

Abstract: Polytetrafluoroethylene (PTFE) films with void structure are prepared by a fusion bonding process. Such void PTFE films are piezoelectric after proper corona charging. The maximum quasi-static piezoelectric d_{33} coefficients of 220 pC/N are achieved. The applied pressure dependence of piezoelectric d_{33} coefficients for the void films is associated with the structure of the films. The piezoelectric response of the films is dependent on the duration of the applied force, which is apparently due to the creep of the material.