Hybrid Hydrogels Derived from Renewable Resources as a Smart Stimuli Responsive Soft Material for Drug Delivery Applications

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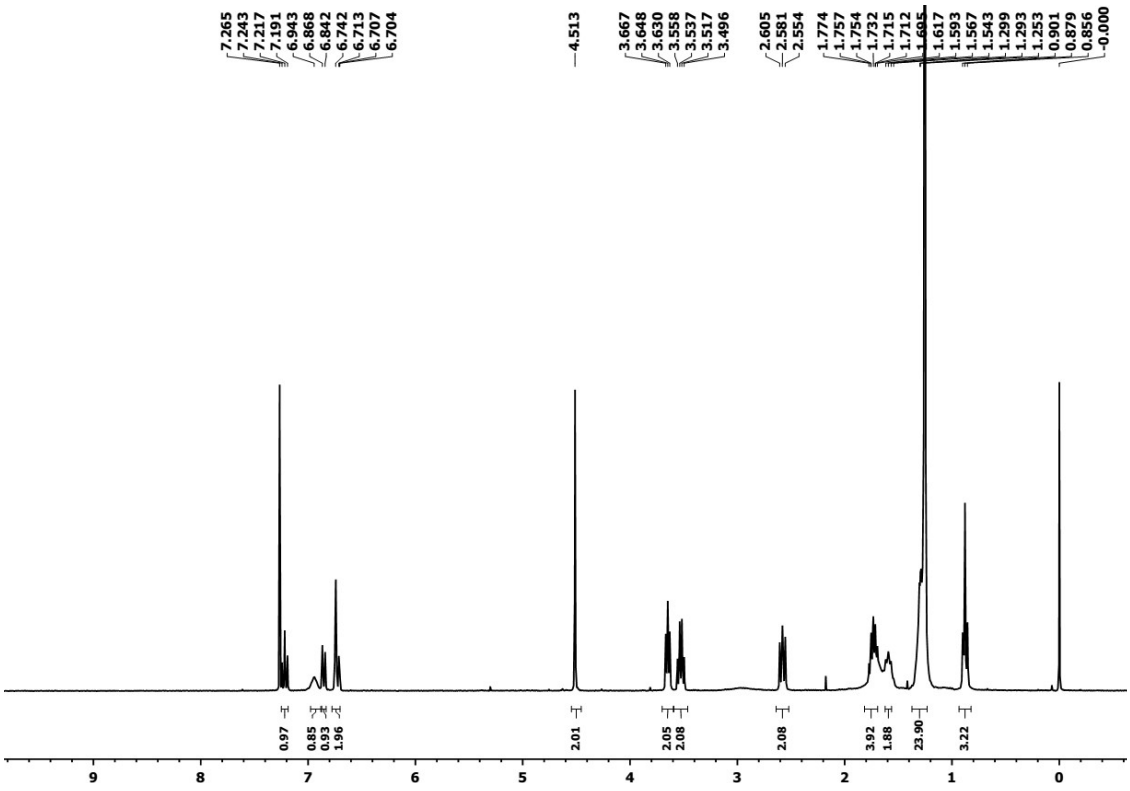


