Combustion of Ammonia Mixed with Dimethyl Ether
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Introduction

| NH3 conversion occurs at lower temperature with excess of O2. |
| NO formation occurs at the highest temperatures studied with an ammonia yield to NO not higher than 62 ppm. |
| NO formation is lower if the DME/NH3 ratio increases. |
| DME derived species interact with NO. |
| The presence of H/OH radicals promotes NH3 conversion. |
| Radicals formed from DME interact with NH3, promoting its conversion. |
| The reaction is globally shifted towards the formation of N2. |

Methodology

References


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Conclusions

Figure 1. A) NH3 concentration. B) DME concentration. C) NO concentration.

Figure 2. Reaction pathways of NH3 and DME.

Figure 3. Normalized Sensitivity NH2.