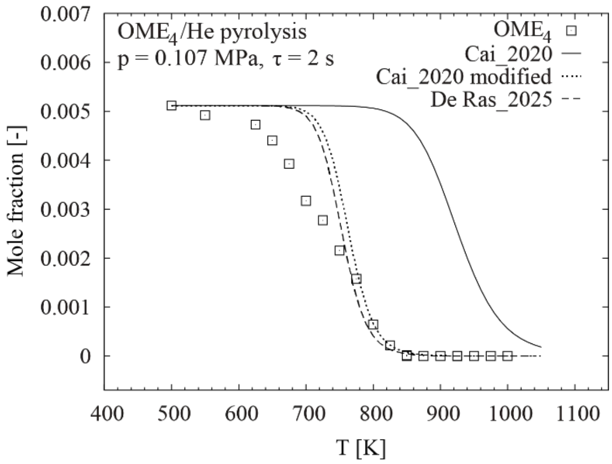

Figure S1: Concentrations of OME_4 during its pyrolysis at 1.07 MPa and $\tau = 2$ s. Lines represent results calculated with the De Ras_2025 [1] model, Cai_2020 [2] model, and modified Cai_2020[2] model. Symbols denote experimental data from De Ras et al. [1].

References

1. De Ras K, Herbinet O, Battin-Leclerc F, Eschenbacher A, Kusenberg M, et al. 2025. A Fundamental investigation of the pyrolysis chemistry of oxymethylene ethers. Part II: Experiments and comprehensive model analysis. Combustion and Flame 275: 114122.
2. Cai L, Jacobs S, Langer R, Vom Lehn F, Heufer K A, et al. 2020. Auto-ignition of oxymethylene ethers (OME_n, n = 2-4) as promising synthetic e-fuels from renewable electricity: shock tube experiments and automatic mechanism generation. Fuel 264: 116711.
3. Shrestha K P, Eckart S, Drost S, Fritsche C, Schie, et al. 2022. A comprehensive kinetic modeling of oxymethylene ethers (OME_n, n=1-3) oxidation - laminar flame speed and ignition delay time measurements. Combustion and Flame 246: 112426.
4. De Ras K, Panaget T, Fenard Y, Aerssens J, Pillier L, et al. 2023. An experimental and kinetic modeling study on the low-temperature oxidation of oxymethylene ether-2 (OME-2) by means of stabilized cool flames. Combustion and Flame 253: 112792.
5. Li N, Sun W, Liu S, Qin X, Zhao Y, et al. 2021. A comprehensive experimental and kinetic modeling study of dimethoxymethane combustion. Combustion and Flame 233: 111583.