

## **Effect of Applied Voltage and Needle Size on Morphology of polyamide-6.6 Nanofiber Formed by Electro spinning Technique\***

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### **Abstract**

Nylon-6/6 continuous Polymer nanofibers (NF) were produced by using conventional single needle electrospinning (ES) technique. In this paper several parameters, such as applied voltage and needle diameter were investigated to optimize fiber morphology. The morphological and structure properties of the fiber (average diameter, height, length, surface roughness and fiber shape) are visualized by Atomic Force Microscopy (AFM). Good alignment of polymer nanofibres was confirmed by AFM and optical microscopy observations. We concluded that fiber diameter increases with decreasing applied voltage intensity and increasing the distance between the electrodes.

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**Key Words:** Electrospinning (ES), Nanofiber (NF), polyamide 6.6 (PA-6.6), Atomic force microscopy (AFM).

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