Figure S1. ^{1}H NMR of compound **6a** in $CDCl_3$

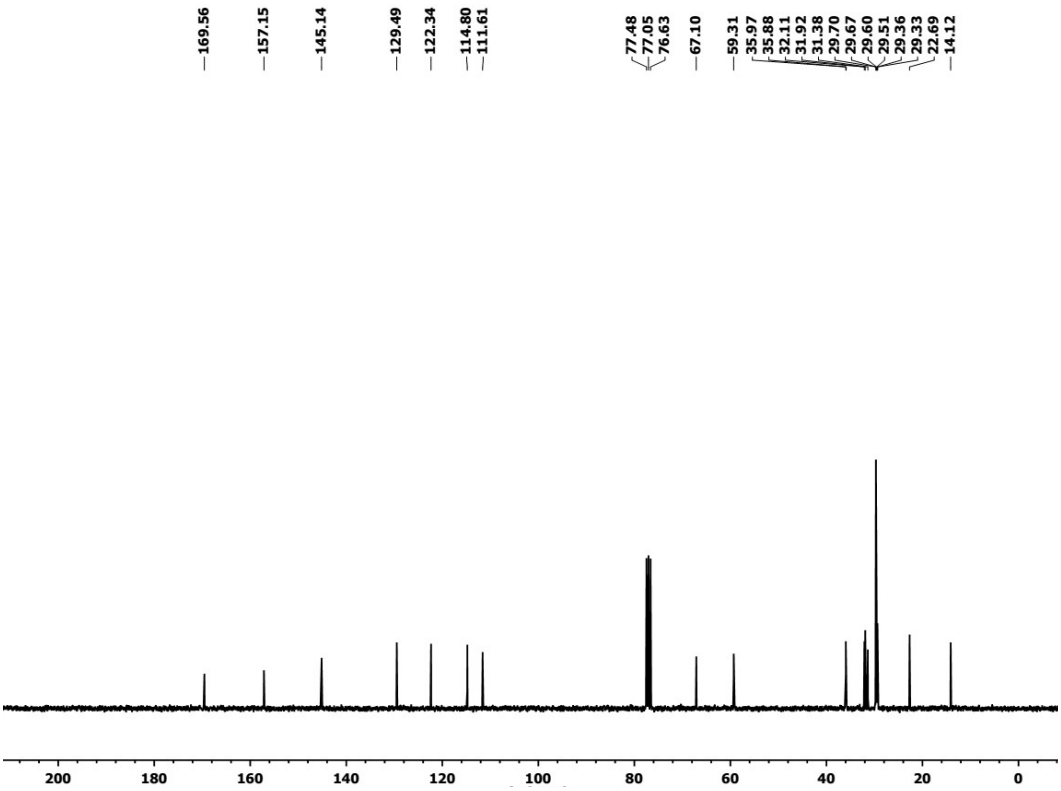


Figure S2. ^{13}C NMR of compound **6a** in $CDCl_3$

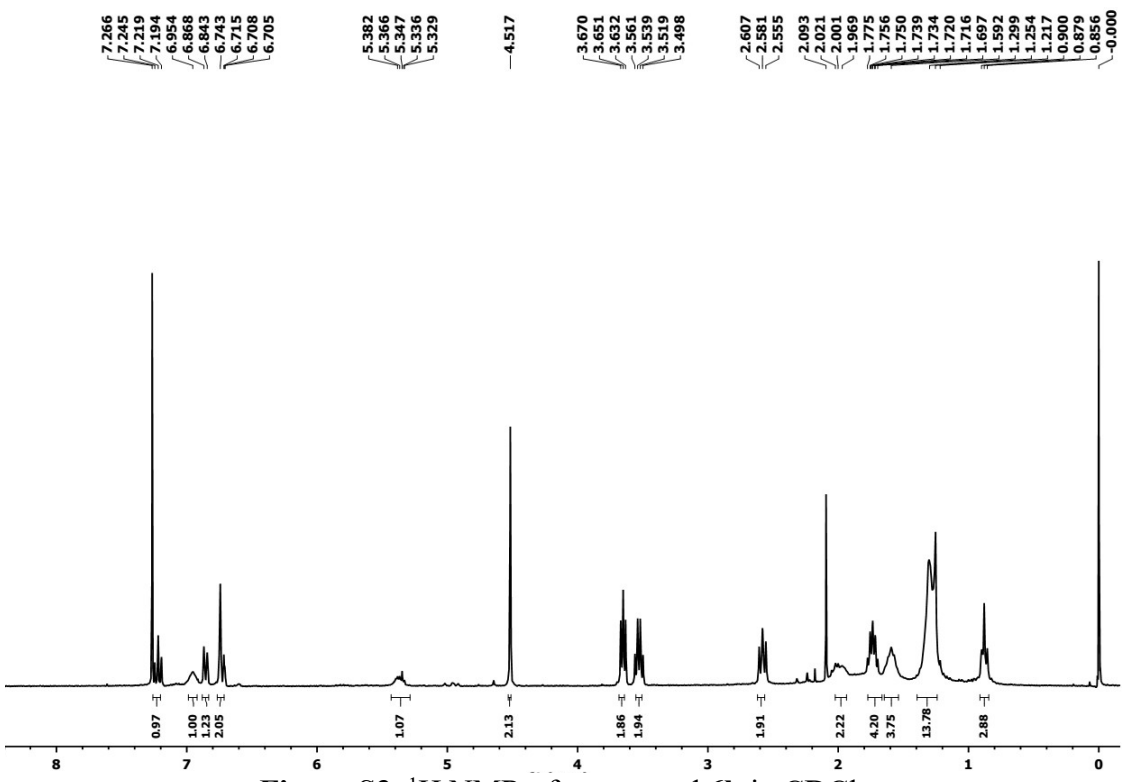


Figure S3. ^{1}H NMR of compound **6b** in $CDCl_3$

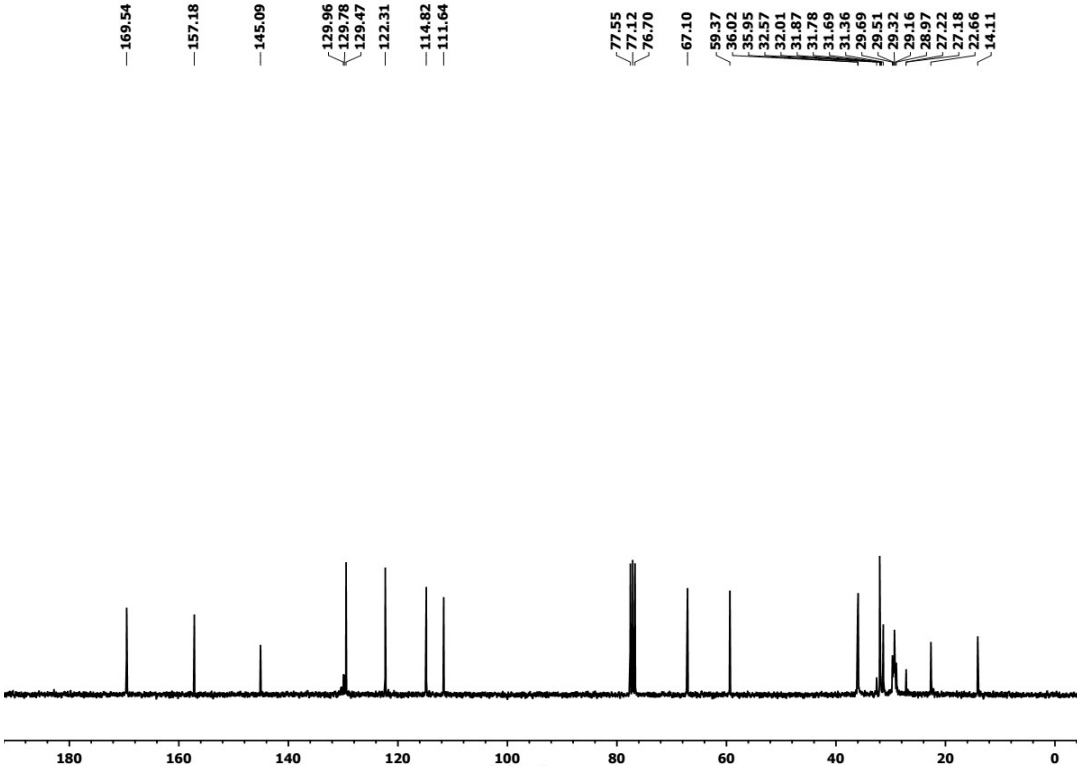


Figure S4. ^{13}C NMR of compound **6b** in $CDCl_3$

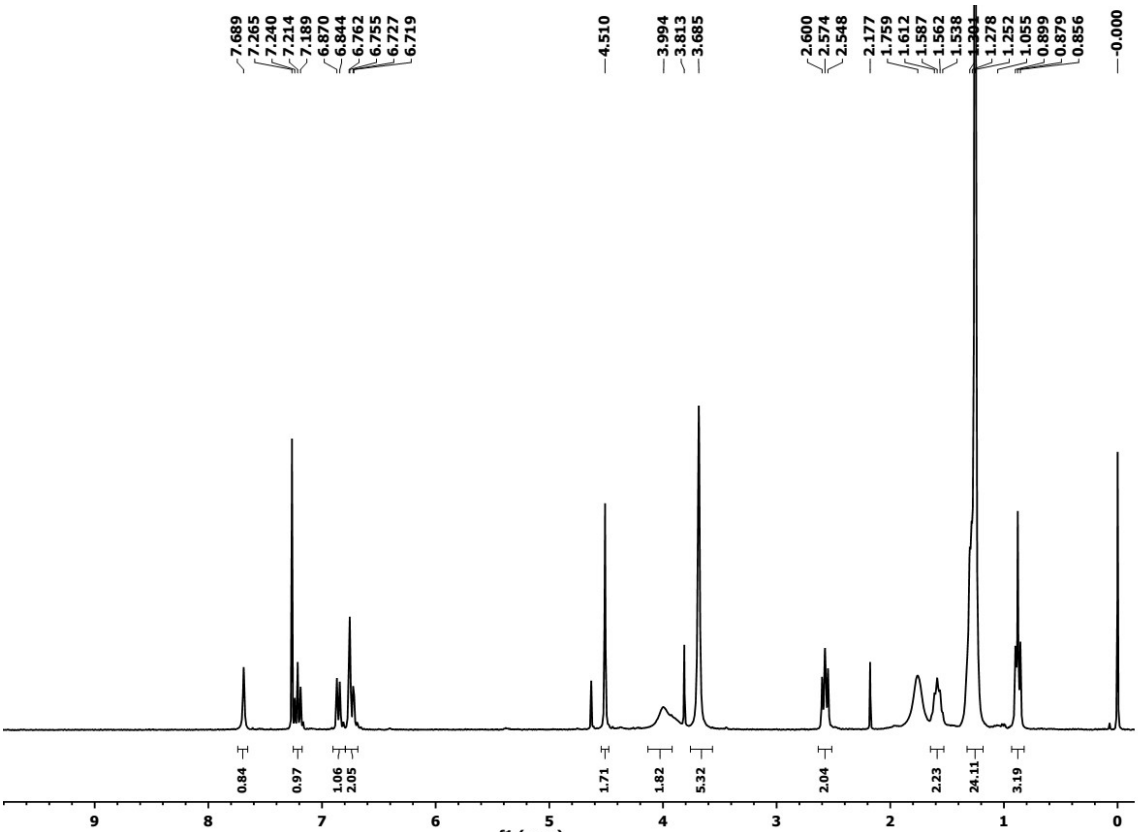


Figure S5. ^{1}H NMR of compound **7a** in $CDCl_3$

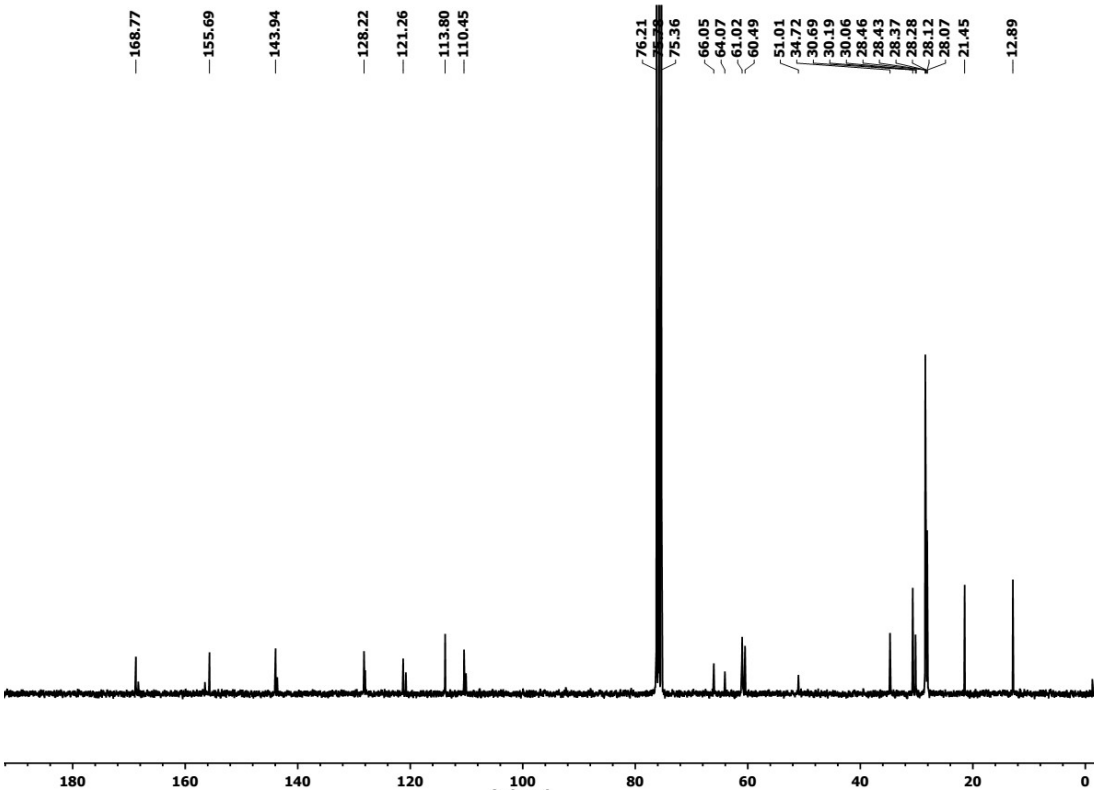


