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LMPE Srl, a recent reality in the implementation of circular economy in the industrial district of Capannori – Lucca (Italy)

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The LMPE Lab is an Italian SME ranked as a start-up/spin-off of the National Interuniversity Consortium of Materials Science and Technology (INSTM). It is located in the Technological Pole of the Capannori Town Hall at Segromigno in Monte (Lucca). The mission of LMPE, holding a consolidate scientific and technological background in polymers science and technology is aimed at implementing routes leading, within the framework of circular economy, to ZERO industrial waste processes or giving second safe life to the wastes generated in various industries of the district. The strategic approaches that will be applied in order to meet the objectives of clean industrial processes and utilize all the free energy content yet available in the wastes, will imply: 1) Design and production of environmentally friendly prototype polymeric formulations based on the wastes generated in the Capannori's industrial district as raw materials and/or compatible fillers of biodegradable polymeric materials attained from fossil fuel feedstock as well as from agro industrial wastes. 2) In keeping with the expectations mentioned in the former point, attention will be posed onto full carbon backbone polymeric materials, holding an overall world market share higher than 50% in the production of relative short service life commodities. In particular, attention will be posed on the ways to impart to them propensity to biodegradation in different environmental compartments without compromising their eventual reutilization in recycling as second life raw material.

Technological Pole at Segromigno in Monte, Capannori Lucca

Biography

Lucía Pérez Amaro, PhD, has her expertise in Polymeric Materials Science and Technology. She received her PhD in 2008 (University of Concepción, Chile) and her Master's degree in Materials Engineering in 1999 (University Simón Bolívar, Venezuela). In particular, in the recent years (CNR- Italy), she gained expertise in the chemical modification of 2D nanostructured additives, their dispersion in polymeric matrices and the assessment of the ultimate properties of the final nanocomposites obtained. Her expertise also includes, thermo-mechanical modification of polymer blends and composites, assessment of the biodegradability of biodegradable and bio-based polymers modified with different functional additives, dispersion of oxo additives in polyolefin and their blends with biodegradable polymers, chemical recycling of aromatic polyester, functionalization of polyolefin and the assessment of their properties for water treatment applications.

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