

## Supporting Information

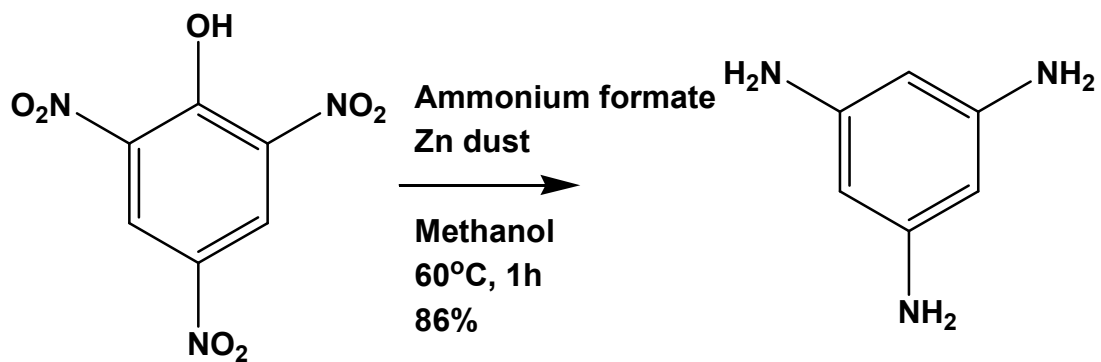
# Dynamic self-assembled polymer: HCl responsive inversion of supramolecular polymer handedness †

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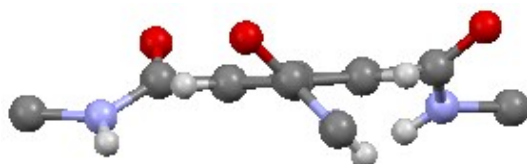
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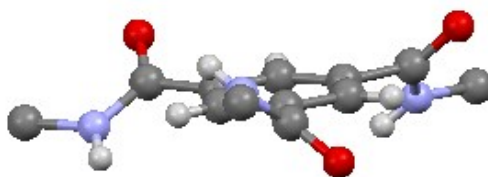
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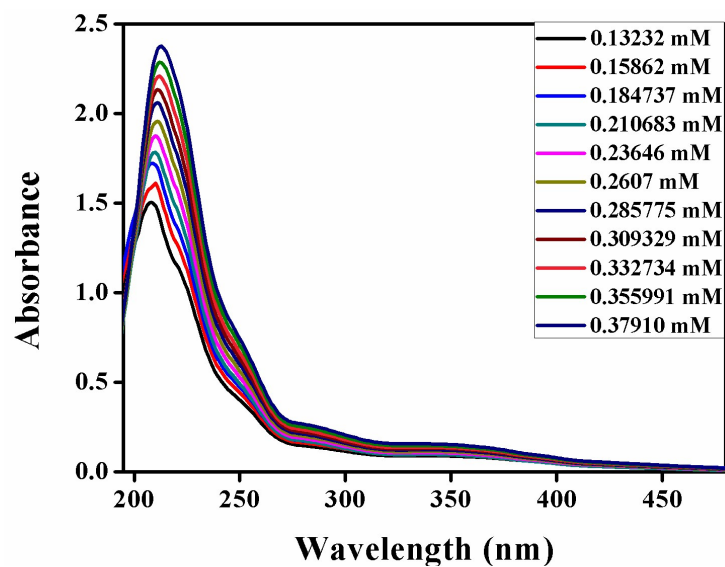
**ESI Scheme 1.** Schematic representation of synthesis of 1,3,5-triamino benzene from picric acid.



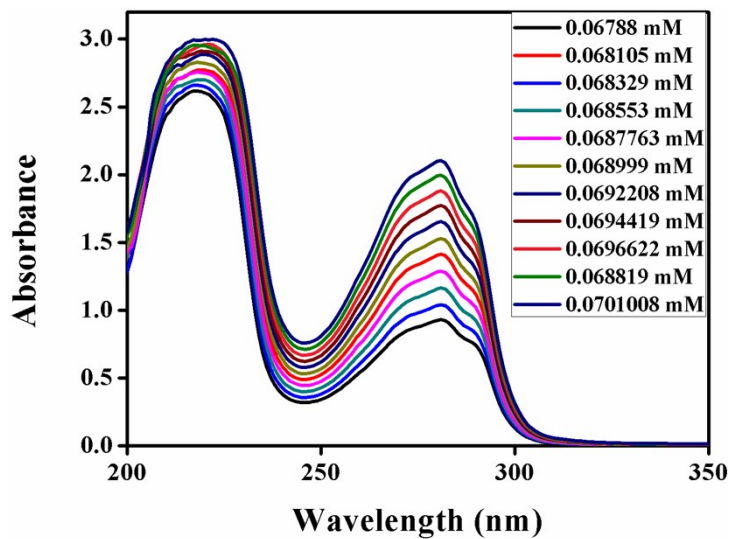
ESI Fig. S1 Trisamide with 3:0 conformation.



