

Electronic Supplementary Information (ESI)

Separation of phenylenediamine isomers by using decamethylcucurbit[5]uril

Long Cao^a, Han-Ling Guo^a, Rui-Lian Lin^b, Zhi-Hua Zhang^a, Li-Fei Tian^a, Jing-Xin Liu^{*,b} and Zhu Tao^{*,a}

a Key Laboratory of Macrocyclic and Supramolecular Chemistry of Guizhou Province, Guizhou University, Guiyang 550025, People's Republic of China.

Email Address: gzutao@263.net

b College of Chemistry and Chemical Engineering, Anhui University of Technology, Maanshan 243002, People's Republic of China.

Email Address: jxliu411@ahut.edu.cn

Table of Contents

Figure S1 Crystal structure of Q[5]- <i>p</i> -PDA-based supramolecular chains.....	S2
Figure S2 ¹ H NMR titration spectra of Me ₁₀ Q[5] with <i>m</i> -PDA.....	S3
Figure S3 ¹ H NMR titration spectra of Me ₁₀ Q[5] with <i>o</i> -PDA.....	S4
Figure S4 ITC profiles of Me ₁₀ Q[5] with PDA isomers.....	S5
Figure S5 ¹ H NMR spectra of the isolated sample	S6

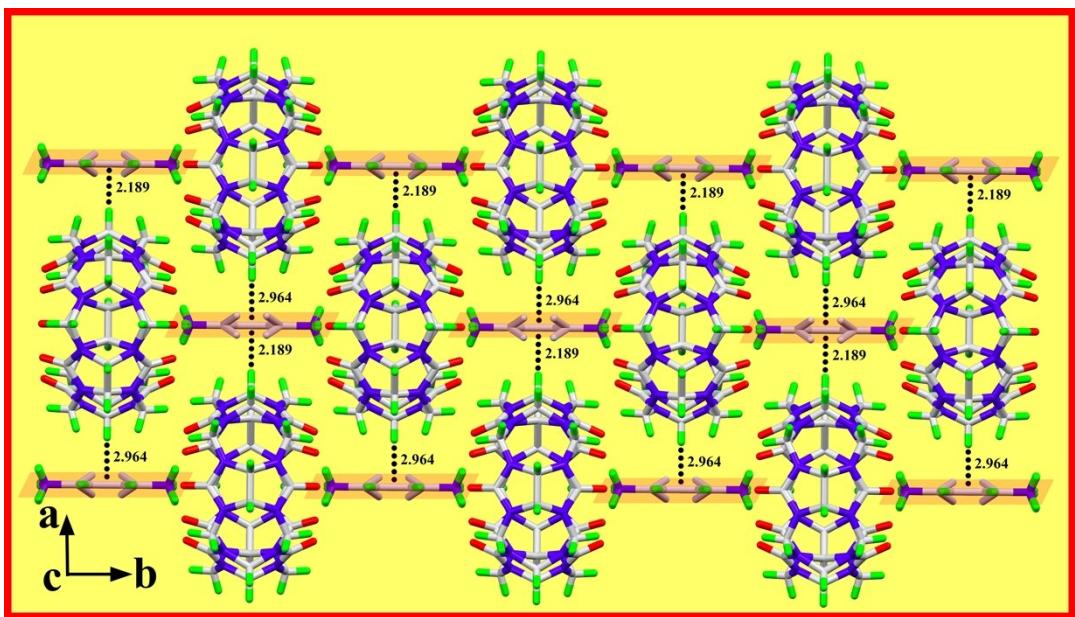


Figure S1 Crystal structure of Q[5]-*p*-PDA-based supramolecular chains.

