CHAPTER V
CONCLUSIONS

In our work, electromechanical properties of gelatin films were investigated as a function of electric field strength and operating temperature on the storage moduli under oscillatory shear mode. The storage modulus (G') increases depending gel strength of gelatin samples, when the applied field strength is increased to 1 kV/mm. The temperature dependence of $\Delta G'$ and $\Delta G'/G_{\circ}$ shows a maximum at T ≈300 °K, so gelatin samples are found to decrease with increasing temperature up. They were show as plastic-like behavior. In non-crosslinked gelatin films, the storage modulus differential response and storage modulus sensitivity higher than crosslinked gelatin films. It meant a transition from a fluid-like to a solid-like behavior from crosslinking agent, so crosslinked gelatin films's rigidity is so high comparatively non-crosslinked gelatin films.

Recommendations

1) Electromechanical response of a soft and flexible actuator based on polyaniline particles embedded in a cross-linked poly(dimethyl siloxane) network.