

Supporting Information

Two azobenzene derivatives CAB/ACB as reusable sunscreen: UV absorptive capacity and biosafety evaluation

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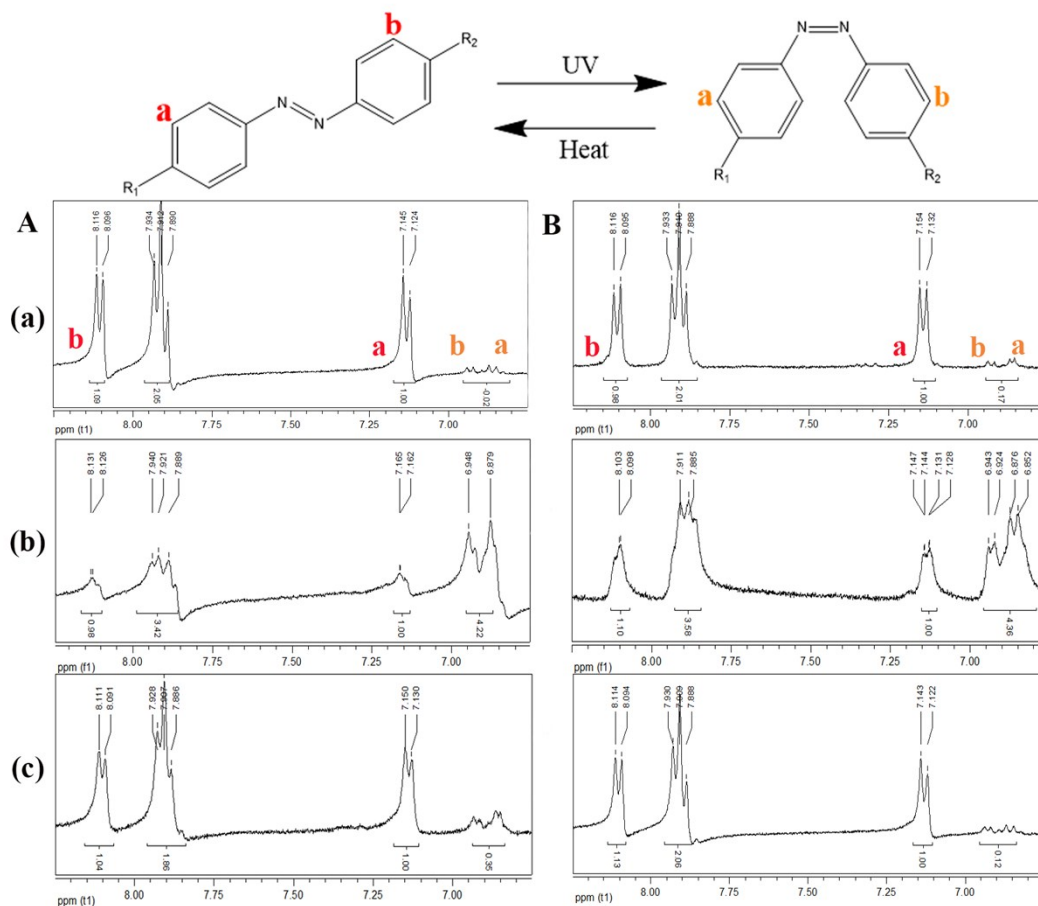


Fig. S1. ¹H NMR spectra of CAB(A)/ACB(B) before UV irradiation(a), after UV irradiation (b) and heating (c).

