

Supporting Information

Photoenhanced Oxidation of Amino Acids and Cross-linking of Lysozyme mediated by Tetrazolium Salts

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Supporting figures

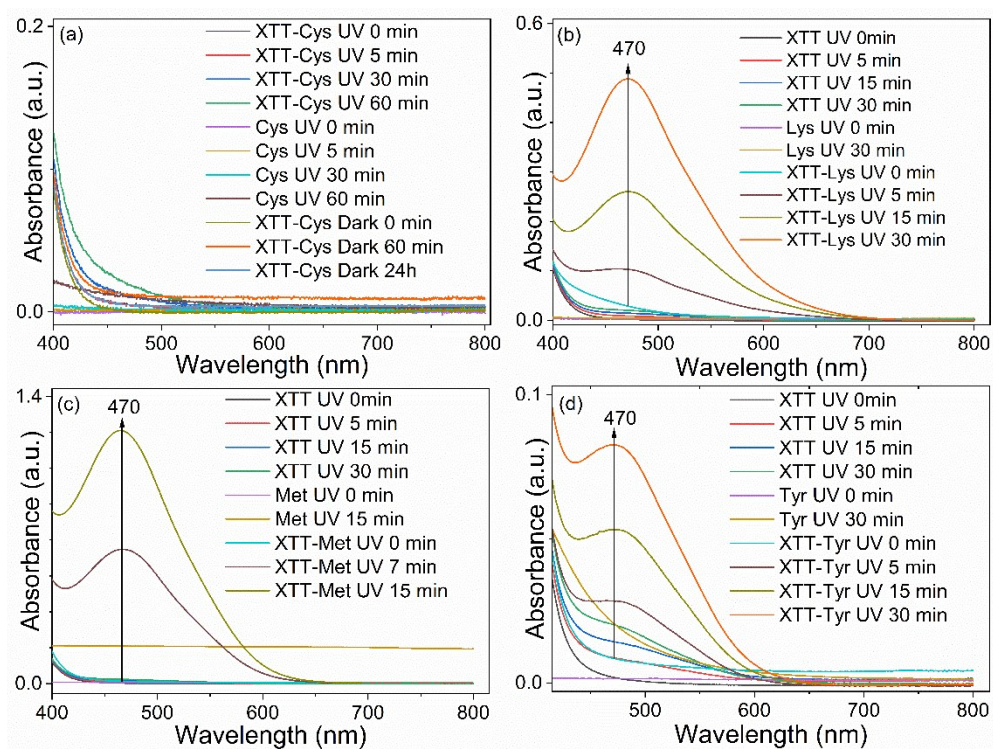


Fig. S1. Aqueous solution of XTT and/ or (a) L-Cysteine (Cys), (b) L-Lysine (Lys), (c) L-Methionine (Met) and (d) DL-Tyrosine (Tyr) under UV irradiation or in the dark. UV accelerated the yield of XTT-formazan (characteristic absorption at 470 nm) with the presence of Lys, Met and Tyr, but not for Cys.

