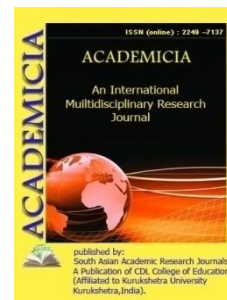




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AN OVERVIEW ON PYROLYSIS OF PLASTIC TRASHES

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ABSTRACT

Due to the many uses of plastics in a variety of industries, worldwide plastic manufacturing has grown throughout time. The constant demand for plastics resulted in the buildup of plastic trash in landfills, which took up a lot of space and contributed to the environmental issue. Because plastics are a petroleum-based substance, increased demand for plastics resulted in the depletion of petroleum as a non-renewable fossil fuel. Recycling and energy recovery methods are two options for managing plastic trash that have been explored. However, the recycling technique had several disadvantages, such as high labor costs for the separation process and water pollution, which made the practice less sustainable. As a result of these flaws, researchers have shifted their focus to the energy recovery technique to offset the high energy consumption. Plastic waste conversion to energy was created after significant study and technological development. Because petroleum was the primary source of plastic, the conversion of plastic to liquid oil via the pyrolysis process had enormous potential, as the oil produced had a high calorific value comparable to commercial fuel. The pyrolysis process for each type of plastic was reviewed, as well as the main process parameters that influenced the final end product, such as oil, gaseous, and char. Temperatures, reactor type, residence time, pressure, catalysts, fluidizing gas type, and flow rate were among the key parameters discussed in this study.

KEYWORDS: *Energy recovery, Fuel, Liquid product, Plastic wastes, Pyrolysis.*

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