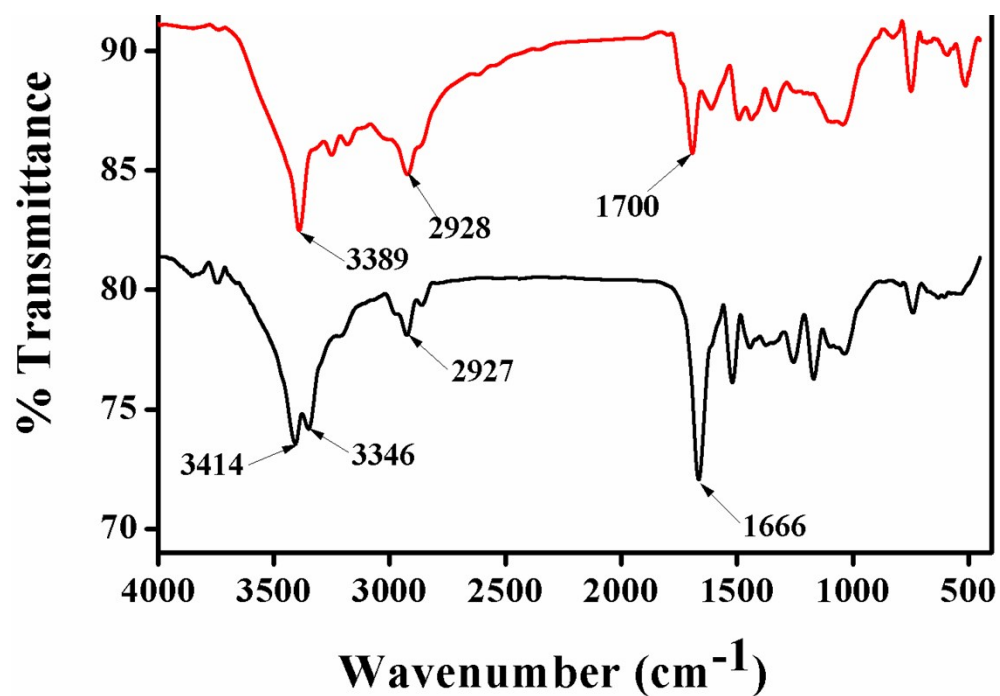
ESI Fig. S2 Trisamide with 2:1 conformation.



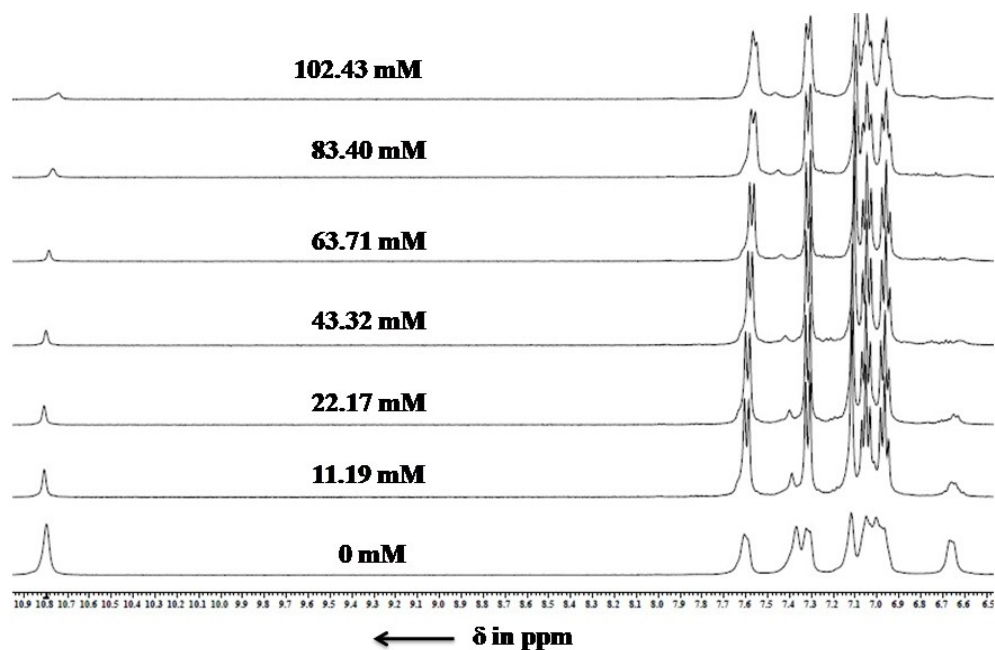
ESI Fig. S3: UV-vis spectra of trisamide 1 with increasing concentration.



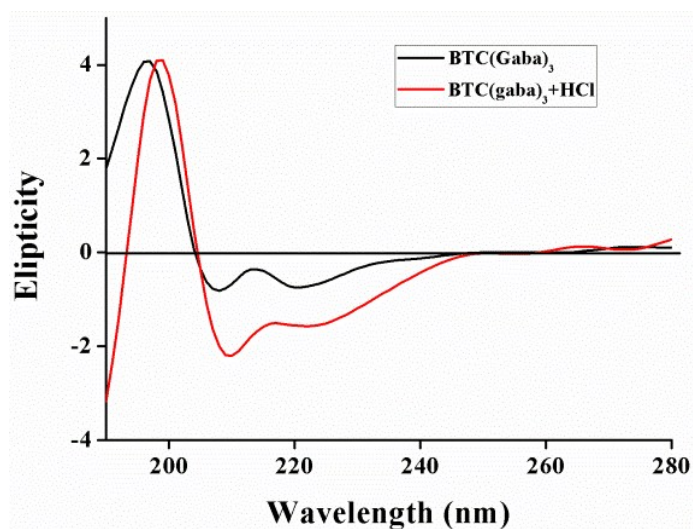
ESI Fig. S4: UV-vis spectra of trisamide 2 with increasing concentration.



