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New sustainable raw materials for polymers production

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Over 90% of all Polymeric Materials now in production use petrochemical raw materials. It is well known that in the future, renewable and sustainable raw materials will be mandatory, for a large number of reasons. Amongst the different primary sources of raw materials for Polymeric Materials, wood appears to be a very interesting one since the forests are the more efficient and natural alternative for Carbon Dioxide capture, with consequent carbon fixation. A

new process of Wood Liquefaction, by simultaneous catalytic depolymerization of Lignin and celluloses, in liquid phase and atmospheric pressure was developed, with one overall yield around 94% on a dry wood basis. The obtained "liquid Wood" after extraction with water to remove the soluble oligosacharides, proved to be one excellent starting material for adhesives and reactive polymers. A short review of other alternative sources of sustainable raw materials is presented.

Biography

J C m Bordado is a Full professor in the IST, Portugal.

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