The Experimental and Kinetic Study on Ignition Characteristics of n-Butane/Oxygen-Enriched Air Mixtures in a Heated Meso-Channel

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(Supplemental Material)



Figure S1. Flame behaviors of the mixed gas after ignition.

(*v*=0.4 m/s)

Table S1. Partial Reactions in the Analyses.

|  |  |
| --- | --- |
| **NO.** | **Reaction** |
| R1 | H+O2<=>O+OH |
| R13 | HO2+OH<=>H2O+O2 |
| R14 | H2O2+O2<=>2HO2 |
| R15 | H2O2+O2<=>2HO2 |
| R16 | H2O2(+M)<=>2OH(+M) |
| R27 | HCO+O2<=>CO+HO2 |
| R43 | CH2O+OH<=>HCO+H2O |
| R44 | CH2O+H<=>HCO+H2 |
| R45 | CH2O+O<=>HCO+OH |
| R46 | CH2O+CH3<=>HCO+CH4 |
| R47 | CH2O+HO2<=>HCO+H2O2 |
| R63 | CH3O(+M)<=>CH2O+H(+M) |
| R64 | CH3O+O2<=>CH2O+HO2 |
| R109 | CH3+HO2<=>CH3O+OH |
| R110 | CH3+HO2<=>CH4+O2 |
| R113 | CH3+O2<=>CH2O+OH |
| R151 | 2CH3(+M)<=>C2H6(+M) |
| R163 | C2H4+H(+M)<=>C2H5(+M) |
| R184 | C2H5+O2<=>C2H4+HO2 |
| R499 | C3H5-A+HO2<=>C3H5O+OH |
| R668 | C4H10(+M)<=>2C2H5(+M) |
| R669 | C4H10(+M)<=>NC3H7+CH3(+M) |
| R681 | C4H10+CH3<=>SC4H9+CH4 |
| R682 | C4H10+H<=>PC4H9+H2 |
| R683 | C4H10+H<=>SC4H9+H2 |
| R684 | C4H10+OH<=>PC4H9+H2O |
| R685 | C4H10+OH<=>SC4H9+H2O |
| R686 | C4H10+O<=>PC4H9+OH |
| R687 | C4H10+O<=>SC4H9+OH |
| R688 | C4H10+HO2<=>PC4H9+H2O2 |
| R689 | C4H10+HO2<=>SC4H9+H2O2 |
| R716 | PC4H9<=>C2H5+C2H4 |
| R717 | SC4H9<=>C3H6+CH3 |