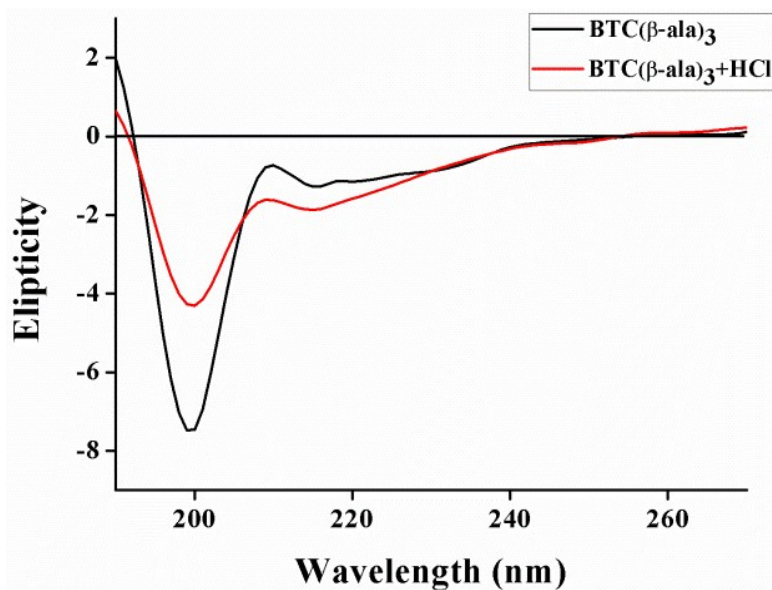
ESI Fig. S5: FT-IR spectra of trisamide **2** in absence of HCl (black) and in presence of HCl (red).



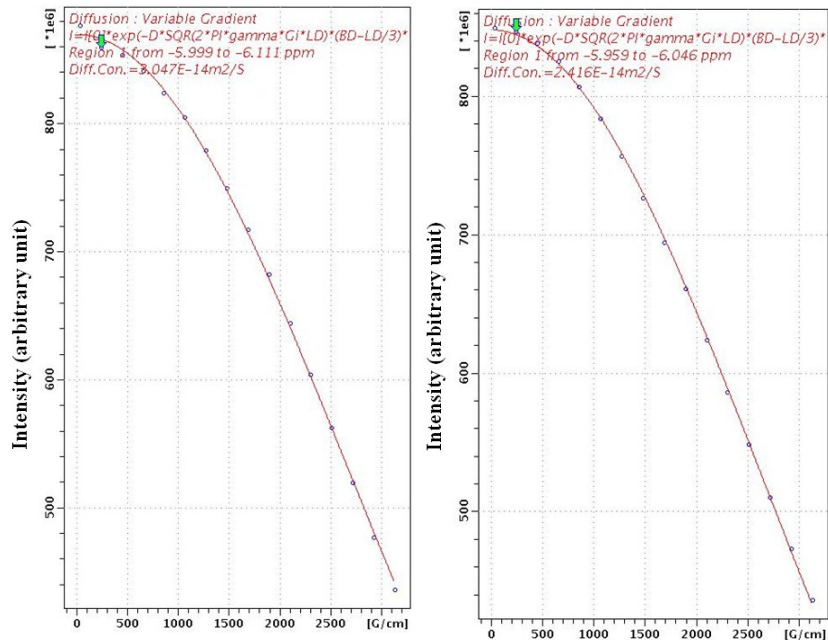
ESI Fig. S6: The acid dependence of NH chemical shifts of trisamide **2** at varying concentrations of HCl.



