1. Record Nr. UNINA9910814162603321 Autore Bansch Cornelie **Titolo** Reactions of hydroxyl radicals with oxygenated hydrocarbons in the gas phase: a laser photolysis laser-induced fluorescence study / / von Cornelie Bansch Berlin:,:Logos Verlag,, [2017] Pubbl/distr/stampa ©2017 **ISBN** 3-8325-9226-1 Descrizione fisica 1 online resource (ix, 173 pages): illustrations Disciplina 535.58 Soggetti Laser spectroscopy Laser-induced fluorescence Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali PublicationDate: 20171221 Sommario/riassunto Long description: Hydroxyl radicals (OH) play a key role in ignition processes and in the atmosphere. Thus, the detailed knowledge of the kinetics of OH reactions is crucial in combustion and atmospheric research. In this work, an experimental approach for time-resolved studies of OH radical reactions at high pressures with pulsed laser photolysis/laser-induced fluorescence was revised and the reactions of dimethyl ether, diethyl ether, and dimethoxymethane with OH radicals were investigated in detail. The results reveal a deeper insight into the reaction processes of ether compounds with OH in general, contributing to a better understanding of the combustion of different

biofuels and fuel additives.