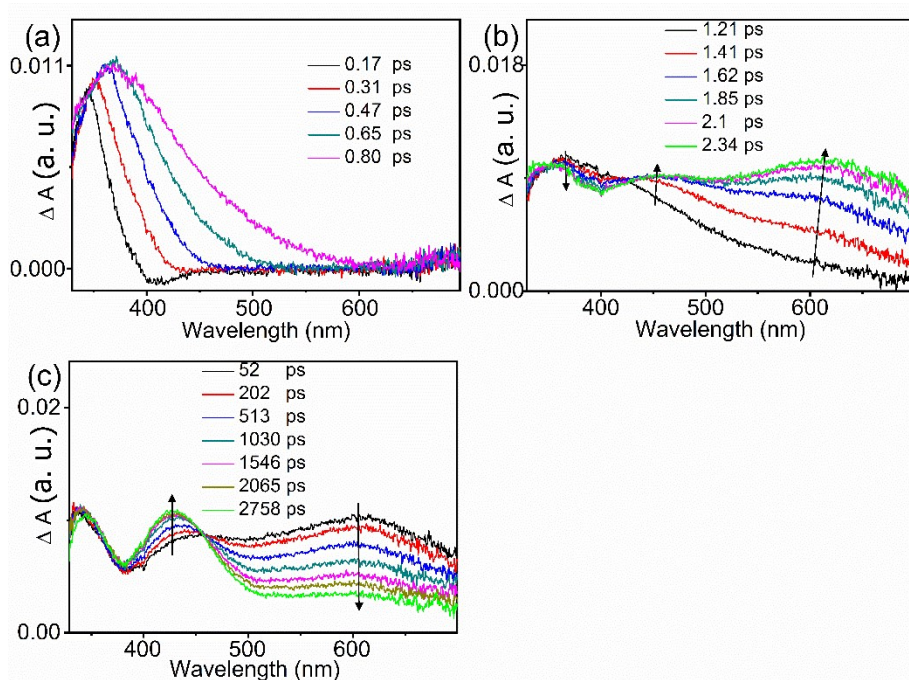


Fig. S2 The fs-TA spectra of Trp in ACN/H₂O mixed solution.

The band centered at 350 nm is due to Trp-S_n and this relaxed into Trp-S₁ (the lowest excited states of the singlets, denoted as S₁ (LA)¹) with absorption bands at 330, 450 and ~550-600 nm, Trp-S₁ (LA) transformed into Trp-T₁ with absorption bands located at 350 and 425 nm. So after photoexcitation, the ground state of Trp molecules is first excited to a higher excited singlet state (Trp-S_n) and then transforms into the excited triplet state (Trp-T₁) thereafter, which is in accordance with literature reports.²

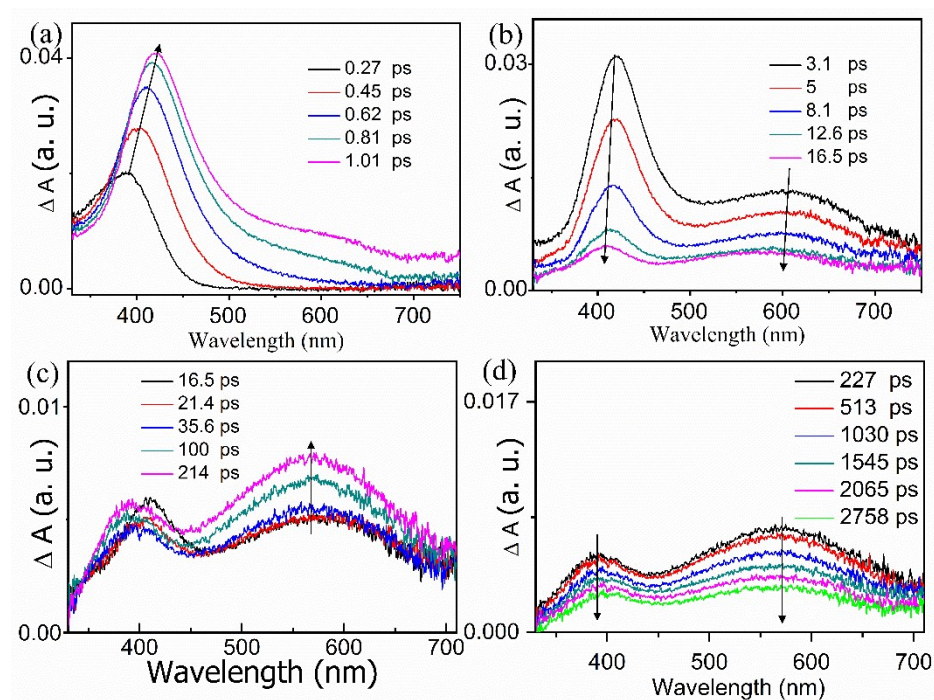


Fig. S3 fs-TA spectra of NBT in ACN/H₂O (volume ratio, 1:1) mixed solution obtained after 267 nm laser irradiation of the samples. (a), (b), (c) and (d) represent for the fs-TA spectra evolved with time delay after laser dose, respectively.

1. J. Leonard, D. Sharma, B. Szafarowicz, K. Torgasin and S. Haacke, *Phys. Chem. Chem. Phys.*, 2010, **12**, 15744-15750.
2. D. V. Bent and E. Hayon, *J. Am. Chem. Soc.*, 1975, **97**, 2612-2619.