Ferroelectricity in Nano-Composite Films of Sodium Nitrite: Starch Prepared by Drop Cast Technique

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Abstract : Nano-composite films of sodium nitrite (NaNO2): Starch with different proportions of NaNO2 and Starch have been prepared by drop cast technique. The ferroelectric hysteresis loops (P-V) have been traced using modified Sawyar-Tower circuit. The films containing equal proportions of NaNO2 and Starch exhibit optimized ferroelectric properties. The stability of the remanent polarization, Pr in the optimized nano-composite films exhibit improved stability over the pure NaNO2 films. The Atomic Force Microscopy (AFM) has been employed to investigate the surface morphology. AFM images clearly reveal the nano sized particles of NaNO2 dispersed in starch with small value of surface roughness.

Keywords : ferroelectricity, nano-composite films, Atomic Force Microscopy (AFM), nano composite film
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