SUPPLEMENTAL MATERIAL

to

Combustion chemistry and flame structure of furan group biofuels using molecular-beam mass spectrometry and gas chromatography – Part II: 2-Methylfuran

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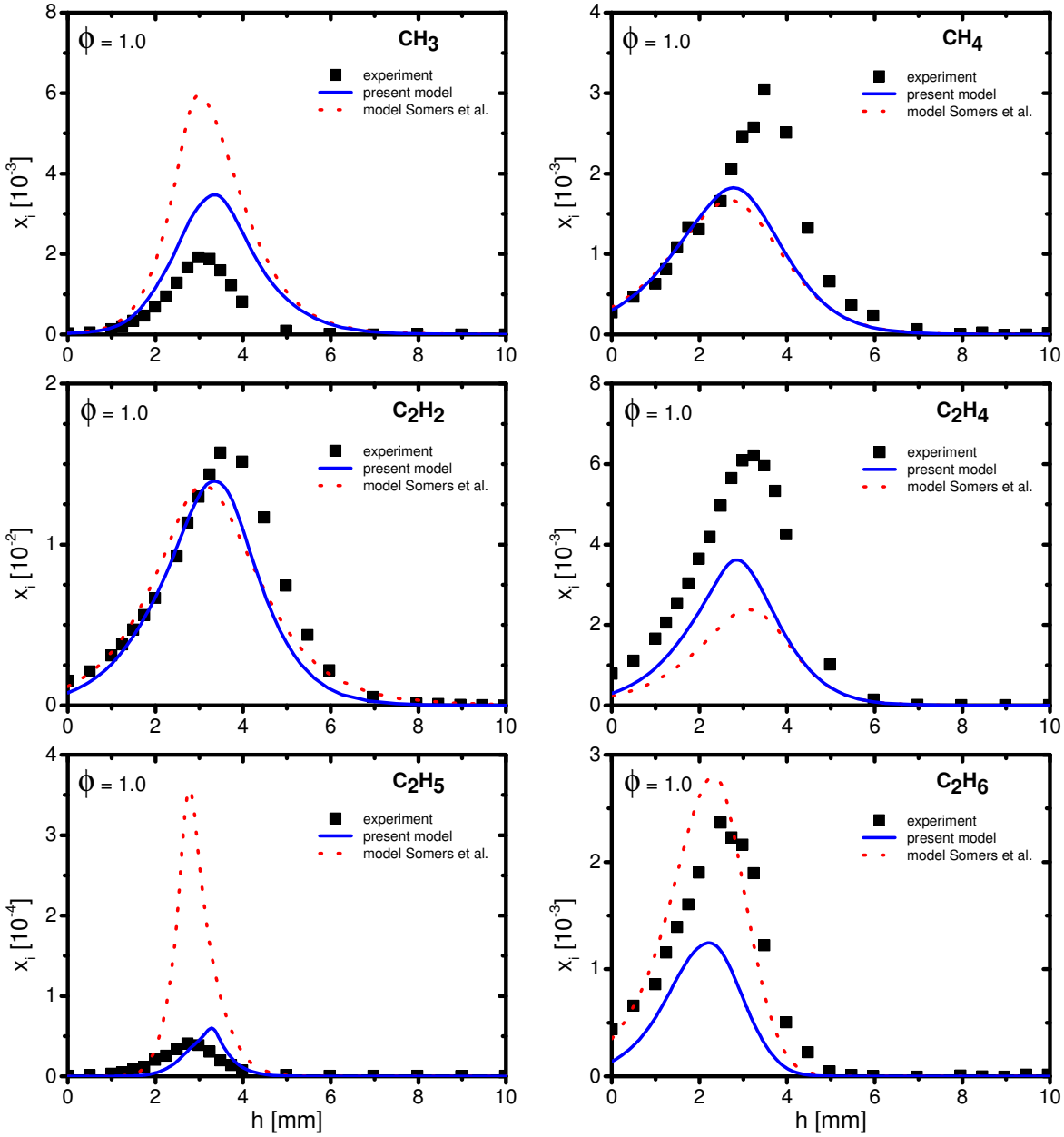

Figure S1. Mole fraction profiles of selected C_1 and C_2 species for ϕ=1.0. Symbols: experiment; lines: simulation; solid lines: present model, dotted lines: model of Somers et al. [S1].

