

Supplementary Material of
Optical properties and oxidative potential of aqueous-phase products
from OH and ³C* -initiated photolysis of eugenol

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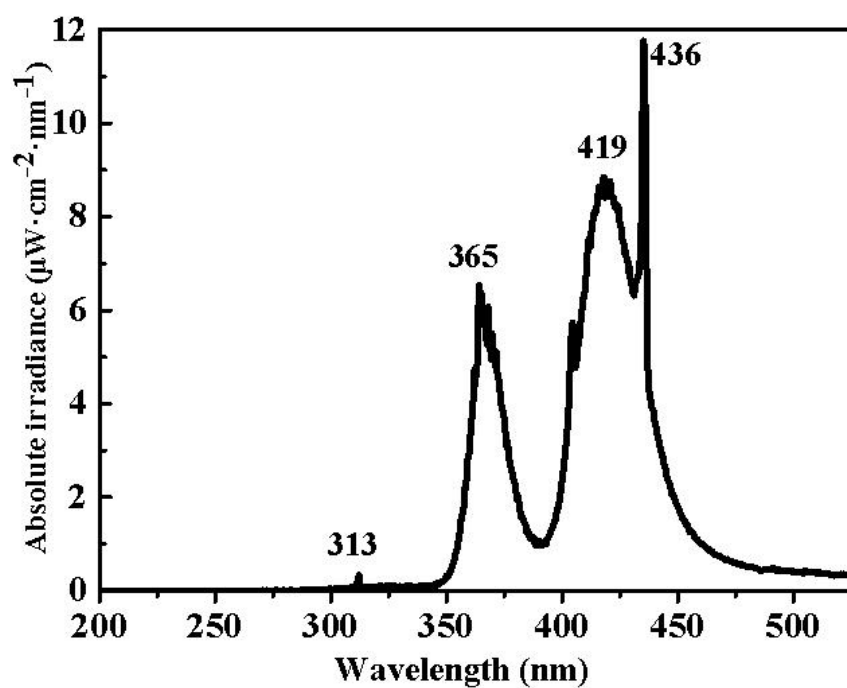


Figure S1. Irradiation intensity of simulated sunlight in this study

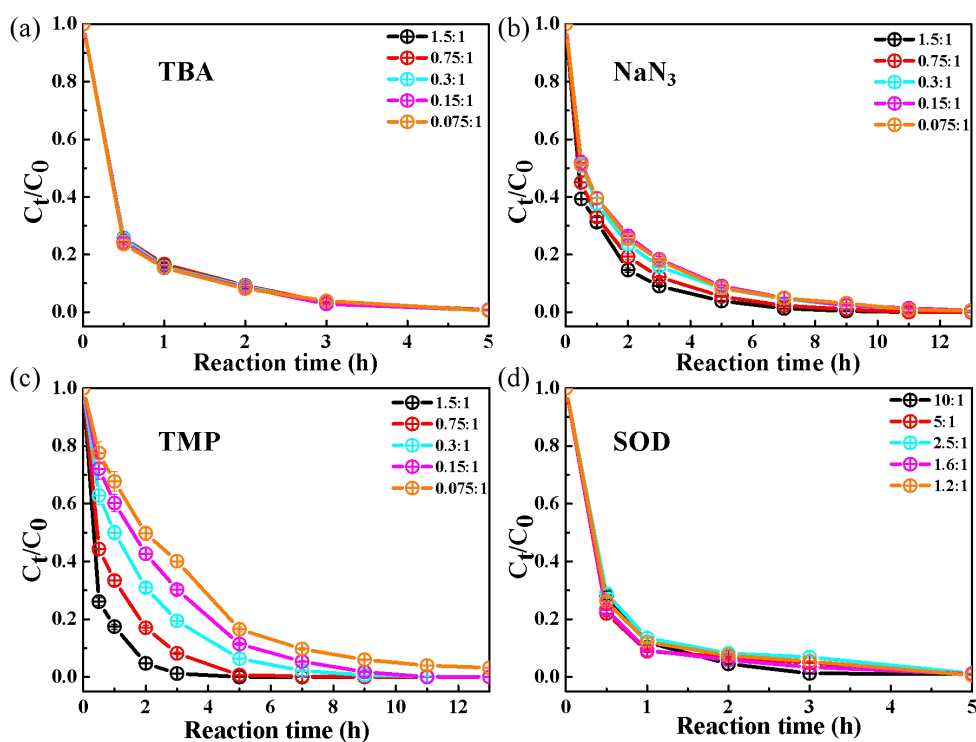


Figure S2. Ratio of residue concentration to initial concentration (C_t/C_0) at different mole ratios as a function of reaction time with (a) TBA quencher, (b) NaN_3 quencher, (c) TMP quencher and (d) SOD quencher. Legend represented mole ratios of eugenol to quenchers.

