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Synthesis and electric characterization of the thermoelectric materials $\text{Bi}_{0.5}\text{Sb}_{1.5}\text{Te}_3$ and $\text{Bi}_{1.5}\text{Sb}_{0.5}\text{Te}_3$ alloys

Energy is likely to be the major scientific challenge in decades to come. The solution to the climate and environmental problems rests on a concerted effort to broaden our energy resources. New and improved functional materials are important components in efforts to effectively harvest energy from alternative energy sources, and to use the available energy more economically and environmentally friendly. One alternative energy source can be thermoelectric devices, which represents a clean energy. They are able to generate electrical energy from the waste heat, which is produced by computers, factories, household appliances, etc. In this work we present the synthesis of $\text{Bi}_{2-x}\text{Sb}_x\text{Te}_3$ and $\text{BiTe}_{3-x}\text{Sb}_x$, as well as electric characterization.

Keywords

SPS, Thermoelectric Materials, Coefficient Seebeck

Reference

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