

molecules

IMPACT
FACTOR
4.2

Indexed in:
PubMed

CITESCORE
7.4

Special Issue Reprint

Lignocellulosic Biomass

www.mdpi.com/books/reprint/4665

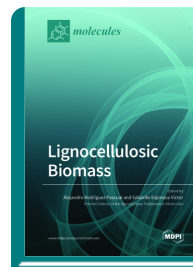
Edited by

Alejandro Rodríguez Pascual

Eduardo Espinosa Víctor

ISBN 978-3-0365-2475-7 (Hardback)

ISBN 978-3-0365-2474-0 (PDF)



Recently, there has been a growing awareness of the need to make better use of natural resources. Hence, the utilization of biomass has led to so-called biorefinery, consisting of the fractionation or separation of the different components of the lignocellulosic materials in order to achieve a total utilization of the same, and not only of the cellulosic fraction for paper production.

The use of plant biomass as a basic raw material implies a shift from an economy based on the exploitation of non-renewable fossil fuels, with limited reserves or with regeneration cycles far below the rates of exploitation, to a bioeconomy based on the use of renewable organic natural resources, with balanced regeneration and extraction cycles. To make this change, profound readjustments in existing technologies are necessary, as well as the application of new approaches in research, development, and production.

"Biorefinery" is the term used to describe the technology for the fractionation of plant biomass into energy, chemicals, and consumer goods. The future generation of biorefinery will include treatments, leading to high-value-added compounds. The use of green chemistry technologies and principles in biorefineries, such as solvent and reagent recovery and the minimization of effluent and gas emissions, is essential to define an economically and environmentally sustainable process.

In particular, the biorefinery of lignocellulosic materials to produce biofuels, chemicals and materials is presented as a solid alternative to the current petrochemical platform and a possible solution to the accumulation of greenhouse gases.



Order Your Print Copy

You can order print copies at

www.mdpi.com/books/reprint/4665

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.