# Article information:

Dynamic Structural Color Display Based on Femtosecond Laser Variable Polarization Processing - Wu - 2021 - Advanced Materials Interfaces - Wiley Online Library  
<https://onlinelibrary.wiley.com/doi/10.1002/admi.202100460>

# Article summary:

1. Structural colors are widespread in nature and have a wide range of functional properties, such as hydrophobicity, anti-reflection, mechanical strength at light weight, or bactericidal characteristics.

2. Femtosecond laser micro/nano surface structuring is an effective method for producing structural colors by inducing a periodic surface structure called the laser-induced periodic surface structure (LIPSS).

3. Laser polarization can be used to adjust the orientation of LIPSS on the material surface and create complex and dynamic displays illuminated under white LED light.

# 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 “Dynamic Structural Color Display Based on Femtosecond Laser Variable Polarization Processing” by Wu (2021) provides an overview of the use of femtosecond laser micro/nano surface structuring to produce structural colors with periodic LIPSS micro/nanostructures. The article is well written and provides a comprehensive overview of the topic, including its potential applications in information storage, anti-counterfeiting, and other fields. The article also discusses how laser polarization can be used to adjust the orientation of LIPSS on the material surface and create complex and dynamic displays illuminated under white LED light.

The article is generally reliable and trustworthy; however, there are some points that could be improved upon. For example, while the article does discuss potential applications for this technology, it does not provide any evidence or examples to support these claims. Additionally, while the article does mention possible risks associated with this technology (such as instability due to large expansions or contractions), it does not provide any detailed information about how these risks can be mitigated or avoided. Finally, while the article does discuss different orientations that can be imprinted using special cases in specific geometries and conditions, it does not explore any counterarguments or alternative approaches that could be taken instead.

In conclusion, this article provides a comprehensive overview of femtosecond laser micro/nano surface structuring for producing structural colors with periodic LIPSS micro/nanostructures; however, it could benefit from providing more evidence for its claims as well as exploring counterarguments or alternative approaches that could be taken instead.

# Topics for further research:

* Femtosecond laser micro/nano surface structuring applications
* Mitigating risks associated with femtosecond laser micro/nano surface structuring
* Alternative approaches to femtosecond laser micro/nano surface structuring
* Counterarguments to femtosecond laser micro/nano surface structuring
* Examples of femtosecond laser micro/nano surface structuring
* Benefits of femtosecond laser micro/nano surface structuring

# Report location:

<https://www.fullpicture.app/item/32b49d5f7492dabc4c7a7e269b2eb2e8>