

||||| 特集：燃焼～単純化して探る複雑現象 |||||
(解説)

予混合噴霧の燃焼と微小重力実験

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Combustion of Premixed Spray and Microgravity Experiments

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Abstract

In spray combustors, the group combustion of fuel spray is required to attain stable combustion. The group combustion follows some transient processes, such as ignition and flame spread after local mixing of fuel spray and air. The fuel spray/air mixture is termed the premixed spray. It is important to conduct systematic researches on combustion of premixed sprays to elucidate the occurrence of group combustion. Recently, there have been many microgravity experiments which are fundamental researches of some elementary processes appearing in the premixed-spray combustion. The present paper shows some results from these microgravity experiments and premixed-spray combustion experiments. Characteristics of the premixed-spray combustion are discussed based on knowledge from microgravity researches.