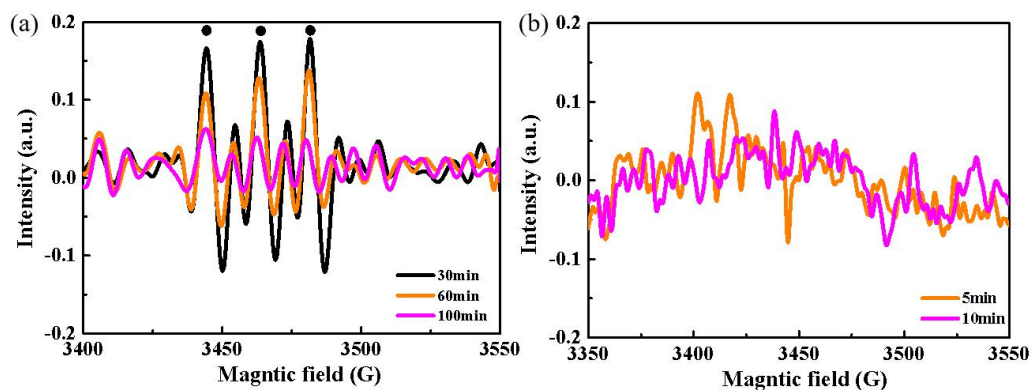


Figure S3. EPR spectra using (a) TEMP as a $^1\text{O}_2$ trapping agent in the $^3\text{C}^*$ oxidation and (b) DMPO as $\bullet\text{OH}$ trapping agent in the OH oxidation.

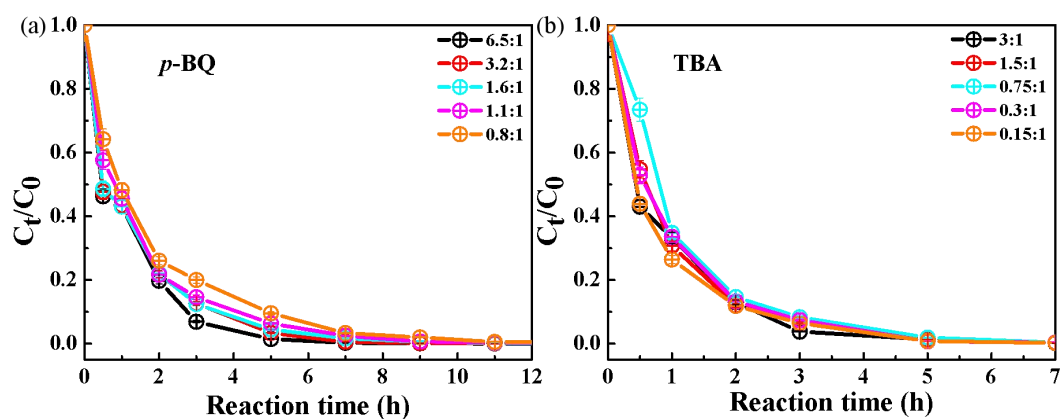


Figure S4. Ratio of residue concentration to initial concentration (C_t/C_0) as a function of reaction time with (a) *p*-BQ quencher and (b) TBA quencher

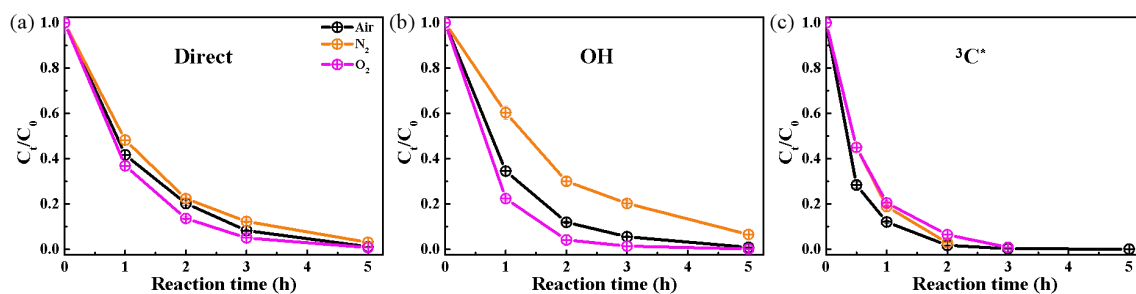


Figure S5. Ratio of remaining concentration to initial concentration (C_t/C_0) as a function of reaction time at different saturated gases under (a) direct photolysis (b) OH-initiated and (c) $^3\text{C}^*$ -initiated oxidation.