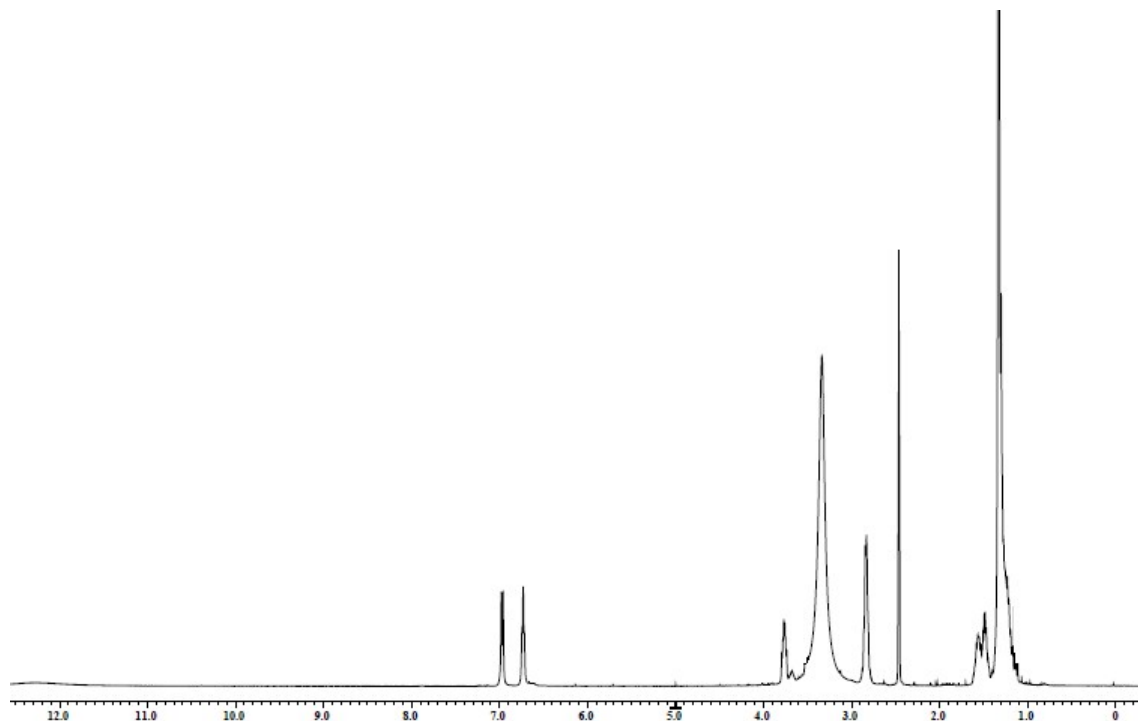
**ESI Fig. S7:** The CD spectra of trisamide containing  $\gamma$ -aminobutyric acid in methanol without HCl (black) and in presence of HCl (red).



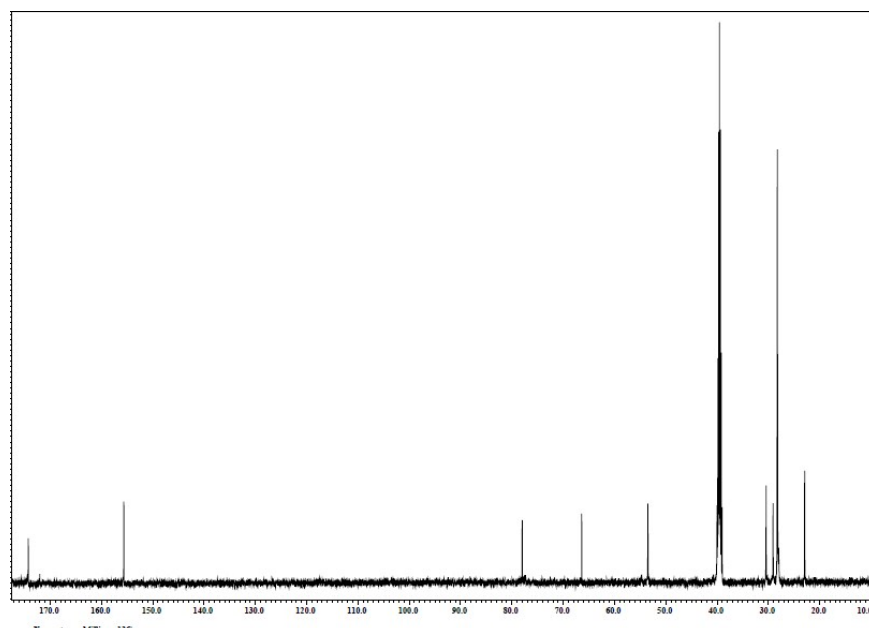
**ESI Fig. S8:** The CD spectra of trisamide containing  $\beta$ -alanine in methanol without HCl (black) and in presence of HCl (red).



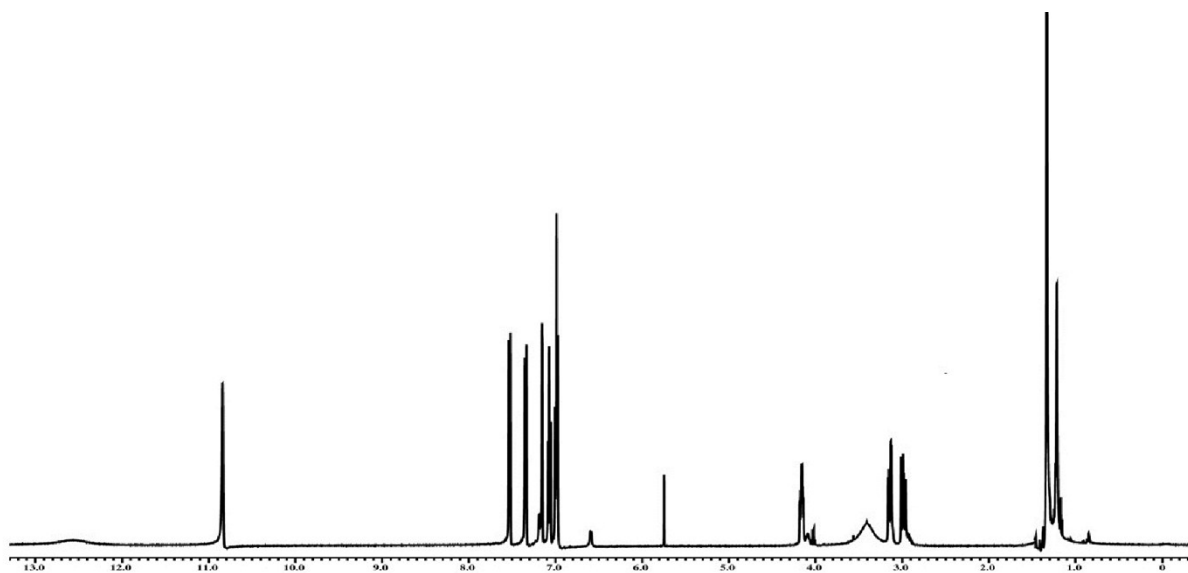
**ESI Fig. S9:** The plot of DOSY NMR of trisamide **1** with conc 0.075mol (left) and plot of DOSY NMR of trisamide **1** with conc 0.075mol after addition of 0.0075mol HCl (right).



