Development of bench-scale pretreatment process for the recycling of silica-coated PET fabrics

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Silica-coated PET fabric waste poses serious environmental and economic problems. Due to high level of surface impurities, recycling the silica-coated PET fabrics for commercially valuable products is challenging to meet customer satisfaction. We successfully developed and optimized a bench-scale pretreatment process to remove surface impurities from silica-coated PET fabric waste. The solution-based chemical treatment can eliminate the coating layer and pretreated PET fabrics can be used to produce various commercial products.