

Abstract: In this paper, the PMMA films were prepared by spin-coating method. The films were charged by means of constant voltage corona charging. The charge storage stability and the transport of detrapping charges in the PMMA electrets were investigated by isothermal surface potential decay, open-circuit TSD current spectrum analysis. The shifts of mean charge depth for PMMA at different environment humidity and charging temperature were measured by heat pulse technique. The experimental results indicated that the charge storage stability of PMMA materials was significantly influenced by relative humidity. Charging at elevated temperature could improve charge storage stability in PMMA.