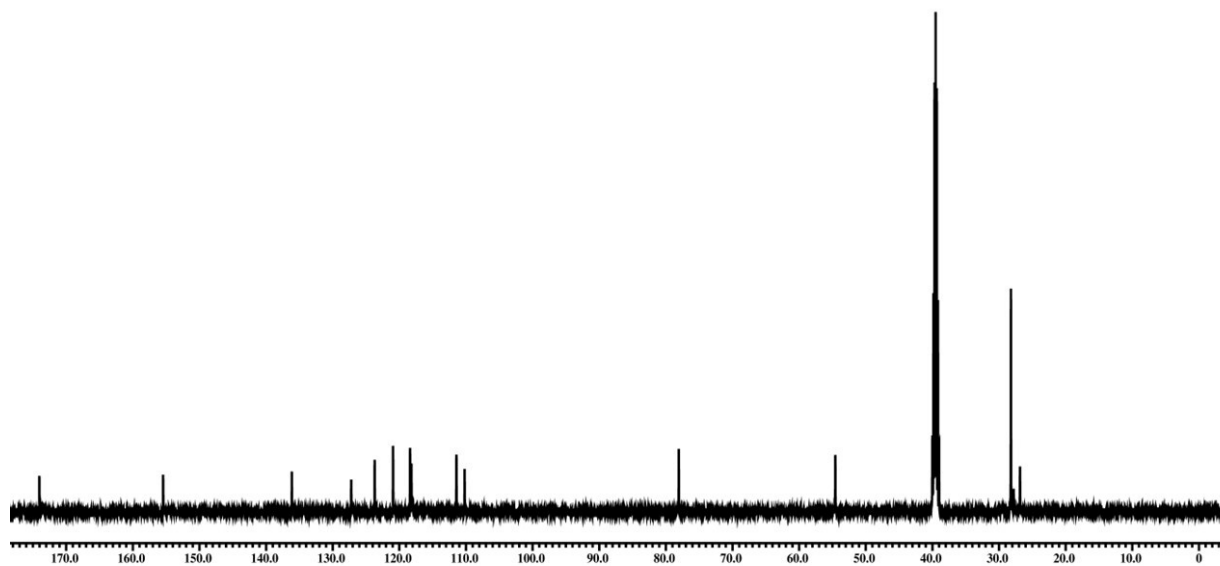
**Fig S10:**  $^1\text{H}$  NMR (DMSO- $d_6$ , 500 MHz,  $\delta$  in ppm) of Boc<sub>2</sub>-Lys-OH.



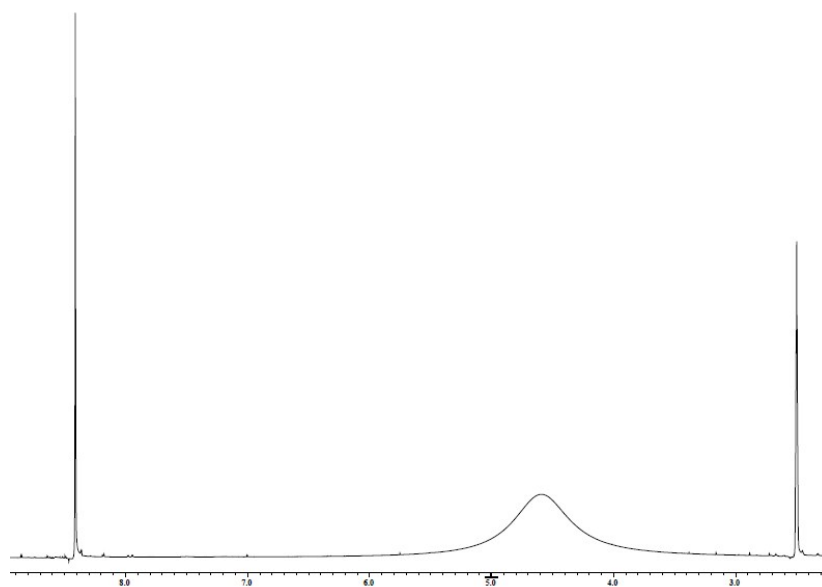
**Fig. S11:**  $^{13}\text{C}$  NMR (DMSO- $d_6$ , 125 MHz,  $\delta$  in ppm) of Boc $_2$ -Lys-OH.



