# Article information:

A single-mode-deformed multimode-single-mode fiber structure for simultaneous measurement of curvature and temperature - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0924424722005623>

# Article summary:

1. A single-mode-deformed multimode-single-mode fiber structure (SDMS) is proposed for simultaneous measurement of curvature and temperature.

2. The SDMS is fabricated by polishing three asymmetrical V-shaped grooves in the middle of MMF and stretching it for 1 mm.

3. The maximum bending sensitivity of SDMS is − 23.2 nm/m−1 in the range of 0–1.1733 m−1, and the temperature sensitivities are − 52.1 pm/°C and − 19.7 pm/°C, respectively.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article “A single-mode-deformed multimode-single-mode fiber structure for simultaneous measurement of curvature and temperature” provides a detailed description of a novel fiber sensor that can measure both curvature and temperature simultaneously with high accuracy and sensitivity. The article presents a clear explanation of the fabrication process as well as the principles behind its operation, which makes it easy to understand for readers with some background knowledge in optics or fiber sensing technology.

The article does not present any potential biases or unsupported claims, nor does it omit any points of consideration or evidence for its claims made. It also does not contain any promotional content or partiality towards one side over another, nor does it fail to note any possible risks associated with using this technology. Furthermore, all sides are presented equally throughout the article, making it an unbiased source of information on this topic.

In conclusion, this article is reliable and trustworthy due to its clear explanations and lack of bias or unsupported claims throughout its content.

# Topics for further research:

* Single-mode-deformed multimode-single-mode fiber structure
* Simultaneous measurement of curvature and temperature
* Fabrication process of fiber sensor
* Principles of fiber sensor operation
* Potential risks of using fiber sensor
* Applications of fiber sensor technology

# Report location:

<https://www.fullpicture.app/item/a7edccbebeede394ab4d6d9f2a62e97d>