GREEN CHEMISTRY'S MAJOR CHALLENGE: CARBOHYDRATES AS ORGANIC RAW MATERIALS

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„Although exhaustion of our fossil fuels is not imminent, it is inevitable" [1]

"A raw material as feedstock should be renewable rather than depleting wherever technically and economically practicable" [2]

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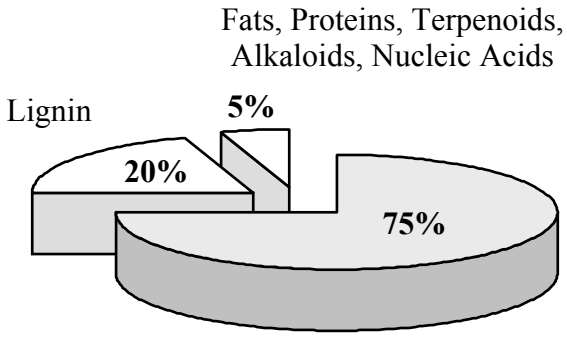
In view of the impending transition of the chemical industry from depleting fossil raw materials to renewable feedstocks – the end of cheap oil is predicted for 2040 at the latest [3] – a brief overview on chemically transforming carbohydrates, by far the major part of the annually regrowing biomass, into products which not only have versatile industrial application profiles but the potential to eventually replace those presently derived from petrochemical sources [4,5].

Renewable Biomass:
~ 200 bill. tons / year



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