

Abstract: The charge storage stability of a muscovite electret after corona charging at room and elevated temperatures is examined. Charge stability of the muscovite electret can be improved by means of controlled humidity, chemical surface treatment, heating treatment, and constant current corona charging by which charge can be injected into the bulk of the sample. The influence of bulk conductivity at elevated temperature on mean charge depth was studied by determining the relation between mean charge depth and charging temperature. Due to the obvious increase of the bulk conductivity at elevated temperature, the mean charge depth moves towards the back electrode after constant voltage corona charging at elevated temperature for the material.