Special Issue

Bio-Materials in a Bark Biorefinary Context

Message from the Guest Editor

I am very pleased to invite you to contribute to a Special Issue of the Journal of Applied Sciences, "Bio-Materials in a Bark Biorefinary Context". There is huge potential for converting bark into value-added products due to its complex and highly heterogeneous chemical composition. However, this chemical upgrade, in a biorefinery context, is somewhat limited and challenging. Barks fractionation into divisions with distinctive polarity can be achieved through successive extractions applying a combination of organic solvents and hot water. Lignin and polysaccharides are analyzed by a first extraction with aqueous alkali solutions, followed by hydrolysis of the extractive-free bark by sulfuric acid to give Klason lignin and acid insoluble residue contents. Developing new processes that can extract, isolate, and purify these high value chemicals and other products is the main focus of research within a "Green Biorefinery" context.

Guest Editor

Dr. Joana Ferreira

 CERNAS—Research Centre for Natural Resources, Santarém Polytechnic University, Quinta do Galinheiro—S. Pedro, 2001-904 Santarém, Portugal

 LEAF—Linking Landscape, Environment, Agriculture and Food Research Center, Associate Laboratory TERRA, Instituto Superior de Agronomia, Universidade de Lisboa, Tapada da Ajuda, 1349-017 Lisboa, Portugal

Deadline for manuscript submissions

closed (31 August 2021)



Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



mdpi.com/si/67861

Applied Sciences Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41616837734 applsci@mdpi.com

mdpi.com/journal/applsci





Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5 CiteScore 5.5



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo

Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