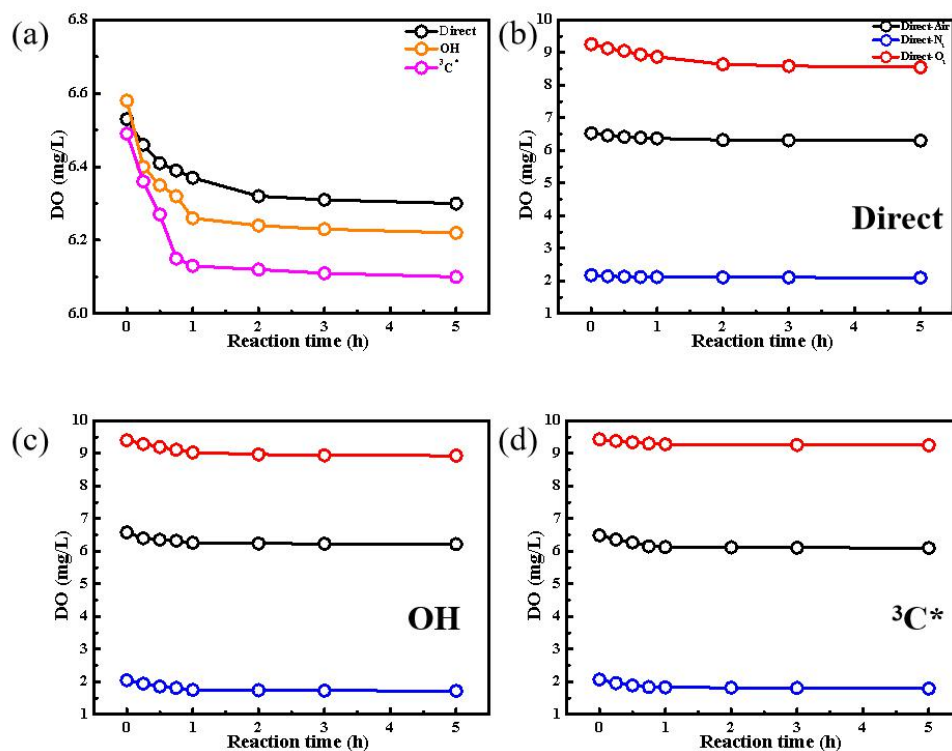


Figure S6. DO concentrations as a function of reaction time for (a) the three systems, and different saturated gases in the (b) Direct (c) OH (d) ³C* system.

