

# Polymers from renewable resources: macromolecular materials for the future?

## Polímeros a partir de recursos renovables: materiales macromoleculares para el futuro?

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### **Abstract**

After a general introduction to this realm, which will highlight its very rapid growth in both fundamental and applied research, the following topics will be briefly discussed with the primary purpose of providing a clear idea of their relevance:

1. The chemical modification of cellulose fibres in view of their use in composites or as omniphobic materials.
2. Polyesters and polyurethanes from lignin fragments.
3. New materials based on starch.
4. Recent advances in furan polymers.
5. Chemically modified vegetable oils as macromonomers.
6. Chitosan composites and blends.

The emphasis will be on our search for alternatives to polymers derived from fossil resources, with the concurrent input of green chemistry, in order to prepare novel materials possessing useful properties and intelligent features.

**Keywords:** materials, macromolecular, polymers, fossil resources, green materials