

## **The Effect of Parameters on Production of NiO/Al<sub>2</sub>O<sub>3</sub>/B<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub> Composite Nanofibers by Using Sol-Gel Processing and Electrospinning Technique**

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**Abstract :** For the first time, nanofibers of PVA /nickel nitrate/silica/alumina izopropoxide/boric acid composite were prepared by using sol-gel processing and electrospinning technique. By high temperature calcinations of the above precursor fibers, nanofibers of NiO/Al<sub>2</sub>O<sub>3</sub>/B<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub> composite with diameters of 500 nm could be successfully obtained. The fibers were characterized by TG/DTA, FT-IR, XRD and SEM analyses.

**Keywords :** nano fibers, NiO/Al<sub>2</sub>O<sub>3</sub>/B<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub> composite, sol-gel processing, electro spinning

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