



P44. Structural Properties of Sol-Gel BiFeO₃- Films

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The main purpose is to synthesize BiFeO₃ thin films by sol-gel method, i.e. characterization of sample structure on their composition and annealing temperature. The initials for the sol-gel synthesis were salts of metals; ethylene glycol; citric acid; ethylenediamine. Then the samples BiFeO₃ sol-gel materials were annealed at the different temperatures for 20 minutes. X-ray thin-film measurement technique was used to determine the structure.

XRD data for BiFeO₃ samples annealed at different temperatures were analyzed. It was established that BiFeO₃ samples have the different behavior compared to powders [1]. The formation of required with high content phase begins at the temperature of 500 °C.

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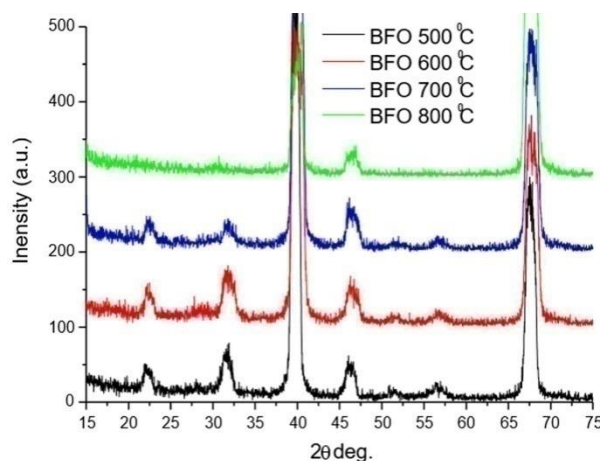


Figure 1- XRD of BiFeO₃ sol-gel films

References

- [1]S. Khakhomov, V. Gaishun, D. Kovalenko, A. Semchenko et. al., *Recent Advances in Technology Research and Education: Proceedings of the 17th International Conference on Global Research and Education Inter-Academia-2018*, **53**, 43-48 (2018)