Figure S6. ^{13}C NMR of compound **7a** in $CDCl_3$

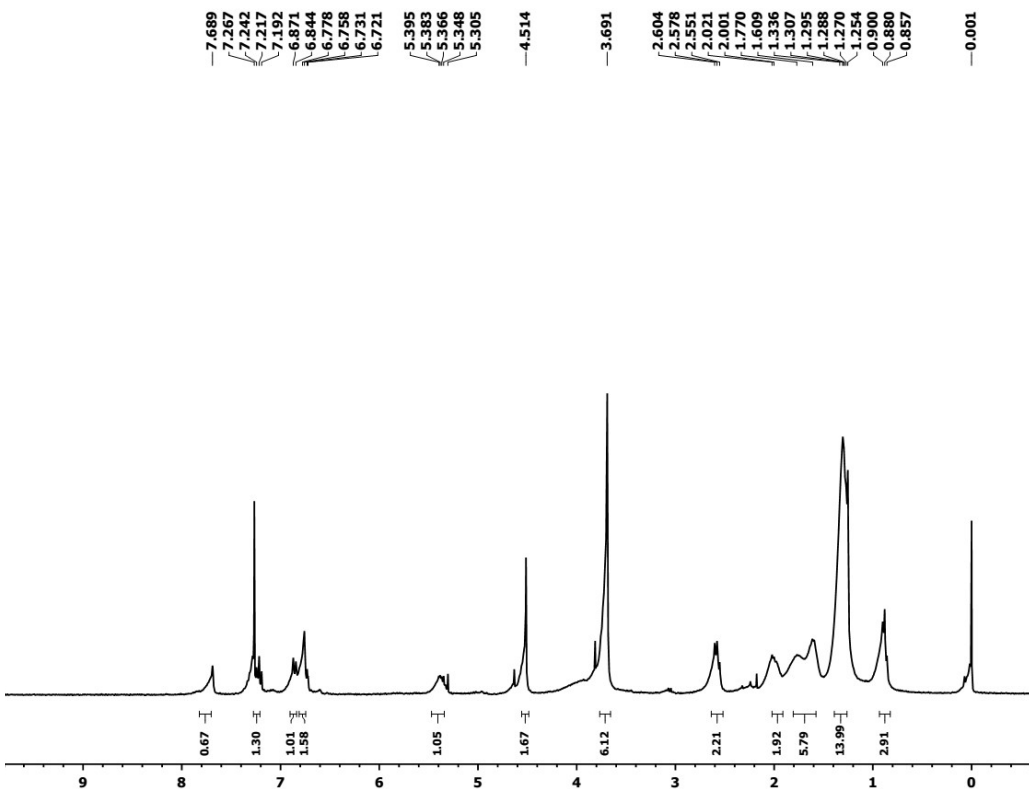


Figure S7. ^{1}H NMR of compound **7b** in $CDCl_3$

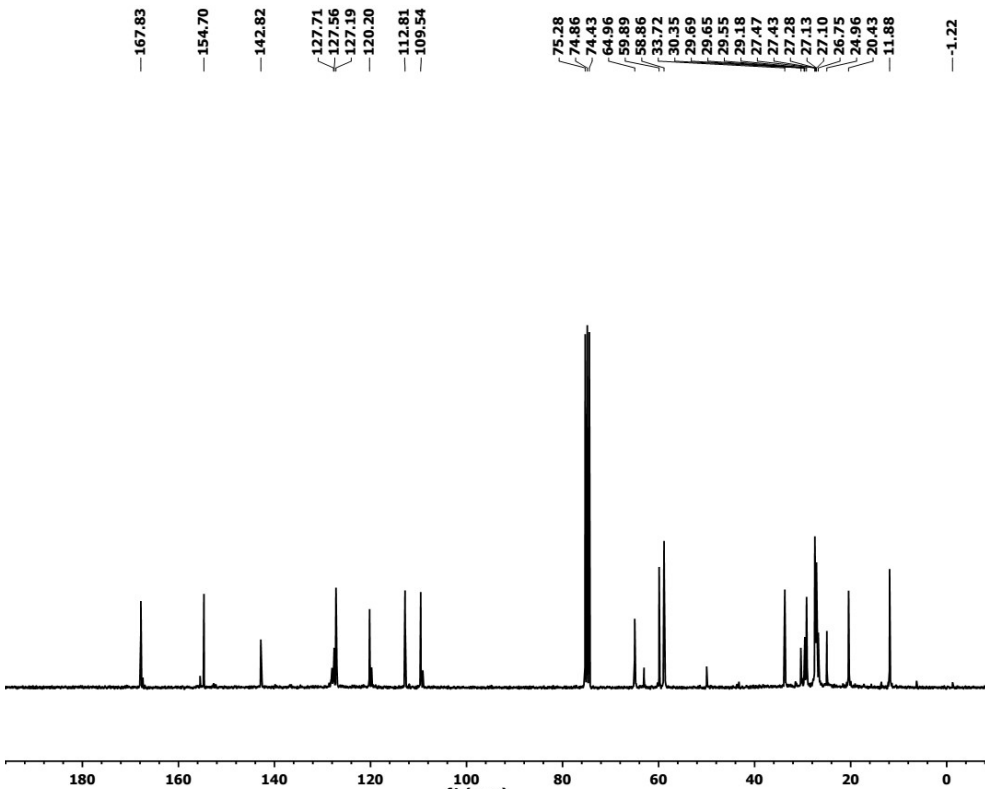


Figure S8. ^{13}C NMR of compound **7b** in $CDCl_3$

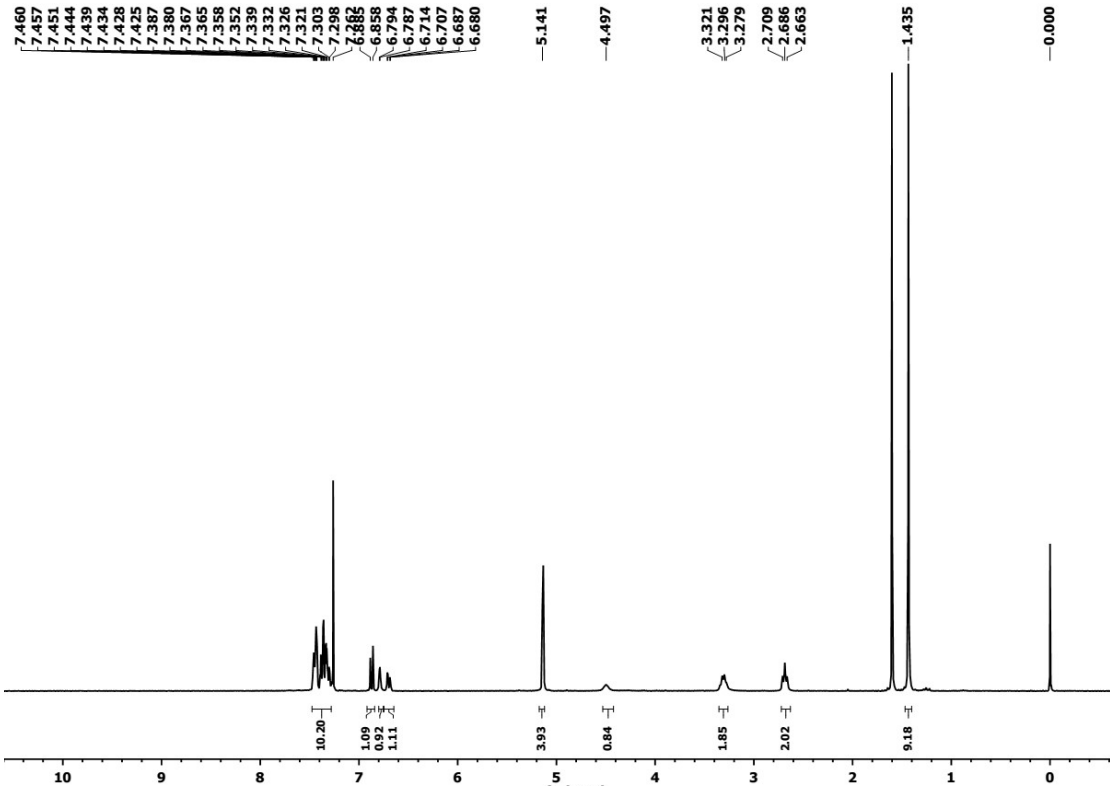


Figure S9. ^{1}H NMR of *t*-butyl (3,4-bis(benzyloxy)phenethyl)carbamate in $CDCl_3$

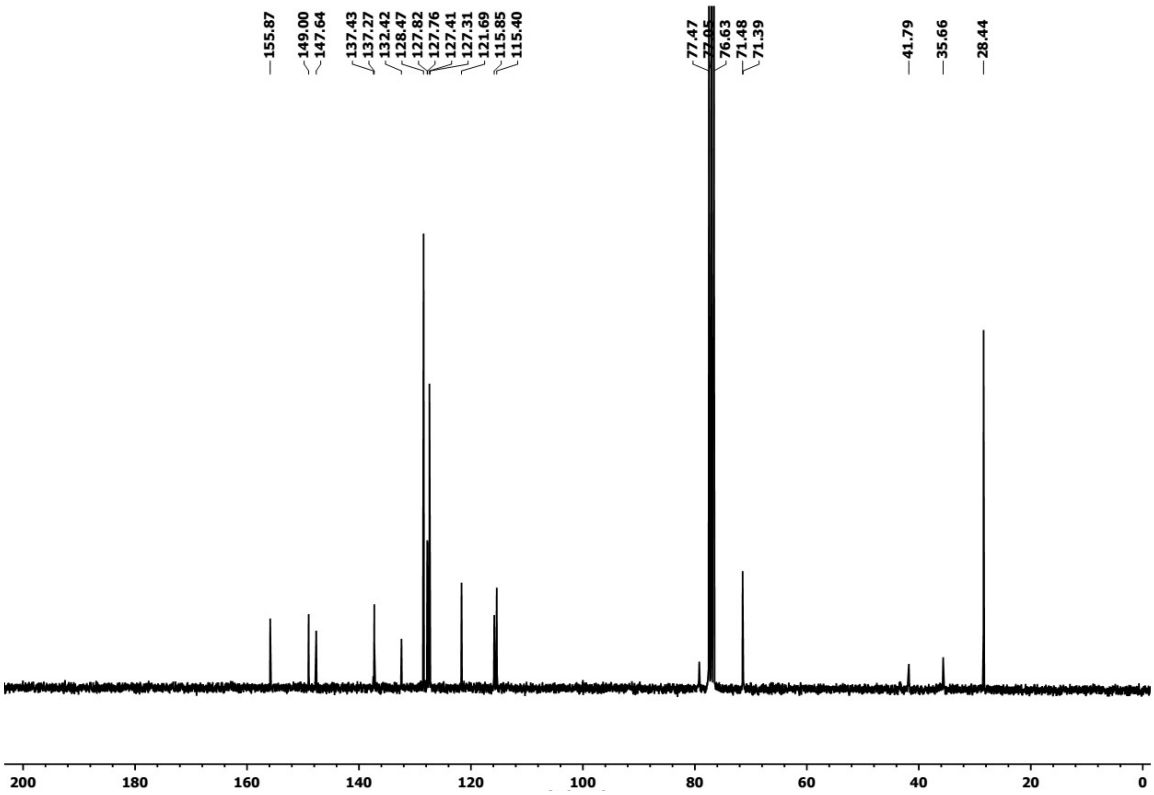


Figure S10. ^{13}C NMR of *t*-butyl (3,4-bis(benzyloxy)phenethyl)carbamate in $CDCl_3$

