Record Nr. UNINA9910816045403321 Transportation biofuels: novel pathways for the production of ethanol, **Titolo** biogas and biodiesel / / edited by Alwin Hoogendoorn, Han van Kasteren Cambridge [England], : RSC Pub., c2011 Pubbl/distr/stampa **ISBN** 1-84973-227-2 Edizione [1st ed.] Descrizione fisica 1 online resource (xii, 190 pages) **ISSN** Collana RSC green chemistry series, , 1757-7039;;9 Altri autori (Persone) HoogendoornAlwin KasterenHan van Disciplina 662.669 Soggetti **Biodiesel fuels** Ethanol as fuel Biogas Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Introduction -- Biological conversion of syngas into ethanol --Biological conversion of syngas into methane -- Enzymatic biodiesel --Concluding remarks. "Current world fossil oil production is struggling to meet demand and Sommario/riassunto may even show a decline after 2010. It is therefore necessary to develop new energy efficient production pathways for transportation biofuels. This book offers an insight into three promising and innovative pathways for the biological production of biodiesel, ethanol and methane. These unconventional methods should provide higher product yields, less stringent feedstock specifications, lower chemical additive demand, reduced waste production and much better energy balances when compared to more traditional methods. The first pathway is the enzymatic production of a new kind of biodiesel where no glycerol waste is produced and a twenty percent higher product yield is obtained. The other two pathways are based on the biological conversion of syngas into ethanol or methane using various kinds of lignocellulosic biomass as the starting point. For each of the three

pathways a comparison will be made with competing production

methods. The contents reflect extended desktop research and show practical experimental results. Government scientists, academics and biofuel producers with an interest in novel transportation fuels will all find this book to be essential reading."--Publisher description.