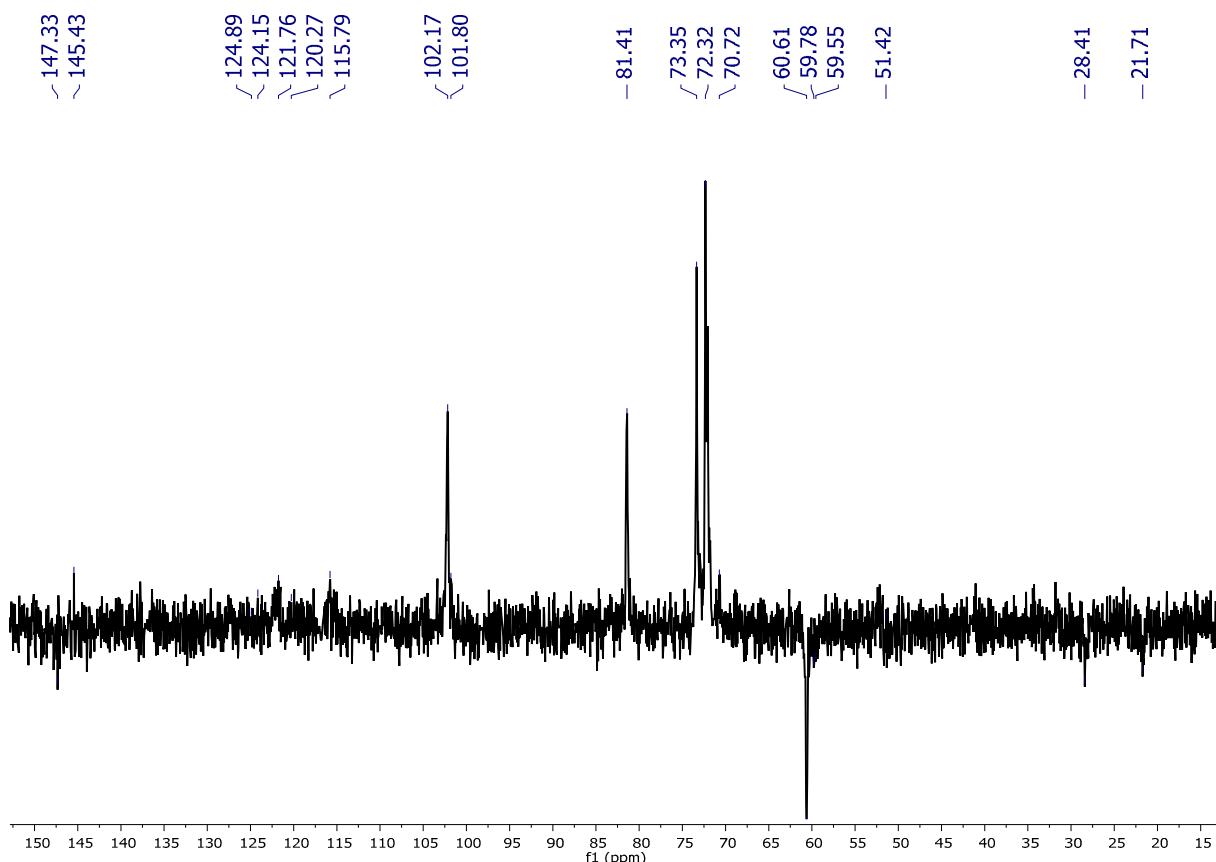


# *Supplementary Information*

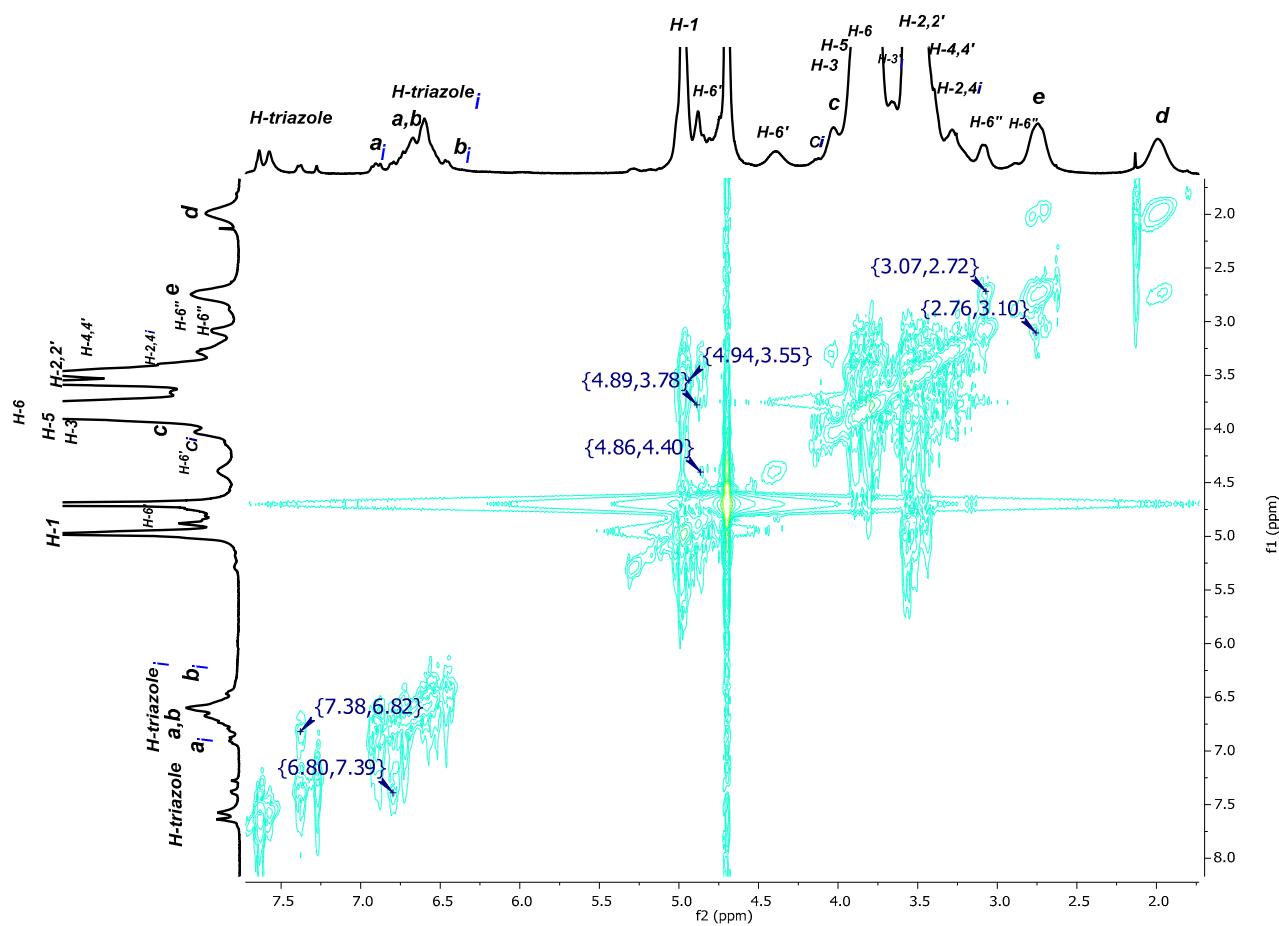
Kendra Sorroza-Martínez <sup>1</sup>, Israel González-Méndez <sup>1,\*</sup>, Mireille Vonlanthen <sup>1</sup>, Fabián Cuétara-Guadarrama <sup>1</sup>, Javier Illescas <sup>2</sup>, Xiao Xia Zhu <sup>3</sup> and Ernesto Rivera <sup>1,\*</sup>

