Abstract：Cross-linked polypropylene (XPP) foams are modified by a hot-stretching process and charged to be piezoelectric. The results show that a piezoelectric d_{33} coefficient of 308 pC/N is obtained for sample with an elongation ratio of 200%. The dynamic d_{33} value is smaller than the quasi-static value, which is probably due to the rise of Young's modulus with increasing frequency. All the samples show pressure-independent d_{33} in the range up to 30 kPa. Improved d_{33} was obtained in the sample rough surface exposed to the corona during charging. Compared to linear PP, the stretched XPP shows pressure independence of d_{33} in larger range.