Supplementary Material (ESI) for New Journal of Chemistry

Supporting Information

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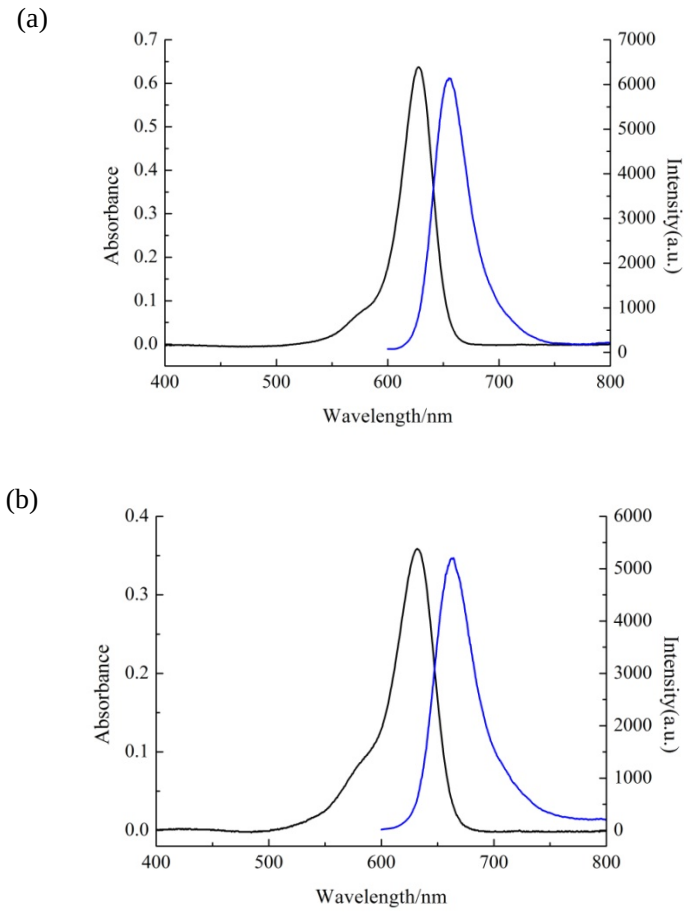
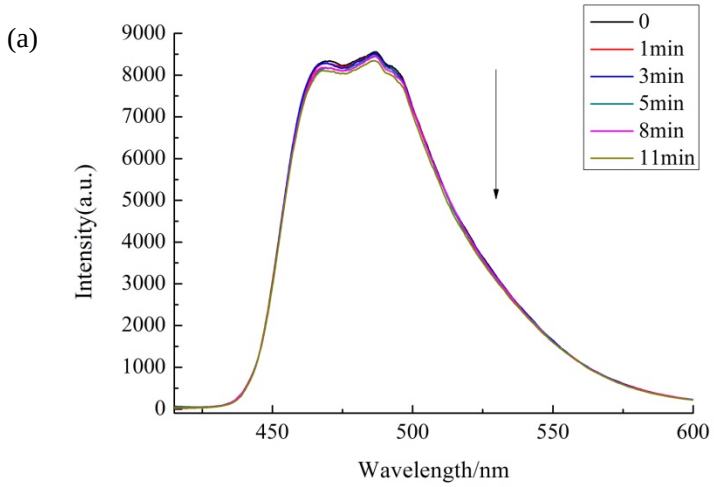


Figure S1. The absorption and fluorescence spectra of SQ-OH (a) and SQ-OH-Br (b) in $CHCl_3$.



