# Article information:

Ultrabroadband reflective polarization convertor for terahertz waves: Applied Physics Letters: Vol 105, No 18  
<https://aip.scitation.org/doi/10.1063/1.4901272>

# Article summary:

1. A metamaterial-inspired reflective linear polarization convertor has been designed and experimentally demonstrated for terahertz waves.

2. The structure exhibits three neighboring resonances, allowing for the conversion of incident wave linear polarization upon reflection.

3. The proposed design has potential applications in terahertz spectroscopy, imaging, and communications.

# 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 description of the design and experimental demonstration of a metamaterial-inspired reflective linear polarization convertor for terahertz waves. It also explains the mechanism behind the polarization conversion via decomposed electric field components that couple with different resonance modes of the structure. Furthermore, it mentions potential applications in terahertz spectroscopy, imaging, and communications.

However, there are some points that could be improved upon to make the article more reliable and trustworthy. For example, there is no mention of possible risks associated with using this technology or any counterarguments to its use. Additionally, there is no discussion of any potential biases or sources of bias in the research or reporting on it. Finally, there is no evidence provided to support the claims made in the article regarding its efficiency or potential applications.

# Topics for further research:

* Risks associated with metamaterial-inspired polarization convertor
* Counterarguments to using metamaterial-inspired polarization convertor
* Potential biases in metamaterial-inspired polarization convertor research
* Efficiency of metamaterial-inspired polarization convertor
* Terahertz spectroscopy applications of metamaterial-inspired polarization convertor
* Terahertz imaging applications of metamaterial-inspired polarization convertor

# Report location:

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