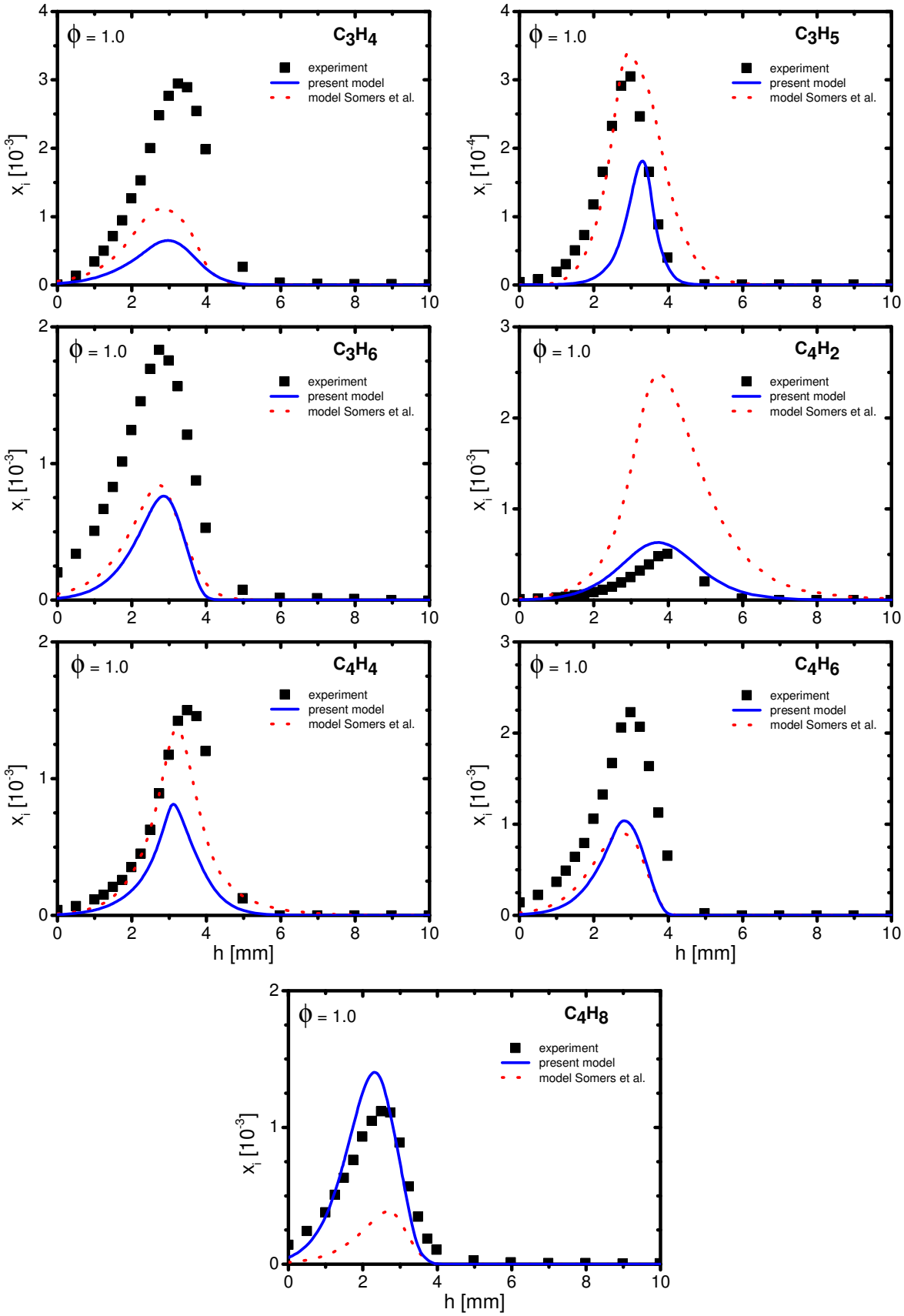

Figure S2. Mole fraction profiles of selected C_3 and C_4 species for ϕ=1.0. Symbols: experiment; lines: simulation; solid lines: present model, dotted lines: model of Somers et al. [S1].

