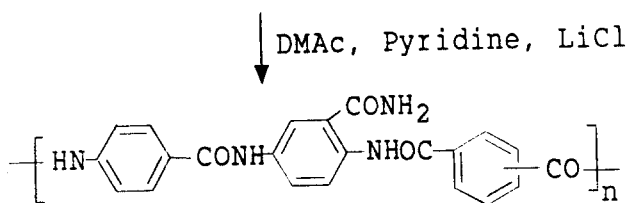
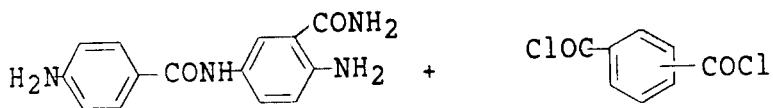


Synthesis and Characterization of Heterocyclic Aramids

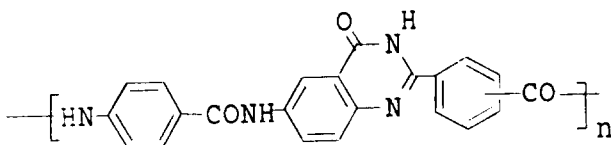
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Aromatic polyamides having pendant carbamoyl group were prepared by solution polymerization of terephthaloyl chloride or isophthaloyl chloride with 4,4'-diamino-3-carbamoylbenzanilide as shown in synthetic scheme. The resultant polyamide prepolymers with pendant carbamoyl group were soluble in dimethylacetamide(DMAc) and N-methyl-pyrrolidone and could be cast into transparent films. The subsequent thermal cyclization of the prepolymer yielded a heterocyclic aramid having quinazoline unit in the main chain. The change of chemical structure along the polymer chain was investigated by FTIR spectroscopy. The cyclized polymer was insoluble in most organic solvents and showed excellent thermal property which was monitored by TGA thermogram. Mechanical and viscoelastic properties of the uncyclized and cyclized aramid film will be discussed.



Aromatic Polyamide Having Pendant Carbamoyl Group



Aromatic Polyamide Having Quinazoline Unit