

## Abstract

Microwave irradiation method indicated points of interest for the produced polymer that contrasted with that prepared by a routine strategy, where it can offer a polymer in brief time, high yield, higher molecular weight because of the prevention action of the chain exchange, more pure compounds, and all the more thermally stable polymers, instead of the conventional technique. Benzil and p-phenylenediamine were built into the main chain to prepare a new polymer named polyimine, utilizing microwave route as a part of 95% yield, and characterized it by Fourier transform infrared (FT-IR), UV-visible, and nuclear magnetic resonance (NMR) techniques. The thermal properties of the new polymer were evaluated by thermal gravity analysis (TGA).