

The Global Market for Biobased and Sustainable Materials 2024-2035

<https://marketpublishers.com/r/G1971FE9D7A9EN.html>

Date: April 2024

Pages: 2585

Price: US\$ 1,266.00 (Single User License)

ID: G1971FE9D7A9EN

Abstracts

Advancements in science and technology are enabling companies to develop and design chemicals and materials for a more sustainable future. The global plastics industry is increasingly turning to biobased alternatives to supplement production and address sustainability concerns, as less than 10% of the world's plastic is currently recycled. Biobased materials are products primarily derived from living matter (biomass), either occurring naturally or synthesized. These materials can include bulk chemicals, platform chemicals, solvents, polymers, and biocomposites. Various processes are used to convert biomass components into value-added products and fuels, which can be broadly classified as biochemical or thermochemical. Additionally, biotechnological processes involving plant breeding, fermentation, and conventional enzyme isolation are employed. As new bio-based materials emerge, they have the potential to compete with conventional materials, and this publication explores the opportunities for their use in existing and novel products.

There is a growing demand from consumers and regulatory bodies for bio-based chemicals, materials, polymers, plastics, paints, coatings, and fuels that exhibit high performance, good recyclability, and biodegradable properties. This demand is driving the transition towards more sustainable manufacturing practices and products, as industries seek to reduce their environmental impact and meet evolving consumer preferences.

The Global Market for Bio-based and Sustainable Materials 2024-2035 offers comprehensive overview of the rapidly growing field of biobased and sustainable materials. It provides in-depth insights into a wide array of innovative materials, such as biobased chemicals and intermediates sourced from plants, wastes, and microbial and mineral origins. The report presents a thorough analysis of the production processes,

applications, and global market trends for essential biochemicals, including lysine, isosorbide, lactic acid, succinic acid, and many others. It also examines the current state and future prospects of the biobased chemicals market, highlighting key drivers, challenges, and opportunities.

The report offers a detailed assessment of the properties, production methods, and applications of synthetic biobased polymers, such as PLA, Bio-PET, and Bio-PP, as well as natural polymers like PHA and cellulose. The report analyzes the market dynamics, production capacities, and end-use markets for these sustainable alternatives to conventional plastics, providing valuable insights for manufacturers, suppliers, and investors.

Additionally, the report explores the potential of natural fiber plastics and composites, presenting a comprehensive analysis of various plant-based fibers, their properties, and applications across industries, including automotive, packaging, construction, and consumer goods. It evaluates the competitive landscape, market trends, and future outlook for this promising sector, enabling stakeholders to make informed decisions and capitalize on emerging opportunities.

Sustainable construction materials represent another key focus area of the report. It examines the latest trends and innovations in this field, such as hemp-based products, mycelium composites, green concrete, and advanced insulation solutions like aerogels. The report assesses the market drivers, challenges, and opportunities in the sustainable construction industry, providing valuable insights for companies looking to enhance their sustainability practices and gain a competitive edge.

The report also covers biobased packaging materials, sustainable textiles and apparel, biobased coatings and resins, biofuels, and sustainable electronics. It identifies key players, market trends, and growth potential across these industries, offering a comprehensive overview of the current market landscape and future prospects.

The report also provides in-depth company profiles, detailed market data, and expert analysis, making it an indispensable resource for businesses, investors, and stakeholders seeking to understand and capitalize on the immense potential of biobased and sustainable materials. Companies profiled include Aduro Clean Technologies, Agilyx, Alt.Leather, Alterra, Amsty, APK?AG, Aquafil, Arcus, Arda Biomaterials, Avantium, Axens, BASF Chemcycling, Beyond Leather Materials ApS, BiologiQ, Biome Bioplastics, Biophilica, Bpacks, Braskem, Bucha Bio, Byogy Renewables, Caphenia, Carbios, CJ CheilJedang, DePoly, Dow, Earthodic, Eastman

Chemical, Ecovative, Ensyn, EREMA Group GmbH, Evolved by Nature, Extractive, ExxonMobil, FlexSea, FORGE Hydrocarbons Corporation, Fych Technologies, Garbo, Gozen Bioworks, gr3n SA, Hyundai Chemical, cytos, Ioniqa, Itero, Kelpi, Kvasir Technologies, Licella, LignoPure GmbH, MeduSoil, Modern Meadow, Mura Technology, MycoWorks, Natural Fiber Welding, Notpla, Origin Materials, Pack2Earth, PersiSKIN, Plastic Energy, Plastogaz SA, Polybion, ProjectEx, Polystyvert, Pyrowave, Recyc'ELIT, RePEaT Co., Ltd., revalyu Resources GmbH, SA-Dynamics, Solugen, Stora Enso, Strong By Form, Sulapac, UBQ Materials, UNCAGED Innovations, Verde Bioresins, and ZymoChem.

Report contents include:

Biobased Chemicals and Intermediates

Biorefineries

Bio-based Feedstock and Land Use

Plant-based (Starch, Sugar Crops, Lignocellulosic Biomass, Plant Oils, Non-Edible Milk)

Waste (Food, Agricultural, Forestry, Aquaculture/Fishing, Municipal Solid, Industrial, Waste Oils)

Microbial & Mineral Sources (Microalgae, Macroalgae, Mineral)

Gaseous (Biogas, Syngas, Off Gases)

Company Profiles

Biobased Polymers and Plastics

Drop-in Bio-based Plastics

Novel Bio-based Plastics

Biodegradable and Compostable Plastics

Types and Key Market Players

Synthetic Biobased Polymers (PLA, PET, PTT, PEF, PA, PBAT, PBS, PE, PP)

Natural Biobased Polymers (PHA, Cellulose, Protein-based, Algal, Fungal, Chitosan)

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Lignin

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Interface and Compatibility

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Biobased Packaging Materials

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Chemical Recycling for Biofuels

Electrofuels

Algae-derived Biofuels

Green Ammonia

Biofuels from Carbon Capture (CO2 Capture, Direct Air Capture, Carbon Utilization)

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Refuse Derived Fuels

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