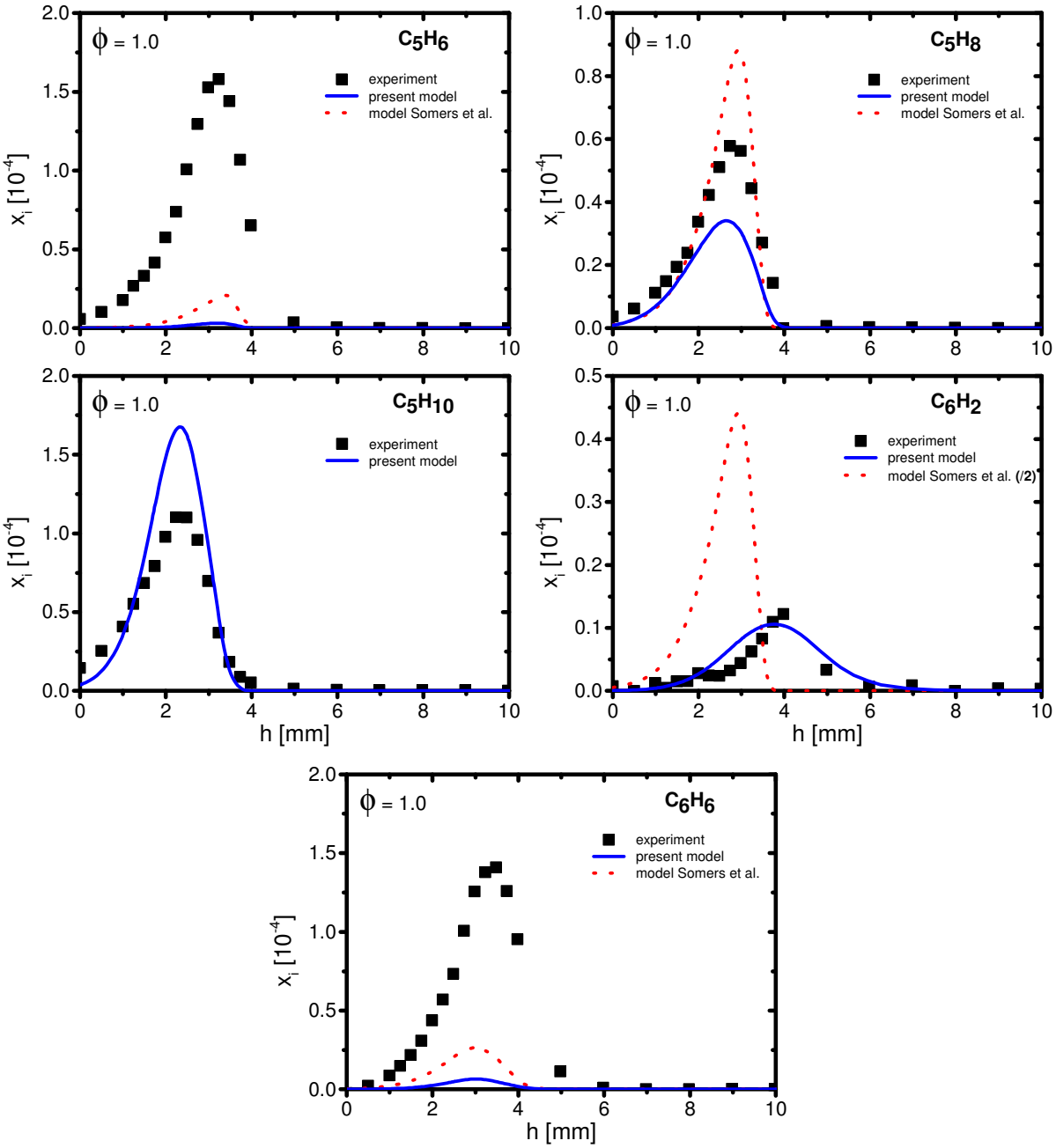

Figure S3. Mole fraction profiles of selected C_5 and C_6 species for ϕ=1.0. Symbols: experiment; lines: simulation; solid lines: present model, dotted lines: model of Somers et al. [S1], except for C_5H_{10} (simulation data were not available).

