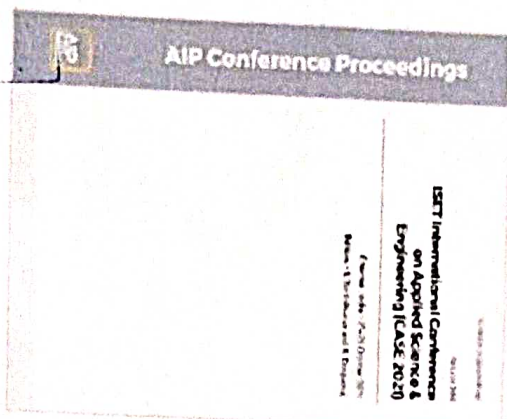


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Statistical optimization of process parameters for maximal degradation of polyurethane

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Using Response surface methodology, the effect of various physical and chemical parameters on PU degradation by filamentous fungi *Aspergillus Versicolor* was investigated (RSM). Due to its effectiveness and time-saving benefits, Response Surface Methodology (RSM) has become widely used in optimization studies in recent years. It's commonly utilized to forecast surface responses and investigate variable interactions. This research employs RSM to optimize parameters in the microbial fermentation process utilizing *Aspergillus Versicolor*. Box-Behnken Design (BBD) generates 3D response surface plots as well as 2D contour plots for the optimization of fermentation process parameters. According to the findings, three variables, pH, temperature (°C), as well as shaking speed (rpm), had substantial effects on PU degradation.



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