

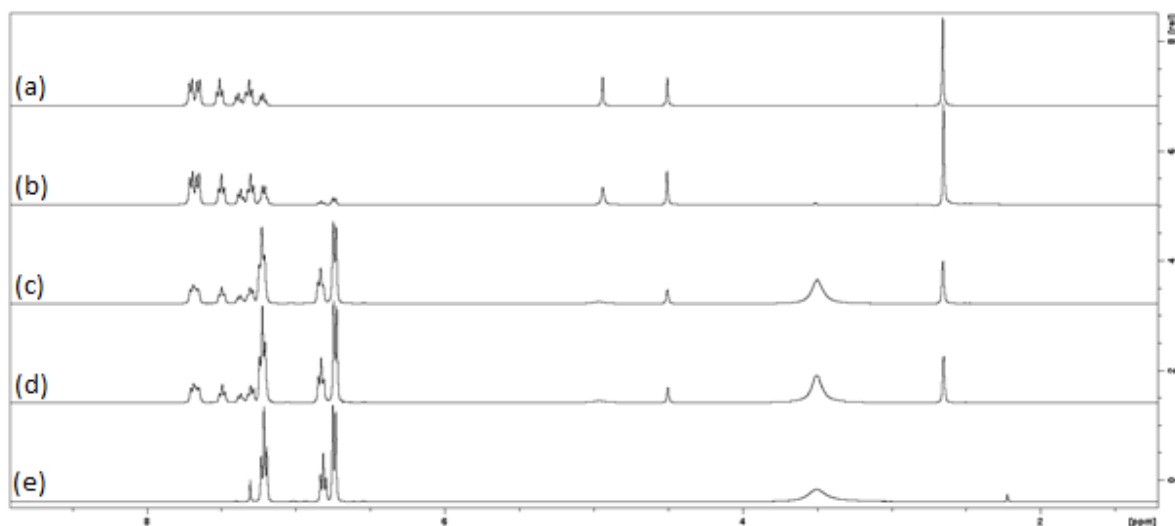
## SUPPLEMENTARY MATERIAL

Host (-)-(2*R*,3*R*)-2,3-Dimethoxy-1,1,4,4-tetraphenylbutane-1,4-diol and Guests Aniline, *N*-Methylaniline and *N,N*-Dimethylaniline: A Selectivity Study