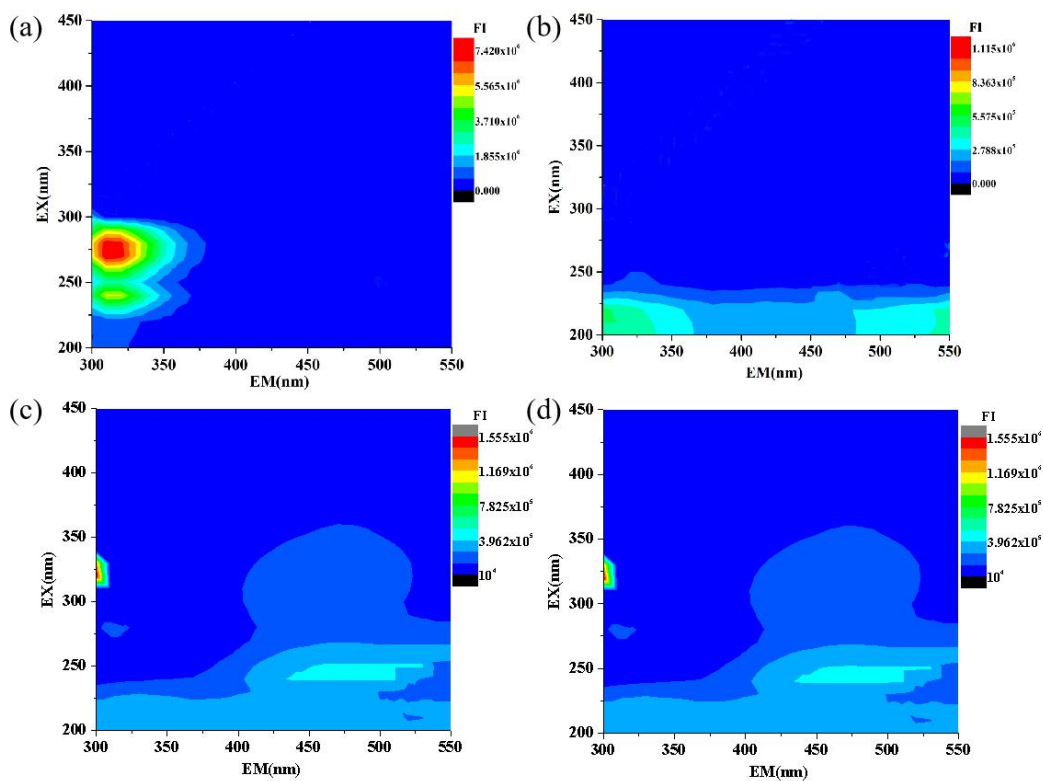


Figure S7. EEM spectra of (a) pure eugenol, (b) pure DMB (³C* precursor), (c) solution at the end

of reaction (23 h) in direct photolysis, and (d) in OH oxidation.

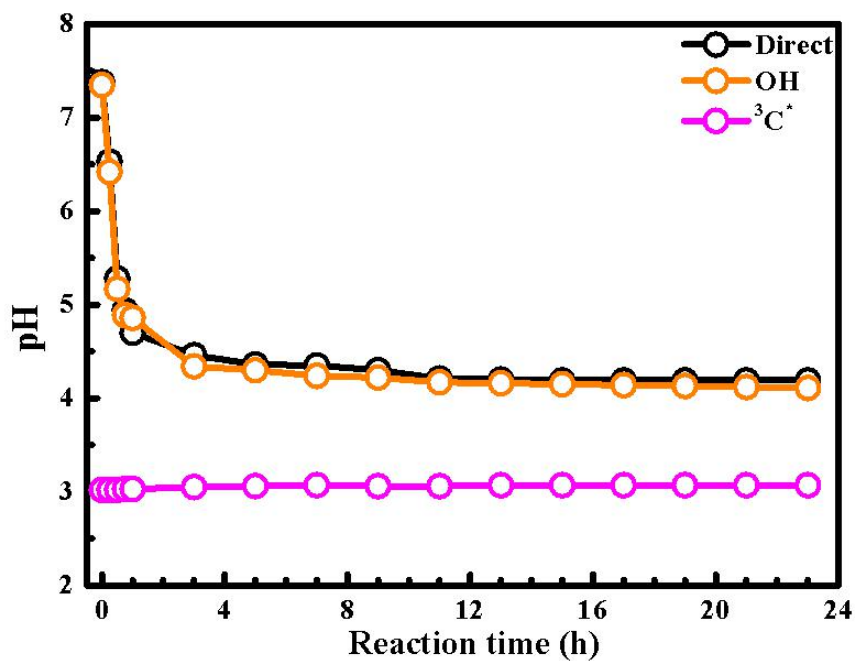


Figure S8. pH values as a function of reaction time for the three systems.

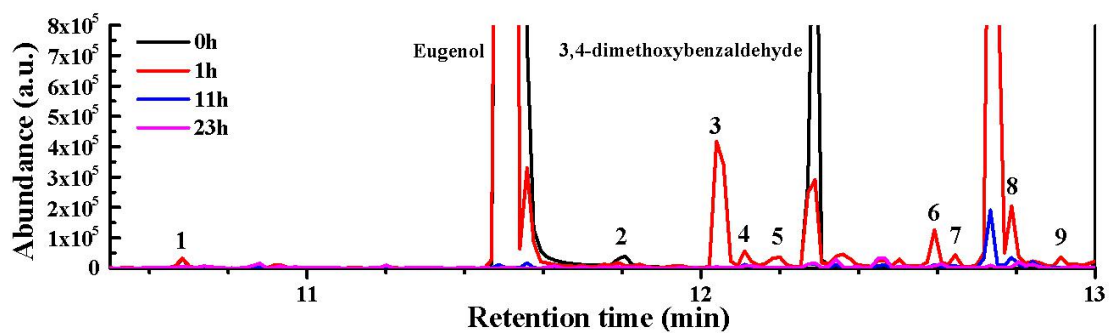


Figure S9. The total ion chromatograph (TIC) of GC-MS of extracted products under ³C* oxidation before and after photolysis of 1, 11, and 23 h, respectively.