**Fig. S12:**  $^1\text{H}$  NMR (500MHz, DMSO- $d_6$ ,  $\delta$  in ppm) spectra of Boc-Trp-OH.

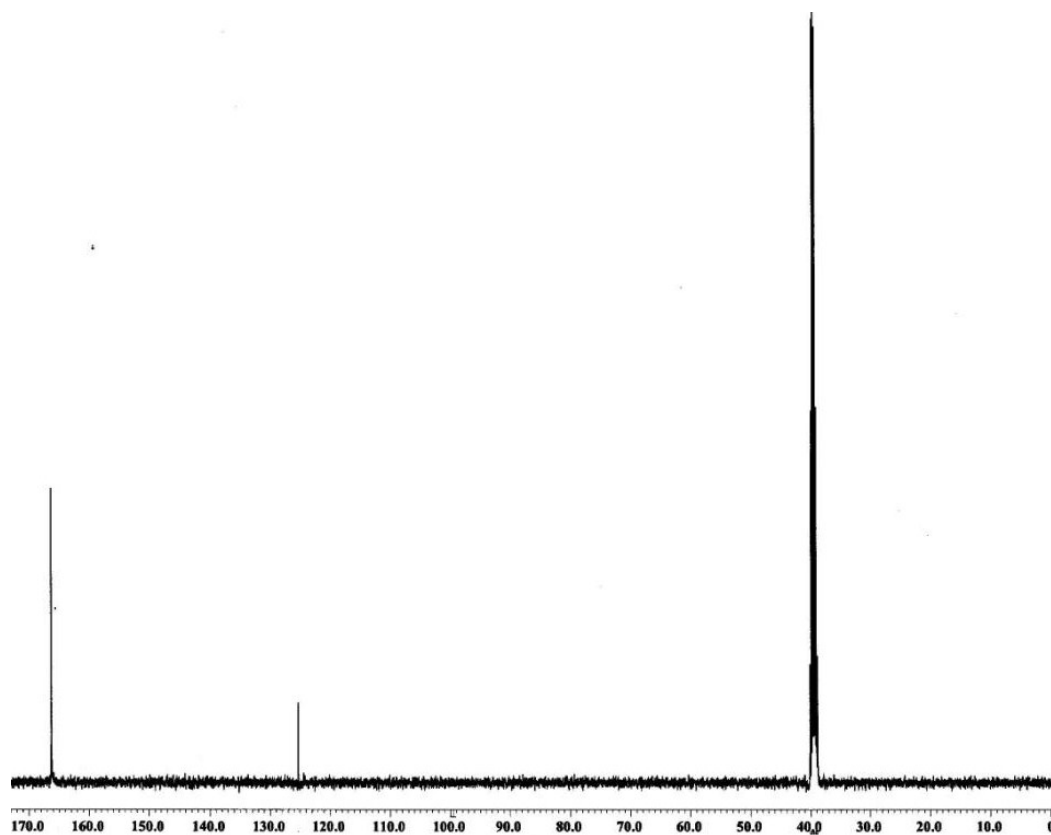


**Fig. S13:**  $^{13}\text{C}$  NMR (125 MHz,  $\text{DMSO-}d_6$ ,  $\delta$  in ppm) spectra of Boc-Trp-OH.

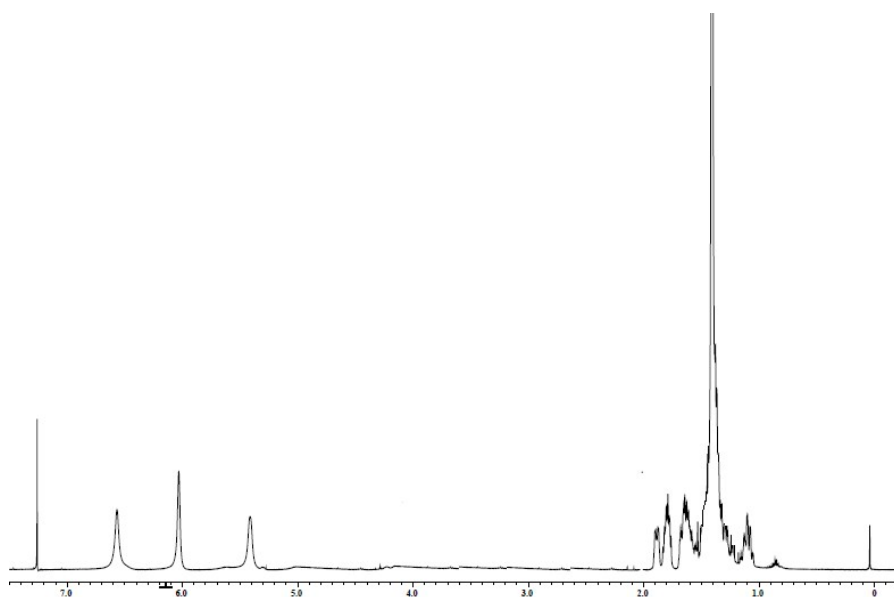


