

Chemistry Department

Sustainable Chemistry



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Objectives

- Implementation of integrated biotransformation/separation processes.
- Elucidation of structure-function relationships for enzymes in nonconventional media.
- Development of conductive biopolymers.
- Valorisation of waste biomass.

Methodology

- Use of nonaqueous solvents, including compressed gases, ionic liquids and combined ionic liquid/supercritical fluids.
- Use of medium engineering combined with spectroscopic techniques.
- Incorporating an ionic liquid in a biopolymer.
- Extraction/conversion of compounds from waste biomass using subcritical water.

Expected Results

- Integrated biotransformation/separation process for enantiomer separation.
- Elucidation of the behavior of immobilized enzymes in nonaqueous solvents.
- Solid electrolyte.
- Added-value/useful compounds from waste biomass.