## **Analysis data of**

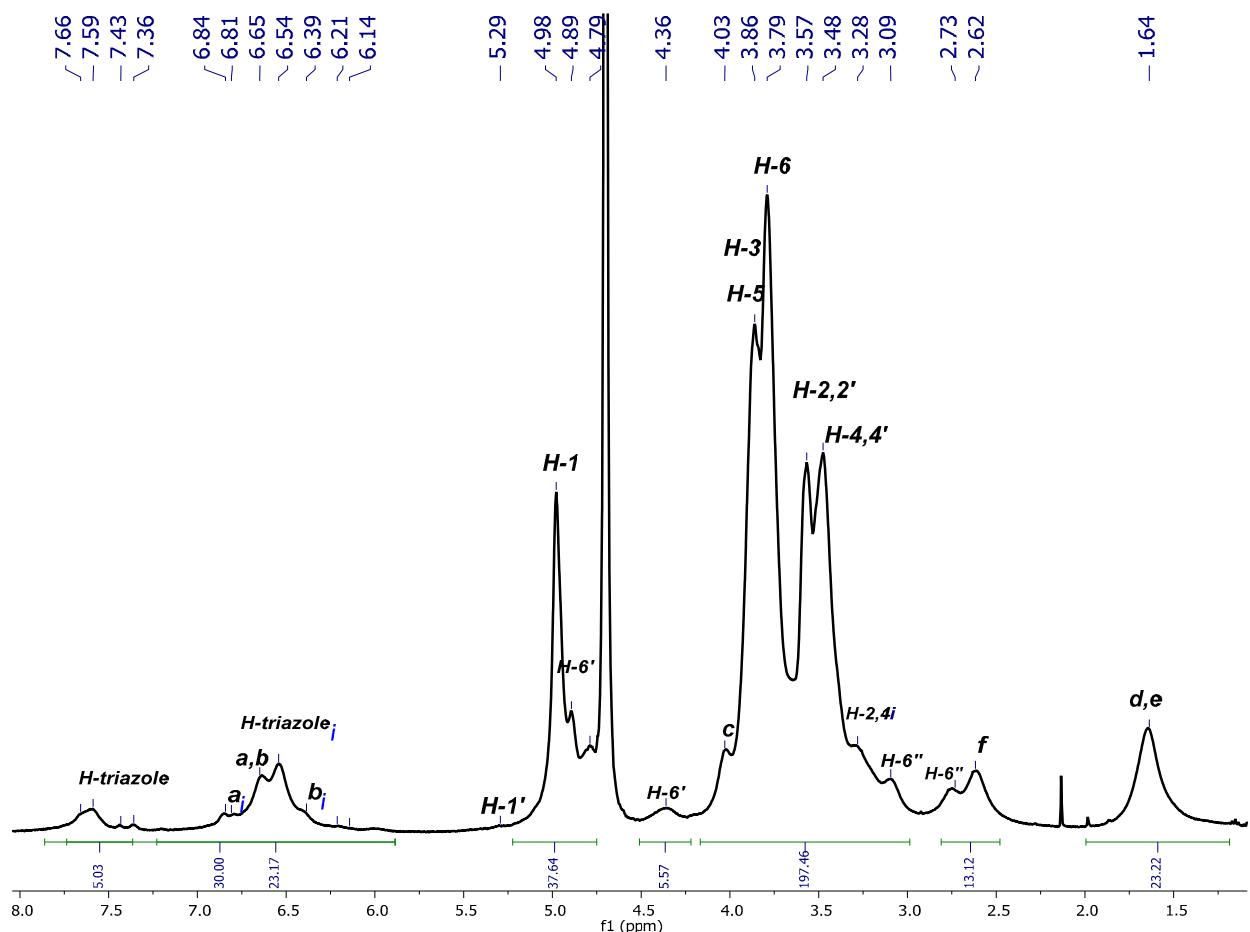
- Figure S1.** DEPTQ-NMR spectrum of P<sub>3</sub>N<sub>3</sub>-[O-C<sub>6</sub>H<sub>4</sub>-O-(CH<sub>2</sub>)<sub>3</sub>-βCD]<sub>6</sub> (**I**) in D<sub>2</sub>O. p2
- Figure S2.** 2D NMR COSY spectrum of P<sub>3</sub>N<sub>3</sub>-[O-C<sub>6</sub>H<sub>4</sub>-O-(CH<sub>2</sub>)<sub>3</sub>-βCD]<sub>6</sub> (**I**) in D<sub>2</sub>O. p3
- Figure S3.** <sup>1</sup>H NMR spectrum of P<sub>3</sub>N<sub>3</sub>-[O-C<sub>6</sub>H<sub>4</sub>-O-(CH<sub>2</sub>)<sub>4</sub>-βCD]<sub>6</sub> (**II**) in D<sub>2</sub>O. p4
- Figure S4.** DEPTQ-NMR spectrum of P<sub>3</sub>N<sub>3</sub>-[O-C<sub>6</sub>H<sub>4</sub>-O-(CH<sub>2</sub>)<sub>4</sub>-βCD]<sub>6</sub> (**II**) in D<sub>2</sub>O. p5
- Figure S5.** 2D NMR HMQC spectrum of P<sub>3</sub>N<sub>3</sub>-[O-C<sub>6</sub>H<sub>4</sub>-O-(CH<sub>2</sub>)<sub>4</sub>-βCD]<sub>6</sub> (**II**) in D<sub>2</sub>O. p6
- Figure S6.** 2D NMR NOESY spectrum of P<sub>3</sub>N<sub>3</sub>-[O-C<sub>6</sub>H<sub>4</sub>-O-(CH<sub>2</sub>)<sub>4</sub>-βCD]<sub>6</sub> (**II**) in D<sub>2</sub>O. p7
- Figure S7.** 2D NMR COSY spectrum of P<sub>3</sub>N<sub>3</sub>-[O-C<sub>6</sub>H<sub>4</sub>-O-(CH<sub>2</sub>)<sub>4</sub>-βCD]<sub>6</sub> (**II**) in D<sub>2</sub>O. p8
- Figure S8.** <sup>1</sup>H-NMR titration experiment of dendritic compound (**II**). p9
- Figure S9.** Job plot for the inclusion complex of AdCOOH with βCD cavities in the dendritic compound (**II**). p10
- Figure S10.** <sup>1</sup>H NMR spectrum of inclusion complex P<sub>3</sub>N<sub>3</sub>-[O-C<sub>6</sub>H<sub>4</sub>-O-(CH<sub>2</sub>)<sub>4</sub>-βCD]<sub>6</sub> (**II**)/AdCOOH in D<sub>2</sub>O. p11
- Figure S11.** 2D NMR NOESY spectrum of inclusion complex P<sub>3</sub>N<sub>3</sub>-[O-C<sub>6</sub>H<sub>4</sub>-O-(CH<sub>2</sub>)<sub>4</sub>-βCD]<sub>6</sub> (**II**)/AdCOOH in D<sub>2</sub>O. p12



