

Abstract: The charging capability and Young's modulus of XPP films can be modified by a hot-stretching process. The results show that the onset of piezoelectricity occurs at an elongation ratio of 70% and enhances with the increase of this ratio. A quasistatic piezoelectric d_{33} -coefficient of 308 pC/N is achieved for samples with an elongation ratio of 200% and a Young's modulus of 0.54 MPa. An improved piezoelectric d_{33} -coefficient is obtained for samples with a rough surface exposed to the corona during charging.