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## Fabrication and characterization of polyvinyl alcohol nanofiber

**Nazanin Ghafari**

Islamic Azad University, Iran

Nanotechnology is the study and application of extremely small things (about 1 to 100 nanometers) and can be used across all the other science fields, such as chemistry, biology, physics, materials sciences and engineering. Polymeric nanofibers are one of the most known nanotechnology products and have huge potential applications in many fields due their high aspect ratio and porosity. The three dimensional feature of the product, results in having high capability for mechanical and biological applications. Electrospinning is a simple and inexpensive method of producing nanofibers in which, because of their unique structure, can be used in tissue engineering. Polyvinyl alcohol (PVA) is a biocompatible and water soluble synthetic polymer that is easily electrospun. Typically, PVA is soluble in water but in fact water can decrease the solubility of some polymers, hence blending these polymers with PVA can solve this problem. In this work, PVA was prepared by acetic acid which has less affection to degradation and is of low toxicity. The main objective of this work focuses on effect of distance and voltage parameters on morphology and diameter of nanofibers. The morphology of electrospun PVA nanofibers were characterized by using scanning electron microscope (SEM) and Fourier transform infrared spectrometer (FTIR).

### Biography

Nazanin Ghafari has completed her BS in Textile Engineering/Textile Chemistry Major in 2013 and her MSc in Nanofibrous Structure in 2015 from Islamic Azad University, Yadegar Imam, Shar-e-rey Branch; and has been pursuing PhD degree in Science and Research University. She has submitted papers in several conferences like: 1st Conference on Textile Engineering with latest Methods in Related Industry at Islamic Azad University Tehran Branch, Iran; 4th National Conference on Textile Engineering, Polymer at Islamic Azad University Yazd Branch, Iran, and so on.

[nghafari69@yahoo.com](mailto:nghafari69@yahoo.com)**Notes:**