

## Synthesis and Characterization of Poly(amide-imide)

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Thermally stable poly(amide-isoindoloquinazolinedione)s were prepared by solution polymerization of 4,4'-diamino-3-carbamoylbenzanilide with various anhydrides such as pyromellitic anhydride, trimellitic anhydride chloride in dimethylacetamide at room temperature. The structural and polymerization route of poly(amide isoindoloquinazolinedione) was studied by FTIR spectroscopy. The polymerization proceeded through the formation of tractable poly(amide-amic acid amide), followed by cyclodehydration, yielding poly(amide-imide amide); on subsequently being heated, this underwent intramolecular rearrangement along the polymer chain, giving the thermally stable poly(amide isoindoloquinazolinedione). Thermal property was evaluated by TGA thermogram. Mechanical and viscoelastic properties will be discussed.