# Article information:

Crystal structure modulation of SnSe thermoelectric material by AgBiSe2 solid solution - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0955221923001371?via%3Dihub>

# Article summary:

1. A series of Sn1–2x(AgBi)xSe samples were synthesized using vacuum melting and spark plasma sintering methods.

2. The increased configurational entropy caused by AgBiSe2 solid solution enabled the cubic structure to be obtained when x exceeded 0.2.

3. The figure of merit of 0.08 was reached in Sn0.6(AgBi)0.2Se at 500 K, and a high Vicker hardness of 1.5 GPa was obtained in Sn0.4(AgBi)0.3Se

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy, as it provides evidence for its claims through experiments and data analysis, as well as providing insights into the design of new thermoelectrics based on the results obtained from the experiments conducted. However, there are some potential biases that should be noted, such as the lack of exploration into counterarguments or alternative explanations for the results obtained from the experiments conducted, as well as a lack of discussion regarding possible risks associated with using this material for thermoelectric applications. Additionally, there is a lack of discussion regarding other materials that could potentially provide similar or better performance than what was achieved with Sn1–2x(AgBi)xSe samples in this study, which could lead to a one-sided reporting of the results achieved here. Furthermore, there is no mention of any ethical considerations related to using this material for thermoelectric applications, which could be an important factor to consider when assessing its potential use in real-world applications.

# Topics for further research:

* Alternative thermoelectric materials
* Potential risks of thermoelectric applications
* Ethical considerations of thermoelectric applications
* Counterarguments to thermoelectric experiments
* Performance comparison of thermoelectric materials
* Design considerations for thermoelectric materials

# Report location:

<https://www.fullpicture.app/item/3762c5719ebff7e822edcff0aaae58a5>