# Article information:

High performance and multifunctional protein-based adhesive produced via phenol-amine chemistry and mineral reinforcement strategy inspired by arthropod cuticles - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S1385894721024372>

# Article summary:

1. An arthropod cuticle-inspired bio-based adhesive was developed using a low-cost phenolic polymer and acid-stable montmorillonite in an amino-rich soy protein matrix.

2. The adhesive had a bonding strength comparable to industrial adhesives, with 10 times lower VOC emission.

3. The adhesive featured high toughness, superior strength, outstanding stiffness, mold resistance, and flame retardancy.

# 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 detailed information on the development of a bio-based adhesive inspired by arthropod cuticles. It also provides evidence for its claims such as the bonding strength being comparable to industrial adhesives and the VOC emission being 10 times lower than that of industrial adhesives. Furthermore, the article presents both sides of the argument equally by providing information on both the advantages and disadvantages of using this type of adhesive.

However, there are some potential biases in the article that should be noted. For example, it does not mention any possible risks associated with using this type of adhesive or any potential environmental impacts that may arise from its production or use. Additionally, there is no discussion about how this type of adhesive compares to other types of bio-based adhesives in terms of performance or cost effectiveness. Finally, there is no exploration into any unexplored counterarguments or alternative solutions that could be used instead of this type of adhesive.

In conclusion, while the article is generally reliable and trustworthy due to its detailed information and evidence provided for its claims, there are some potential biases that should be noted when considering its trustworthiness and reliability.

# Topics for further research:

* Environmental impacts of bio-based adhesives
* Performance comparison of bio-based adhesives
* Cost effectiveness of bio-based adhesives
* Risks associated with bio-based adhesives
* Alternative solutions to bio-based adhesives
* Counterarguments to bio-based adhesives

# Report location:

<https://www.fullpicture.app/item/450277036ad07b64d30f604321c05cd8>