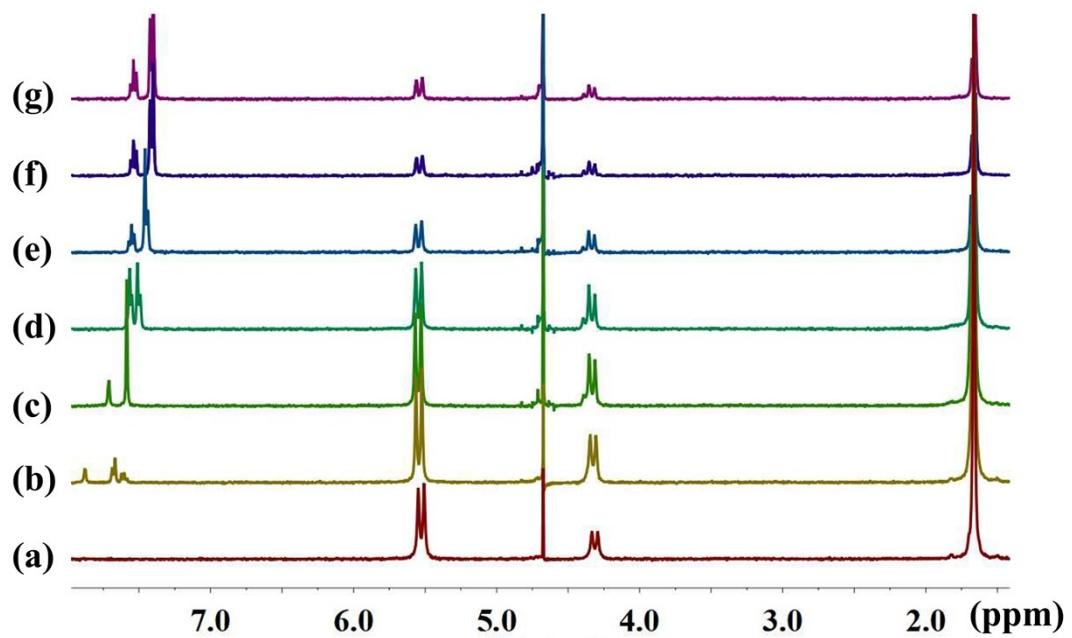


Figure S2. Titration ¹H NMR spectra of $\text{Me}_{10}\text{Q}[5]$ (1 μM) upon addition with molar equivalents of *m*-PDA: (a) 0; (b) 0.5; (c) 1.5; (d) 2.5; (e) 5; (f) 5.5; (g) 6.