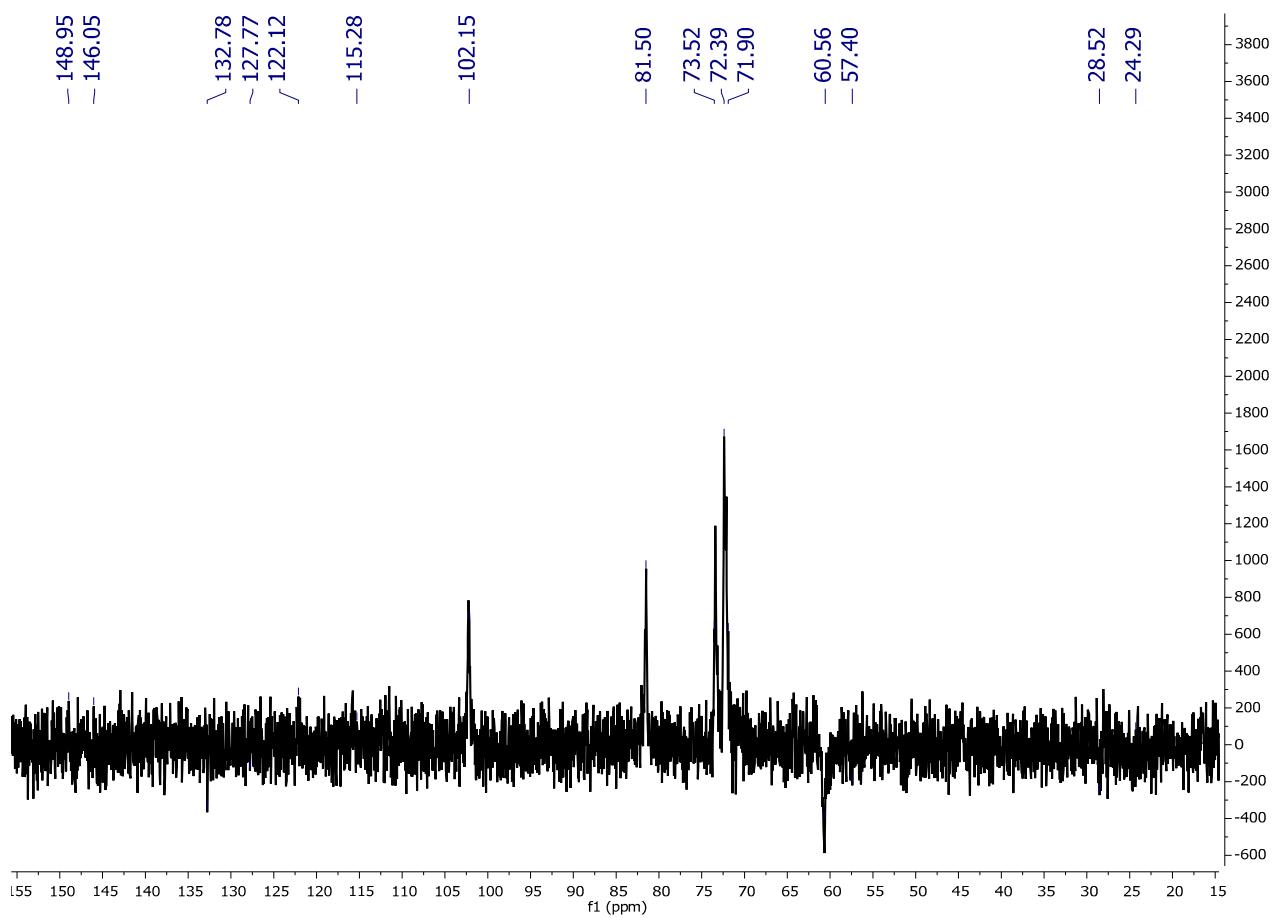
**Figure S1.** DEPTQ-NMR spectrum of  $\text{P}_3\text{N}_3\text{-[O-C}_6\text{H}_4\text{-O-(CH}_2\text{)}_3\text{-}\beta\text{CD]}_6$  (**I**) in  $\text{D}_2\text{O}$ .