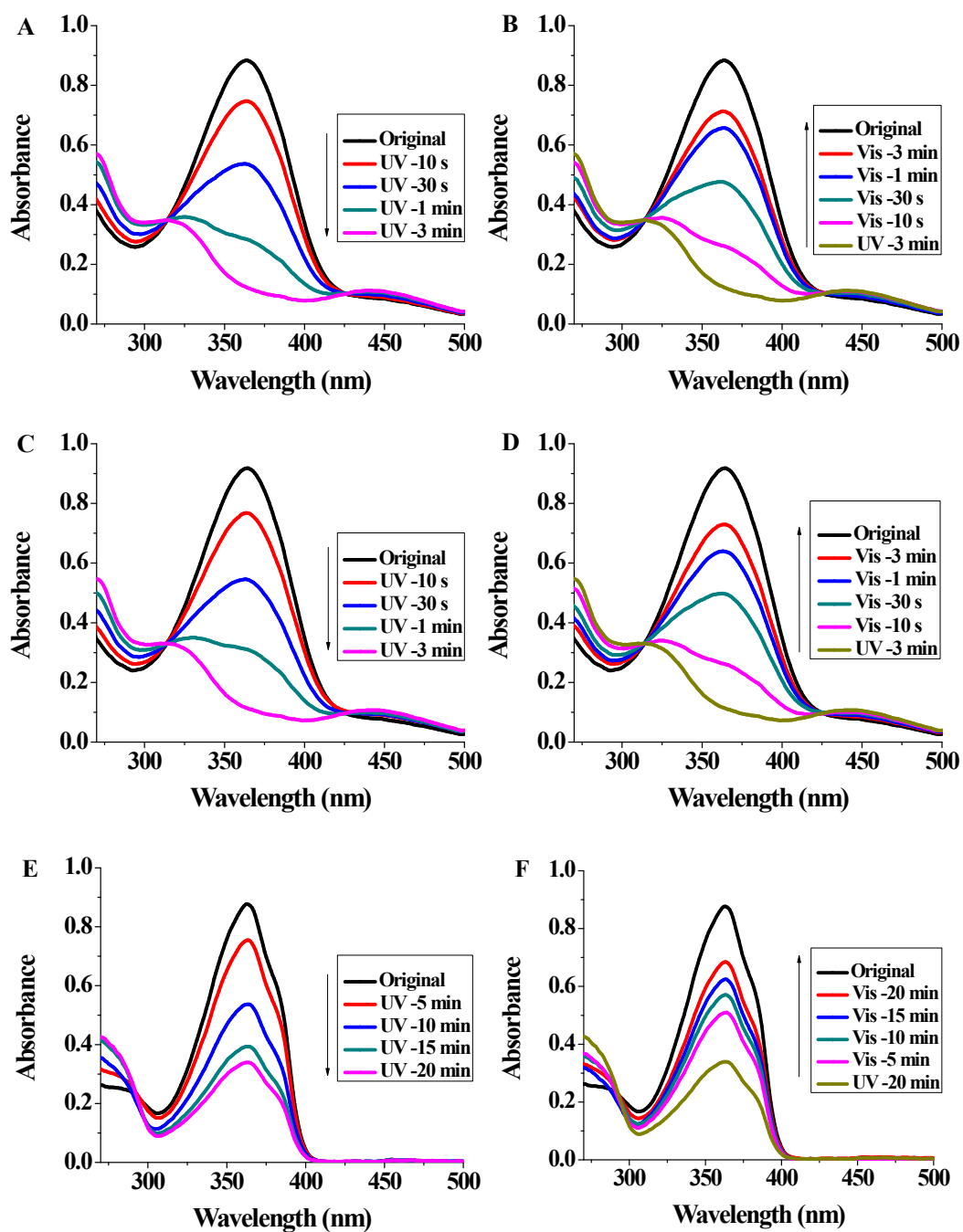


Fig. S2. The *trans-cis* spectral changes of ACB (A), CAB (C) and AVO (E) in DMSO under 365 nm irradiation, and the *cis-trans* spectral changes of ACB (B), CAB (D) and AVO (F) in DMSO under 420 nm irradiation.