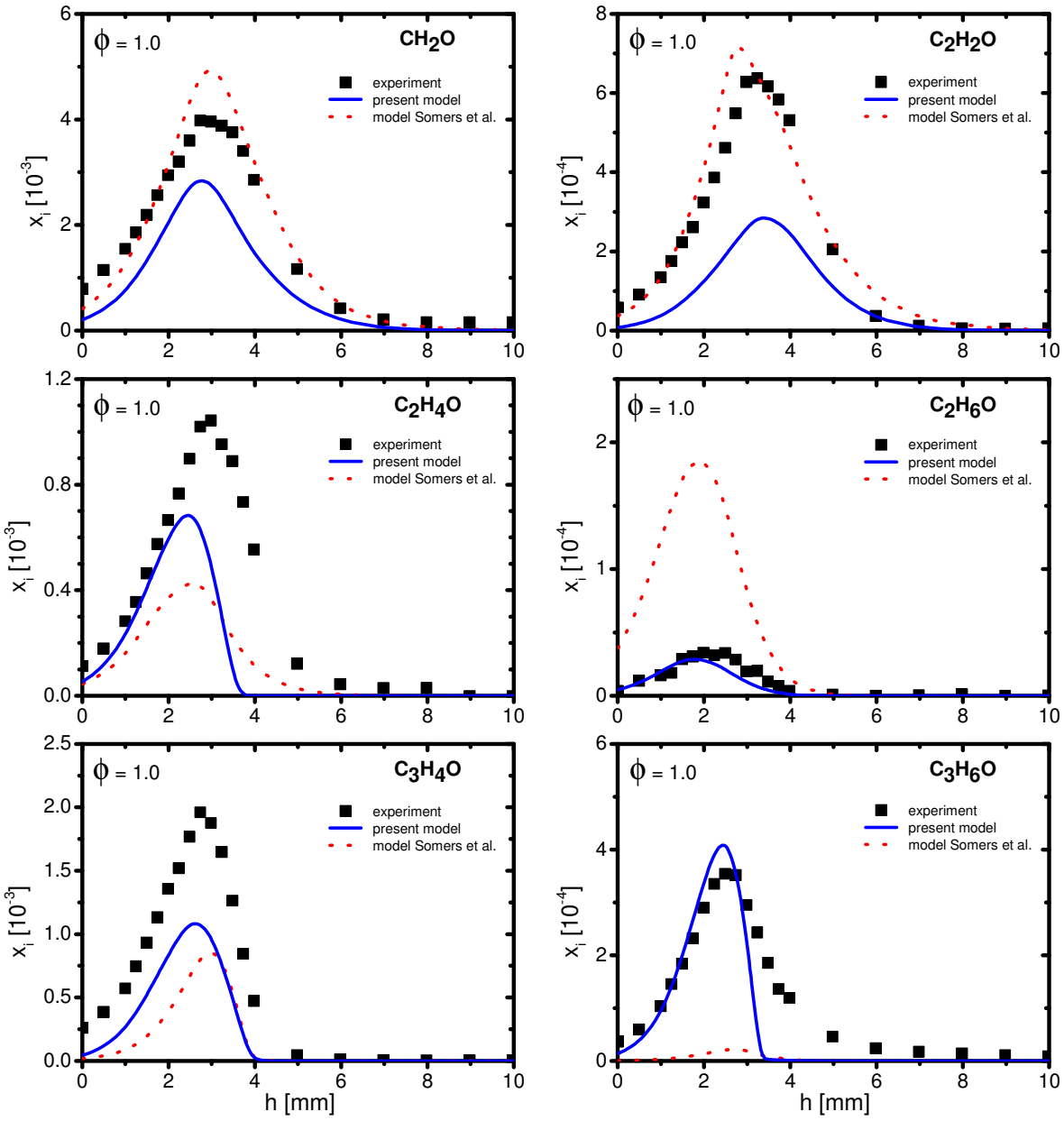

Figure S4. Mole fraction profiles of selected C_1-C_3 oxygenated species for ϕ=1.0. Symbols: experiment; lines: simulation; solid lines: present model, dotted lines: model of Somers et al. [S1].

