

# **Thermal pyrolysis as a potential method for the management of plastic waste in developing countries**

## **ABSTRACT**

Plastic is a cheap and versatile material. The production and manufacture of plastics has risen tremendously to cater the needs of the growing world population, even more in the effort of fighting the COVID-19 pandemic. Lack of proper technology and human irresponsibility contribute to the mismanagement of plastic waste. Hence, the severity of plastic waste pollution is heightening, and the Earth and all living things are suffering the consequences. This review explores thermal pyrolysis as a more effective method to manage plastic waste in developing countries like Malaysia. Thermal pyrolysis is compared to existing plastic waste management methods. Factors influencing the yield and composition of pyrolysis products are also being discussed. These include feedstock type, reactor type, temperature, residence time, pressure, and fluidizing gas type and flow rate. Several topics such as the manipulation of pyrolysis parameters and the use of Appropriate Technology-based reactors, are raised as possible areas for further research.