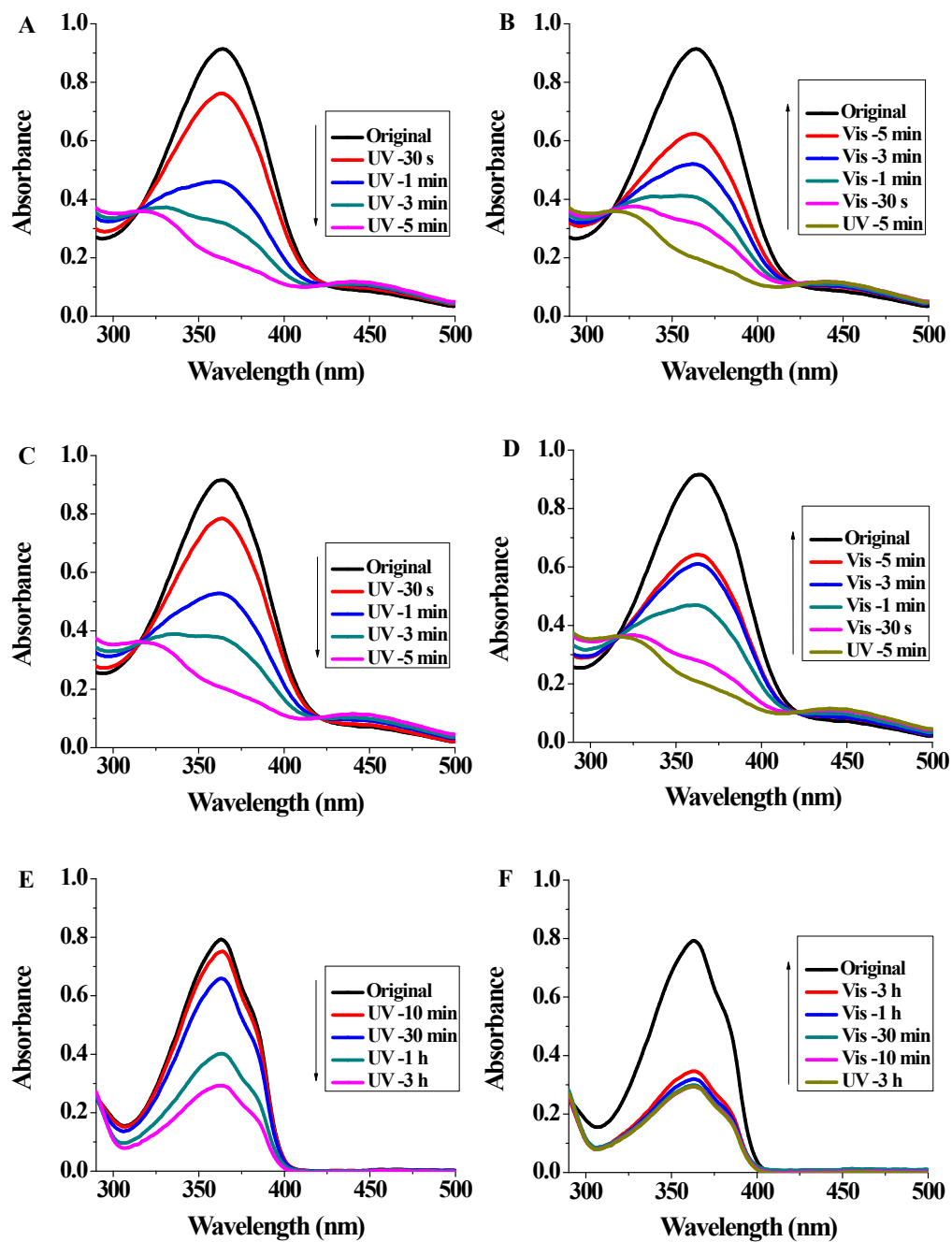


Fig. S3. The *trans-cis* spectral changes of ACB (A), CAB (C) and AVO (E) in cream under 365 nm irradiation, and the *cis-trans* spectral changes of ACB (B), CAB (D) and AVO (F) in cream under 420 nm irradiation.