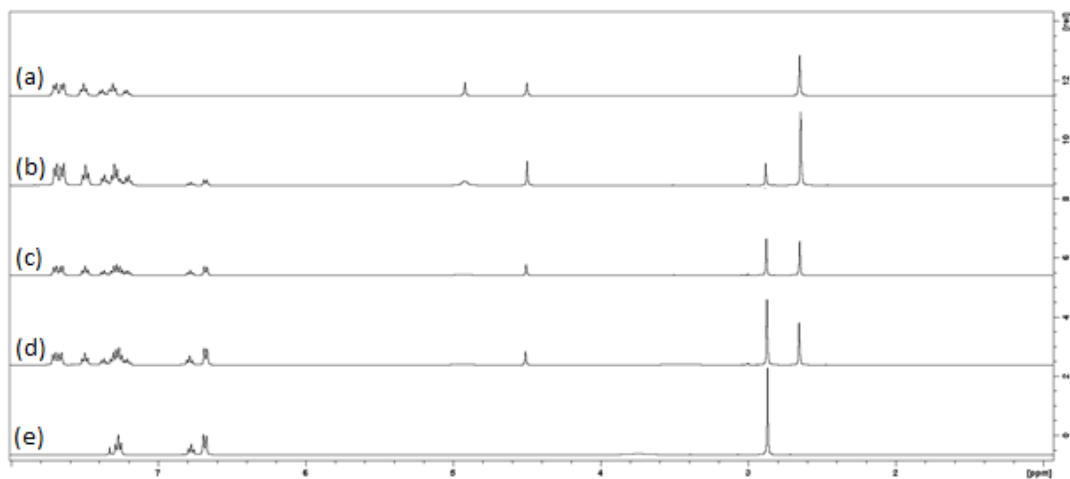
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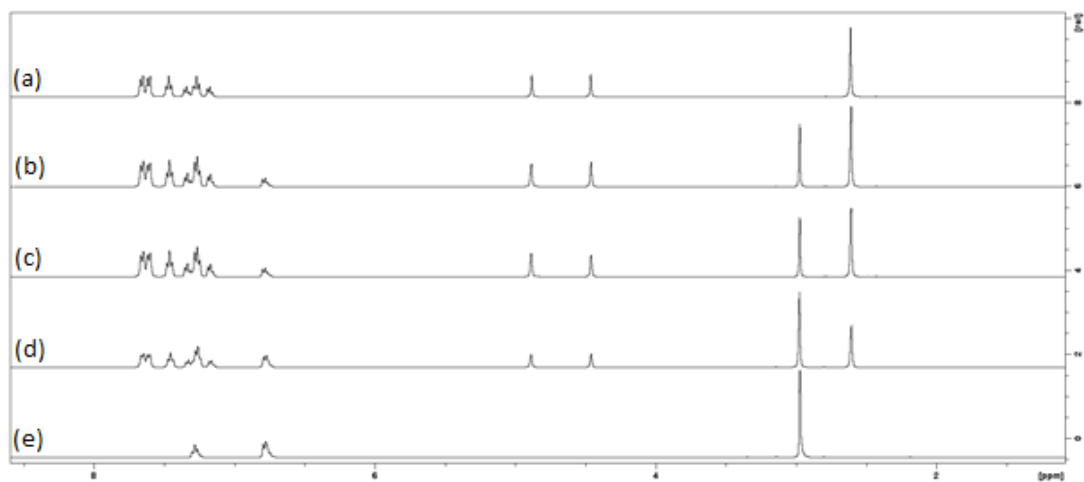
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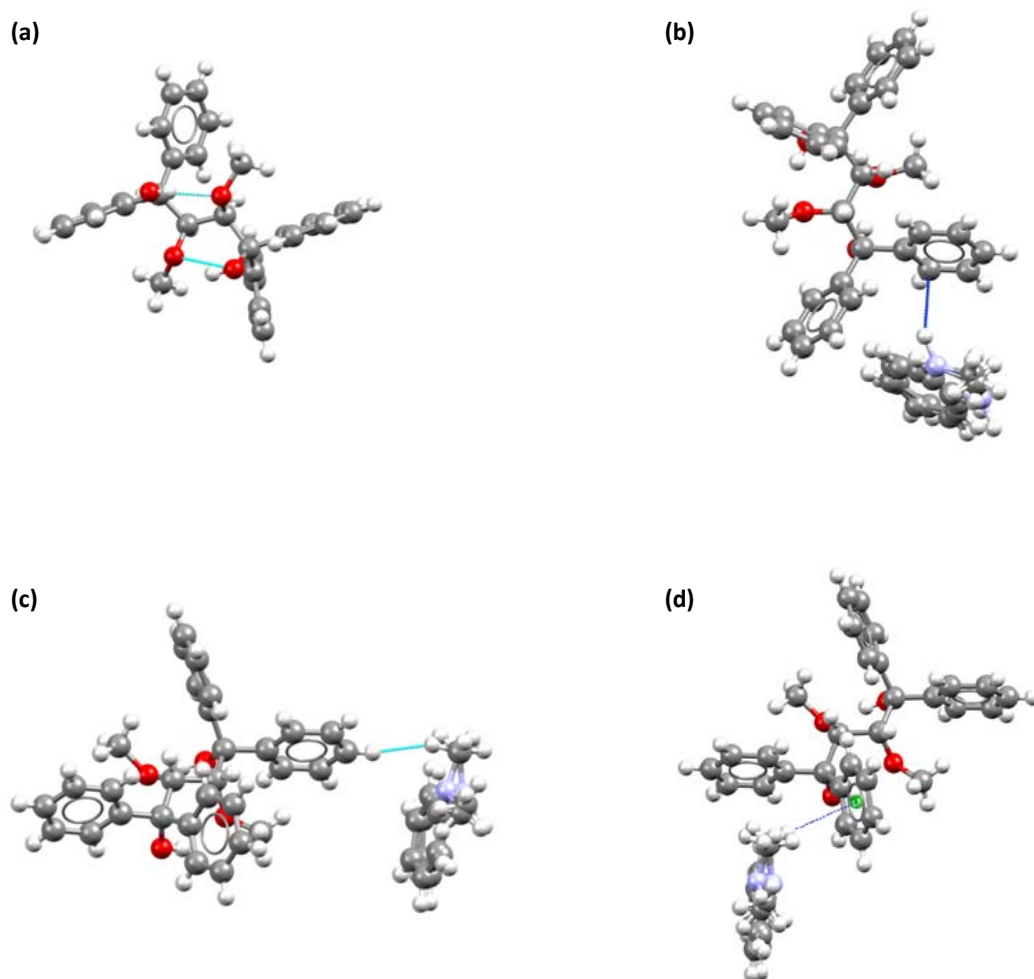
**Fig. S1.** Overlaid <sup>1</sup>H-NMR spectra for (a) pure DMT, (b) 2DMT•aniline, (c) DMT•aniline (d) DMT•2aniline and (e) pure aniline.



**Fig. S2.** Overlaid <sup>1</sup>H-NMR spectra for (a) pure DMT, (b) 2DMT•*N*-methylaniline, (c) DMT•*N*-methylaniline (d) DMT•2*N*-methylaniline and (e) pure *N*-methylaniline.



**Fig. S3.** Overlaid <sup>1</sup>H-NMR spectra for (a) pure DMT, (b) 2DMT•*N,N*-dimethylaniline, (c) DMT•*N,N*-dimethylaniline (d) DMT•2*N,N*-dimethylaniline and (e) pure *N,N*-dimethylaniline.



**Fig. S4.** (a) A pair of 1,3-hydrogen bonds maintains the geometry in each of the host molecules for all of the complexes. Host-guest interactions showing the strong short contacts in (b) 2DMT•**2** [2.63 Å (140°)] [(guest)N–H···C–C(host)] and in (c) 2DMT•**3** [2.14 Å (158°)] [(host)*p*-ArH···HC(guest methyl)]. (d) The dialkylated aniline **3** is the only guest to experience a CH··· $\pi$  interaction with the host molecule.