SUPPORT INFORMATION

^{1}H-NMR :

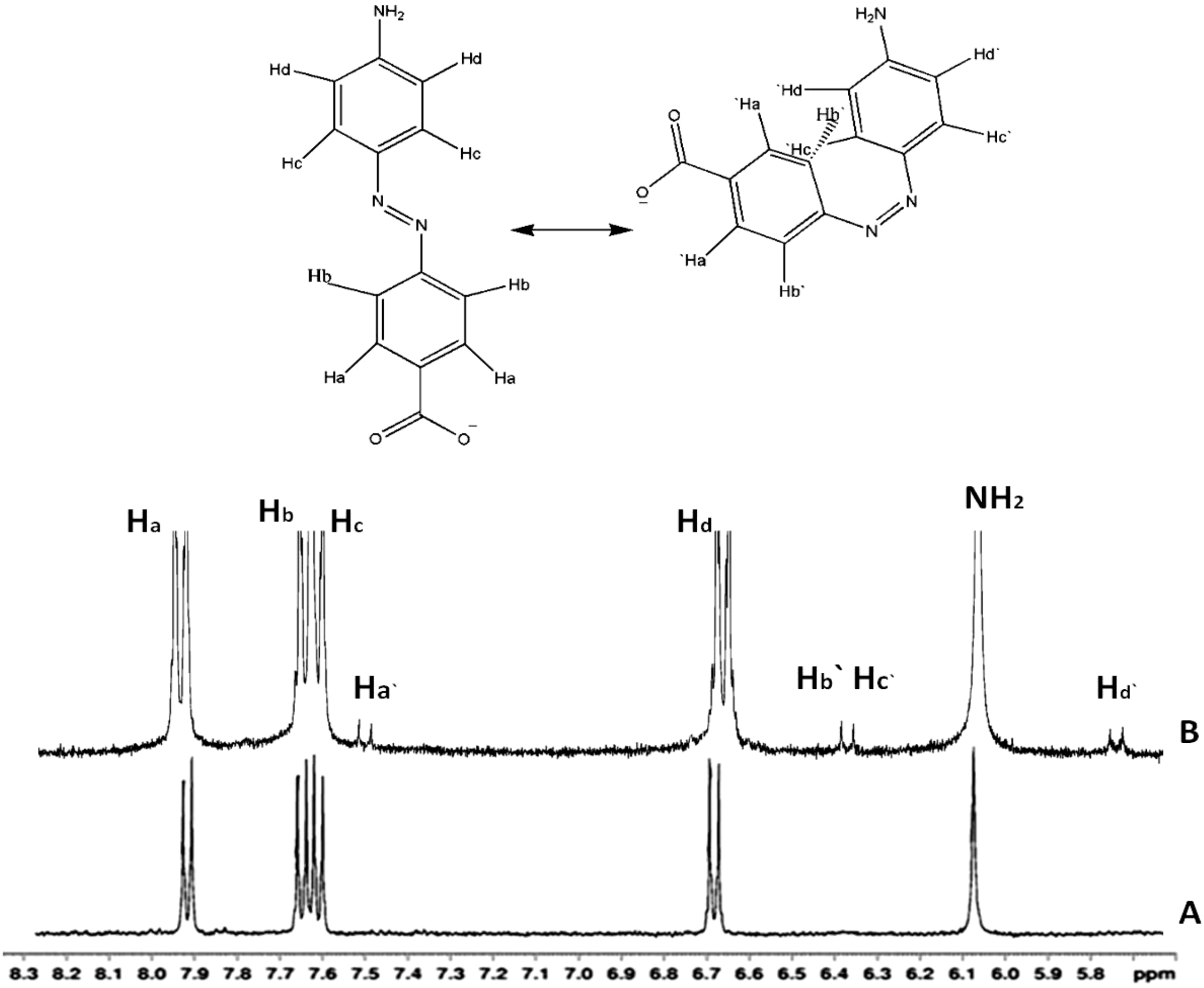

Figure 1S. ^{1}H-NMR spectra of APABA in DMSO before (A) and after 60 min irradiation with UV light at 366 nm (B).

The *trans-cis* isomerization can change the chemical environments of protons, which lie in close proximity to the azobenzene linkage. Figure 1S shows the ^{1}H-NMR spectra of APABA in DMSO before (a) and after 60 min irradiation with UV light at 366 nm (b). Upon irradiation, the number of signals in the spectrum appears duplicated, because of the appearance of new peaks with lower intensity.

The trans isomer is planer while the cis isomer change from planar shape: the aromatic rings are twisted relative to each other to avoid close contacts between the ring hydrogen atoms. In this new environment could lead to changes in NMR signals. As seen in Figure 1S, trans APABA protons yield peaks at 7.97 ppm (Hd), 7.72 ppm (Hd), 7.67 ppm (Hb), 6.70 (Ha), 6.12 ppm (NH_2). A second group of peaks appear at 5.77 ppm (Hd`), 6.4 ppm a), 6.7-6.8 pprn (Hc`, Hb`), and 7.62 (Ha`) ppm following 60 min of irradiation at 366 nm. These peaks correspond to the protons of cis-APABA in addition to the original trans-APABA peaks[1-3].

Refrences:

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