

Figure S1: Temperature evolutions of the DEE conversion for various inlet mole fractions, residence time (τ) and pressure (P). Symbols are experiments and lines simulations with the model of Yasunaga et al. [7].



Figure S2: Temperature evolutions of mole fraction of the products obtained during DEE pyrolysis (2% DEE inlet mole fraction, $\tau = 2s$, P = 800 Torr). Symbols are experiments and lines simulations with the model of Yasunaga et al. [7] (1,3-butadiene and benzene are not presented because they are not considered in this model).



Figure S3: Sensitivity analysis performed for DEE consumption using the model of Tran et al. [5] (1000 K, 2% DEE inlet mole fraction, $\tau = 2s$, P = 800 Torr) and the OpenSMOKE++

framework [11].