On-Going-Projects



Sustainable Fresh Meat Packaging System

The primary objective of this study is to enhance the sustainability of

packaging used in the meat industry. Main objectives of this project would be to provide a Stateof-the-art literature review of multilayer flexible packaging structures for primal and retail packaging of meat products. The review will identify the sector trends in the area while providing an overview of how new EU directives will influence packaging into the future. The review will also identify progress in sustainability made in the sector, but also to benchmark existing packaging offerings against world leading packaging structure of superior shelf-life performance. In the scope of this project, we are aiming to de-risk and system proof the provision of biodegradable alternatives for the construct of multilayer material structures for primal and retail applications, but also to identify a route to company cost savings, enable job creation and an increase in potential Irish innovative products to meat companies by demonstrating our alternative packaging. CPS group oversees one of the work packages regarding multilayer materials waste management. A combination of mechano-green chemical and biocatalytic processes will be used to develop approaches for the morphological and chemical modification of multilayer component polymers including PE and EVOH. The target will be to make polyolefin materials amenable to biocatalytic depolymerisation and facilitate conversion to feedstocks suitable to produce high market value biopolymers such as sought after PHBs with equivalent properties to PE. Proprietary Mechano-Thermo-Chemical and enzymatic-based circularity technologies will be expanded and extended to PET, PE, EVOH and Polyamide multilayer films. Each defined stream will enter a dedicated circulisation loop with the option of direction into additional routes such PHB production according to assessment of most efficient and sustainable achievable loops.

