Electronic Supplementary Information

Suppression of menthyl anthranilate (UV-A sunscreen)-sensitized singlet oxygen generation by Trolox and α-tocopherol

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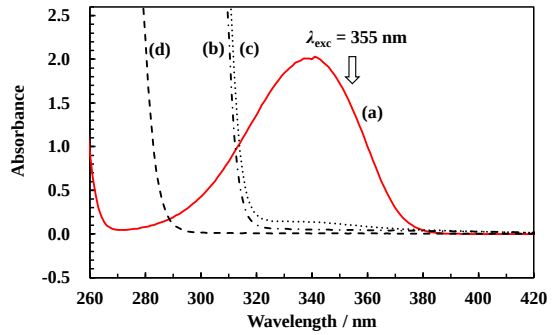


Fig. S1 UV absorption spectra of (a) MA (0.4 mmol dm^{-3}, red solid line), (b) Trolox (20 mmol dm^{-3}, dash-dot-dash line), (c) α-tocopherol (16 mmol dm^{-3}, dotted line) and (d) 3-EtAA(20 mmol dm^{-3}, broken line) in ethanol at 25 °C.

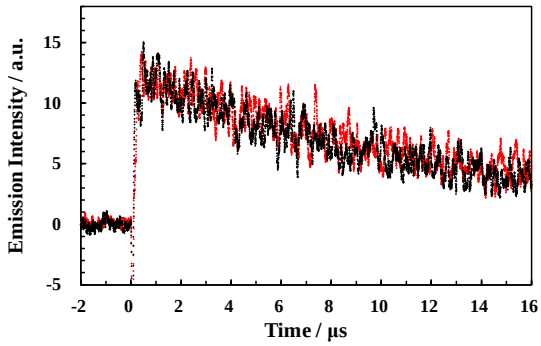


Fig. S2 Kinetic traces of the phosphorescence intensity of singlet oxygen taken following 355 nm laser excitation of MA (0.4 mmol dm^{-3}) in air-saturated ethanol at 25 °C in the absence (red) and presence of 3-EtAA (16 mmol dm^{-3}). The phosphorescence intensity was monitored at 1274 nm.

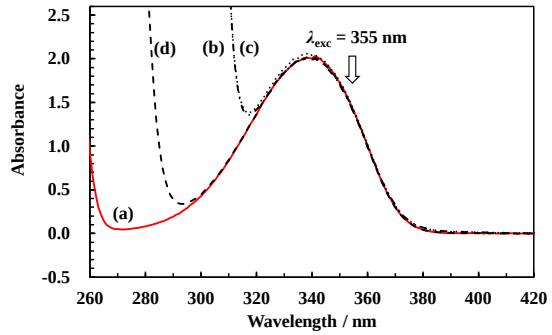


Fig. S3 UV absorption spectra of (a) MA (0.4 mmol dm^{-3}, red solid line) in the presence of (b) Trolox (20 mmol dm^{-3}, dash-dot-dash line), (c) α-tocopherol (16 mmol dm^{-3}, dotted line) and (d) 3-EtAA(20 mmol dm^{-3}, broken line) in ethanol at 25 °C.

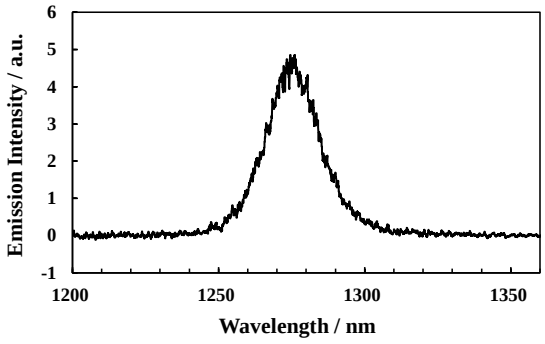
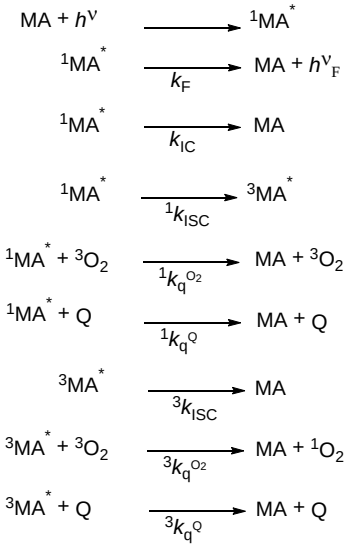


Fig. S4 Time-resolved phosphorescence spectrum of singlet oxygen generated by excitation of MA in air-saturated isododecane. The sampling times were set at 2–17 μs after the 355 nm YAG laser pulse.



Scheme S1 kinetics of the excited singlet and triplet states of MA.