1. Record Nr. UNINA9910709938403321 Workshop on combustion simulation databases for real transportation Titolo fuels / / editor, Jeffery W. Hudgens; report writing team, Thomas C. Allison [and others] [Gaithersburg, MD]:,: U.S. Dept. of Commerce, National Institute of Pubbl/distr/stampa Standards and Technology, , [2003] Descrizione fisica 1 online resource (xii, 36 pages): color illustrations Collana NISTIR; ; 7155 Altri autori (Persone) AllisonThomas Clayton HudgensJ. W <1949-> (Jeffrey Warren) Soggetti Transportation - Databases Transportation - Combustion Transportation - Fuel **Transportation** Conference papers and proceedings. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali "Report of the workshop conducted at the National Institute of Standards and Technology, Gaithersburg, MD, September 4-5, 2003." Contributed record: Metadata reviewed, not verified. Some fields updated by batch processes. Title from PDF title screen. Nota di bibliografia Includes bibliographical references. Sommario/riassunto The overall aim of the present workshop was to create a forum that would help NIST and the combustion community to assess the data needs of studies involving transportation fuels and to recommend plans for developing reference databases and chemical kinetic models. These databases and models will enable the combined application of chemical kinetics and computational fluid dynamics (CFD) programs to simulate combustion processes realistically. The target applications were envisioned to be real liquid transportation fuels, which we refer to hereafter as 'real fuels, ' and include aviation, diesel, and gasoline fuels.

Some specific objectives were: (1) to evaluate the benefits and

feasibility of a cooperative program that focuses upon the combustion

of real fuels; (2) to evaluate the benefits and feasibility of using surrogate mixtures and modeling thereof to realistically describe the important characteristics and behavior of real fuels; (3) to broadly assess the data needs; (4) to assess the community's willingness to work together to address the data and information needs for model-based design and; (5) to assess how to make better use of knowledge management structures to facilitate information exchange and more rapid progression from the laboratory to applications.