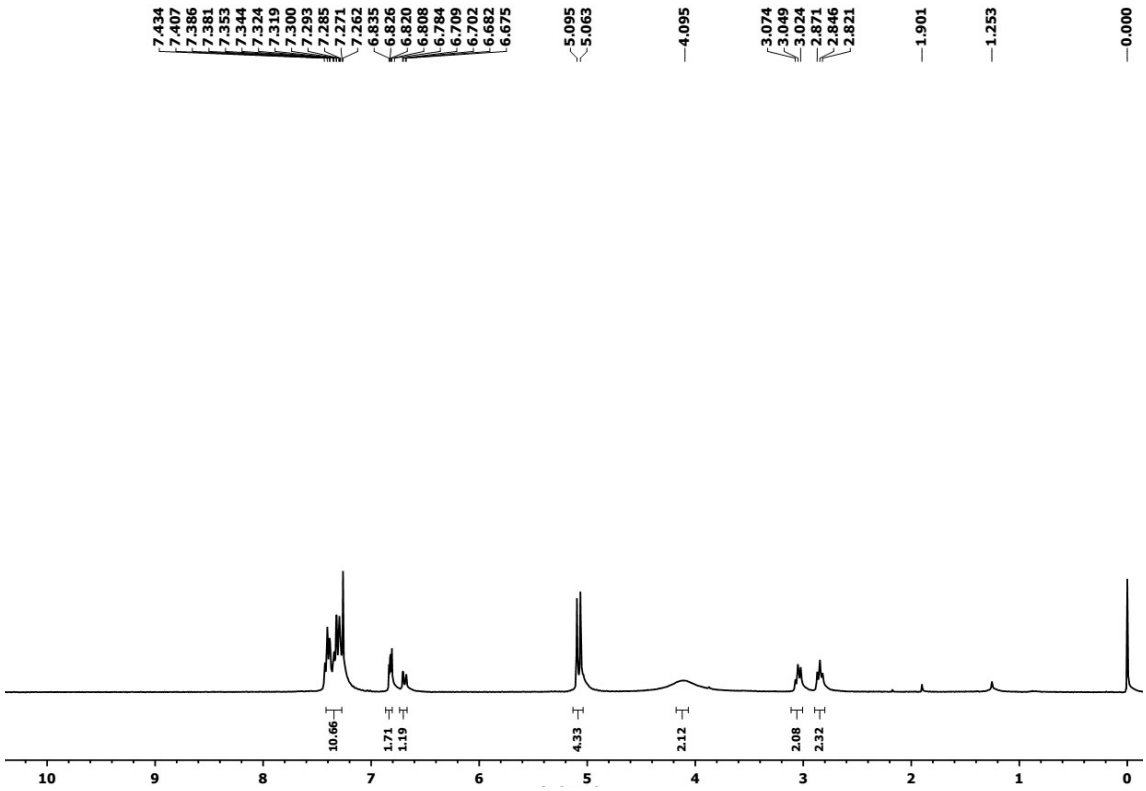


Figure S11. ^{1}H NMR of 2-(3,4-Bis-benzyloxy-phenyl)-ethylamine in $CDCl_3$

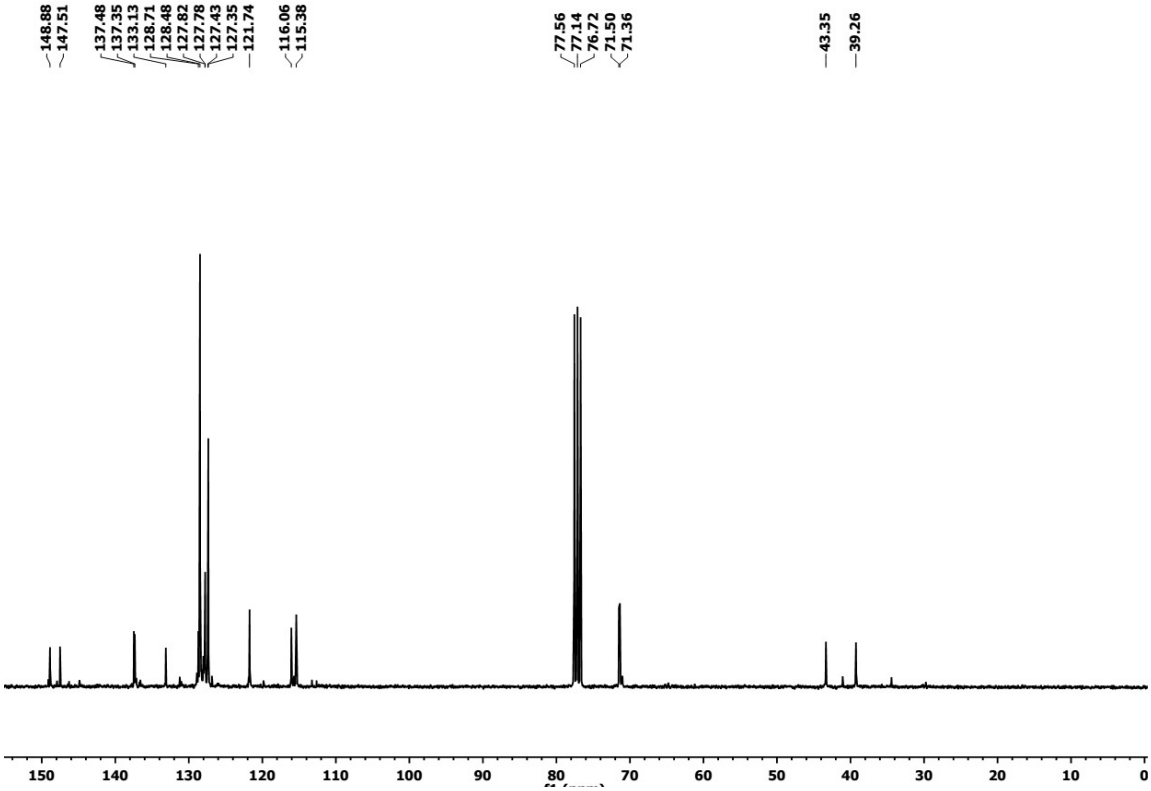


Figure S12. ^{13}C NMR of 2-(3,4-Bis-benzyloxy-phenyl)-ethylamine in $CDCl_3$

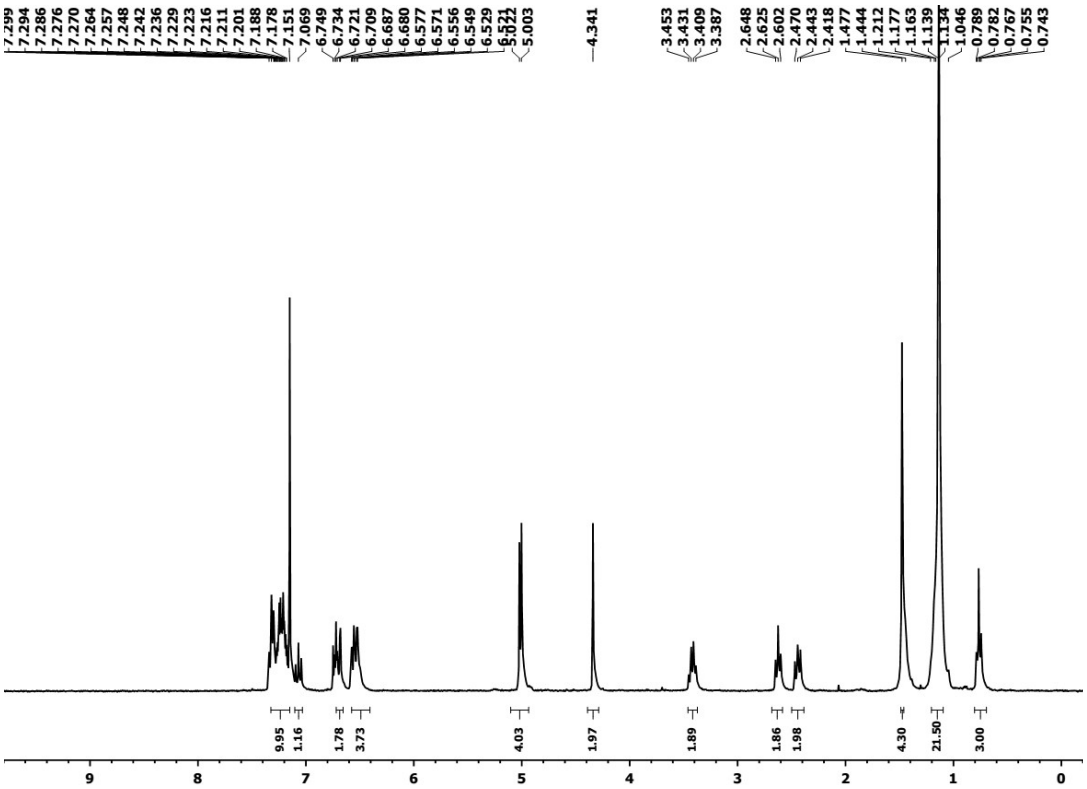


Figure S13. ^{1}H NMR of *N*-(3,4-bis(benzyloxy)phenethyl-2-(3-pentadecylphenoxy)acetamide in $CDCl_3$