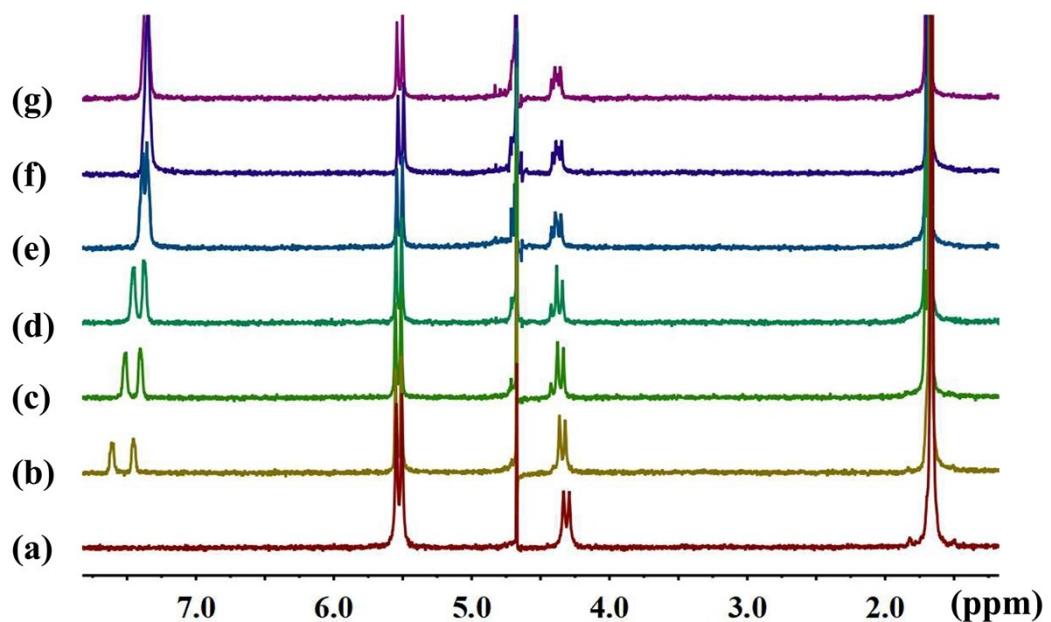


Figure S3. Titration ¹H NMR spectra of $\text{Me}_{10}\text{Q}[5]$ (1 μM) upon addition with molar equivalents of *o*-PDA: (a) 0; (b) 1; (c) 2.5; (d) 4.5; (e) 5.5; (f) 6; (g) 7.

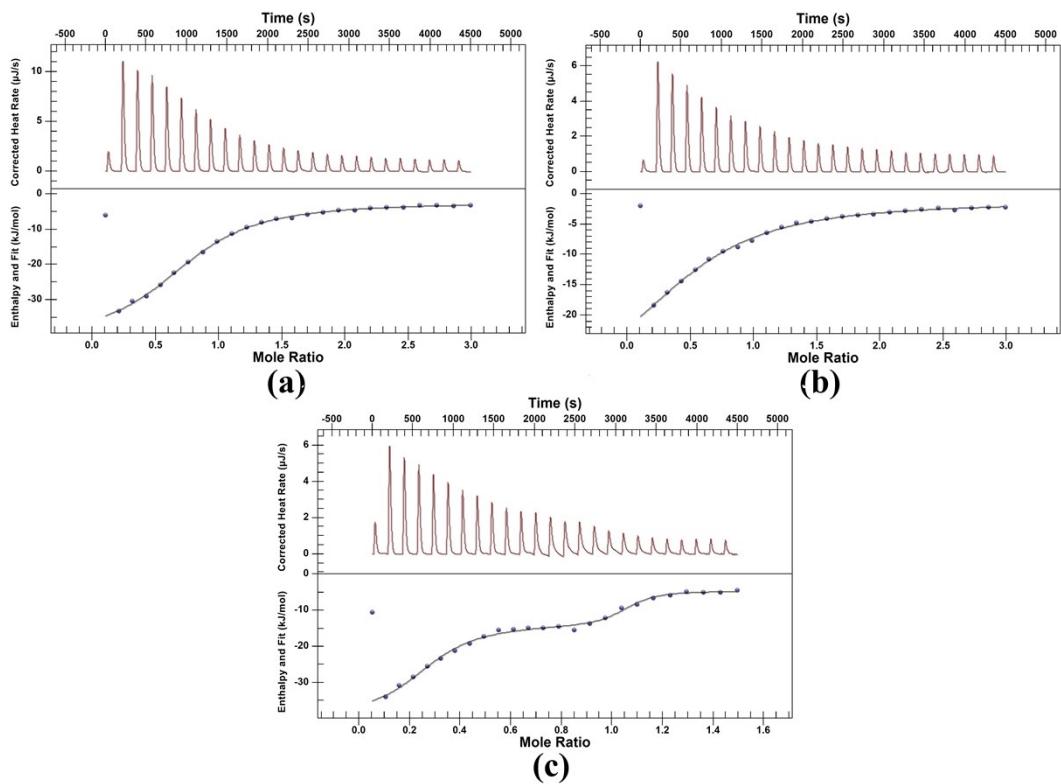


Figure S4. Isothermal titration calorimetry profiles obtained for $\text{Me}_{10}\text{Q}[5]$ in the presence of (a) *o*-PDA, (b) *m*-PDA and (c) *p*-PDA, respectively in an aqueous HCl solution (0.05M) at 298.15 K.