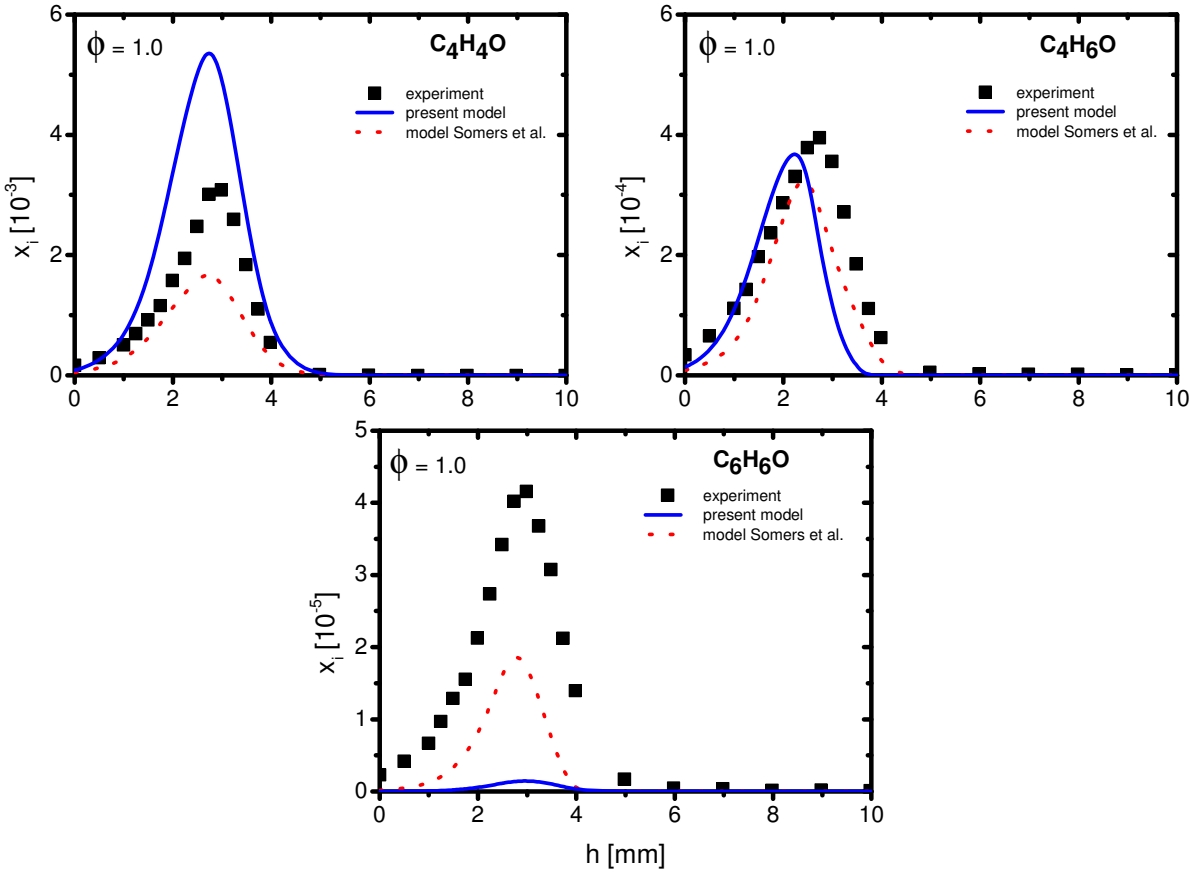

Figure S5. Mole fraction profiles of selected C_1-C_3 oxygenated species for ϕ=1.0. Symbols: experiment; lines: simulation; solid lines: present model, dotted lines: model of Somers et al. [S1].

