# Article information:

Additive manufacturing of NiTiHf high temperature shape memory alloy - ScienceDirect
<https://www.sciencedirect.com/science/article/abs/pii/S1359646217306127>

# Article summary:

1. A NiTi-20Hf high temperature shape memory alloy (HTSMA) was additively manufactured by selective laser melting (SLM) technique.

2. Transformation temperatures of the SLM material were found to be above 200°C and slightly lower due to the additional oxygen pick up from the gas atomization and melting process.

3. Shape memory response in compression was measured for stresses up to 500 MPa, and transformation strains were found to be very comparable.

# 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 a detailed overview of the research conducted on the additive manufacturing of NiTiHf high temperature shape memory alloy using selective laser melting technique. The article is well-referenced, with 50 references cited, which adds credibility to its claims. Furthermore, the authors acknowledge funding support from NASA Glenn Research Center, which further adds to its trustworthiness.

However, there are some potential biases that should be noted in this article. Firstly, the authors do not explore any counterarguments or alternative perspectives on their research findings; instead they focus solely on their own results and conclusions without considering other points of view or evidence that may contradict their findings. Additionally, there is no discussion of possible risks associated with this type of manufacturing process or any potential implications for safety or environmental concerns that may arise from it. Finally, while the authors provide a comprehensive overview of their research findings, they do not provide any insight into how these results could be applied in practical applications or what further research needs to be done in order to make use of them in real-world scenarios.

# Topics for further research:

* NiTiHf high temperature shape memory alloy applications
* Selective laser melting technique safety risks
* Environmental implications of additive manufacturing
* Practical applications of NiTiHf high temperature shape memory alloy
* Further research on NiTiHf high temperature shape memory alloy
* Alternative perspectives on additive manufacturing of NiTiHf high temperature shape memory alloy

# Report location:

<https://www.fullpicture.app/item/fd6fef19059b7f12c8df5b6411c4b59d>