Sooting Limits of Nonpremixed *n*-Heptane, *n*-Butanol and Methyl Butanoate

Sili Deng*, Jeremy A. Koch, Michael E. Mueller, Chung K. Law

Department of Mechanical and Aerospace Engineering, Princeton University, Princeton, NJ 08544, USA

Supplemental Materials

Table 1: X_{O_2} in the oxidizer at experimental conditions.

		O_2														
		0.1800	0.1850	0.1875	0.1900	0.1925	0.1950	0.1975	0.2000	0.2025	0.2050	0.2075	0.2100	0.2150	0.2200	0.2250
$n-C_7H_{16}$	N_2	0.8200	0.8150	0.8125	0.8100	0.8075	0.8050		0.8000							
$n-C_4H_9OH$	N_2						0.7718	0.7679	0.7640	0.7600	0.7560	0.7521				
	Ar						0.0332	0.0346	0.0360	0.0375	0.0390	0.0404				
$C_5H_{10}O_2$	N_2										0.7119		0.7017	0.6915	0.6811	0.6707
	Ar										0.0831		0.0883	0.0935	0.0989	0.1043

*Corresponding Author: silideng@princeton.edu

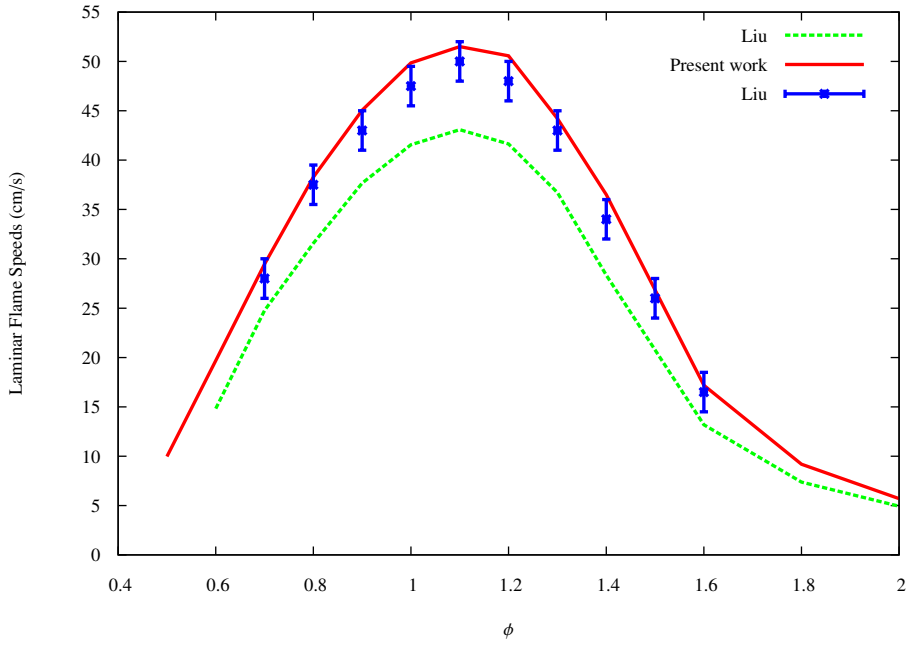

Figure 1: Mechanism validation on *n*-butanol laminar flame speeds, against the experimental (symbols) and computational (dotted lines) results in Ref.[1]. $P = 1atm$ and $T = 353K$.

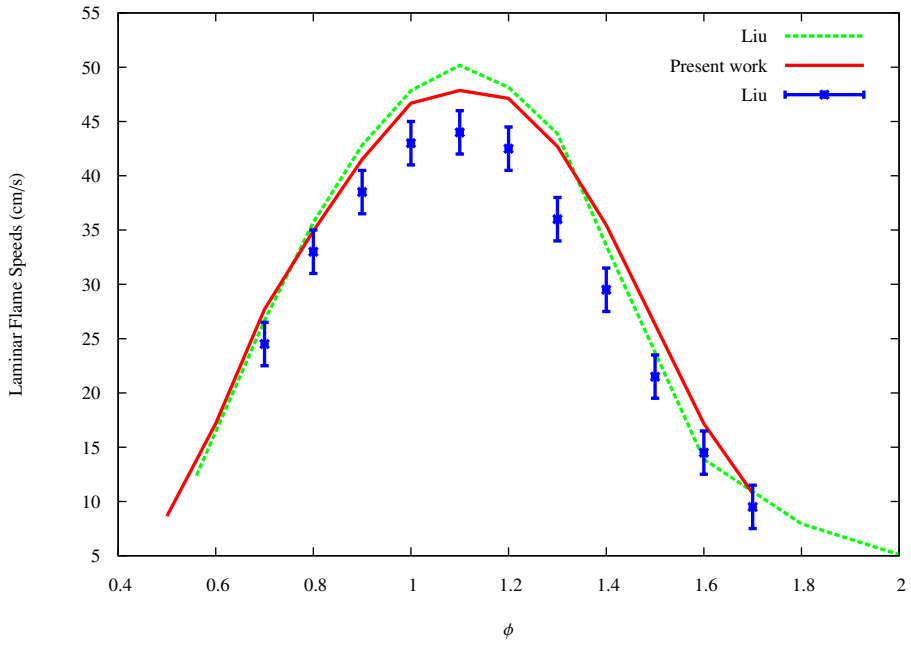

Figure 2: Mechanism validation on methyl butanoate laminar flame speeds, against the experimental (symbols) and computational (dotted lines) results in Ref.[1]. $P = 1atm$ and $T = 353K$.