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Titolo	Combustion for Power Generation and Transportation : Technology, Challenges and Prospects // edited by Avinash Kumar Agarwal, Santanu De, Ashok Pandey, Akhilendra Pratap Singh
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Descrizione fisica	1 online resource (X, 451 p. 240 illus., 178 illus. in color.)
Disciplina	621.042
Soggetti	Energy systems Thermodynamics Heat engineering Heat transfer Mass transfer Engines Machinery Energy Systems Engineering Thermodynamics, Heat and Mass Transfer Engine Technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Continuous Detonation Wave Engines for the Future -- Carbon Sequestration and Optimization of Enhanced Oil and Gas Recovery -- Lean Blowout (LBO) Prediction through Symbolic Time Series Analysis -- Multiple Mapping Conditioning Approach for Turbulent Reactive Flows -- Gasoline Direct Injection – Challenges -- Use of Lasers and Optical Diagnostics for Next Generation IC Engine Development: Ushering New Era of Engine Development -- Investigation of Forward and Reverse Flow CDC Combustors -- Advanced Combustion Concepts for Energy Generation and Environmental Sustainability -- Theoretical Formulation for the Investigation of Entropy-Driven Combustion Instabilities in Gas Turbine Engines -- Thermodynamic Modelling of Combustion Process in a Spark Ignition Engine and its Numerical Predictions -- Effect of

Premixed Ratio and Injection Timing on the Combustion and Emission Characteristics of RCCI Engine -- A Novel Concept for Energy Modeling and Simulation -- Global and Local Viewpoints to Analyze Turbulence-Premixed Flame Interaction -- Design of a Solar-Powered Stirling Engine - Generator -- Chronology of Dynamic Stall Characteristics Through Simultaneous PIV and Surface Pressure Measurements -- Syngas as SI Engine Fuel: Combustion Perspective -- Exergy Destruction Study on a Small DI Diesel Engine -- Numerical Modeling of MILD Combustion at High Pressure to Predict the Optimal Operating Conditions -- Pulse Combustor Driven Pressure-Gain Combustion For High Efficiency Gas Turbine Engines -- Development of an Indigenous Sensor For Sub-Micron Aerosol Monitoring in India.

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Sommario/riassunto

This research monograph presents both fundamental science and applied innovations on several key and emerging technologies involving fossil and alternate fuel utilization in power and transport sectors from renowned experts in the field. Some of the topics covered include: autoignition in laminar and turbulent nonpremixed flames; Langevin simulation of turbulent combustion; lean blowout (LBO) prediction through symbolic time series analysis; lasers and optical diagnostics for next generation IC engine development; exergy destruction study on small DI diesel engine; and gasoline direct injection. The book includes a chapter on carbon sequestration and optimization of enhanced oil and gas recovery. The contents of this book will be useful to researchers and professionals working on all aspects on combustion.

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