# Article information:

Adhesion failure and anti-adhesion bionic structure optimization of surgical electrodes in soft tissue cutting - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S152661252300097X>

# Article summary:

1. Adhesion failure is a common problem in soft tissue cutting with surgical electrodes, and can be addressed by auxiliary devices, surface coatings, and surface microstructures.

2. This article studied the failure behavior of surgical electrodes by analyzing its adhesion material and growth law, as well as exploring the influences of electrode type, tissue water content, and cutting speed on electrode failure.

3. A bionic microstructure was fabricated on the electrode surface to reduce tissue adhesion and improve the service life of the surgical electrode.

# 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:

This article provides an overview of adhesion failure in soft tissue cutting with surgical electrodes and potential solutions to address this issue. The authors provide a comprehensive review of existing literature on this topic, including auxiliary devices, surface coatings, and surface microstructures that can be used to reduce adhesion failure. They also present their own research findings on the influence of electrode type, tissue water content, and cutting speed on electrode failure. Finally, they propose a bionic microstructure for fabrication on the electrode surface to reduce tissue adhesion and improve the service life of the surgical electrode.

The article is generally reliable in terms of its content; however there are some potential biases that should be noted. For example, while the authors provide a comprehensive review of existing literature on this topic, they do not explore any counterarguments or alternative solutions that may exist in other studies or research papers. Additionally, while they present their own research findings on the influence of various factors on electrode failure, they do not provide any evidence or data to support these claims which could make them more convincing. Furthermore, there is no discussion about possible risks associated with using these solutions which could be important for readers to consider before implementing them in practice.

In conclusion, this article provides an informative overview of adhesion failure in soft tissue cutting with surgical electrodes and potential solutions to address this issue; however it could benefit from further exploration into counterarguments or alternative solutions as well as providing evidence for its claims and discussing possible risks associated with using these solutions.

# Topics for further research:

* Adhesion failure in soft tissue cutting
* Alternative solutions for adhesion failure
* Risks associated with using solutions for adhesion failure
* Influence of electrode type on adhesion failure
* Influence of tissue water content on adhesion failure
* Influence of cutting speed on adhesion failure

# Report location:

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