Record Nr.	UNINA9910812748503321
Titolo	Carbon-neutral fuels and energy carriers / / edited by Nazim Z. Muradov, T. Nejat Veziroglu
Pubbl/distr/stampa	Boca Raton, FL, : CRC Press, c2012
ISBN	0-429-09601-1 1-4398-1858-4
Edizione	[1st ed.]
Descrizione fisica	1 online resource (835 p.)
Collana	Green chemistry and chemical engineering
Altri autori (Persone)	MuradovNazim Z VezirogluT. Nejat
Disciplina	621.042
Soggetti	Chemical engineering Environmental engineering Fuel Renewable energy sources
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front Cover; Contents; Preface; Green Chemistry and Chemical Engineering; Editors; Chapter Lead Contributors; Chapter 1 - Energy Options in a Carbon-Constrained World: An Advent of Carbon-Neutral Technologies; Chapter 3 - Nuclear Power for the Production of Carbon- Free Energy and Fuels; Chapter 4 - Solar Production of Fuels from Water and CO2; Chapter 5 - Efficient Utilization of Solar, Wind, and Geothermal Energy Sources through Exergy Analysis; Chapter 6 - Electrochemical Reduction of CO2 to Fuels Chapter 7 - Energy Storage and Other Ways of Handling Intermittent Energy Production from Renewable SourcesChapter 9 - Synthetic Hydrocarbon Fuels from Lignocellulosic Biomass; Chapter 10 - Fundamentals of Biohydrogen Production Processes; Chapter 11 - Photobiological and Photobiomimetic Production of Solar Fuels; Chapter 12 - Fermentative Biofuels: Prospects of Practical Application; Chapter 13 - Biofuels from Oily Biomass; Chapter 14 - Fossil Fuel Decarbonization: In the Quest for Clean and Lasting Fossil Energy; Chapter 15 - Clean Car Options for the Twenty-First Century; Back Cover

1.

Concerns over an unstable energy supply and the adverse environmental impact of carbonaceous fuels have triggered considerable efforts worldwide to find carbon-free or low-carbon alternatives to conventional fossil fuels. Carbon-Neutral Fuels and Energy Carriers emphasizes the vital role of carbon-neutral energy sources, transportation fuels, and associated technologies for establishing a sustainable energy future. Each chapter draws on the insight of world-renowned experts in such diverse fields as photochemistry and electrochemistry, solar and nuclear energy, biofuels and