

Electronic Supplementary Material (ESI) for Organic & Biomolecular Chemistry

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**Aggregation-induced emission behavior of pH-controlled
molecular shuttle based on tetraphenylethene moiety**

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1. Partial ^1H NMR spectra of [2]rotaxanes **1a**

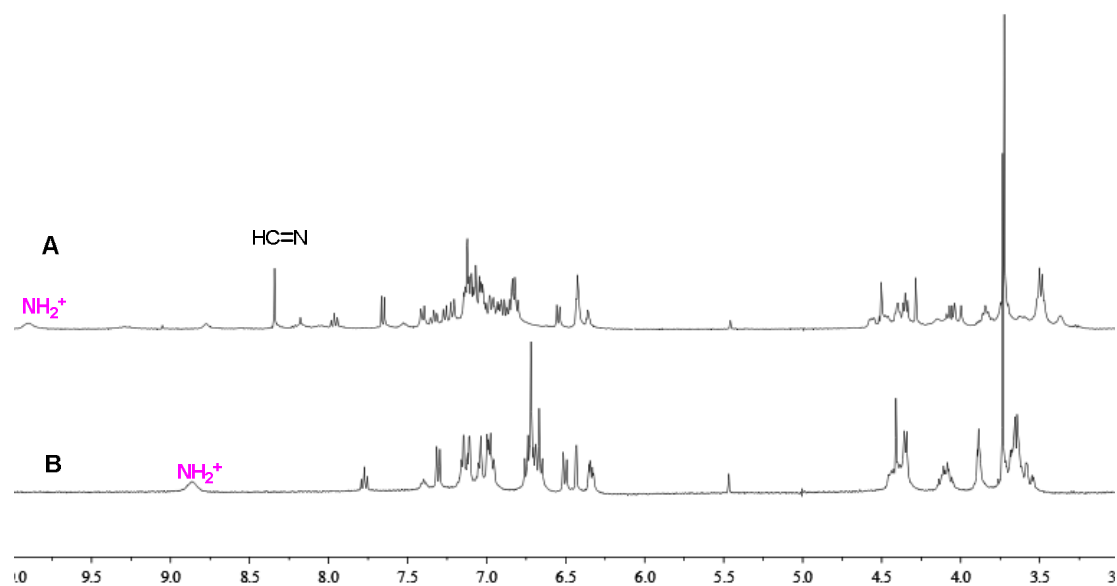


Figure S1. Partial ^1H NMR spectra (400 MHz, CD_3CN , 298 K) of clipping reaction mixture (dynamic imine of **1a**) (A); and **1a** (B).

2. UV-vis spectra of **8** (A), **9** (B), **1a** (C) and **1b** (D) in CH_3CN /water mixtures with different fractions of water (f_w).