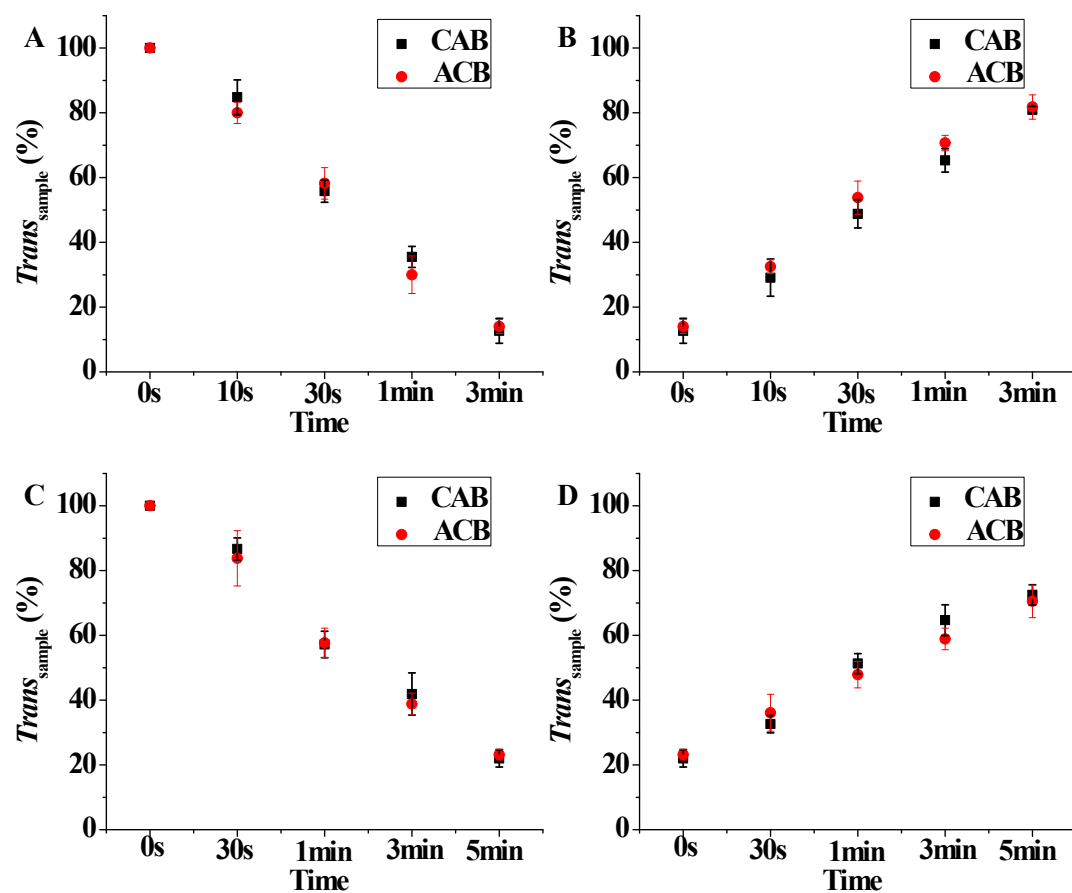


Fig. S4. The reversible *trans*-to-*cis* isomerization degree (A, C) and *cis*-to-*trans* isomerization degree (B, D) of ACB and CAB in DMSO (A, B) and in cream (C, D). (% $trans_{\text{sample}} = [(Abs_{365\text{nm}})_{\text{sample}} / (Abs_{365\text{nm}})_{\text{dark}}] \times 100$) (n=3).

