

Synthesis and characterization of transparent polyimide with silica

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We have synthesized transparent polyimide(TPI) films with silica obtained from TEOS. Generally, TPI has lower thermal stability than yellow polyimide. So, we combined TPI with silica to enhance thermal stability of TPI. The thermal properties of TPI with silica were investigated by differential scanning calorimetric (DSC) and thermal gravimetric analysis(TGA). These tests revealed that the thermal decomposition temperature and the glass transition temperature of hybrid film are higher than reference film. Also, we confirmed transparency of film by UV/VIS spectrophotometer and Yellow Index.