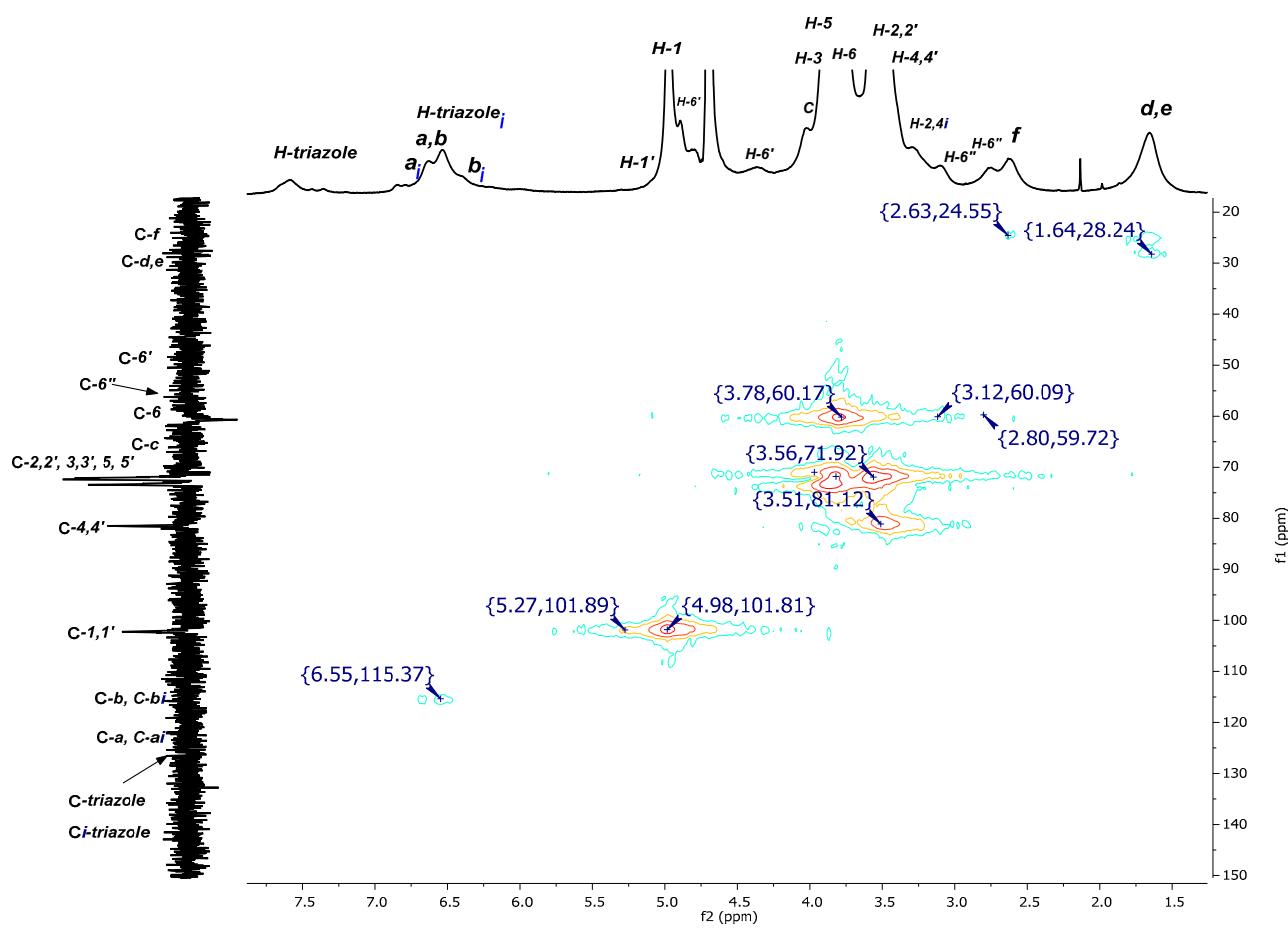
**Figure S2.** 2D NMR COSY spectrum of  $\text{P}_3\text{N}_3\text{-}[\text{O}-\text{C}_6\text{H}_4\text{-}\text{O}-(\text{CH}_2)_3\text{-}\beta\text{CD}]_6$  (**I**) in  $\text{D}_2\text{O}$ .



