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Titolo	Innovative Renewable Waste Conversion Technologies / / edited by Gheorghe Lazaroiu, Lucian Mihaescu
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ISBN	3-030-81431-9
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (464 pages)
Collana	Biomedical and Life Sciences Series
Disciplina	333.794
Soggetti	Renewable energy sources Refuse and refuse disposal Energy policy Energy and state Renewable Energy Waste Management/Waste Technology Energy Policy, Economics and Management
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Structure of the energy produced from renewable sources -- The matrix of energy biofuels -- The technological matrix for the efficient use of biofuels -- Combined combustion required for energy fuels -- Experimental tests on the combustion of animal fats -- Combustion of biogas obtained by anaerobic fermentation of animal proteins -- Feasibility and experimental study of cogeneration plant using wood biomass gasification process -- Design and experimental testing of a horizontal flame burner for agricultural waste pellets -- Experimental research of combustion of poultry manure -- Waste heat recovery from boilers and furnaces running on biomass waste products -- Solutions for Polluting Emissions Reduction in Internal Combustion Engines -- Technologies for energy production from lignocellulosic agricultural residues -- Purification of waste oils from the transport industry through nanotechnology -- Environmental impact and risk analysis of the implementation of cogeneration power plants through biomass processing -- Informatics applications for efficient exploitation of

	forestry fund -- The staged combustion of meat-and-bone meal: The characteristics of conversion sub-processes and large-scale process outputs.
Sommario/riassunto	This book investigates innovative solutions to increase the share of renewable engery in the global power mix, with a particular focus on improved and sustainable biomass conversion technologies. To this end, the book deals with an analysis of the generation mix of renewable energies (including biofuels, renewable waste and biogas) in the overall power balance of several countries. In addition, the possibilities of using bioenergy resources in the context of power generation are thoroughly analyzed. As one of the most important ways of converting biomass into energy, the combustion process is analyzed in detail, highlighting the vast potential for the use of innovative biofuels. In this context, a detailed classification of existing biofuels is established, reflecting the relationship between their energy properties and their potential use in industrial facilities. Additionally, the most efficient combustion technologies for the respective applications are discussed. Furthermore, the authors emphasize that the management of renewable waste, both from industry (tannery waste and oils from transport) and agriculture, requires an economic and environmental friendly approach. The challenges of burning various renewable waste fuels and upgrading industrial facilities are discussed, and the ideas and technologies presented in this book contribute to the UN Sustainable Development Goal (SDG) for "Affordable and Clean Energy". The book is a useful resource for professionals dealing with current and upcoming activities related to renewable energy combustion, and a good starting point for young researchers.