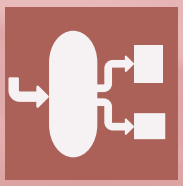

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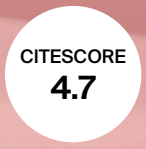

Section

Catalysis Enhanced Processes

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Section Information

The Catalysis Enhanced Processes section of *Processes* is the ideal forum for the publication of significant high-quality and high-impact research, as well as review papers. Catalytic processes are the core for most of the chemical, energy, and food industries. With the increase in population and, at the same time, increase in environmental concerns, it is essential to develop catalytic processes that allow a higher production rate with higher efficiency and lower emissions. The detailed knowledge on the interplay between the catalyst activity and selectivity and the reactor and process design will allow the development of more efficient production processes. We welcome manuscripts dealing with both experimental and modeling work; process design, including the effect of novel catalytic systems; multifunctional catalytic systems; and process intensified catalytic systems. The Catalysis Enhanced Processes section of *Processes* addresses these challenges. All manuscripts submitted for publication under this section will undergo the usual high-quality peer review process of the *Processes* journal and, if accepted, will be published rapidly online.

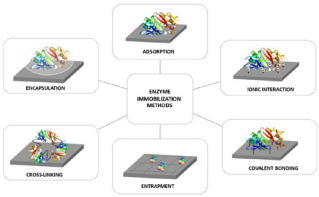
Selected Papers

DOI:10.3390/pr11061840

Use of Potential Immobilized Enzymes for the Modification of Liquid Foods in the Food Industry

Authors: Ernestina Garcia-Quinto, Raquel Aranda-Cañada, Paz García-García and Gloria Fernández-Lorente

Abstract: Enzymes are complex proteins that carry out biochemical reactions. Apart from being necessary for life, they are used in numerous industrial processes, especially in the textile, pharmaceutical, food and chemical sectors. One of the longest-lived industries regarding the use of enzymes is the food industry. Enzymes have always been used, mainly in their free form, to obtain new products and to improve the organoleptic qualities in different industries, such as in dairy, fruit and vegetables, and beverages. However, today, immobilized enzymes are the focus of attention in the liquid food industry, as they offer numerous advantages, such as stabilization and reuse, which enable cost reduction.

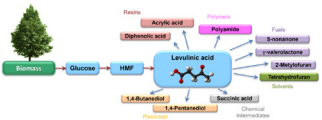


DOI:10.3390/pr10020223

Catalytic Transformation of Biomass-Derived Glucose by One-Pot Method into Levulinic Acid over Na-BEA Zeolite

Authors: Natalia Sobu´s and Izabela Czekaj

Abstract: This article presents the results of the conversion of biomass-based glucose to levulinic acid (LA) with the use of Na-BEA commercial zeolite catalyst. For this purpose, synthetic zeolite BEA was used as a matrix. The glucose conversion process with the participation of Na-BEA zeolite allowed the following acids to be obtained: levulinic acid, lactic acid, pyruvic acid and formic acid. The highest yield of levulinic acid was achieved when processed for 1–5 h at 200–250 °C with 0.1 g and 0.6 g of Na-BEA catalyst. We also compare the one-pot heterogeneous process with similar homogeneous process using H_2SO_4 as catalyst.



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