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AGRIWASTES VALORIZATION AGAINST ECONOMIC AND ENVIRONMENTAL CRISIS

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Countries with economies based on agriculture have also vast amounts of wastes which do not have value and represent environmental hazards. During her work as a member of a multidisciplinary group, agroindustrial wastes have been converted into value added substances and materials with several aims: decreasing pollution, giving added value to wastes and working in a sustainable way in which the wastes of an industry can be used as the raw materials of the same or others, as the "cradle to cradle" and circular economy philosophies state. Some examples are biocompatible materials from beverage production wastes, more cost effective and environmentally sound than synthetic ones, structured materials from rice wastes capable of effluent decontamination with the adequate designs, and fine chemicals and intermediates prepared from catalysts based on solids from sunflower wastes using citrus wastes as raw chemicals and avoiding the need for expensive and toxic petroleum derivatives. Furthermore, conventional characterization techniques are applied to the new materials prepared and comparison of their properties against those of more conventional ones allows insight into the benefits of this kind of approach. Alternative sources of energy (including sunlight) are also being studied and compared to conventional heating in order to improve the sustainability of the processes.

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