

Abstract: In this paper, a porous (aperture from 1 to 5  $\mu$  m, porosity 50%) polytetrafluoroethylene (PTFE) was prepared by stretching with bipolar orientation, which can be used in clinical medicine for encouraging the recovery of wounded tissues of the human body. Influence of environmental humidity on charge stability for the porous PTFE was investigated after constant voltage corona charging. The comparison of the charge storage ability of the porous PTFE film and the solid PTFE film charged at room and elevated temperatures was carried out. The transport property of detrapped charges during thermally stimulated discharge was also studied by means of Thermally Stimulated Discharge (TSD) method and heat pulse technique.