

1. Record Nr.	UNINA9910795201803321
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Titolo	Fuel/engine interactions // Gautam Tavanappa Kalghatgi
Pubbl/distr/stampa	Warrendale, Pa. (400 Commonwealth Dr., Warrendale PA USA) : , : Society of Automotive Engineers, , [2014]
ISBN	0-7680-8043-6 0-7680-8839-9
Descrizione fisica	1 online resource (1 PDF (xv, 255 pages)) : illustrations
Collana	Society of Automotive Engineers. Electronic publications
Disciplina	629.25/38
Soggetti	Internal combustion engines - Design and construction Motor fuels TECHNOLOGY & ENGINEERING / Automotive TECHNOLOGY & ENGINEERING / Power Resources / Fossil Fuels Automotive technology and trades Fossil fuel technologies
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction : outlook for energy and transport fuels -- Manufacture, composition, and properties of practical fuels for internal combustion engines -- Deposits in internal combustion engines -- Fuel effects on autoignition in premixed system - knock in spark ignition engines and combustion in homogeneous charge compression ignition engines -- Preignition and super-knock in turbocharged spark ignition engines -- Fuel effects on compression ignition combustion - is low-octane gasoline the best fuel for advanced diesel engines? -- Implications for future transport fuels -- Abbreviations.
Sommario/riassunto	Conventional fossil fuels will constitute the majority of automotive fuels for the foreseeable future but will have to adapt to changes in engine technology. Unconventional transport fuels such as biofuels, gas-to-liquid fuels, compressed natural gas, and liquid petroleum gas will also play a role. Hydrogen might be a viable transport fuel if it overcomes barriers in production, transport, storage, and safety and/or if fuel cells become viable. This book opens by considering these issues and then introduces practical transport fuels. A chapter on engine deposits

follows, which is an important practical topic about how fuels affect engines that is not usually considered in other books. The next three chapters discuss auto-ignition phenomena in engines. The auto-ignition resistance of fuels is the most important fuel property since it limits the efficiency of spark ignition engines and determines the performance of compression ignition engines. Moreover, the manufacture of fuels is primarily driven by the need to meet auto-ignition quality demands set by fuel specifications.
