

## Synthesis of polyimide nanocomposite and its properties

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In general, the polyimide (PI) films have good thermal stability, good mechanical strength. In electronic materials, polyimide shows good performance because of its properties. However, polyimide films have low water sorption property. For electrochemical usage of polyimide films, water sorption behavior and dielectric constant are important factors. In this work, the polyimide-clay nanocomposite films were synthesized from 1,2,4,5-Benzene tetracarboxylic dianhydride (PMDA), 4,4'-Oxydianiline (ODA) and cloisite 20A. Clay was dispersed by sonicator and films were made by thermal imidization. Water sorption behavior measured with Thin Film Water Sorption Analyzer (TFWA) which was self-developed and Dielectric constant measured with dielectric analyzer.