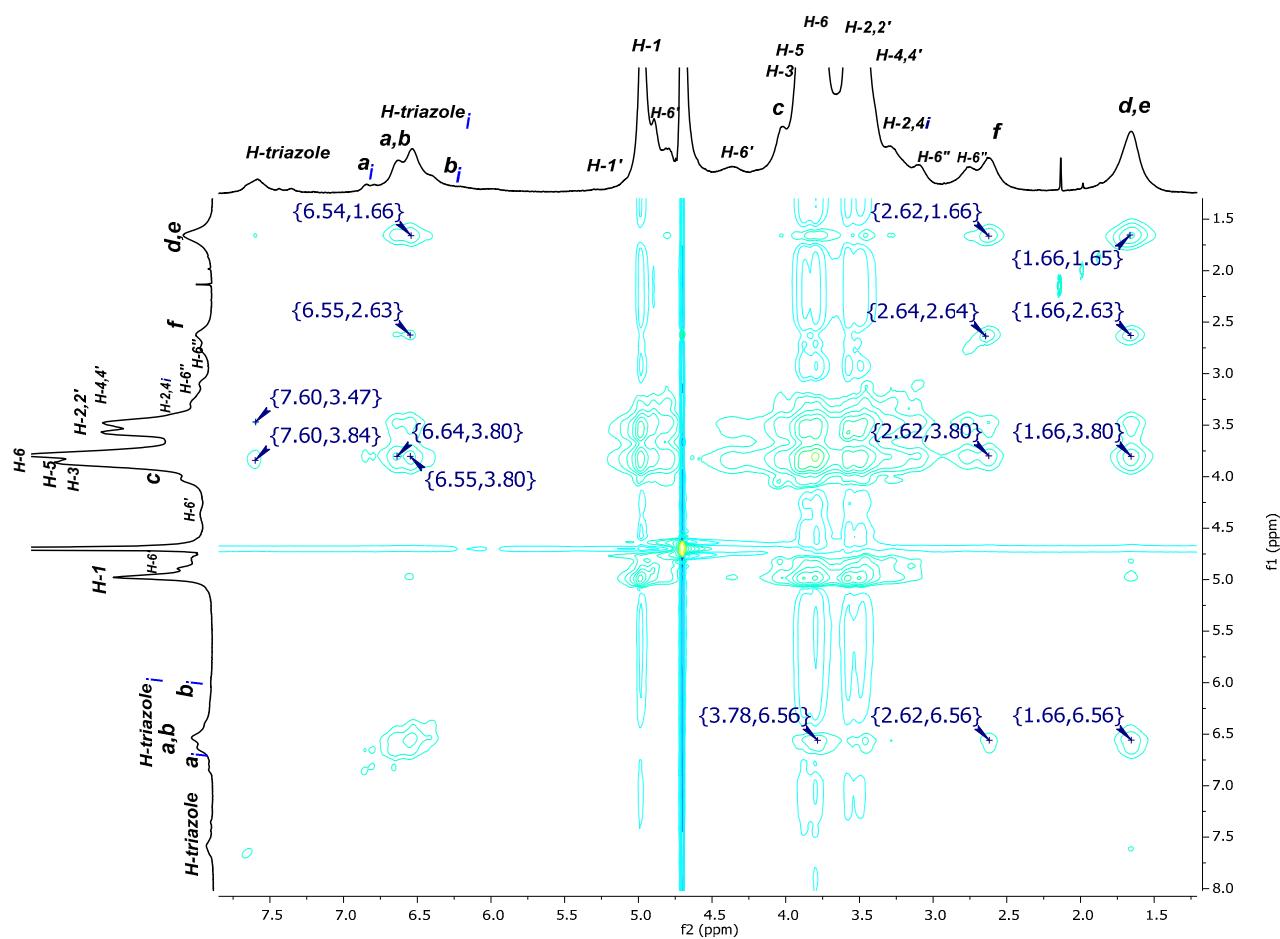
**Figure S3.**  $^1\text{H}$  NMR spectrum of  $\text{P}_3\text{N}_3\text{-}[\text{O}-\text{C}_6\text{H}_4\text{-}\text{O}-\text{(CH}_2\text{)}_4\text{-}\beta\text{CD}]_6$  (**II**) in  $\text{D}_2\text{O}$ .



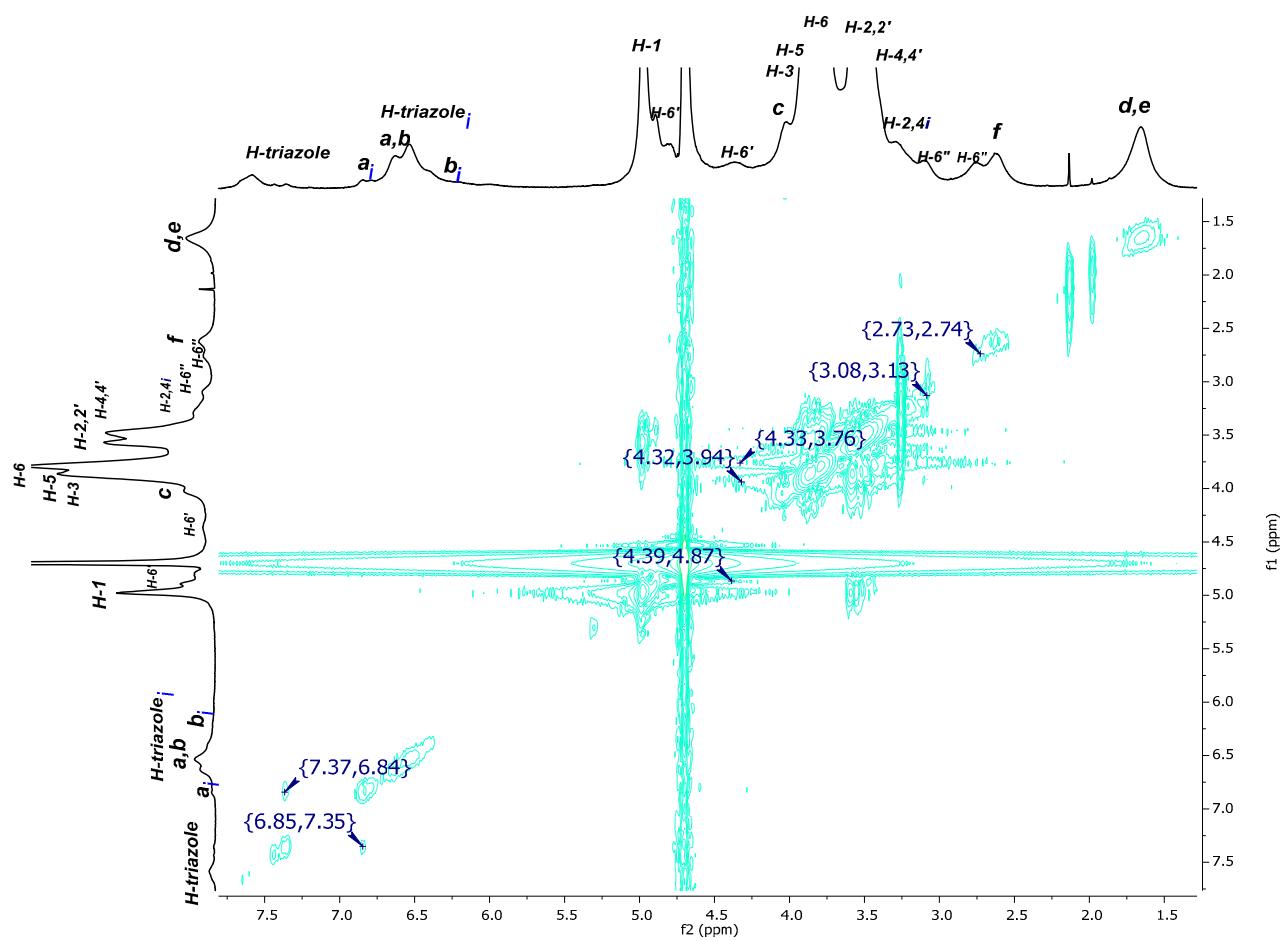
**Figure S4.** DEPTQ-NMR spectrum of  $\text{P}_3\text{N}_3\text{-}[\text{O}-\text{C}_6\text{H}_4\text{-}\text{O}-\text{(CH}_2\text{)}_4\text{-}\beta\text{CD}]_6$  (**II**) in  $\text{D}_2\text{O}$ .



