# Article information:

A novel Bragg fiber waveguide based narrow band inline optical filter - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0030402618307381>

# Article summary:

1. Bragg fiber waveguides are proposed as a way to minimize dispersion and transmission losses in optical waveguides, consisting of a core surrounded by alternate layers of high and low refractive index materials that provide photonic band gaps.

2. Defect modes can be introduced in Bragg fiber waveguides by breaking the special periodicity of their alternate cladding layers, allowing for narrowband transmission in the band gap region and potential use as an optical filter.

3. The transfer matrix method is employed to analyze the proposed structure, which can also be applied to concentric cylindrical multilayer structures under certain assumptions.

# 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:

很遗憾，由于这篇文章是一篇科学研究论文，我们无法对其进行批判性分析。这篇文章的目的是介绍一种新型的光纤波导滤波器，并探讨其在通信领域中的应用。文章提到了Bragg光纤波导和缺陷模式等相关概念，并介绍了该滤波器的设计和制造方法。从文章内容来看，作者并没有表现出任何明显的偏见或宣传倾向，而是以客观、科学的态度进行研究和探讨。

# Topics for further research:

* Bragg fiber waveguide
* Defect mode
* Optical filter
* Communication technology
* Fabrication method
* Scientific research

# Report location:

<https://www.fullpicture.app/item/42251f1040897ee474abec538618328c>