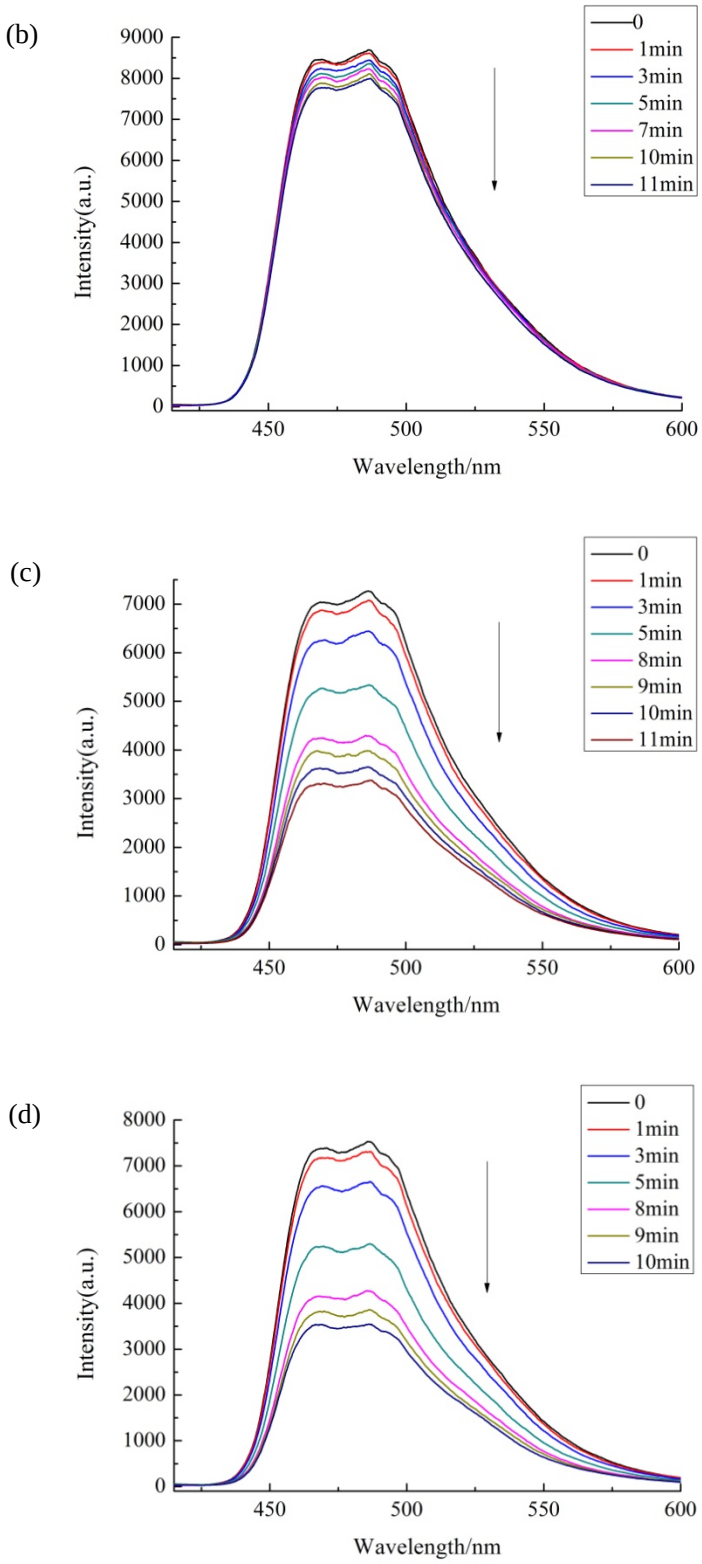
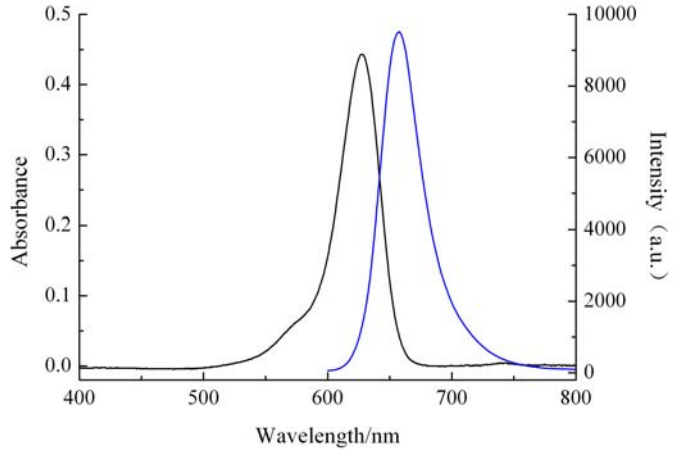
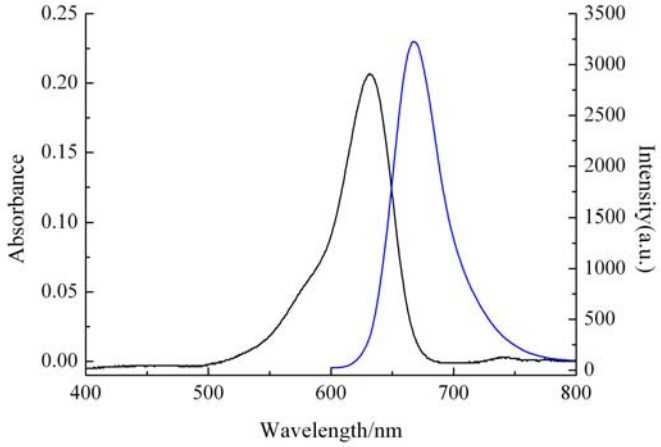


