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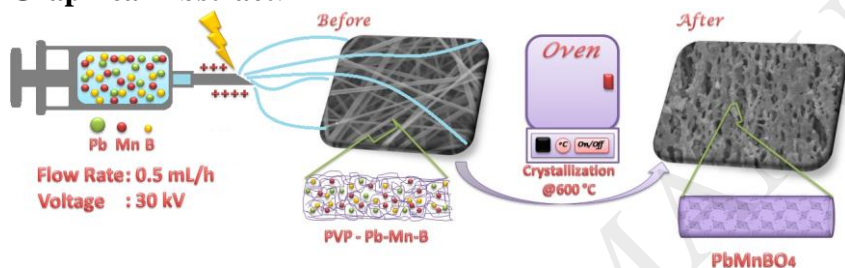
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# Fabrication and Characterization of Electrospun Single-Crystal Lead Manganese Borate Nanofibers

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## Graphical Abstract:



## Highlights:

- Single crystal PbMnBO<sub>4</sub> nanofibers were successfully fabricated by electrospinning process.
- The PbMnBO<sub>4</sub> nanofibers synthesized for the first time and unprecedented in the literature.
- Characterization of PbMnBO<sub>4</sub> nanofibers in mineralogical, optical and thermal properties was revealed.
- The nanofibers exhibit single crystalline features with an average size between 120 and 250 nm.
- These nanofibers can be used in optic or photonic fields as a flexible sensor due to its nonlinear and ferromagnetic properties.

## Abstract

Anhydrous borate compounds are important materials in optical applications as nonlinear optical materials (NLO), due to the presence of structural B<sub>x</sub>O<sub>y</sub> subunits. Herein, lead manganese borate (PbMnBO<sub>4</sub>) nanofibers have been firstly fabricated via a facile approach using a simple and inexpensive electrospinning technique. All of the synthesized samples were analyzed with X-Ray Diffractometer (XRD), Transmission Electron Microscope (TEM),

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