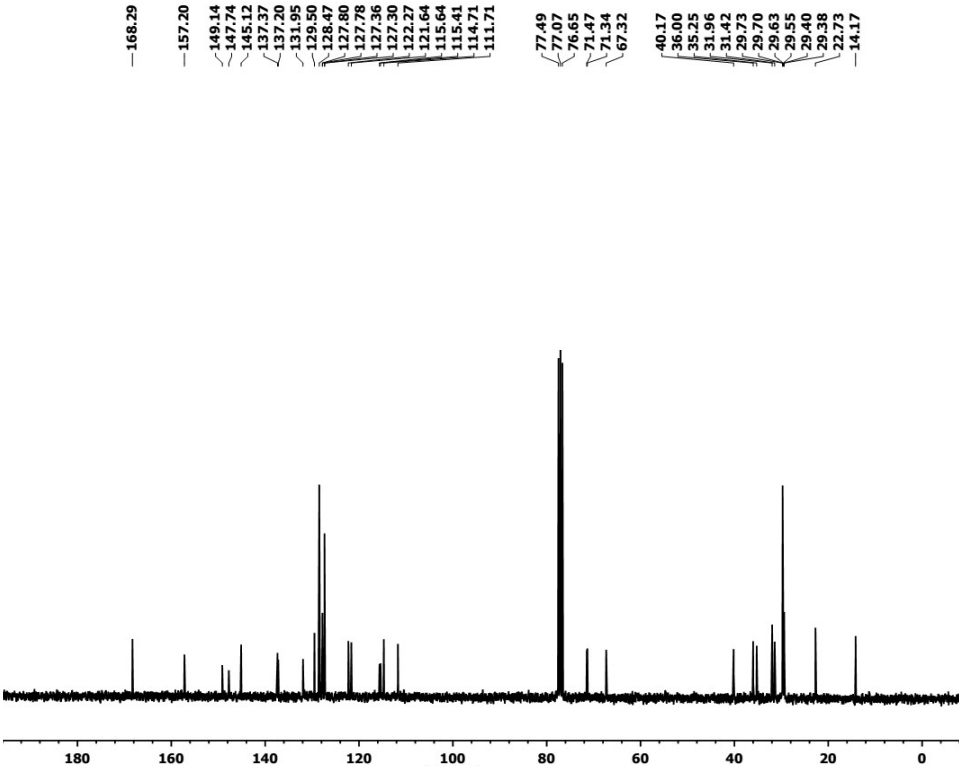


Figure S14. ^{13}C NMR of *N*-(3,4-bis(benzyloxy)phenethyl)-2-(3-pentadecylphenoxy)acetamide in $CDCl_3$

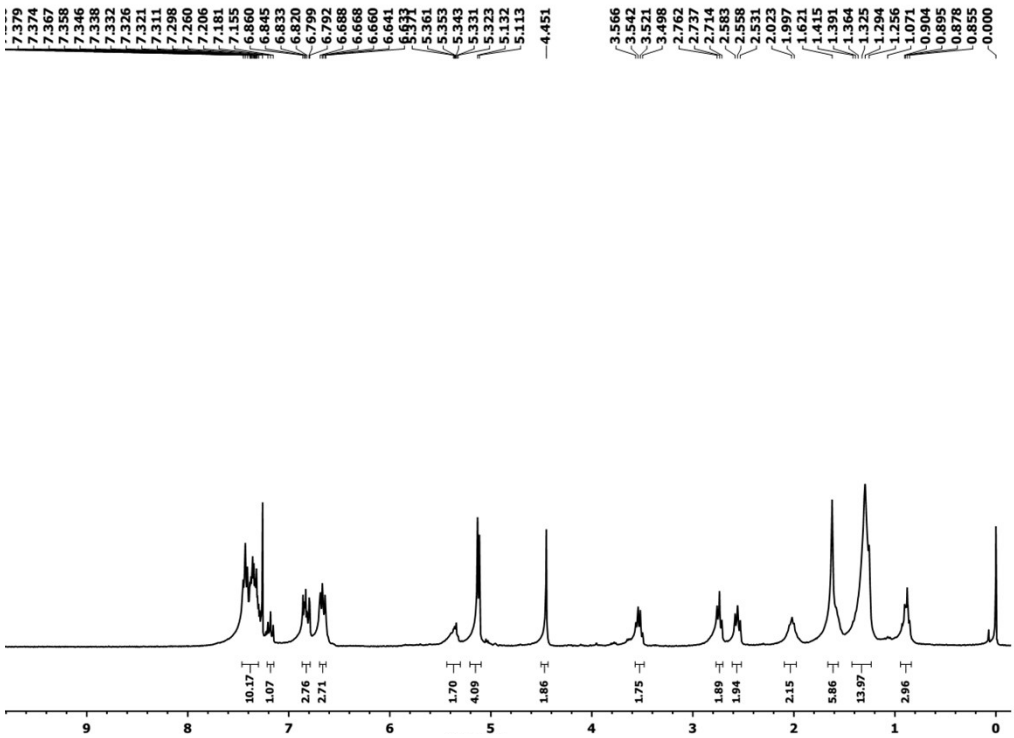


Figure S15. ^{1}H NMR of *N*-(3,4-bis(benzyloxy)phenethyl)-2-(3-pentadec8-en-1-ylphenoxy)acetamide in $CDCl_3$

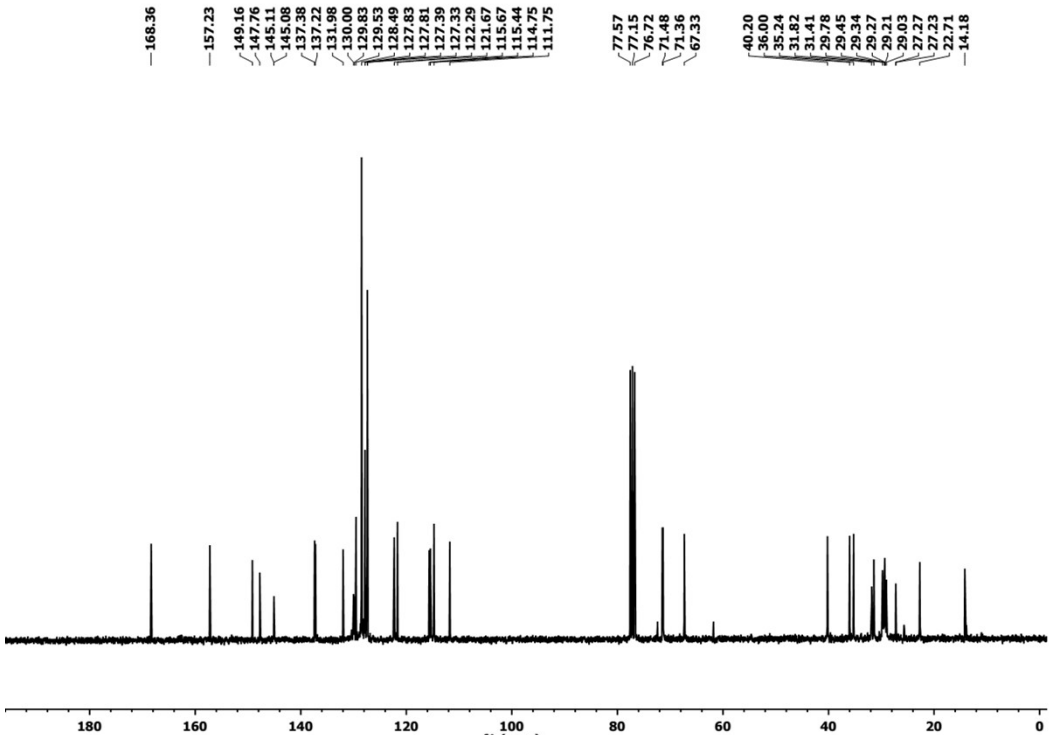


Figure S16. ^{13}C NMR of *N*-(3,4-bis(benzyloxy)phenethyl)-2-(3-pentadec8-en-1-ylphenoxy)acetamide in $CDCl_3$

