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Electric Field Induced Phase Transition in Nylon 12 Films: WAXDiffraction and DSC- Investigations.

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The effect of high electric field on the phase transition in nylon 12 was Studied. Ordering of the crystalline-amorphoures structure is achieved. Changes in the crystal structure induced by the polarizing electric field were investigated using optical microscope, x-ray and DSC techniques. The analysis of the results revealed that the electric field enhance the growth of the crystalline regions and hence has principle effects on the volume fraction of the crystalline phase. Initial results from oriented crystallization were presented.