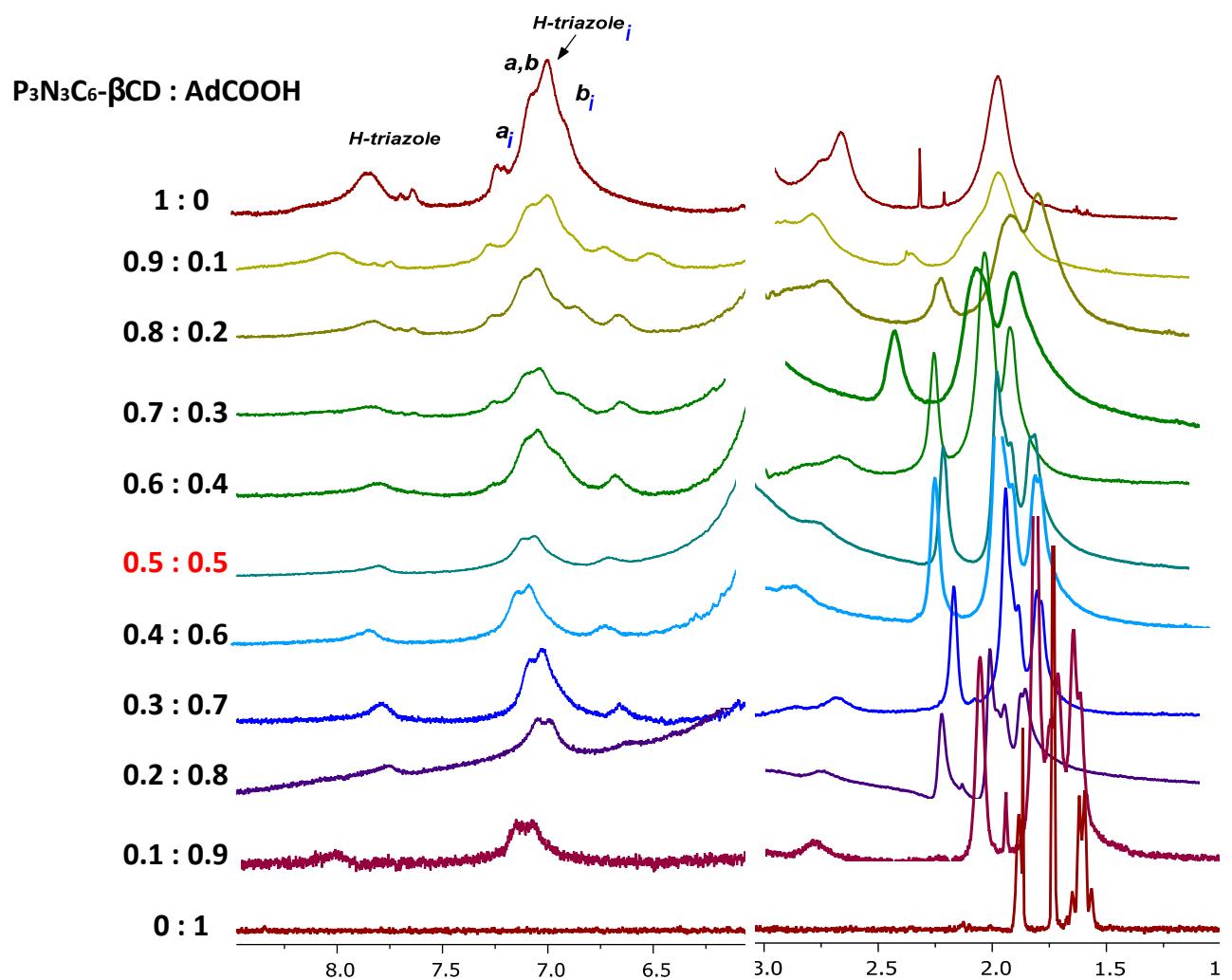
**Figure S5.** 2D NMR HMQC spectrum of  $\text{P}_3\text{N}_3\text{-}[\text{O}-\text{C}_6\text{H}_4\text{-}\text{O}-(\text{CH}_2)_4\text{-}\beta\text{CD}]_6$  (**II**) in  $\text{D}_2\text{O}$ .



