

Electronic Supplementary Information (ESI)

Photoinduced DNA Cleavage by Formation of ROS from Oxygen with a Neurotransmitter and Aromatic Amino Acids

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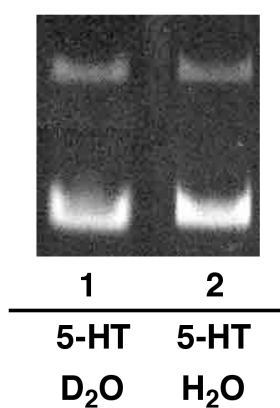


Fig S1 Agarose gel electrophoresis of cleaved supercoiled pBR322 DNA after 10 min photoirradiation with monochromatized light ($\lambda = 300$ nm) at 298 K. Lane 1, with 5-HT ($0.50 \text{ mmol dm}^{-3}$) in D₂O; lane 2, photoirradiation with 5-HT ($0.50 \text{ mmol dm}^{-3}$) in H₂O.

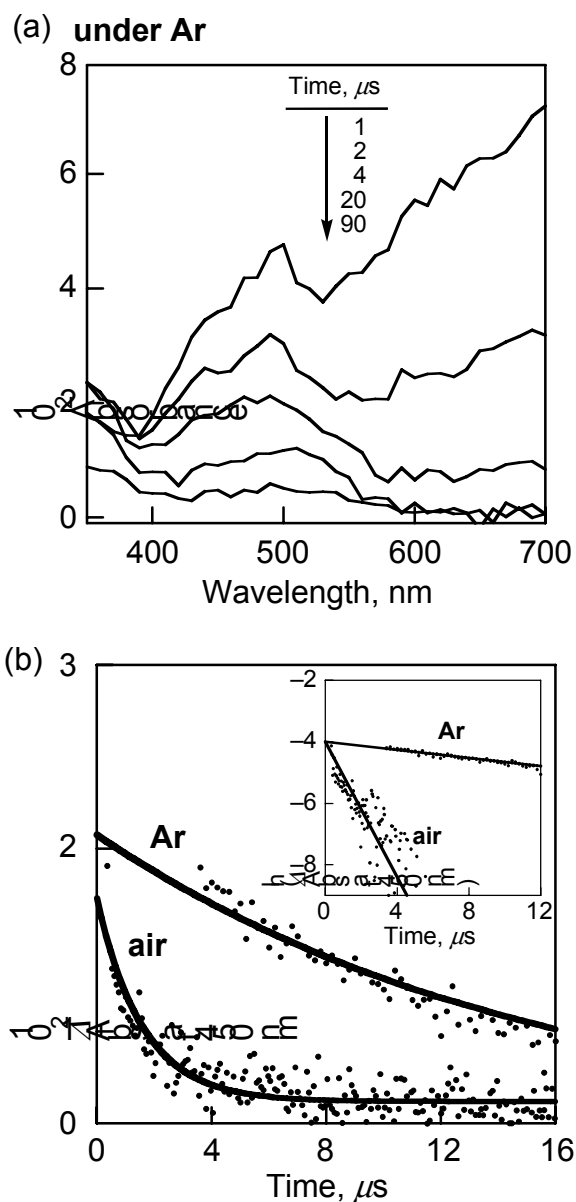


Fig S2 (a) Transient absorption spectra of Trp ($1.9 \times 10^{-4} \text{ mol dm}^{-3}$) in a phosphate buffer solution (0.10 mol dm^{-3} , pH 7.0) after laser excitation at 266 nm. (b) Decay time profiles of ³Trp* ($\lambda = 450 \text{ nm}$) in argon- and air-saturated buffer solutions. The solid curves represent the best fit to the exponential decay. Inset: First order plots.

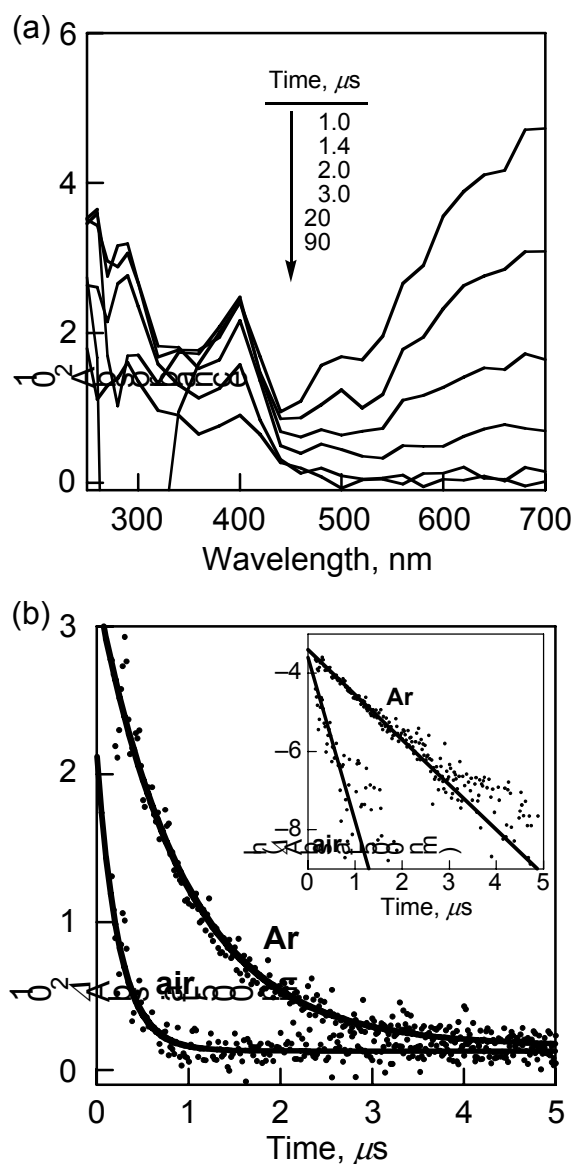


Fig S3 (a) Transient absorption spectra of Tyr ($7.5 \times 10^{-4} \text{ mol dm}^{-3}$) in a phosphate buffer solution (0.10 mol dm^{-3} , pH 7.0) after laser excitation at 266 nm. (b) Decay time profiles of $^3\text{Tyr}^*$ ($\lambda = 500 \text{ nm}$) in argon- and air-saturated buffer solutions. The solid curves represent the best fit to the exponential decay. Inset: First order plots.