Figure S2. Intensity changes of DPBF fluorescence with the illumination time of squaraines by 630 nm light. (a) SQ-OH, (b) SQ-OH-Br, (c) SQ-OH-I, (d) MB reference, in $CHCl_3$ solution.

(a)



(b)



(c)

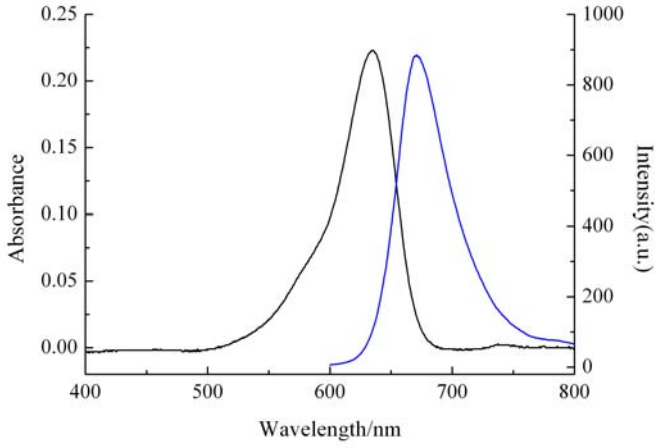


Figure S3. The absorption and fluorescence spectra of SQ-OH (a), SQ-OH-Br (b) and SQ-OH-I (c) in THF.