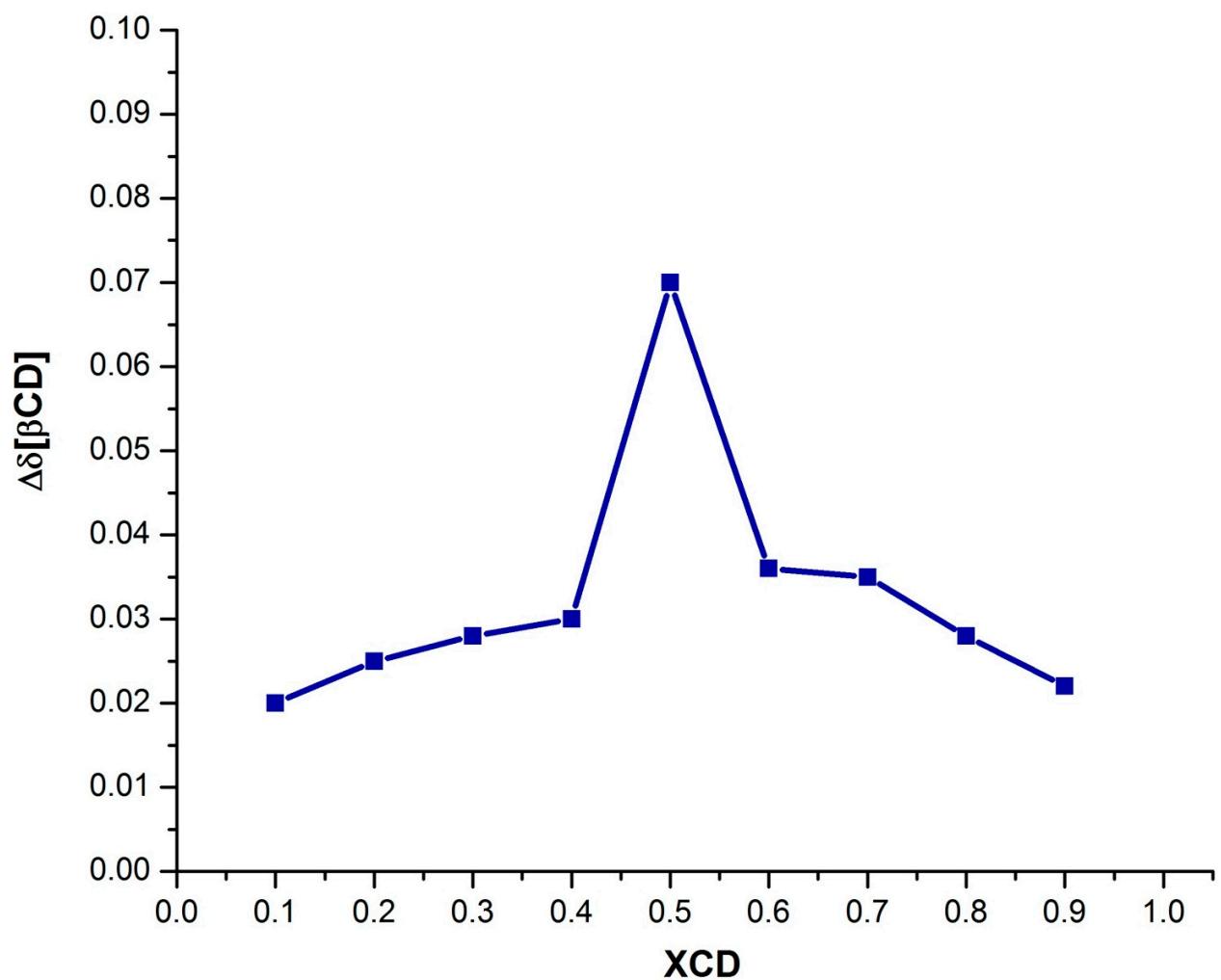
**Figure S6.** 2D NMR NOESY spectrum of  $\text{P}_3\text{N}_3\text{-}[\text{O}-\text{C}_6\text{H}_4\text{-}\text{O}-(\text{CH}_2)_4\text{-}\beta\text{CD}]_6$  (**II**) in  $\text{D}_2\text{O}$ .



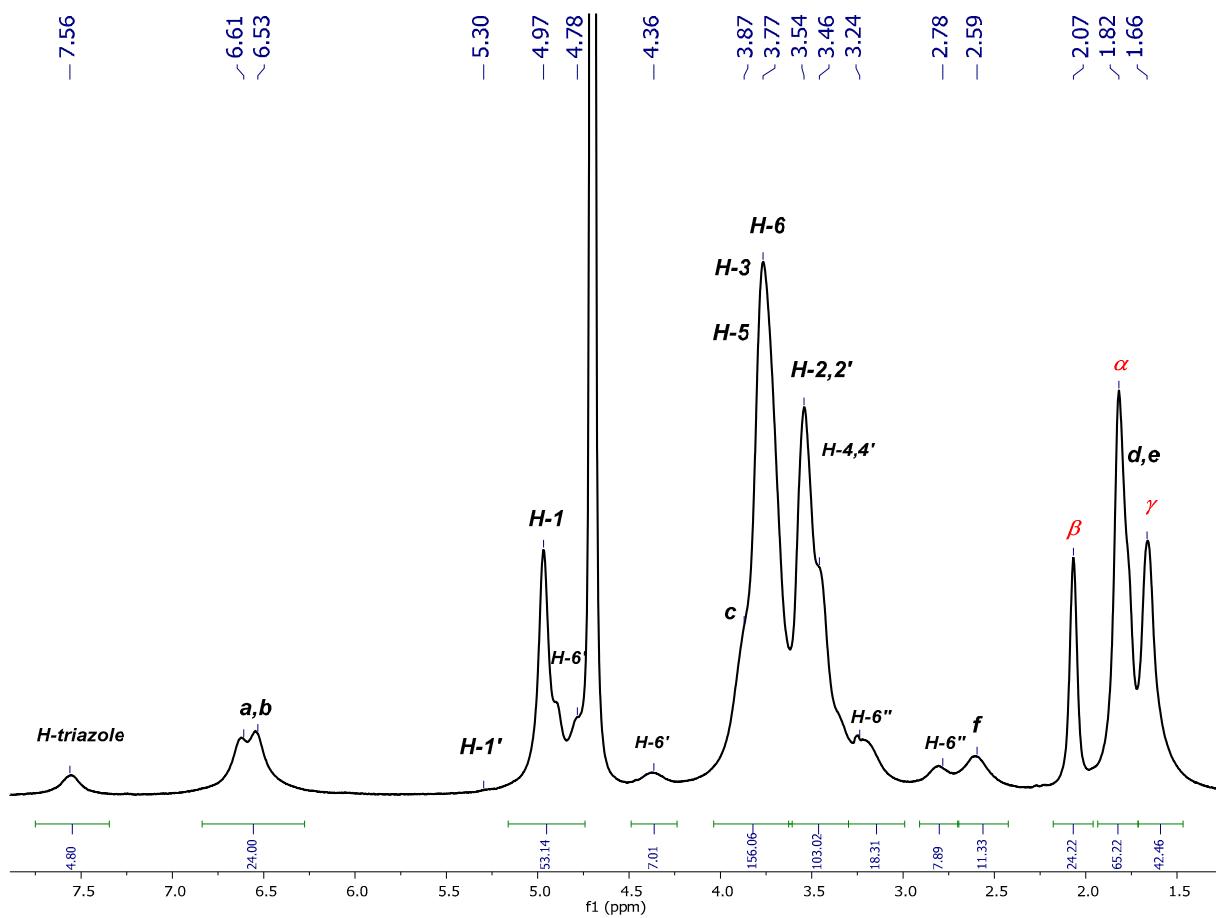
**Figure S7.** 2D NMR COSY spectrum of  $\text{P}_3\text{N}_3\text{-}[\text{O}-\text{C}_6\text{H}_4\text{-}\text{O}-(\text{CH}_2)_4\text{-}\beta\text{CD}]_6$  (**II**) in  $\text{D}_2\text{O}$ .



