2022 Spring Technical Meeting

of The Central States Section of the Combustion Institute

May 15–17, 2021

Detroit, Michigan

Title of the Paper [18pt]

*Author Name1, Author Name1, Author Name2, Author Name2,\*[14pt Italic]*

*1Department, Institution, Address, Country [12pt Italic]*

*2Department, Institution, Address, Country*

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**Abstract:** [10pt] Abstract should be between 150–200 words and should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

***Keywords: Keyword1, Keyword2, Keyword3, Keyword4*** *[10pt Italic]*

*(Provide 2-4 keywords describing your research. Only abbreviations firmly established in the field may be used. These keywords will be used for sessioning/indexing purposes.)*

1. **Introduction [12pt]**

All text [12pt]

Sample Equation:

*X*i*≡Y*i*W*N2*/W*i (1)

*ξ*st *≡* (*Y*O2*,*l *−* 4*Y*F*,*l)*/*(*Y*O2*,*l + 4*Y*F*,*r *− Y*O2*,*r *−* 4*Y*F*,*l)(2)

Sample Figure: [Inline with text. Do not text wrap]

Figure 1: Schematic illustration of the outer structure of a partially premixed methane flame established between counterflowing streams of methane mixed with nitrogen and fuel-lean mixture of oxygen, nitrogen and methane

Sample Table:

Table 1: Rate data for elementary reactions employed in the asymptotic analysis. Units are moles, cubic centimeters, seconds, kJoules, Kelvin.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Number | Reaction | *Bn* | *αn* | *En* |
| 1f | O2 + H *→* OH + O | 2.000E+14 | 0.00 | 70.30 |
| 1b | O + OH *→* H + O2 | 1.568E+13 | 0.00 | 3.52 |
| 2f | H2 + O *→* OH + H | 5.060E+04 | 2.67 | 26.3 |
| 2b | H + OH *→* O + H2 | 2.222E+04 | 2.67 | 18.29 |
| 3f | H2 + OH *→* H2O + H | 1.000E+08 | 1.60 | 13.80 |
| 3b | H + H2O *→* OH + H2 | 4.312E+08 | 1.60 | 76.46 |
| 4f | OH + OH *→* H2O + O | 1.500E+09 | 1.14 | 0.42 |
| 4b | O + H2O *→* OH + OH | 1.473E+10 | 1.14 | 71.09 |
| 5 | H + O2 + M *→* HO2 + M | 2.300E+18 | -0.80 | 0.00 |
| 6f | CO + OH *→* CO2 + H | 4.400E+06 | 1.50 | -3.10 |
| 6b | H + CO2 *→* OH + CO | 4.956E+08 | 1.50 | 89.76 |

# Methods / Experimental

1. **Results and Discussion**
2. **Conclusions**

**5. Acknowledgements**

This research was funded by …

**6. References**

References should be indicated in the text by full-size numbers in brackets, e.g., [1], [2–3], and should be numbered in the order cited. The actual authors can be referred to, but the reference number(s) must always be given. The numbered reference list at the end of the paper should conform to the following style used for *Combustion and Flame*:

**Journal article:**  
[1] A.L. Sánchez, E. Fernárdez-Tarrazo, F.A. Williams, The chemistry involved in the third explosion limit of H H2O2 mixtures, Combust. Flame 161 (2014) 111-117.

**Journal article in press:**  
[2] H. Terashima, M. Koshi, Mechanisms of strong wave generation in end-gas autoignition during knocking combustion, Combust. Flame (2014), doi:[10.1016/j.combustflame.2014.12.013](http://dx.doi.org/10.1016/j.combustflame.2014.12.013).

**Book:**  
[3] P. Prasad, Propagation of a curved shock and nonlinear ray theory, Longman Scientific & Technical, Harlow, U.K., 1993. You may also include the page or page range (optional).

**Reference to a chapter in an Edited Book:**  
[4] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), Introduction to the Electronic Age, E-Publishing Inc., New York, 2009, pp. 281-304.

**Symposium Proceedings:**  
All symposium papers associated with the International Symposium on Combustion published before 2000 should be cited in the following way:  
[5] Y. Ju, G. Masuya, P.D. Ronney, Effects of radiative emission and absorption on the propagation and extinction of premixed gas flames, Symp. (Int.) Combust. 27 (1998) 2619-2626.

All symposium papers associated with the International Symposium on Combustion published in 2000 or later should be cited in the following way:   
[6] A. Attili, F. Bisetti, M.E. Mueller, H. Pitsch, Damköhler number effects on soot formation and growth in turbulent premixed flames, Proc. Combust. Inst. 35 (2015)1215-1223.

**Conference Proceedings**  
A conference proceedings should be styled as a book, with publisher or institution sponsoring publication and the year published as well as the year the conference was held. Authors must ensure that these references are publicly available. Example:  
[7] R. Tangko, D.A. Sheen, H. Wang, Combustion kinetic modeling using multispecies time-histories in shock-tube oxidation of n-dodecane, 7th U.S. National Combustion Meeting (2011), paper 2A18.

**Internal Reports:**  
[8] A.S. Johnson, F.W. Adams, Use of laser diagnostics in supersonic flows, Report No. SAND87-8003, Sandia National Laboratories, Livermore, CA, USA, 1987. Authors must ensure that these references are publicly available.

**Journal abbreviations sources:**  
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<http://www.pg.gda.pl/chem/Dydaktyka/Analityczna/MISC/Journal_Titles_and_%20Abbreviations.htm>

**Page Limits**: The total length of the paper including references should be limited to 10 pages.