

1. Record Nr.	UNINA9910377833903321
Autore	No Soo-Young
Titolo	Application of Liquid Biofuels to Internal Combustion Engines / / by Soo-Young No
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2019
ISBN	981-13-6737-X
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (XVIII, 466 p. 29 illus., 5 illus. in color.)
Collana	Green Energy and Technology, , 1865-3529
Disciplina	665.37
Soggetti	Renewable energy resources Automotive engineering Engines Machinery Renewable and Green Energy Automotive Engineering Engine Technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chap. 1. Production of liquid biofuels from biomass -- Chap. 2. Straight vegetable oil -- Chap. 3. Biodiesel -- Chap. 4. Paraffinic biofuels: HVO and BTL diesel -- Chap. 5. Bio-oil and pyrolytic oil -- Chap. 6. Biomethanol in advanced CI engines -- Chap. 7. Bioethanol in advanced CI engines -- Chap. 8. Biobutanol in advanced CI engines -- Chap. 9. Other higher alcohols -- Chap. 10. Other drop-in fuels.
Sommario/riassunto	This book provides a comprehensive overview of the application of liquid biofuels to internal combustion (IC) engines. Biofuels are one of the most promising renewable and sustainable energy sources. Particularly, liquid biofuels obtained from biomass could become a valid alternative to the use of fossil fuels in the light of increasingly stringent environmental constraints. In this book, the discussion is limited to liquid biofuels obtained from triglycerides and lignocellulose among the many different kinds of biomass. Several liquid biofuels from triglycerides, straight vegetable oil, biodiesel produced from inedible vegetable oil, hydrotreated vegetable oil, and pyrolytic oil have been selected for discussion, as well as biofuels from lignocellulose

bio-oil, alcohols such as methanol, ethanol and butanol, and biomass-to-liquids diesel. This book includes three chapters on the application of methanol, ethanol and butanol to advanced compression ignition (CI) engines such as LTC, HCCI, RCCI and DF modes. Further, the application of other higher alcohols and other drop-in fuels such as DMF, MF, MTHF, and GVL are also discussed. The book will be a valuable resource for graduate students, researchers and engine designers who are interested in the application of alcohols and other biofuels in advanced CI engines, and also useful for alternative energy planners selecting biofuels for CI engines in the future.
