# Article information:

A designerly approach to Algae-based large open office curtain wall Façades to integrated visual comfort and daylight efficiency - ScienceDirect  
<https://www.sciencedirect.com/science/article/abs/pii/S0038092X23000270>

# Article summary:

1. Large open-plan office buildings face challenges with natural daylight, glare control, and ventilation due to their size and depth.

2. Microalgae can be used as a shading element in façades, but the optimal position and concentration need to be determined for optimal visibility, sufficient daylight, and glare control.

3. The best pattern for façades of open-plan office buildings is a combination of microalgae and glass, with specific concentrations of microalgae being more effective than others in controlling glare and transmitting daylight.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article titled "A designerly approach to Algae-based large open office curtain wall Façades to integrated visual comfort and daylight efficiency" presents a study on the use of microalgae as a shading element in large open-plan office buildings. The article provides insights into the optimal position and concentration of microalgae as an architectural element for optimal visibility, sufficient daylight in the space, and glare control.

The article is well-structured, with clear section headings that make it easy to follow. The introduction provides a good overview of the challenges faced by large open-plan office buildings in terms of natural daylight, glare control, and natural ventilation. It also highlights the importance of façades in high-performance building design.

However, there are some potential biases in the article that need to be considered. For example, the study focuses only on microalgae as a shading element and does not consider other materials or technologies that could be used for façade design. This narrow focus could limit the scope of the study's findings and may not provide a comprehensive solution to the challenges faced by large open-plan office buildings.

Additionally, while the article presents some evidence to support its claims about the optimal position and concentration of microalgae as an architectural element, there are some unsupported claims that need further investigation. For example, it suggests that microalgae with concentrations of 10%, 20%, and 30% are not effective in controlling glare but transmits more daylight. However, this claim is not supported by any empirical evidence or data analysis.

Furthermore, there are some missing points of consideration in the article that could affect its validity. For instance, it does not consider how different weather conditions or geographical locations could impact the performance of microalgae as a shading element. This omission could limit its applicability in different contexts.

Overall, while this article provides valuable insights into using microalgae as a shading element for façade design in large open-plan office buildings, it has some potential biases and unsupported claims that need further investigation. Therefore, readers should approach its findings with caution and consider other materials or technologies for façade design before making any decisions based solely on this study's results.

# Topics for further research:

* Microalgae as a shading element in different weather conditions
* Alternative materials for façade design in large open-plan office buildings
* The impact of geographical location on the performance of microalgae as a shading element
* Glare control and daylight efficiency in high-performance building design
* Natural ventilation strategies for large open-plan office buildings
* The role of façades in sustainable building design

# Report location:

<https://www.fullpicture.app/item/a41a15c8c1a306f92e2fe2ada2cd7db8>