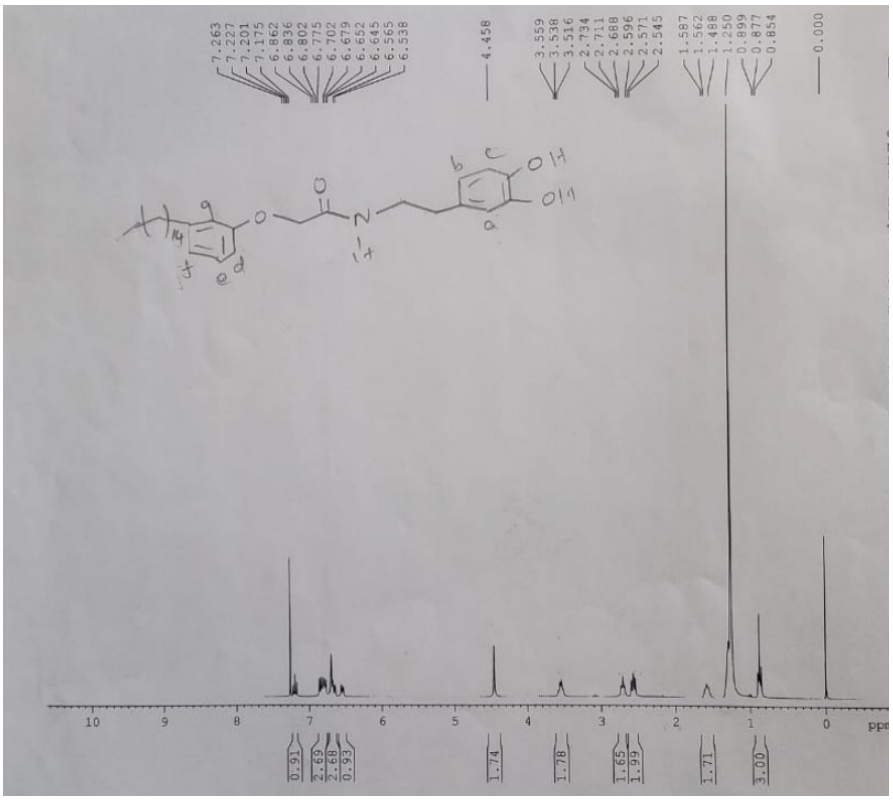


Figure S17. ^{1}H NMR of compound **8a** in $CDCl_3$

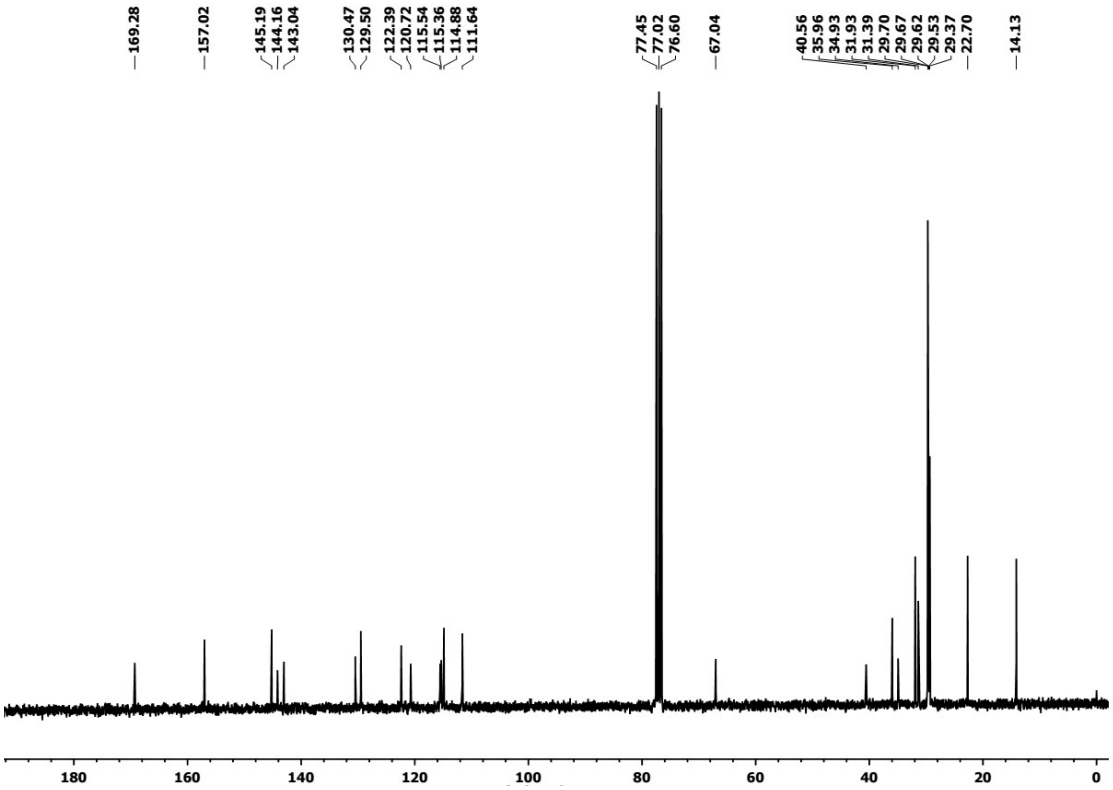


Figure S18. ^{13}C NMR of compound **8a** in $CDCl_3$

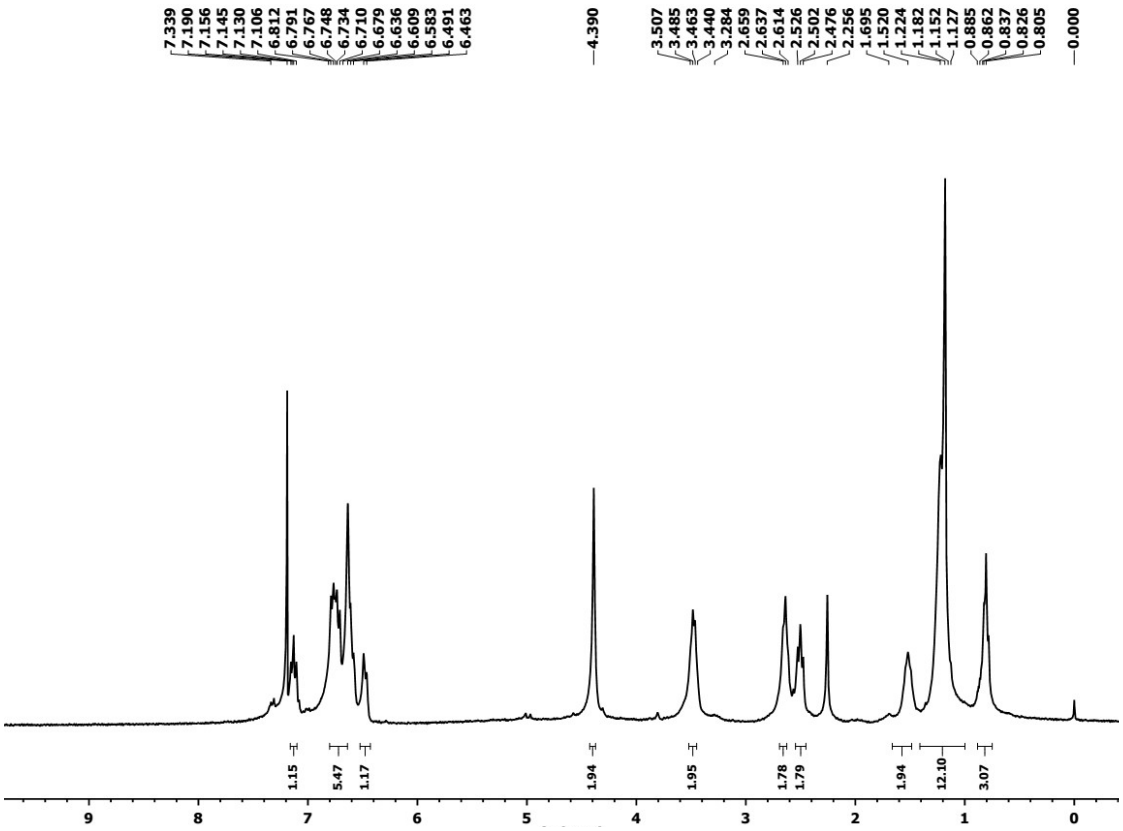


Figure S19. ^{1}H NMR of compound **8b** in $CDCl_3$

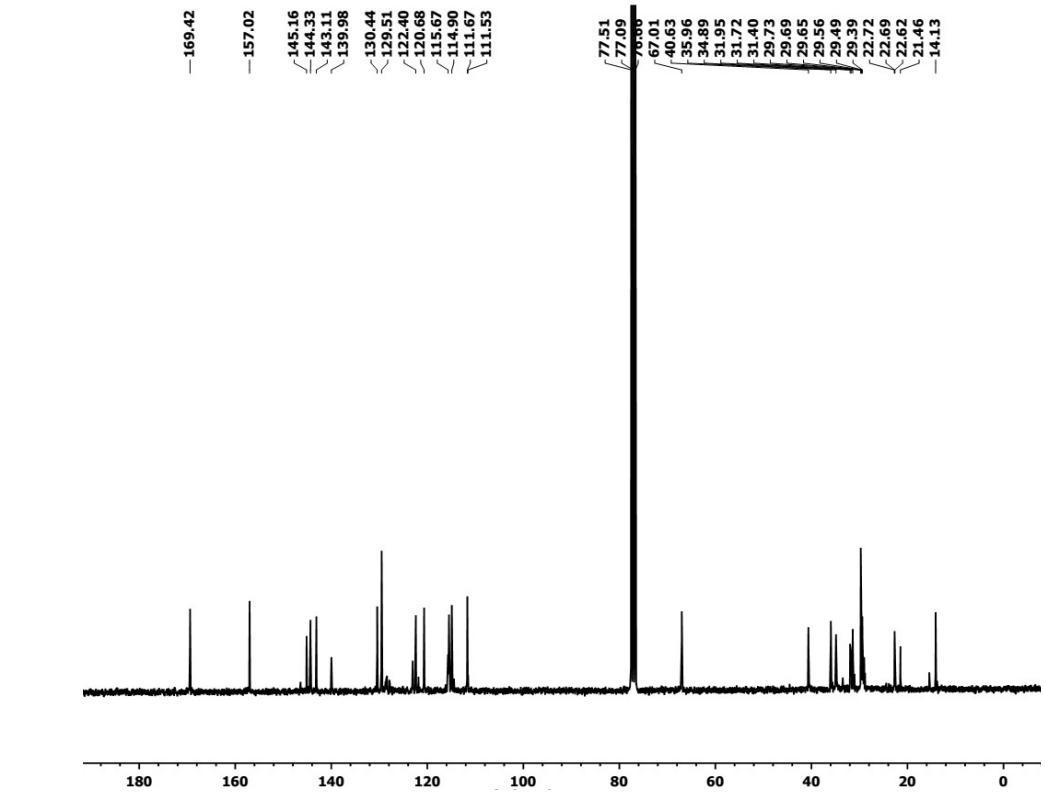


Figure S20. ^{13}C NMR of compound **8b** in $CDCl_3$

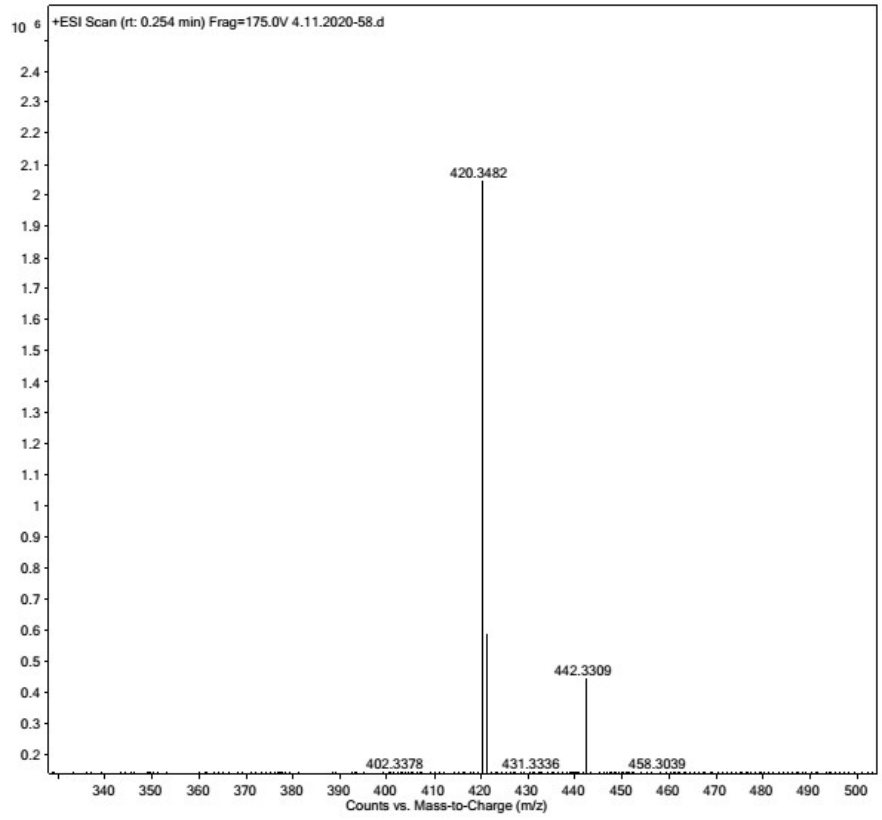


Figure S21. Mass spectra of compound **6a** in methanol

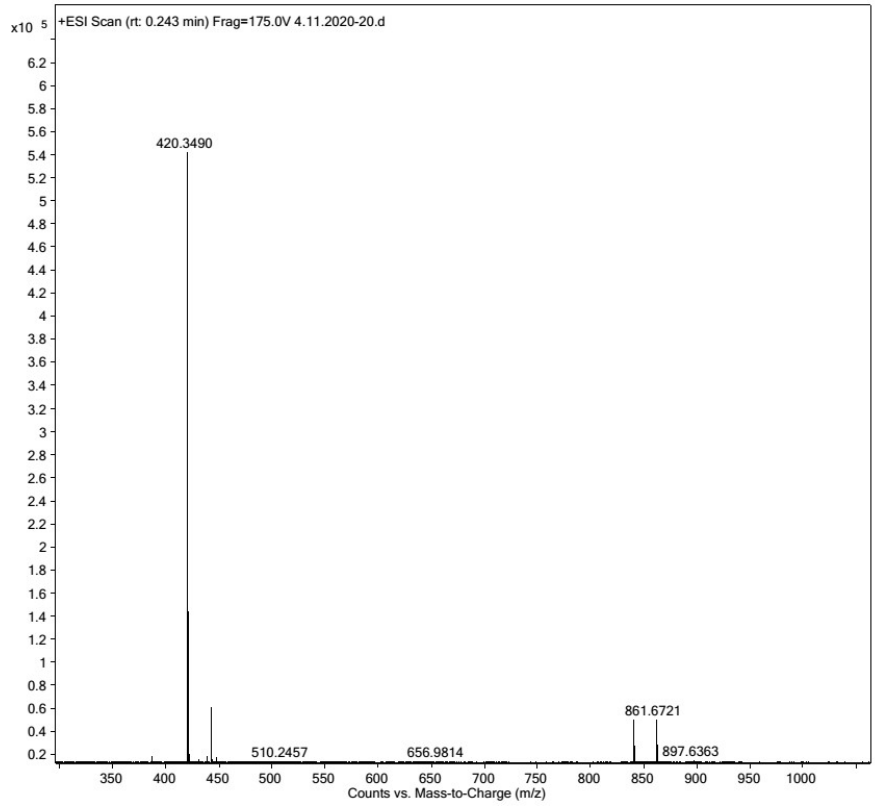


Figure S22. Mass spectra of compound **6b** in methanol

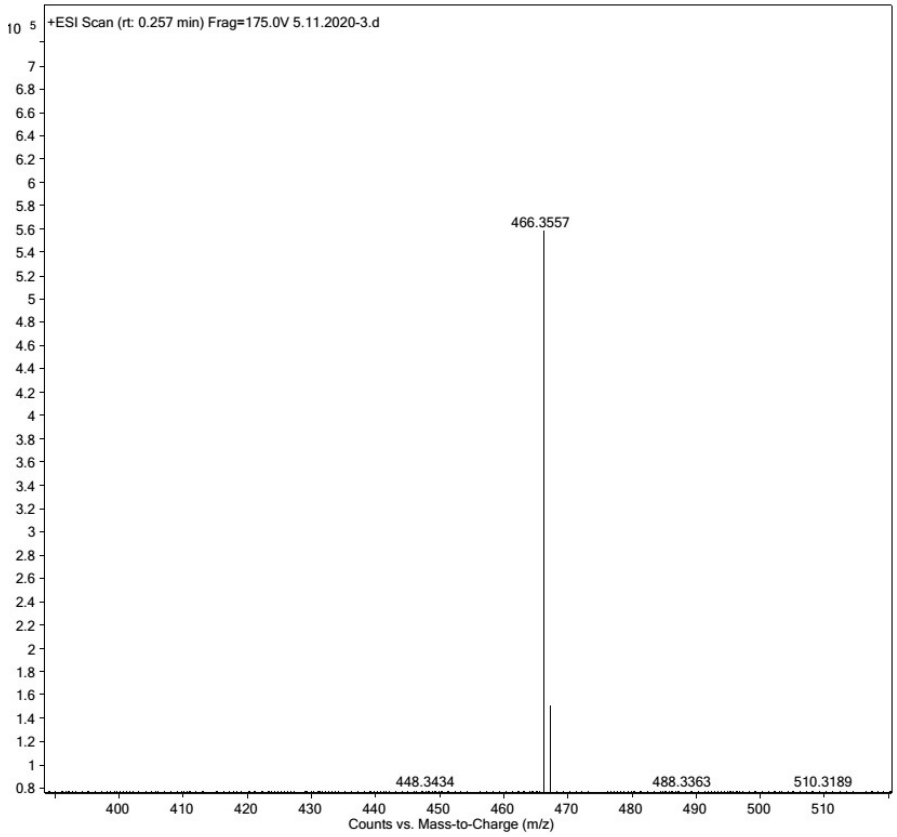


