polymers

IMPACT FACTOR 4.7

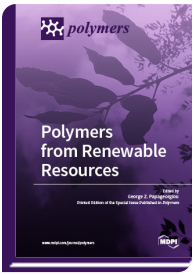
Indexed in: PubMed

CITESCORE 8.0

Special Issue Reprint

Polymers from Renewable Resources

www.mdpi.com/books/reprint/1069



Edited by
George Z. Papageorgiou

ISBN 978-3-03897-451-2 (Softback)
ISBN 978-3-03897-452-9 (PDF)

The use of polymeric materials from renewable resources dates back in history. Even though synthetic polymers dominated the market for years, there is now a need for the development of sustainable, safe, and environmentally benign plastics from renewable resources.

Green polymers from renewable resources can be isolated from biomass, obtained through the chemical modification of natural polymers, or synthesized through a two-step process from biomass involving monomer synthesis and then polymerization. Finally, polymer synthesis can be achieved in plants through photosynthesis using carbon dioxide or in microorganisms (e.g. synthesis of poly(hydroxy-alkanoate)s).

In this issue, the developments in sustainable polymers including PLA, PHB, and furan-based materials are presented together with those concerning bionanocomposites of lignocellulosic mater or starch, and blends of bioplastics. The use of biomass-based plasticizers, fillers, and additives for the improvement of polymers' properties and the applications of biopolymers such as hyaluronic acid, carrageenans, chitosan, and polysaccharides in medicine and pharmaceutics are discussed.

MDPI

Order Your Print Copy
You can order print copies at
www.mdpi.com/books/reprint/1069

MDPI Books

Publishing Open Access Books & Series

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.

MDPI AG
Grosspeteranlage 5
4052 Basel
Switzerland
Tel: +41 61 683 77 34
www.mdpi.com/books
books@mdpi.com