

Supplementary data

Novel fluorescent diarylethenes: synthesis and photoswitching properties of dithienylethene with 4,5-diarylimidazole substituted groups

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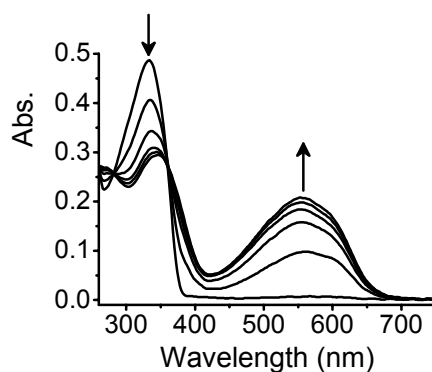


Fig. S1. Absorption changes of photocyclization of diarylethene **2a** with 360 nm light irradiation (1×10^{-5} M, DMSO)

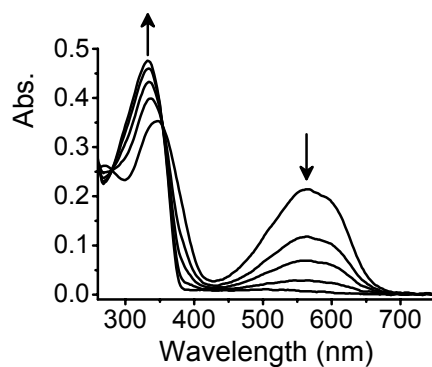


Fig. S2. Absorption changes of photobleaching of diarylethene **2b** with ≥ 450 nm light irradiation (1×10^{-5} M, DMSO)

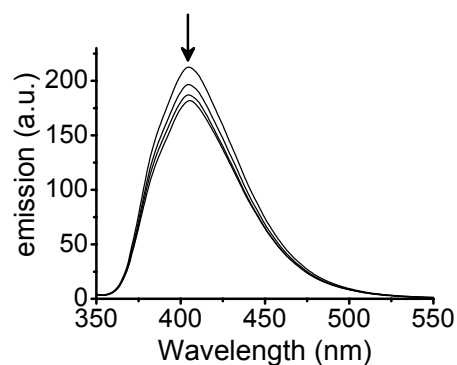


Fig. S3. Fluorescence emission of **2a** together with fluorescence changes of **2a** with 360 nm light irradiation (1×10^{-5} , DMSO, $\lambda_{\text{ex}} = 350$ nm).

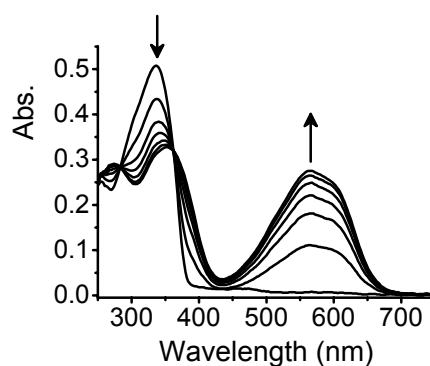


Fig. S4. Absorption changes of photocyclization of diarylethene **3a** with 360 nm light irradiation (1×10^{-5} M, DMSO).

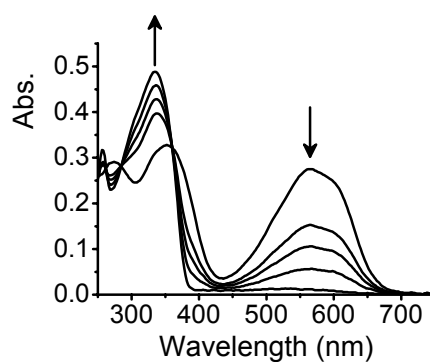


Fig. S5. Absorption changes of photobleaching of diarylethene **3b** with ≥ 450 nm light irradiation (1×10^{-5} M, DMSO).

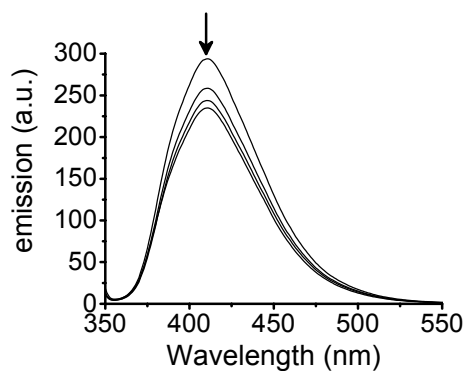


Fig. S6. Fluorescence emission of **3a** together with fluorescence changes of **3a** with 360 nm light irradiation (1×10^{-5} , DMSO, $\lambda_{\text{ex}} = 350$ nm).

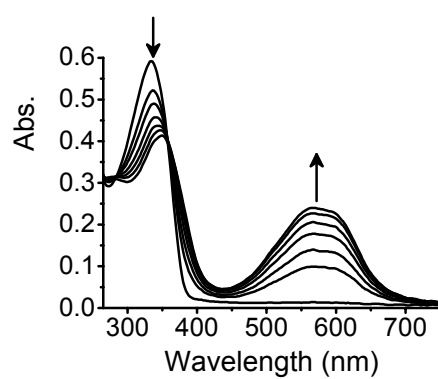


Fig. S7. Absorption changes of photocyclization of diarylethene **4a** with 360 nm light irradiation (1×10^{-5} M, DMSO).

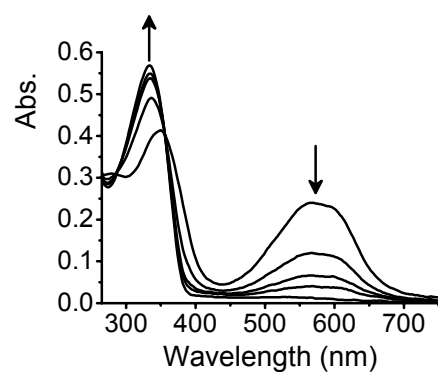


Fig. S8. Absorption changes of photobleaching of diarylethene **4b** with ≥ 450 nm light irradiation (1×10^{-5} M, DMSO).

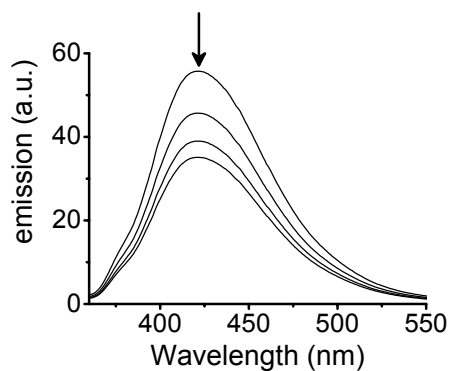


Fig. S9. Fluorescence emission of **4a** together with fluorescence changes of **4a** with 360 nm light irradiation (1×10^{-5} , DMSO, $\lambda_{\text{ex}} = 350$ nm).

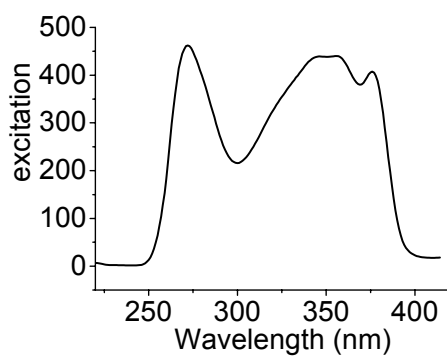


Fig. S10. Excitation spectrum of **1b** in DMSO.