



Published on *Ecologic Institute: Science and Policy for a Sustainable World*
(<https://www.ecologic.eu>)

[Home](#) > Top Emerging Bio-based Products, their Properties and Industrial Applications

PUBLICATION

Brochure
Bioeconomy
Economics
Finance
Resource Conservation + Circular Economy
Sustainability

Top Emerging Bio-based Products, their Properties and Industrial Applications

 [1]

The
top
20
inno
vati
ve
bio-
bas
ed
pro
duc
ts in
Eur
ope

This brochure includes a set of infographics presenting the top 20 innovative bio-based products in Europe. Through an assessment of the active marketplace, EU-based development, innovation degree and market potential, the top 20 most innovative BBPs holding the greatest promise for commercial deployment within the next 5-10 years were identified. This selection includes engineering materials, new bioplastics, high added-value products for demanding applications in the pharmaceutical and biomedical fields as well as sustainable substitutes for critical raw materials. The brochure is available for download.

The 20 case studies were part of a study that mapped the most relevant value chains currently under development that originate from different kinds of large-volume biomass components (natural rubber, vegetable fibres, lignin, renewable oils and fats) and low-volume high-value (LVHV) biomass components (terpenes, natural polyelectrolytes) as well as urban wastes.

More than 100 innovative BBPs were monitored; lignin was found to generate the highest number of innovative products, together with terpenes and urban wastes. More than 30 innovative BBPs are approaching full availability on the market, and more than 20 products are now at the pilot plant level.

This study was performed for the European Commission's DG for Research & Innovation under the framework of the BIOSPRI tender "Study on support to R&I policy in the area of bio-based products (BBPs) and services".

Main Link

Download: Top Emerging Bio-based Products, their Properties and Industrial Applications [pdf,5.9 MB, English]

Ecologic Related Articles

- Support to Research and Innovation Policy for Bio-based Products (BIO-SPRI)
- Innovative Bio-based Products: Investment, Environmental Impacts and Future Perspectives

Citation

Ecologic Institute 2018: Top Emerging Bio-based Products, their Properties and Industrial Applications. Berlin.

Language

English

Credits

Authors & Editors:

Paola Fabbri, University of Bologna
Davide Viaggi, University of Bologna
Fabrizio Cavani, University of Bologna
Lorenzo Bertin, University of Bologna
Melania Michetti, University of Bologna
Erika Carnevale, University of Bologna
Juliana Velasquez Ochoa, University of Bologna
Gonzalo Agustin Martinez, University of Bologna
Micaela Degli Esposti, University of Bologna
Piret Kukk Fischer, Fraunhofer ISI
Sven Wydra, Fraunhofer ISI
Alexander Schwarz, Fraunhofer ISI
Frank Marscheider-Weidemann, Fraunhofer ISI

Layout:

Beáta Welk Vargová, Ecologic Institute

Coordination:

Paola Fabbri, University of Bologna
Piret Kukk Fischer, Fraunhofer ISI

Chiara Mazzetti, Ecologic Institute

Funding

- European Commission, Directorate-General Research & Innovation (DG Research & Innovation)

Publisher

- Ecologic Institute, Germany

Year

2018

Dimension

28 pp.

Project

Support to Research and Innovation Policy for Bio-based Products (BIO-SPRI)

Project ID

3513

Table of Contents

Abstract

Introduction

1 | Guayule Rubber

2 | Microfibrillated cellulose

3 | Thermoplastic biopolymers reinforced with natural fibres

4 | Natural fibres reinforced bioresin pre-pregs

5 | Self-binding composite non-woven natural fibres

6 | Lignin biocomposites reinforced with natural fibres

7 | High-purity lignin

8 | Lignin-based carbon nanofibres

9 | Lignin bio-oil

10 | Lignin-based phenolic resins

11 | BioBTX aromatics

12 | Bio-based phenol and alkylphenols

13 | Bio-based polyamide 12

14 | Biolubricants

15 | PHAs from renewable oils and fats

16 | Limonene-based engineering polymers

16 | Bacterial biosurfactants

18 | Biotechnological chitosan

19 | PHAs from urban wastes

20 | Volatile fatty acids (VFAs) mixture

Keywords

Bioeconomy, bio-based products and processes, Europe, design, layout

Source URL (modified on 06/19/2018 - 14:15): <https://www.ecologic.eu/15776>

Links

[1] <https://www.ecologic.eu/sites/files/presentation/2018/top-emerging-bio-based-products-mi.png>

