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TOPIC(s) : Biomass conversion / Clean reactions

Sugar derived platform molecules for the development of biosourced solvents and polymer

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PURPOSE OF THE ABSTRACT

Sugar-derived molecules constitute a promising alternative for the development of "greener" alternative to existing molecules. Within this frame, our group has developed innovative transformations of sugar-derived platform molecules towards the development of new solvents or new polymers.

During the presentation, we will illustrate our approaches through selected examples. In particular, we will address the hydrothermal decomposition of glucose that allowed us to better understand the mechanism of formation of new bio-sourced resins. We will also exemplify the use of levulinic acid as a key molecular platform for the synthesis of a series of lactams, that could possibly replace the highly toxic NMP. At last, the valorization of bio-sourced carbonates towards the formation of non-isocyanate polyurethanes will be presented.

FIGURES

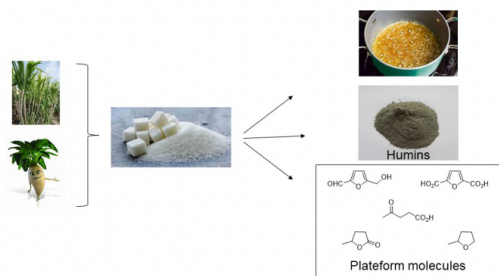


FIGURE 1

Figure 1

Sugar valorization

FIGURE 2

KEYWORDS

Green solvents | Bio-based polymers | Mechanistic investigations | Platform molecules

BIBLIOGRAPHY