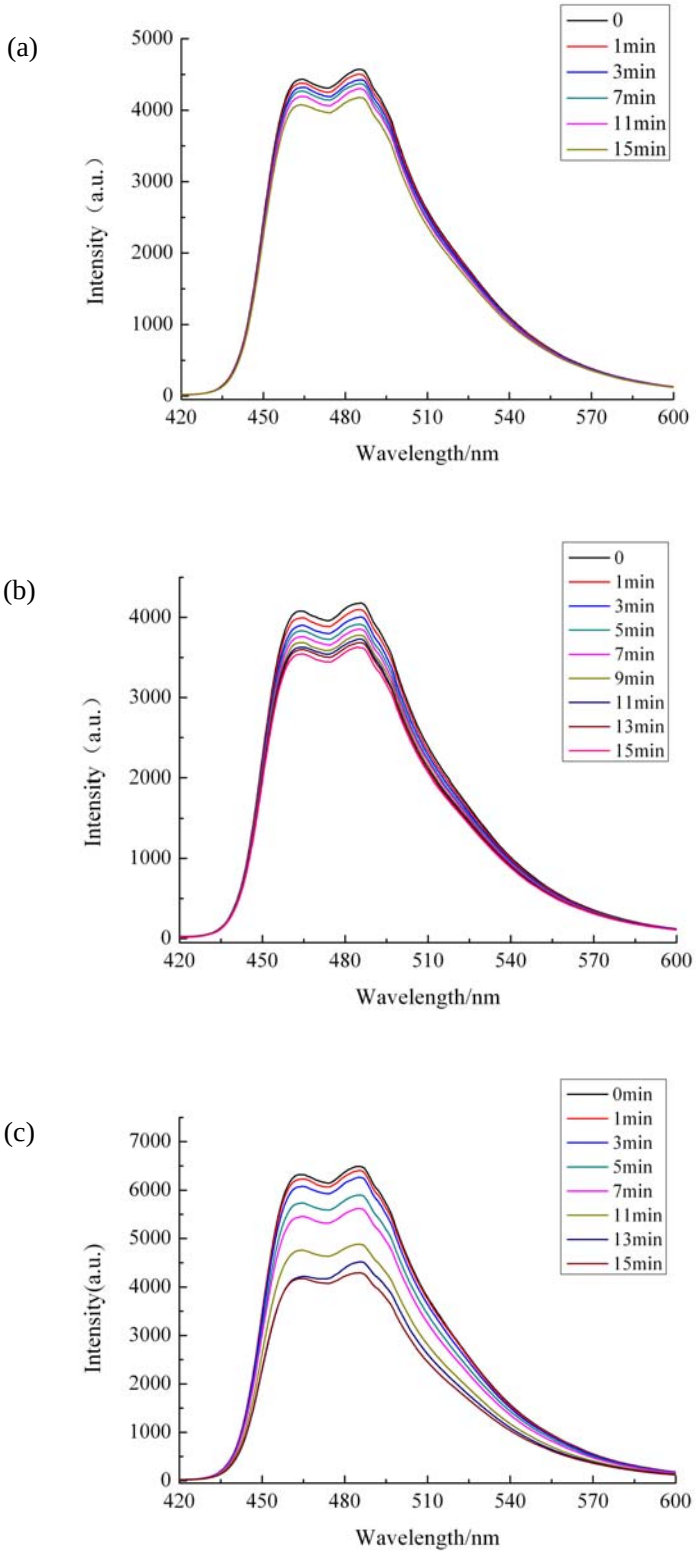


Figure S4. Intensity changes of DPBF fluorescence with the illumination time of squaraines by 630 nm light. (a) SQ-OH, (b) SQ-OH-Br, (c) SQ-OH-I in THF solution.

Table S1. The photophysical properties of SQ-OH, SQ-OH-Br, and SQ-OH-I in THF.

	λ^{ab}_{max} / nm	ε $\times 10^5 M^{-1}cm^{-1}$	λ^{em}_{max} / nm	Φ_f[a]	Φ ($^1O_2$)[b]
SQ-OH	628	2.25	658	0.70	1.0
SQ-OH-Br	632	1.12	667	0.34	1.8
SQ-OH-I	635	1.19	671	0.16	7.8

[a] Fluorescence quantum yield measured using bis[4-(dimethylamino)phenyl]squaraine (0.45 in CH_2Cl_2) as reference. [b] Relative $^1O_2$ quantum yield measured via chemical trap method using the singlet oxygen quantum yield of SQ-OH as 1.0.

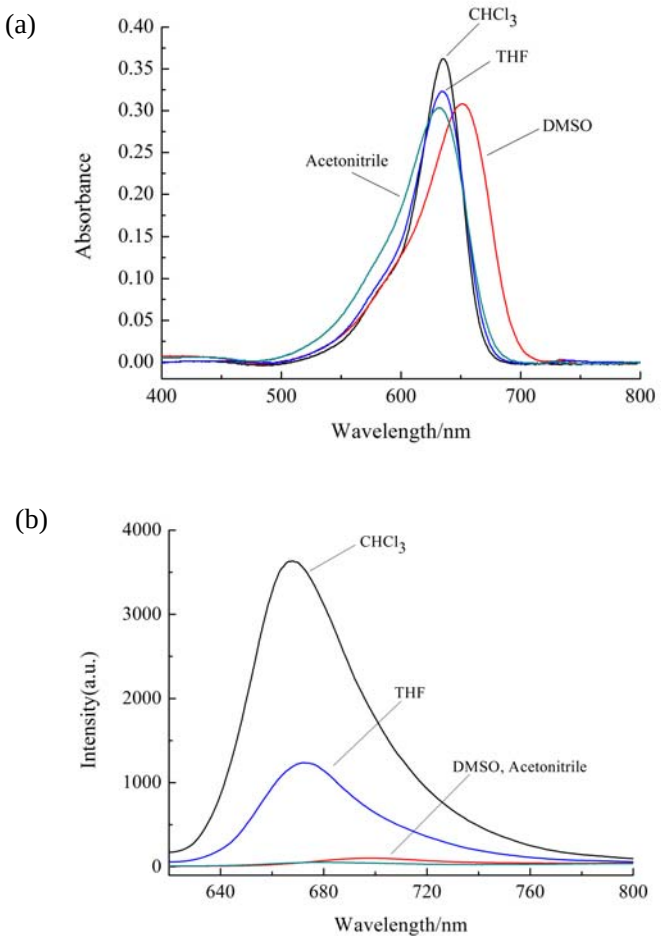


Figure S5. The absorption and fluorescence spectra of SQ-OH-I in various solutions