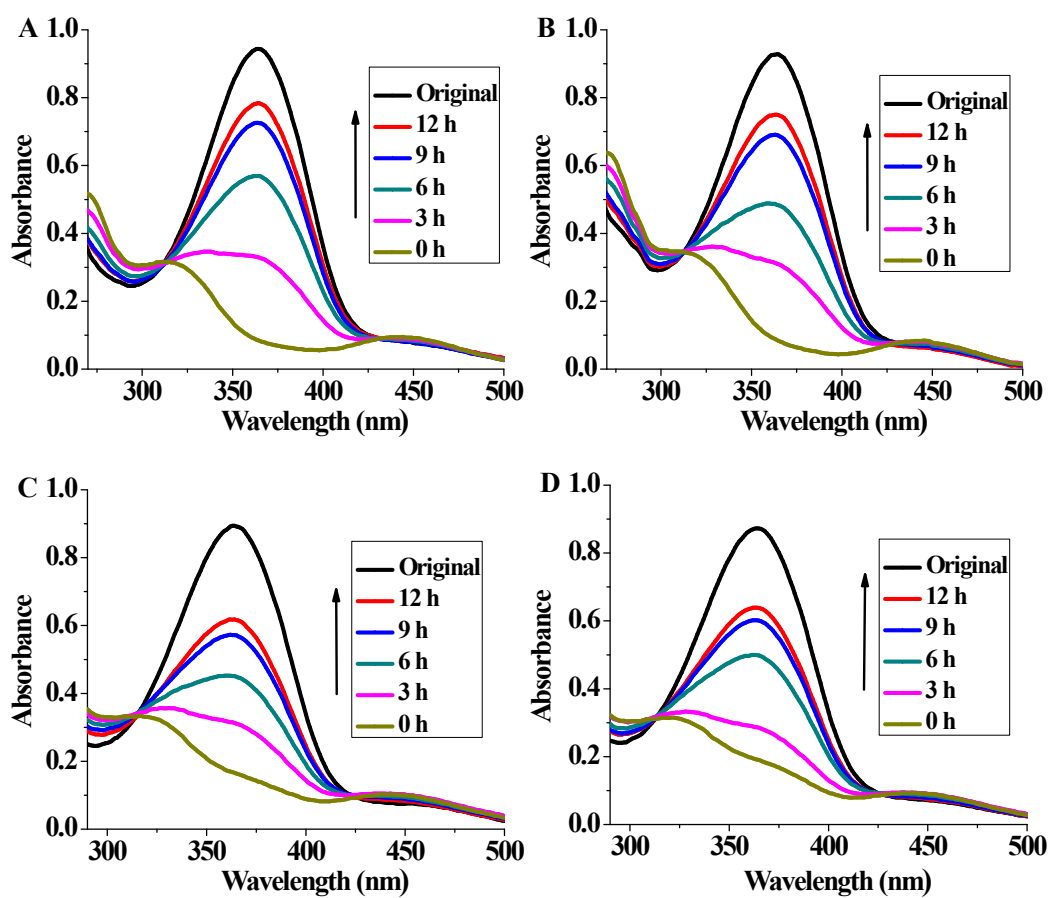


Fig. S5. The *cis*-to-*trans* spectral changes of ACB (A) and CAB (B) in DMSO, and the *cis*-to-*trans* spectral changes of ACB (C) and CAB (D) in cream in the dark at 37 °C.

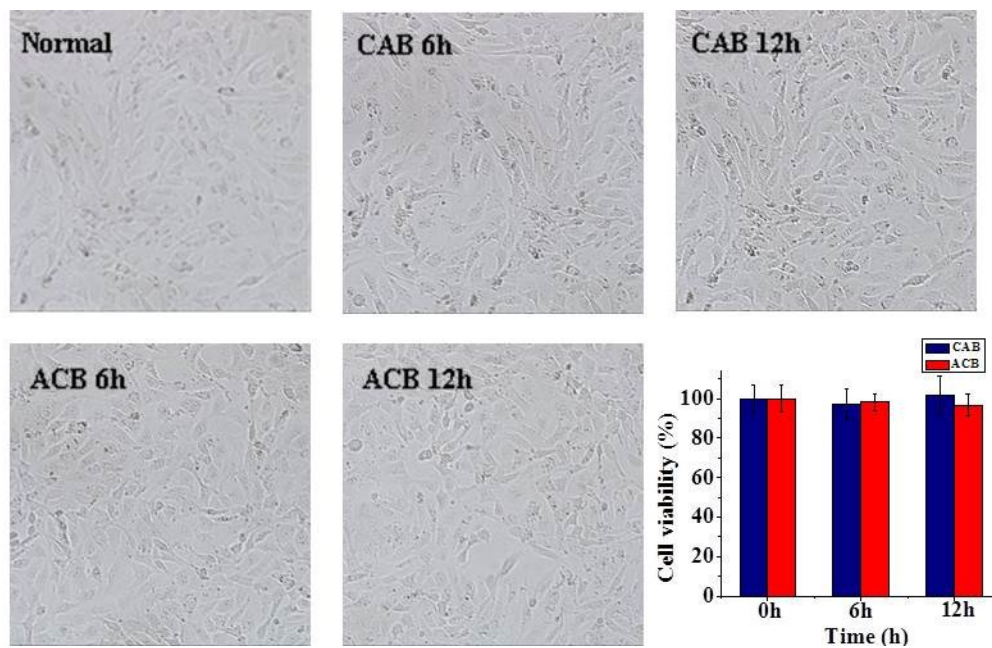


Fig. S6. The phase contrast microscopy images and viability histogram of cells interact with CAB and ACB for different times (n=6).