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Deep eutectic solvents for polysaccharides processing. A review

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Highlights

- Deep eutectic solvents (DES) as multipurpose media for polysaccharides treatment
- DES as green, tailorable and cheap alternative for molecular ionic liquids
- DES for polysaccharides isolation, chemical transformation and modification
- Treatment of cellulose, starch, agar, chitin, chitosan, xylan and other carbohydrates

Abstract

In the review a new class of green solvents – Deep Eutectic Solvents (DES) as media for polysaccharides treatment has been presented. They are an alternative for ionic liquids, non- or low toxic, biodegradable multipurpose agents obtained via simple and convenient way. Moreover, a large number of composition possibilities allow to tailor their properties. Because of selective solubilization of polysaccharides DES can be used for lignocellulosic biomass delignification, cellulose extraction as well as cellulose nanofibrillation or nanocrystalization.

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