Supporting Information

Cationic AIEgen micelle-improved chemiluminescent H$_2$O$_2$
assay by integrating reactants approaching and CRET

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Fig. S1 Molecular structure of C₈-TPE-C₄TAB.
**Fig. S2** Absorption and fluorescence emission spectra of the C₈-TPE-C₄TAB aqueous solution (80 μM), the inset is the photograph of C₈-TPE-C₄TAB aqueous solution under ultraviolet irradiation at 365 nm.
Fig. S3 Plots of fluorescence intensity versus the concentration of C$_8$-TPE-C$_4$TAB from 10 to 100 µM.
**Fig. S4** Peak fitting of CL spectra of C₈-TPE-C₄TAB micelle-HPB-luminol-H₂O₂ system. The black line, green curve, purple curve and blue line represent for original CL spectra, fitted emission of luminol, fitted emission of TPE acceptor and fitted CL spectra, respectively.
Fig. S5 Relative CL signals of HRP-luminol system upon adding possible interferents.
Fig. S6 Measurements of H$_2$O$_2$ in thawing water samples using a standard UV-vis absorption technique with external addition method.