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# Effect of Boric Acid Content on the Structural and Optical Properties of In2O3 Films Prepared by Spray Pyrolysis Technique

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**Abstract :** Boron doped of In2O3 films were prepared by spray pyrolysis technique at 350 °C substrate temperature, which is a low cost and large area technique to be well-suited for the manufacture of solar cells, using boric acid (H3BO3) as dopant source, and their properties were investigated as a function of doping concentration. X-ray analysis showed that the films were polycrystalline fitting well with a hexagonal structure and have preferred orientation in (220) direction. The changes observed in the energy band gap and structural properties of the films related to the boric acid concentration are discussed in detail.

**Keywords :** spray pyrolysis, In2O3, boron, optical properties, boric acid
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