Figure S23. Mass spectra of compound **7a** in methanol

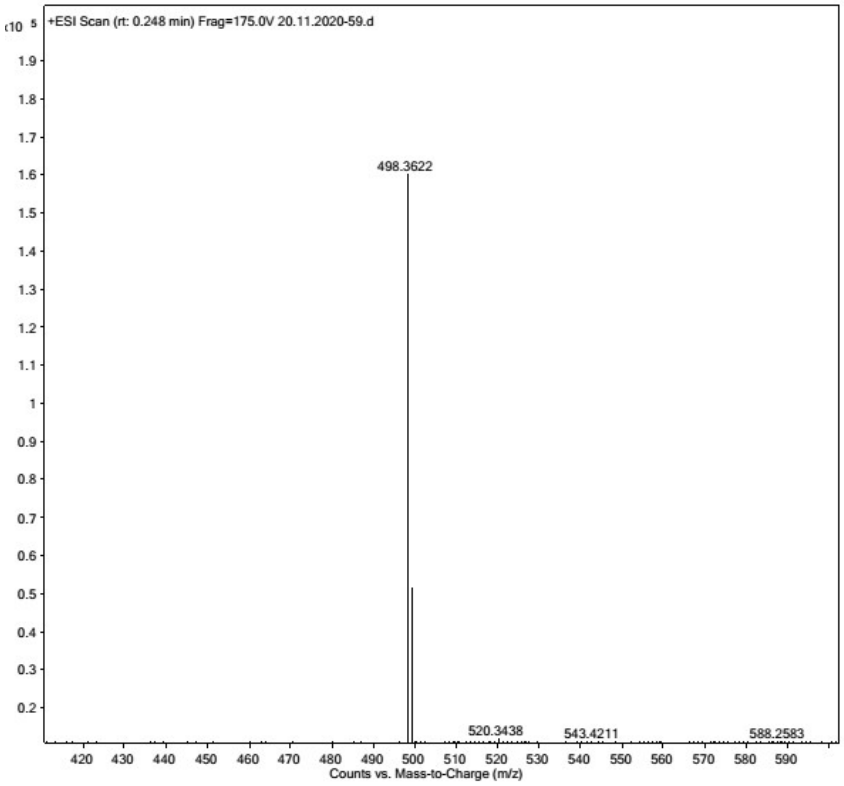


Figure S24. Mass spectra of compound **8a** in methanol

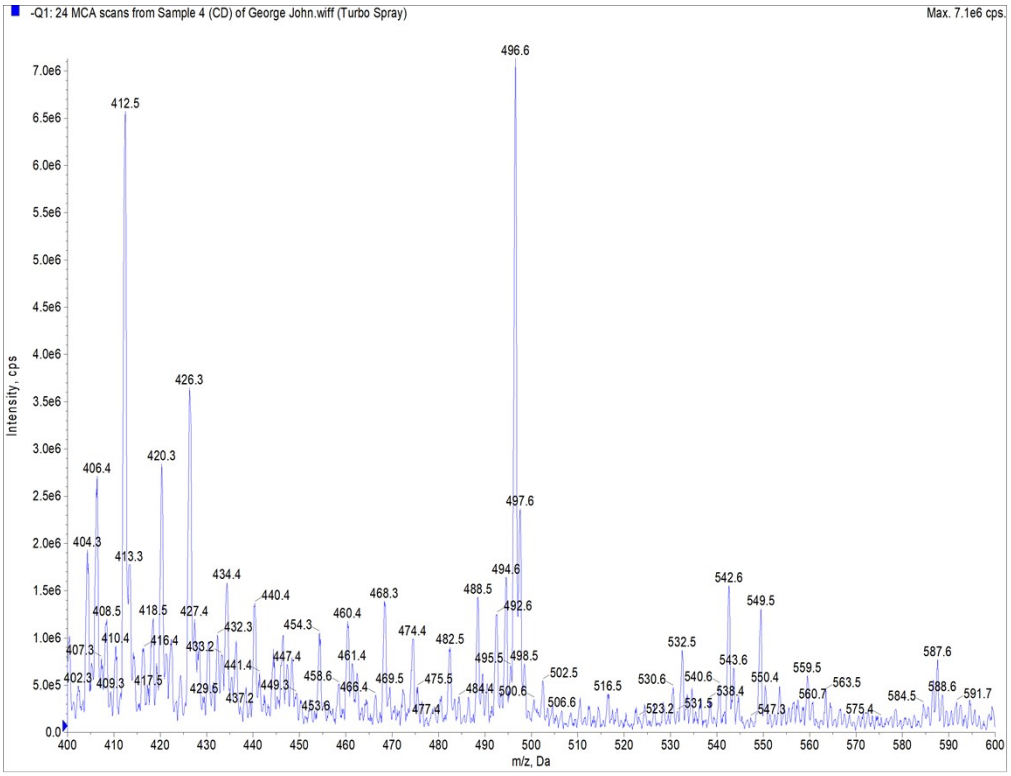
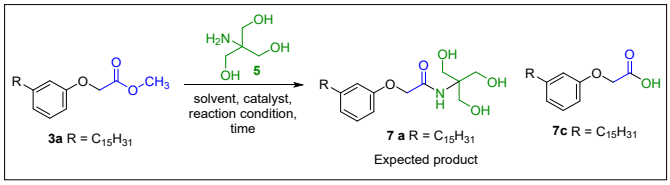


Figure S25. Mass spectra of compound **8b** in methanol

Table S1. Optimization of reaction conditions for the synthesis of *N*-(1,3-dihydroxy-2-(hydroxymethyl)propan-2-yl)-2-(3-alkyl phenoxy)acetamides **7a,b**



Entry	Solvent	Catalyst	Reaction Condition	Reaction Time (h)	Yied (%)*
1	MeOH	-	RT	2	NR
2	MeOH	-	Reflux	6	NR
3	DMSO	-	Reflux	6	NR
4	MeOH	K_2CO_3	RT	2	NR
