

## **Green Processes for PET Depolymerization**

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## Deep Eutectic Solvents and Green Reagent-Based Processes for Polyethylene Terephthalate Depolymerization

Dr. Muhammad Azeem's thesis presents combination of ultra-green chemical and biocatalytic depolymerisation techniques for polyethylene terephthalate (including biodegradable and unique biological compatible solvent- based low-energy microwave treatments). The proposed recycling technique allows complete PET depolymerization within 6 min using green solvents, providing a good yield of purified value-added monomer (TPA), which can be used for repolymerization. This work aligns with the UN sustainable development goals number 9, 12 and 13.