



Figure S11. Analyzed ROP profiles of anthraquinone in the premixed flame of ethylbenzene. Red- solid, blue- solid, black- solid, black- dashed, green- solid, and orange- dotted lines represent R1, R2, R3a, R3b, R4, and temperature, respectively. Measured temperature data ^[4] is also shown for reference.

References

1. Lizardo-Huerta JC, Taamalli S, Sood K, Gasnot L, Louis F, et al. 2022. Thermochemical and kinetic studies of H-abstraction reaction of benzofurans and benzodioxins by H-atoms. *Computational and Theoretical Chemistry* 1209:113589
2. Bounaceur R, Da Costa I, Fournet R, Billaud F, Battin-Leclerc F. 2005. Experimental and modeling study of the oxidation of toluene. *International Journal of Chemical Kinetics* 37:25–49
3. Chu T, Smith MC, Yang J, Liu M, Green WH. 2020. Theoretical study on the HACA chemistry of naphthalenyl radicals and acetylene: The formation of C₁₂H₈, C₁₄H₈, and C₁₄H₁₀ species. *International Journal of Chemical Kinetics* 52:752–68
4. Therrien RJ, Ergut A, Levensis YA, Richter H, Howard JB, et al. 2010. Investigation of critical equivalence ratio and chemical speciation in flames of ethylbenzene–ethanol blends. *Combustion and Flame* 157:296–312