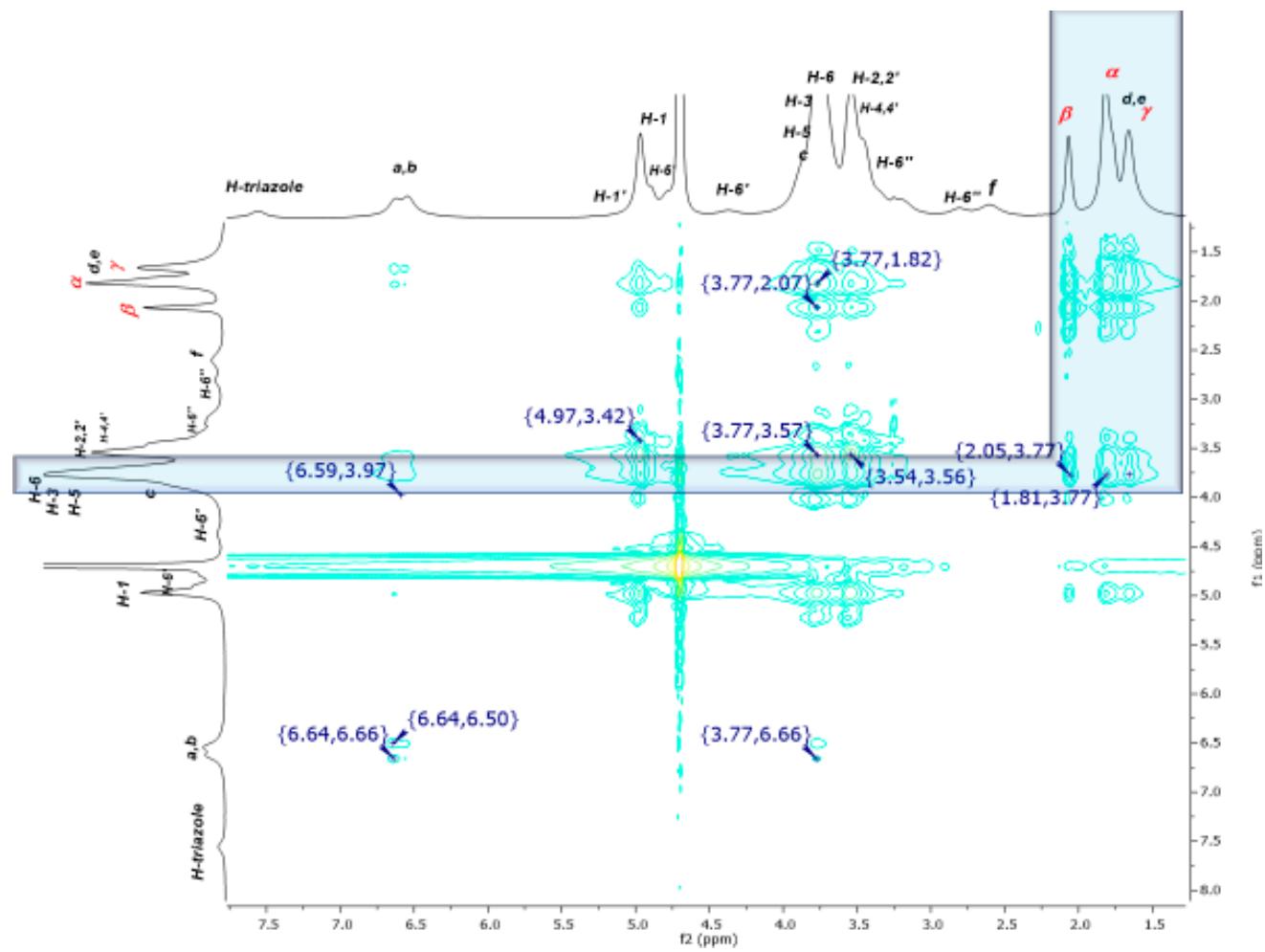
**Figure S8.** <sup>1</sup>H-NMR titration experiment of dendritic compound (II).



**Figure S9.** Job plot for the inclusion complex of AdCOOH with  $\beta\text{CD}$  cavities in the dendritic compound (II),  $[\beta\text{CD}]+[\text{AdCOOH}] = 3 \text{ mM}$  at 298 K, in  $\text{D}_2\text{O}$ . (The inflection point was found to be at 0.5, which confirms the stoichiometry 1:1).



**Figure S10.**  $^1\text{H}$  NMR spectrum of inclusion complex  $\text{P}_3\text{N}_3\text{-}[\text{O}-\text{C}_6\text{H}_4\text{-}\text{O}-(\text{CH}_2)_4\text{-}\beta\text{CD}]_6$  (**II**)/AdCOOH in  $\text{D}_2\text{O}$ .



**Figure S11.** 2D NMR NOESY spectrum of inclusion complex  $\text{P}_3\text{N}_3\text{-[O-C}_6\text{H}_4\text{-O-(CH}_2\text{)}_4\text{-}\beta\text{CD]}_6$  (II)/AdCOOH in  $\text{D}_2\text{O}$ .