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Integral utilization of lignocellulosic materials; Residues of the agriculture and agri-food industry

Alejandro Rodríguez
University of Cordoba, Spain

Sustainable development is a concept that is gaining more and more importance in our society, putting into practice in all social aspects included in industrial production. One of the pillars of sustainable development is the sustainable economy, which relies on integral utilization of natural resources. To achieve this goal it is necessary to get the valorization of by-products or waste produced in agricultural or agro-industrial activities. Industrial activity has always relied on producing products that meet the needs of customers within a market, but in recent years the environmental component has been incorporated into production since more and more society is aware and convinced of the necessity to consume products that have been obtained with environmentally friendly processes. The processes involved in the processing of lignocellulosic biomass as raw material and leading to various products, are included in a scheme similar to the traditional refinery, under the heading of “biorefinery”. In these processes, through different operations (physical, chemical and/or biological), biomass is transformed into a wide range of high value-added products. The integrated process includes the valuation of carbohydrates, lignin and other products that must be transformed into fuels and chemicals. These sequences must be optimized to avoid wastes and processes that involve a minimum ideally energy and environmental impact must be used.

Biography

Alejandro Rodríguez has completed his PhD from University of Cordoba, Spain, and started to work as lecturer in University Pablo of Olavide, Spain. He worked as “Ramon y Cajal” researcher from 2007 to 2011. He is a lecturer in the Chemical Engineering Department in the University of Cordoba, Spain, from December 2011. His scholarly activity should be resumed as follow: books 1, book chapters 3, Journal Articles >80, proceedings & abstracts >50, invited talks 1 and supervisory roles (including present personnel): 9 PhD Students. He has also been serving as an Editorial Board Member of several journals.

q42ropaa@uco.es

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