An-Najah National University
Faculty of Engineering and IT

جامعة النجاح الوطنية
كلية الهندسة وتكنولوجيا المعلومات

Project Title : Electrospinning Device

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Abestract:

Integrated Low-cost Electrospinning Device for Nanofibrous Scaffold Fabrication this project can help educational institutions to have such electrospinning system with ultra-low cost comparing with readymade systems in the market , However, it is difficult to gathering nanofibers with simple design and reasonable price device. This study presents a cost effective and safe electrospinning system with similar capabilities to standard electrospinning device.

As standard current electrospinning system consists of three constructed parts, a hand-constructed electrical power supply to provide a high voltage source direct current (DC), a low cost three-dimensional (3D) printed syringe pump and handmade collectors. The device components are entirely constructed off-the-shelf components, and structural elements are 3D printer. The electrospinning process was carried out using PLA materials. The general parameters in the production process are resolution of the spraying rate micro litter/min and the power supply provides electricity in kilovolt.