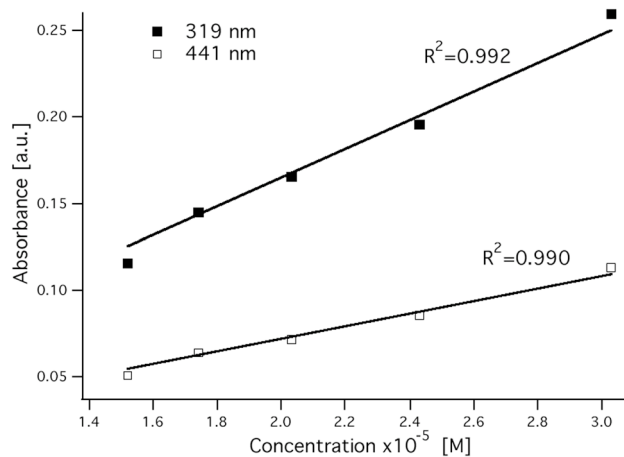
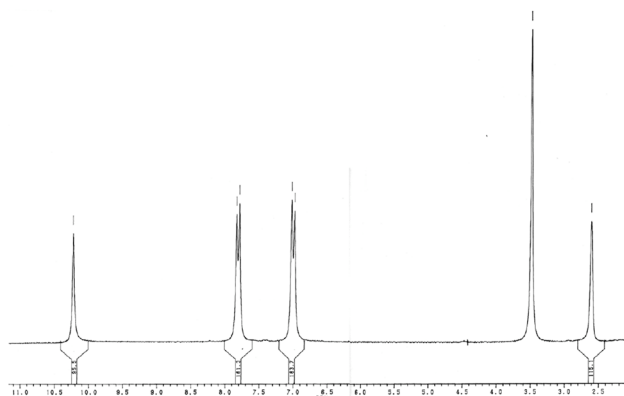


### Supplementary Information.

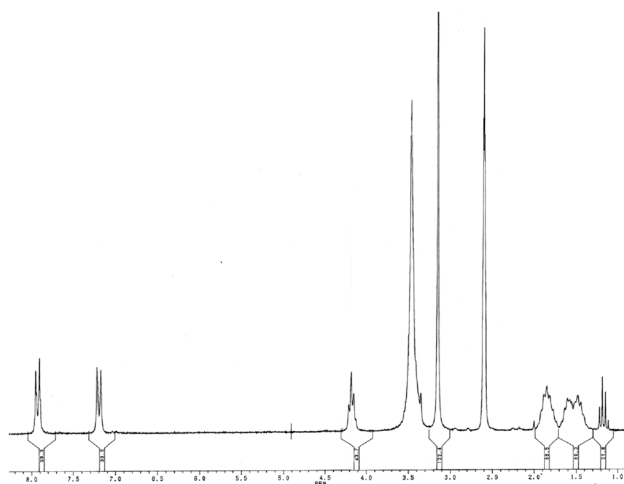
Lambert-Beer calibration curves of BTHA in water at 319 nm and 441 nm, 4,4'-dihydroxyazobenzene and 4,4'-bis(trimethylammoniumhexyloxy)azobenzene bromide <sup>1</sup>H-NMR spectra, dynamic surface tension data of BTHA in water at 25°C, and the normalized autocorrelation functions of the BTHA1 sample in dark, lab and fully irradiated conditions are available as supporting material.



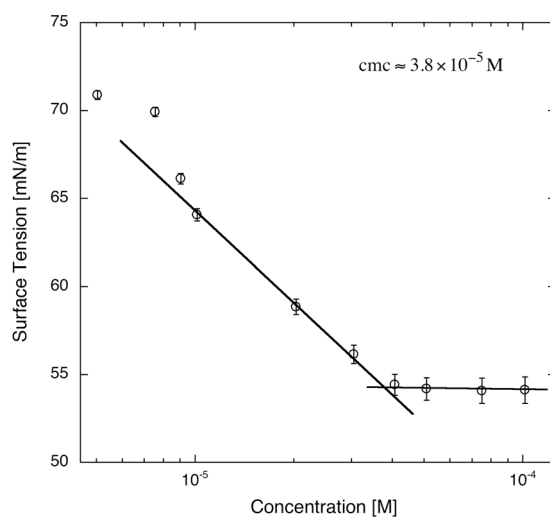
**Figure 15.** Calibration curves of BTHA in water at 319 nm and 441 nm.



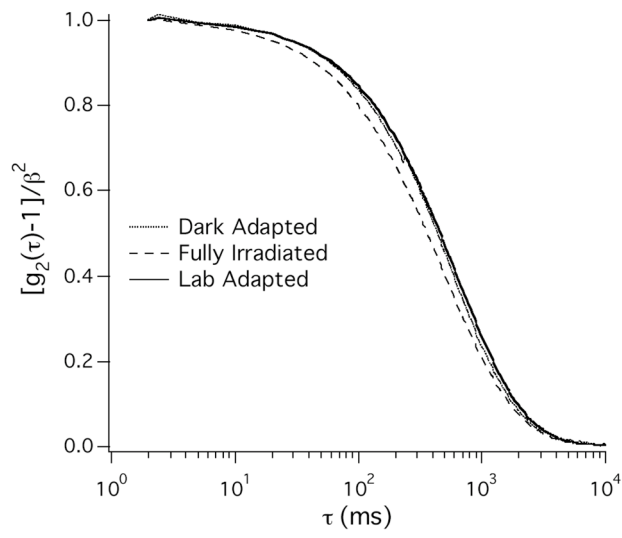
**Figure 16.** <sup>1</sup>H-NMR spectrum of 4,4'-dihydroxyazobenzene (d-DMSO).



**Figure 17.**  $^1\text{H}$ -NMR spectrum of BTHA (DMSO).



**Figure 18.** Dynamic surface tension of BTHA in water solutions.



**Figure 19.** Normalized autocorrelation functions obtained for the dark adapted (· · ·), lab adapted (full line) and fully irradiated (---) BTHA1 sample.