Engineering bacterial catabolism of plastic monomers

Plastics have become an essential part of our everyday life. However, concern for their accumulation in the environment has grown significantly in recent years. Only a small fraction of the plastics we consume are recycled, and even then, the number of times these polymers can be re-used is limited, as the quality of the product diminishes with every cycle. Therefore, new strategies to valorize these highly recalcitrant wastes are needed. One such strategy consists on the chemical or biological depolymerization of plastics into monomers that can be assimilated by bacteria, which can then be further engineered to produce molecules of added value. This seminar will present recent research aimed at the biological upcycling of plastic residues.