

Abstract Submitted
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Two new experiments in physics based on electrospun polymer nanofibers¹ NICHOLAS PINTO, University of Puerto Rico - Humacao — Nanoscience and nanotechnology have been the focus of much scientific research worldwide and has great potential in enhancing the way we look at all of our present day electronic devices. If only part of this potential can be made into reality, the results will be phenomenal. Given the vast financial and scientific investment in nanotechnology that is bound to impact our future, it is important to expose undergraduate Physics and Engineering students to this field of study early in their career. Two experiments related to nanoscience that are currently part of our undergraduate Physics program will be presented. A simple to build and to operate electrospinning apparatus produces conducting polymer nanofibers that are then used in device fabrication. The devices include a nanoresistor and a Schottky nanodiode and yield themselves to straightforward data acquisition and analysis. A modification of the sample chamber can convert one of the experiments into a supersensitive alcohol vapor sensor.

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