**Fig. S14**  $^1\text{H}$  NMR ( $\text{DMSO-}d_6$ , 400MHz,  $\delta$  in ppm) of 1,3,5-triaminobenzene.

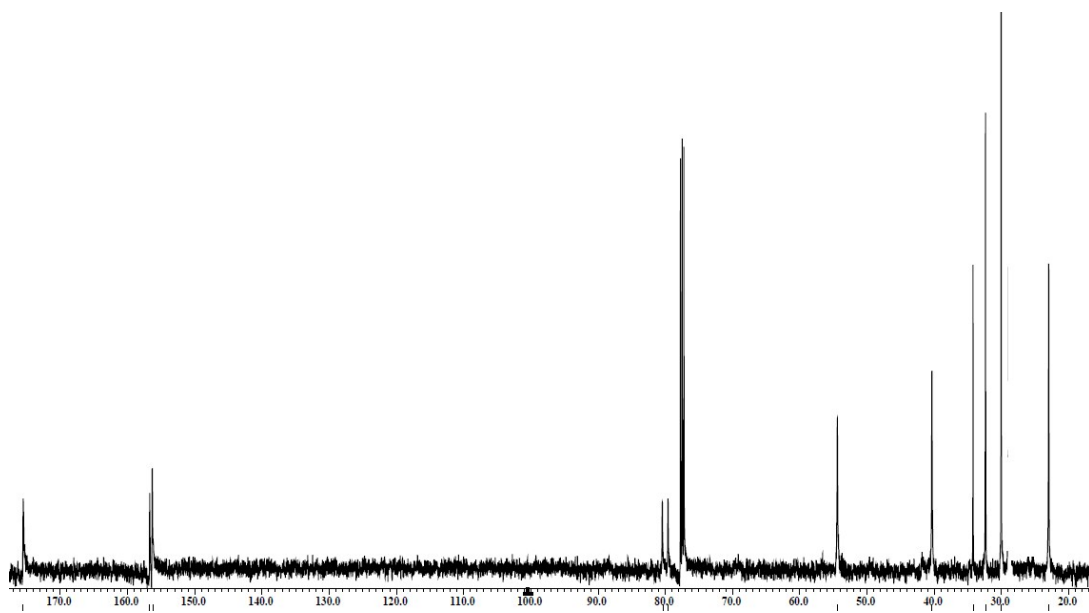




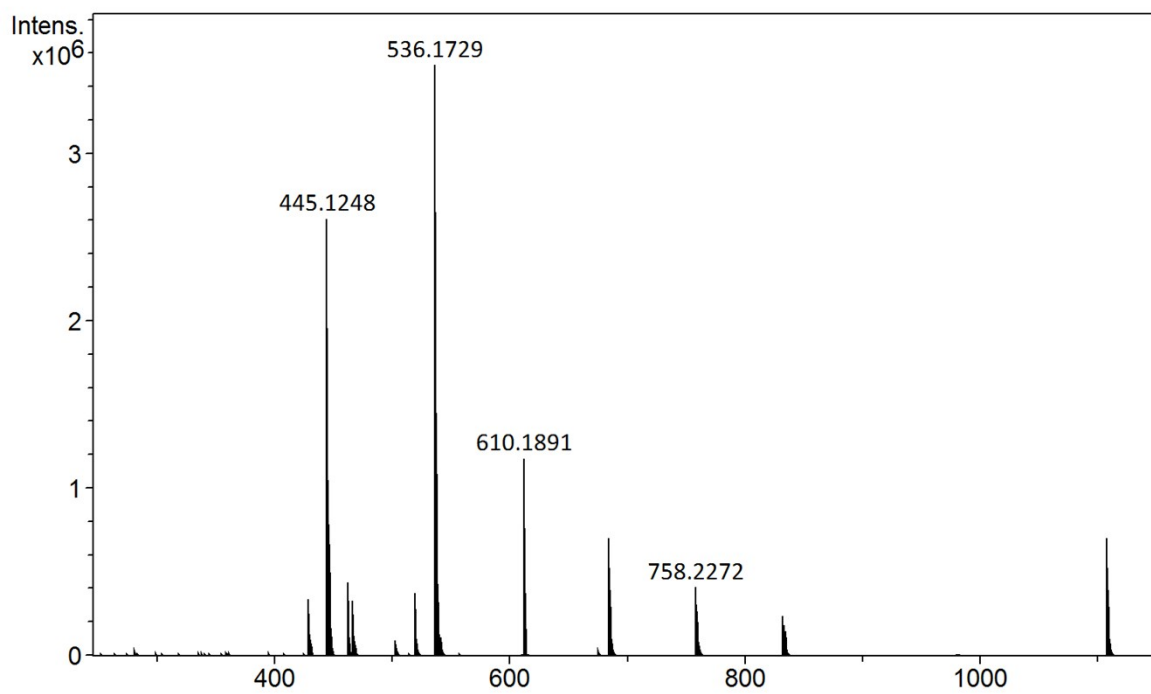
**Fig. S15**  $^{13}\text{C}$  NMR ( $\text{DMSO-}d_6$ , 100 MHz,  $\delta$  in ppm) of 1,3,5-triaminobenzene.