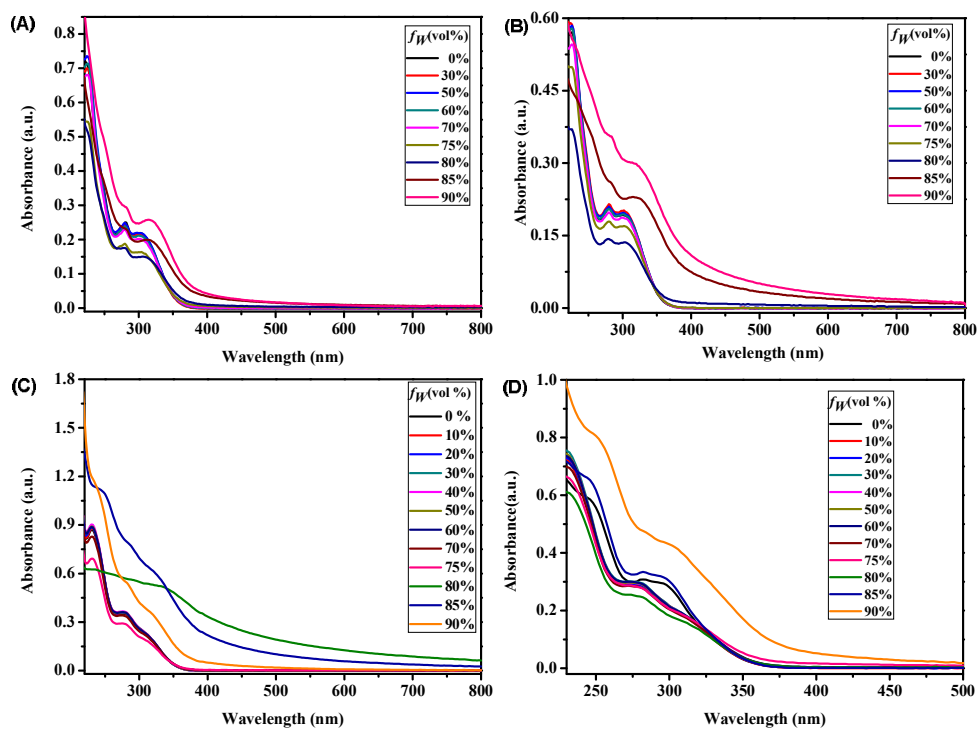


Figure S2. UV-vis spectra of **8** (A), **9** (B), **1a** (C) and **1b** (D) in CH_3CN /water mixtures with different fractions of water (f_w).

3. Fluorescent and UV-vis spectra of 1a and 1b in CH₃OH/ glycerol mixtures with different fractions of glycerol.

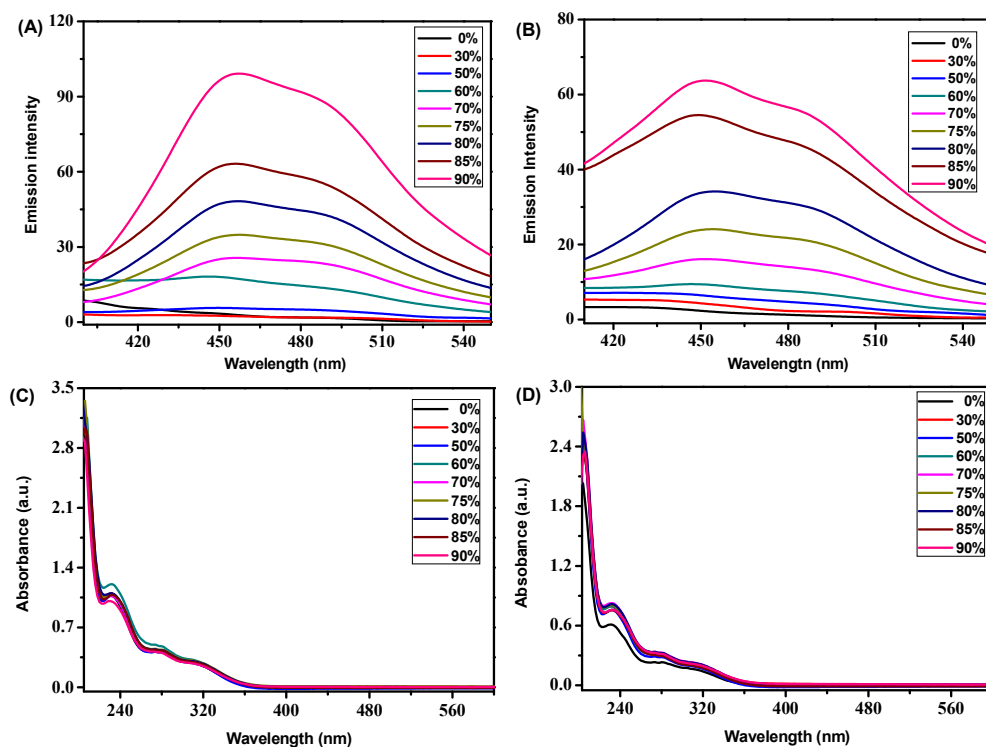


Figure S3. Fluorescent and UV-vis spectra of **1a** and **1b** in CH₃OH/ glycerol mixtures with different fractions of glycerol. (A) Fluorescent spectra of **1a**; (B) fluorescent spectra of **1b**; (C) UV-vis spectra of **1a**; (D) UV-vis spectra of **1b**.

4. NMR and Mass spectra

