## **Supporting Information**



**Figure S1.** Changes in the <sup>1</sup>H-NMR spectra during the titration of **1a** with **2a** in CD<sub>3</sub>CN. \* signal for the proton in partially deuterated solvent CHD<sub>2</sub>CN.



**Figure S2.** Fit of the chemical shift changes, experienced by NH protons of **1a** during the titration with **2a**, using a 1:1 binding model (line) implemented in the HypNMR2008 software.



Figure S3. Changes in the <sup>1</sup>H-NMR spectra during the titration of 1a with 2b in CD<sub>3</sub>CN.



**Figure S4.** Fit of the chemical shift changes, experienced by NH protons of 1a during the titration with **2b**, using a 1:1 binding model (line) implemented in the HypNMR2008 software.



Figure S5. Changes in the <sup>1</sup>H-NMR spectra during the titration of 1b with 2a in CD<sub>3</sub>CN.



**Figure S6.** Fit of the chemical shift changes, experienced by NH protons of **1b** during the titration with **2a**, using a 1:1 binding model (line) implemented in the HypNMR2008 software.



Figure S7. Changes in the <sup>1</sup>H-NMR spectra during the titration of 1b with 2b in CD<sub>3</sub>CN.



**Figure S8.** Fit of the chemical shift changes, experienced by NH protons of **1b** during the titration with **2b**, using a 1:1 binding model (line) implemented in the HypNMR2008 software.



Figure S9. Changes in the <sup>1</sup>H-NMR during the titration of 1c with 2a in CD<sub>3</sub>CN.



**Figure S10.** Fit of the chemical shift changes, experienced by NH protons of **1c** during the titration with **2a**, using a 1:1 binding model (line) implemented in the HypNMR2008 software.



Figure S11. Changes in the <sup>1</sup>H-NMR during the titration of 1c with 2b in CD<sub>3</sub>CN.



**Figure S12.** Fit of the chemical shift changes, experienced by NH protons of **1c** during the titration with **2b**, using a 1:1 binding model (line) implemented in the HypNMR2008 software.



Figure S13. Changes in the <sup>1</sup>H-NMR spectra during the titration of 1d with 2a in CD<sub>3</sub>CN.



**Figure S14.** Fit of the chemical shift changes, experienced by NH protons of **1d** during the titration with **2a**, using a 1:1 binding model (line) implemented in the HypNMR2008 software.



Figure S15. Changes in the <sup>1</sup>H-NMR spectra during the titration of 1d with 2b in CD<sub>3</sub>CN.



**Figure S16.** Fit of the chemical shift changes, experienced by NH protons of **1d** during the titration with **2b**, using a 1:1 binding model (line) implemented in the HypNMR2008 software.



**Figure S17.** Representation of the electrostatic potential on the Van der Waals surface corresponding to the aromatic walls of **1b** (**a**) **1c** (**b**) and **1d** (**c**). The surface was calculated by using B3LYP 6-31G\* in vacuum.



Figure S18. Changes in the <sup>1</sup>H-NMR spectra during the titration of 1e with 2a in CD<sub>3</sub>CN.



Figure S19. ITC titration experiment of the formation of the  $2a \subset 1e$  complex. Top: rawdata; Bottom: normalized integration data of the evolved heat per injection in terms of kcal·mol<sup>-1</sup> of injectant (2a) plotted against the molar ratio 2a-1e. To determine the values of the thermodynamic variables the ITC data have been fitted to a 1:1 binding model (black line).



Figure S20. Changes in the <sup>1</sup>H-NMR spectra during the titration of 1e with 2b in CD<sub>3</sub>CN.



**Figure S21.** Fit of the chemical shift changes, experienced by NH protons of 1e during the titration with **2b**, using a 1:1 binding model (line) implemented in the HypNMR2008 software.



Figure S22. Changes in the <sup>1</sup>H-NMR spectra during the titration of 1f with 2a in CD<sub>3</sub>CN.



**Figure S23.** ITC titration experiment of the formation of the  $2a \subset 1f$  complex. Top: rawdata. Bottom: normalized integration data of the evolved heat per injection in terms of kcal·mol<sup>-1</sup> of injectant (2a) plotted against the molar ratio 2a-1f. To determine the values of the thermodynamic variables the ITC data have been fitted to a 1:1 binding model (black line).



Figure S24. Changes in the <sup>1</sup>H-NMR spectra during the titration of 1f with 2b in CD<sub>3</sub>CN.



**Figure S25.** Fit of the chemical shift changes, experienced by NH protons of **1f** during the titration with **2b**, using a 1:1 binding model (line) implemented in the HypNMR2008 software.