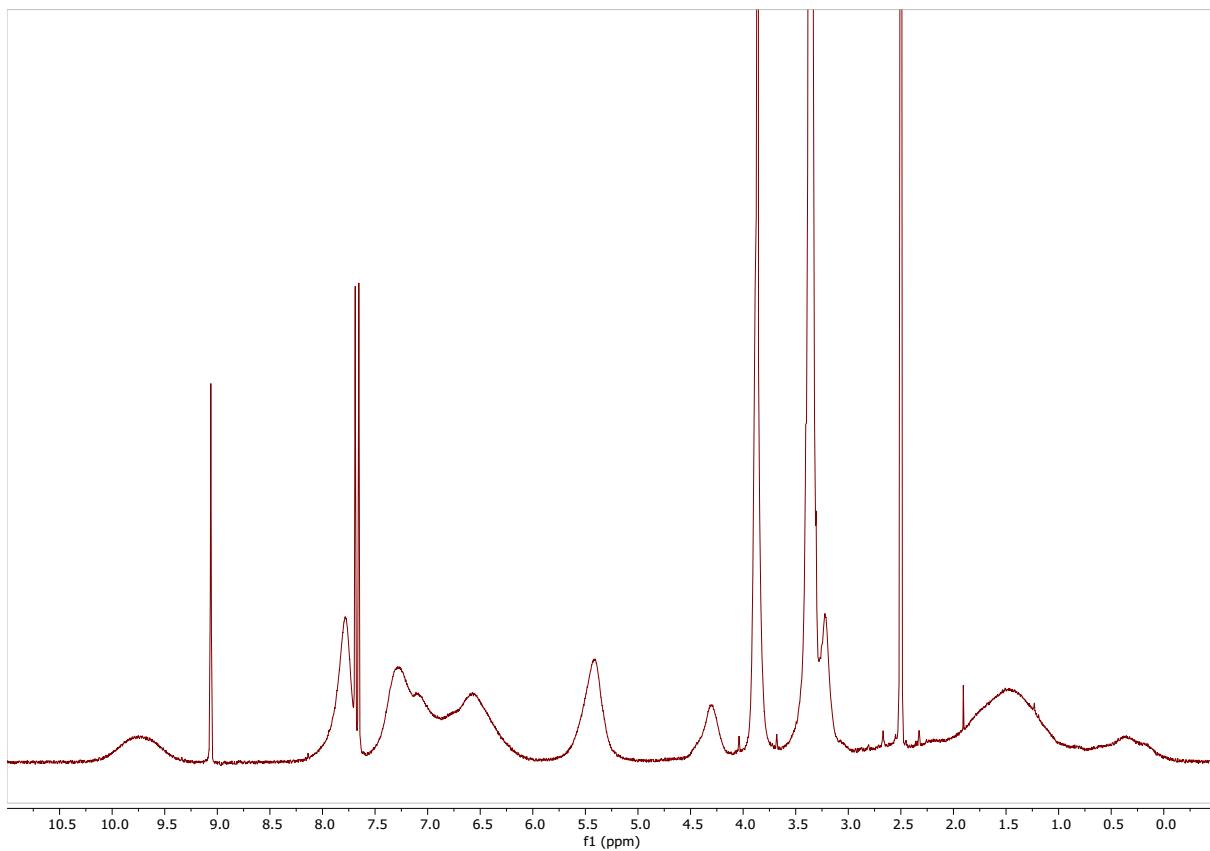


Figure S35. ¹H-NMR spectrum of CP 17 (solvent: d_6 -DMSO).

