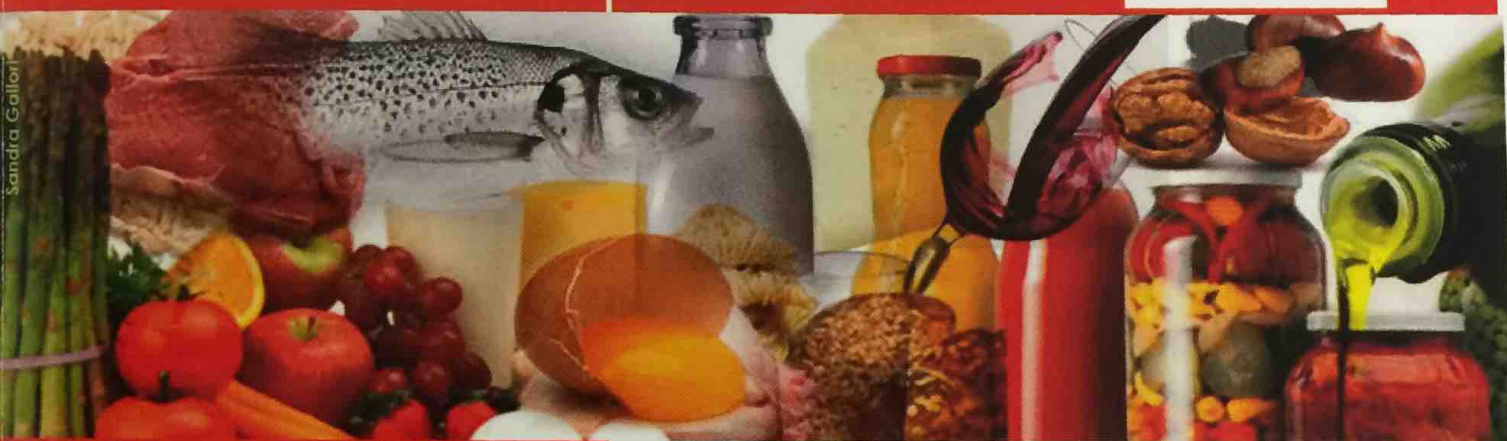


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PL 09 Enabling technologies for green extraction and agro-food waste valorization

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EU industries are heavily involved in the development of inexpensive green protocols that enable process intensification and competitive production [1]. The result is a huge gap between running classic production processes and new environmental friendly protocols based on integrated techniques aiming to higher efficiency and sustainability. The so called “enabling technologies” such as microwaves [2], ultrasound and cavitation reactors [3], dramatically changed the way we think of plant extraction and biomass conversion [4, 5]. Last generation of these non-conventional reactors (batch and flow systems) have been efficiently exploited for the extraction of natural matrices [6], for the hydrolysis of biopolymers [7] and for biodiesel preparation [8]. The “bio-refinery” concept is becoming widely accepted as the world’s natural resources are being used up and can be considered as a facility that combines the biomass conversion process with equipment to produce a wide range of bio-based products such as biofuels, biomaterials and high value-added chemicals, may develop new challenging research fields and open attractive business opportunities for food industry.

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