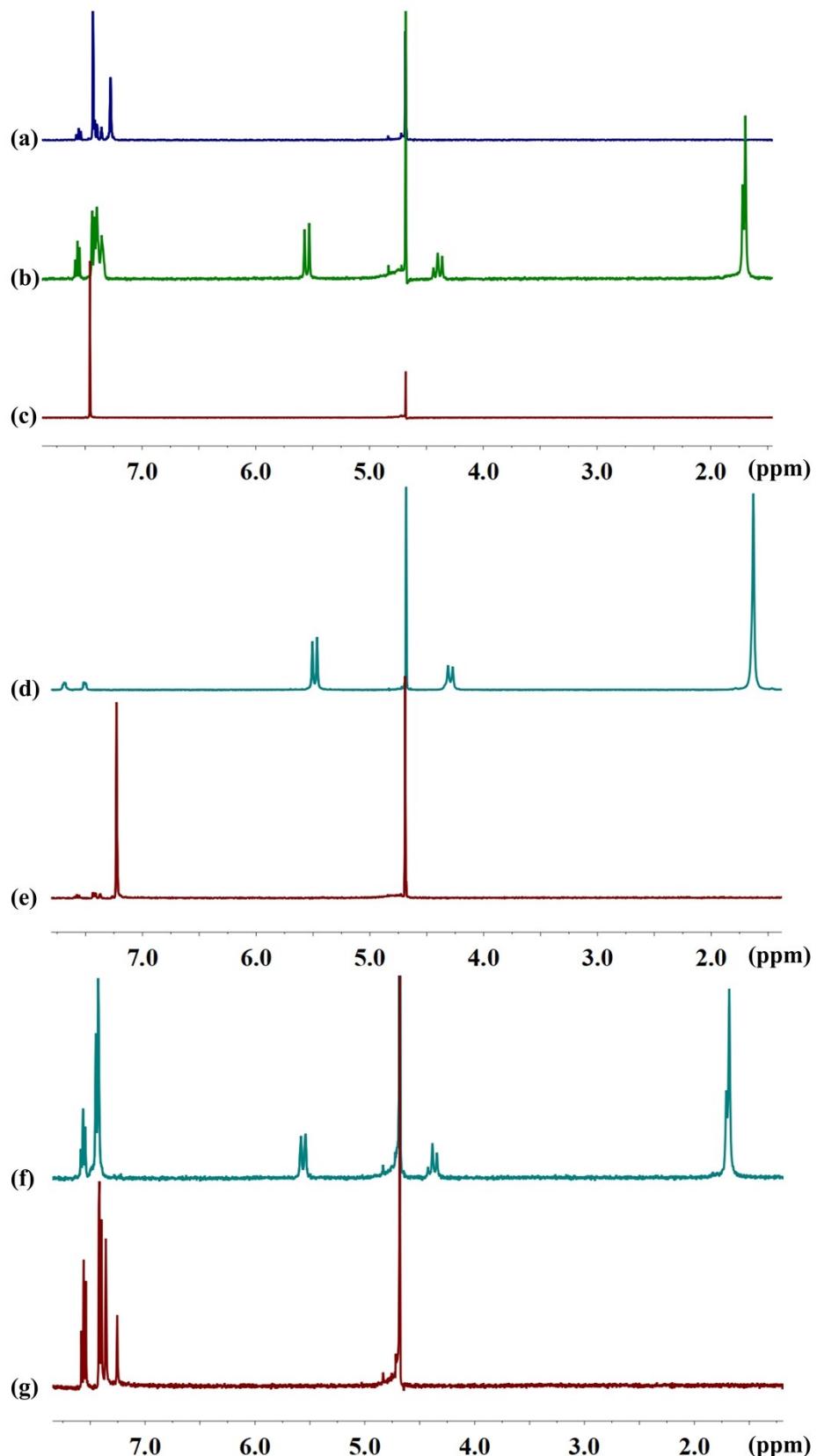


Figure S5. ¹H NMR spectra of sample of (a) Figure 5a; (b) Figure 5b; (c) Figure 5c
(d) Figure 5d; (e) Figure 5e (f) Figure 5f and (g) Figure 5g.