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**Study of polypyrrole-coated electro spun polystyrene fibers by electrochemical oxidization**

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Polypyrrole (Ppy) was synthesized via a chemical oxidization method with  $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$  (FCHH) on Electro Spun Polystyrene Fibers (ESPSF). The spinning process was achieved by means of electrospinning for three solutions of polystyrene PS including 3, 5 and 9% w/v of FCHH in Dimethyl Formamide (DMF). The fibers diameters were monitored by Scanning Electron Microscope SEM before and after coating and it were found that best results were achieved at low concentration of FCHH. Coating with Ppy has been performed in four exposure periods (90, 150, 200, 270 min) in a temperature was at 22 °C and the results show a direct relation between the mean diameters of fibers with quality of coating. The technique suggests a potential route towards the production of conducting fiber with micro/nanoscale dimensions.

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