



Flame Radiation, Structure, and Scalar Properties in Microgravity Laminar Fires (Paperback)

By Douglas Feikema

Bibliogov, United States, 2013. Paperback. Condition: New. Language: English . Brand New Book ***** Print on Demand *****.Results from microgravity combustion experiments conducted in the Zero Gravity Research Facility (ZGF) 5.18 second drop facility are reported. The results quantify flame radiation, structure, and scalar properties during the early phase of a microgravity fire. Emission mid-infrared spectroscopy measurements have been completed to quantitatively determine the flame temperature, water and carbon dioxide vapor concentrations, radiative emissive power, and soot concentrations in microgravity laminar methane/air, ethylene/nitrogen/air and ethylene/air jet flames. The measured peak mole fractions for water vapor and carbon dioxide are found to be in agreement with state relationship predictions for hydrocarbon/air combustion. The ethylene/air laminar flame conditions are similar to previously reported results including those from the flight project, Laminar Soot Processes (LSP). Soot concentrations and gas temperatures are in reasonable agreement with similar results available in the literature. However, soot concentrations and flame structure dramatically change in long-duration microgravity laminar diffusion flames as demonstrated in this report.

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Reviews

It is a of the most popular publication. It is actually rally intriguing through looking at time period. Your daily life span is going to be change the instant you total reading this publication.

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Basically no phrases to clarify. It really is writter in straightforward phrases rather than hard to understand. You will not sense monotony at at any moment of your own time (that's what catalogues are for concerning if you ask me).

-- Doris Beier