Supporting Information

Light-induced morphological transition between unconjugated bilirubin photoisomers†

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1. **Fig. S1** (a) Ground state electronic spectra of UCB (0.1 mM) with incremental illumination time (470 nm); (b) room temperature excitation and fluorescence spectra of UCB (0.1 mM) and (c) fluorescence spectra of UCB (0.1 mM) with incremental illumination time (470 nm).

2. **Fig. S2** (a) FLIM images of UCB (0.3 mM and 0.5 mM) and (b) corresponding 470 nm irradiated of UCB images.

3. **Fig S3**: (a) ESI-MS spectra of UCB; before (left) and after (right) blue light irradiation and (b) reversed-phase HPLC analyses of the UCB before and after 10 min blue light (470 nm) irradiation.

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10. **Scheme S1** Plausible aggregation pattern and molecular packing for two different morphologies of UCB photoisomers.
Supporting Figures

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**Fig. S5** $^1$HNMR spectra of (a) UCB (0.05 mM) and (b) illuminated (470 nm light, 10 min) UCB in dmso-d$_6$. 

Reduced peaks height; more polar intermolecular exposure 

N-H peaks 

O-H peak 

ppm
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