5	EtOH	K_2CO_3	RT	2	NR
6	THF	K_2CO_3	RT	2	NR
7	Anhydrous DMSO	K_2CO_3	RT	2	NR
8	MeOH	K_2CO_3	Reflux	6	**7c** formed
9	Anhydrous DMSO	K_2CO_3	reflux	6	**7c** formed
10	DCM	K_2CO_3	RT	6-12	NR
11	DCM	Et_3N	RT	2	NR
12	MeOH	Et_3N	RT	2	< 10
13	MeOH	Et_3N	RT	6	40
14	EtOH	Et_3N	RT	6	20
15	THF	Et_3N	RT	6	NR
16	MeOH	Et_3N	reflux	6	**7c** formed[#]
17	DCM + MeOH (9:1)	Et_3N	RT	8	30
18	DCM + MeOH (1:1)	Et_3N	RT	12	72

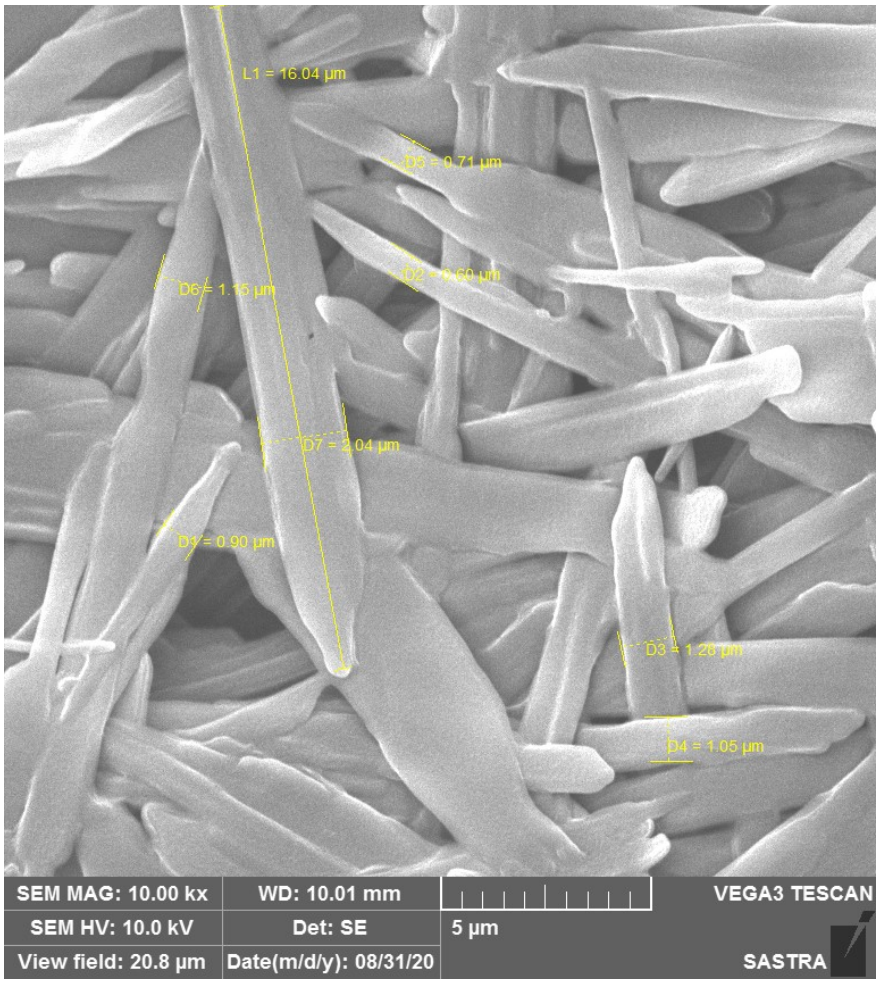


Figure S26. SEM image of hybrid hydrogel formed by **6a**

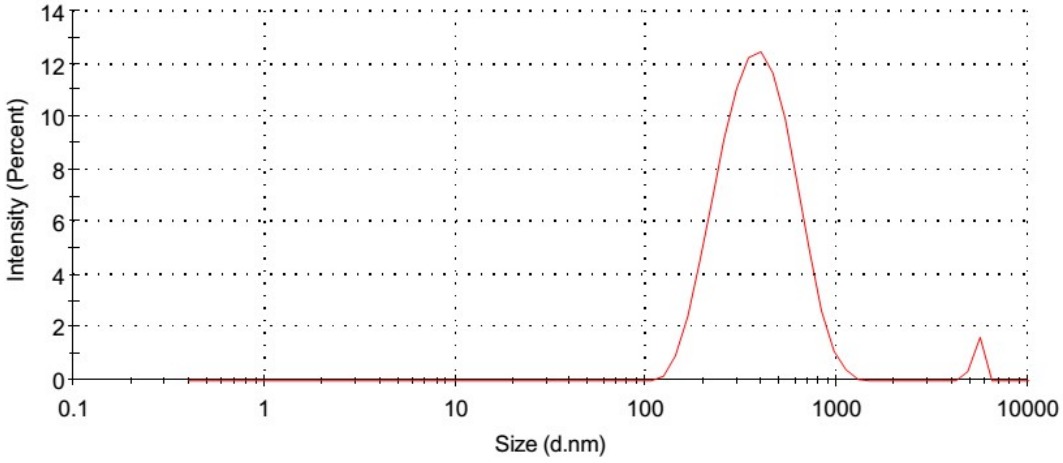


Figure S27. Size distribution intensity plot of **8a** in ethanol + H_2O