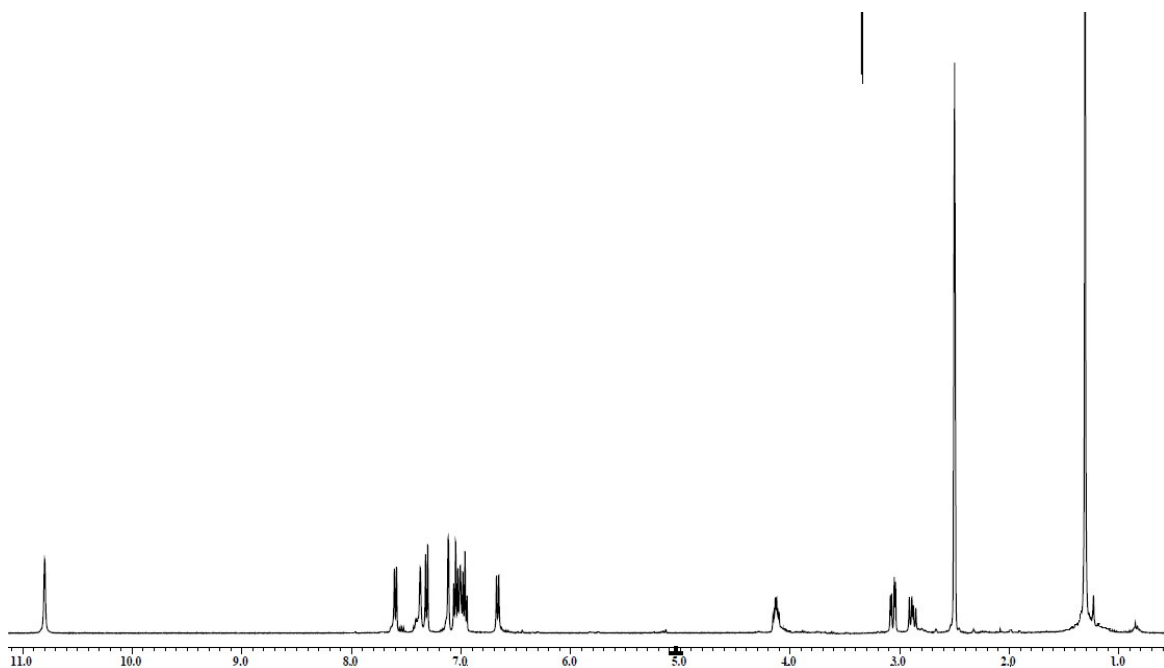
**Fig. S16**  $^1\text{H}$  NMR ( $\text{CDCl}_3$ , 500 MHz,  $\delta$  in ppm) of Trisamide **1**.



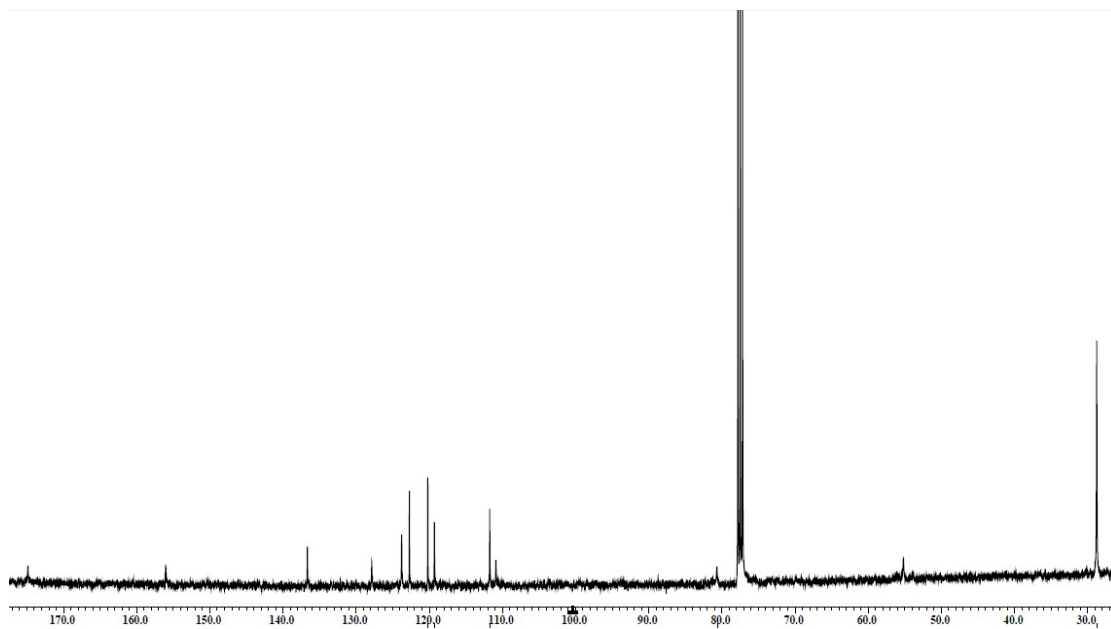
**Fig. S17**  $^{13}\text{C}$  NMR ( $\text{CDCl}_3$ , 125 MHz,  $\delta$  in ppm) of Trisamide **1**.



**Fig. S18** Mass spectra of Trisamide **1**.



**Fig. S19**  $^1\text{H}$  NMR (DMSO- $d_6$ , 500 MHz,  $\delta$  in ppm) of Trisamide **2**.



**Fig. S20**  $^{13}\text{C}$  NMR (DMSO- $d_6$ , 100 MHz,  $\delta$  in ppm) of Trisamide **2**.