

### Supplementary Material

Table showing differences between the current experimental results and the computed laminar flame speeds using Li *et al.* (2007) mechanism.

$\phi$	$\eta_{(H_2/CO)}$	$\xi_{H_2O}$ (%H <sub>2</sub> O)	Laminar Flame Speed ( $S_u^o$ )		Difference: Exp. – Comp. (Li <i>et al.</i> 2007) cm/s
			Experiment	Computed (Li <i>et al.</i> 2007)	
		%	cm/s	cm/s	
0.6	0.053	0	17.9	21.0	-3.1
0.6	0.053	7.5	20.1	24.3	-4.2
0.6	0.053	15	21.8	25.3	-3.6
0.6	0.053	25	21.8	24.9	-3.1
0.6	0.053	35	19.5	23.0	-3.5
0.7	0.053	0	24.2	27.2	-3.0
0.7	0.053	7.5	29.0	31.8	-2.8
0.7	0.053	15	34.6	33.2	1.3
0.7	0.053	25	33.0	32.8	0.2
0.7	0.053	35	28.0	30.4	-2.4
0.8	0.053	0	31.1	33.0	-1.8
0.8	0.053	7.5	34.4	38.1	-3.7
0.8	0.053	15	38.6	40.5	-2.0
0.8	0.053	25	37.7	39.9	-2.3
0.8	0.053	34	33.6	37.4	-3.8
0.9	0.053	0	35.2	38.2	-3.0
0.9	0.053	7.5	43.7	45.0	-1.3
0.9	0.053	15	47.3	47.1	0.2
0.9	0.053	25	45.8	46.4	-0.6
0.9	0.053	32	42.8	44.1	-1.4
0.3	Pure H <sub>2</sub>	0	15.1	5.3	9.8
0.3	Pure H <sub>2</sub>	7.5	12.5	4.5	8.0
0.3	Pure H <sub>2</sub>	15	8.0	3.7	4.2
0.45	Pure H <sub>2</sub>	0	45.7	42.8	2.9
0.45	Pure H <sub>2</sub>	7.5	43.1	39.2	3.9
0.45	Pure H <sub>2</sub>	15	38.7	35.5	3.2
0.45	Pure H <sub>2</sub>	25	33.7	30.0	3.7
0.45	Pure H <sub>2</sub>	35	28.3	24.0	4.3
0.6	1.000	0	54.6	54.2	0.4
0.6	1.000	7.5	50.3	50.9	-0.6
0.6	1.000	15	46.9	47.3	-0.4
0.6	1.000	25	40.7	41.8	-1.0
0.6	1.000	35	34.8	35.4	-0.6

0.4	1.000	0	19.1	17.3	1.7
0.4	1.000	7.5	17.4	16.1	1.3
0.4	1.000	15	15.5	14.9	0.7
0.4	1.000	25	13.6	12.9	0.7
0.4	1.000	35	11.4	10.7	0.6
0.5	1.000	0	35.0	34.7	0.3
0.5	1.000	7.5	33.4	32.5	0.9
0.5	1.000	15	29.4	30.1	-0.7
0.5	1.000	25	23.7	26.5	-2.8
0.5	1.000	35	19.7	22.4	-2.7
0.6	0.111	0	22.2	26.7	-4.6
0.6	0.111	7.5	25.0	28.0	-2.9
0.6	0.111	15	24.2	28.0	-3.8
0.6	0.111	25	22.7	26.7	-4.1
0.6	0.111	35	19.6	24.3	-4.7
0.6	0.176	0	28.7	31.0	-2.3
0.6	0.176	7.5	28.5	31.1	-2.6
0.6	0.176	15	28.6	30.5	-1.9
0.6	0.176	25	23.7	28.5	-4.8
0.6	0.176	35	20.7	25.6	-4.9
0.6	0.250	0	34.3	34.7	-0.5
0.6	0.250	7.5	33.1	34.1	-0.9
0.6	0.250	15	30.8	32.8	-2.0
0.6	0.250	25	25.4	30.3	-4.9
0.6	0.250	35	21.3	26.9	-5.6