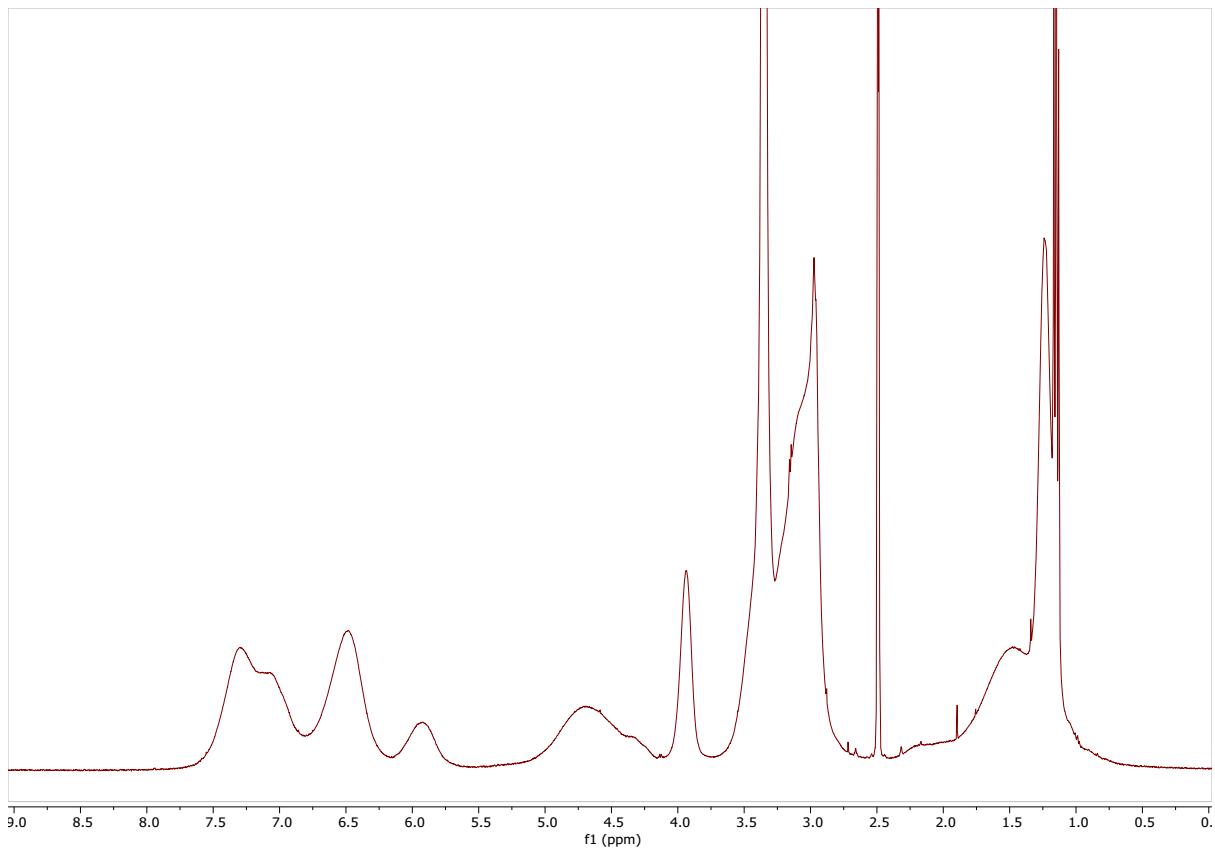


Figure S36. ¹H-NMR spectrum of CP 18 (solvent: d_6 -DMSO).

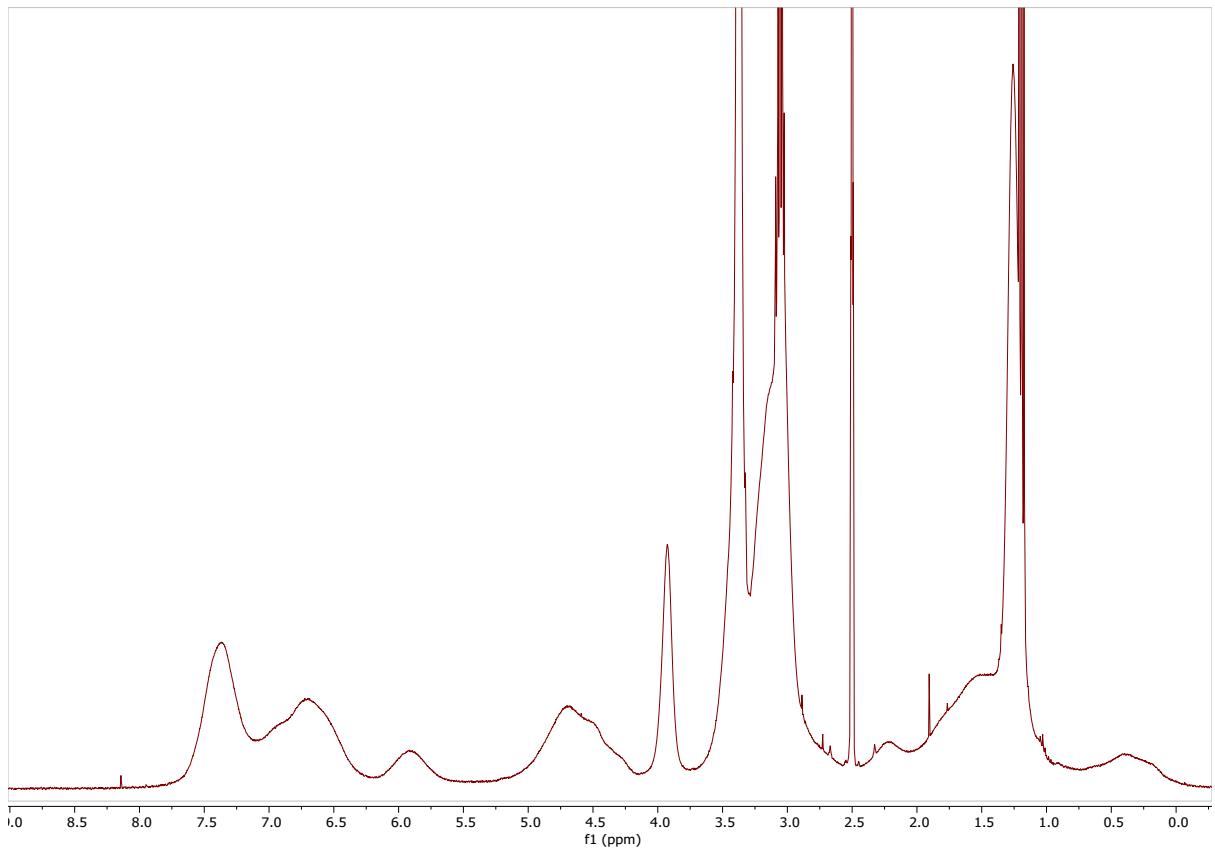


Figure S37. ¹H-NMR spectrum of CP 19 (solvent: d_6 -DMSO).