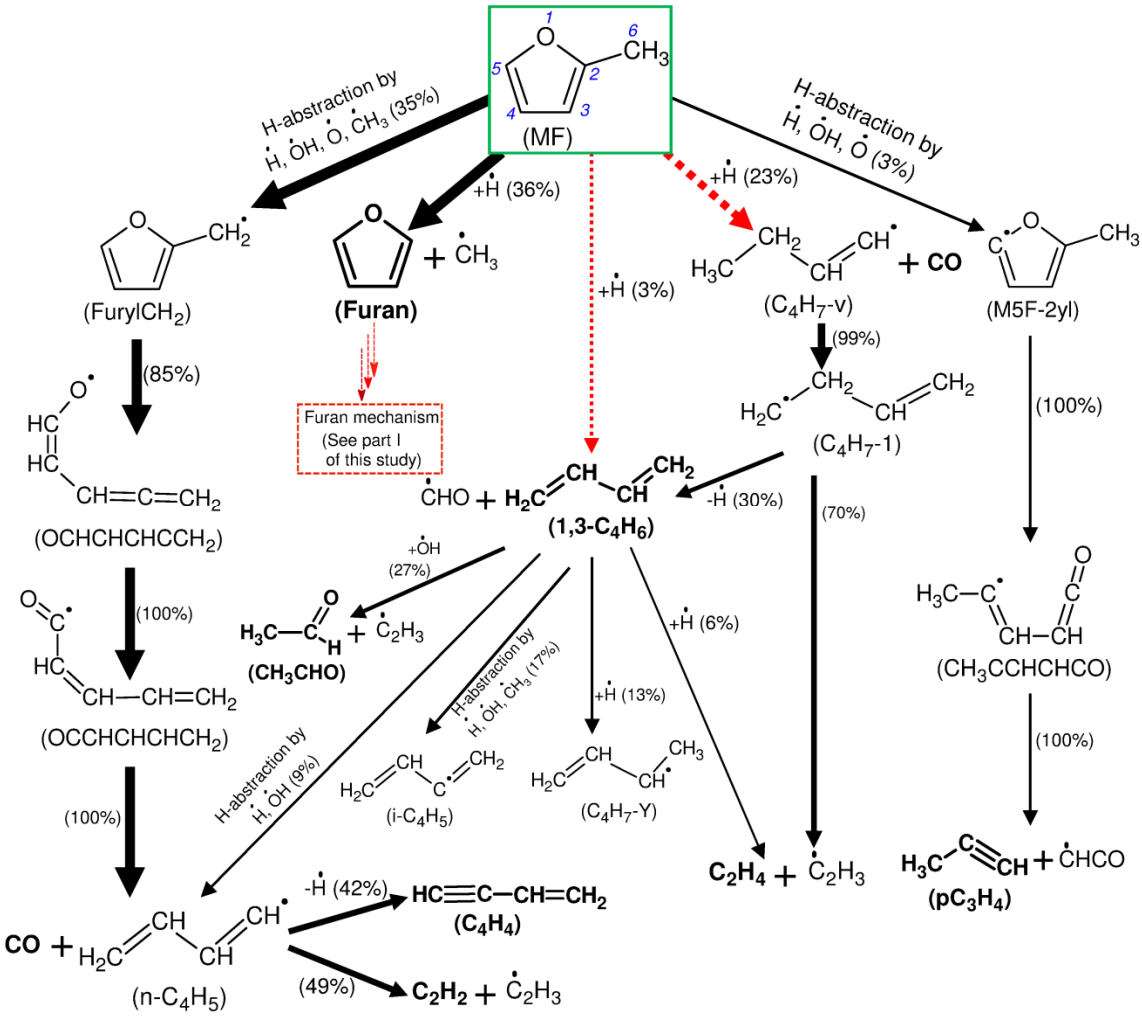

Figure S6. Reaction flow analysis for the consumption of MF in the stoichiometric MF flame (ϕ=1.0) for a distance of 3.0 mm from the burner, corresponding to a simulated temperature of 1210 K and 85% conversion of MF. The size of the arrows is proportional to the relative rates of consumption of a given species. Dashed arrows: reaction pathways which have been added or revised in the present study (see Section 3 in the main paper).

Reference

[S1] K.P. Somers, J.M. Simmie, F. Gillespie, U. Burke, J. Connolly, W.K. Metcalfe, F. Battin-Leclerc, P. Dirrenberger, O. Herbinet, P.-A. Glaude, H.J. Curran, Proc. Combust. Inst. 34 (2013) 225–232.