

Synthesis and characterization of random co-polyimide with various backbone

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Polyimides are stable polymers based on various back bones and are generally synthesized by Dianhydride and Diamine into a polyamic acid which is a random copolymer. In this study, PMDA,BTDA,ODPA was used as an Dianhydride and 4,4'-ODA was used as an Diamine that is synthesized into a polyimide film. The polyamic acid is imidized by heat to form the cyclic polyimide. These films were successfully characterized for confirming the synthesis by the FT-IR. The TGA (Thermogravimetric analyzer) and DSC(Differential Scanning Calorimeter) was used to measure the Glass transition temperature and 5% decomposition temperature. This study was conducted to examine the thermal stability of the polyimide that was made into a random copolymer by imidization.