# Article information:

A Flexible Multifunctional Triboelectric Nanogenerator Based on MXene/PVA Hydrogel - Luo - 2021 - Advanced Functional Materials - Wiley Online Library  
<https://onlinelibrary.wiley.com/doi/10.1002/adfm.202104928>

# Article summary:

1. A new triboelectric nanogenerator (TENG) based on MXene/polyvinyl alcohol (PVA) hydrogel has been developed with simple fabrication, high output performance, and versatile applications.

2. The doping of MXene nanosheets promotes the crosslinking of the PVA hydrogel and improves its stretchability. It also forms microchannels on surfaces which enhances the conductivity of the hydrogel and generates an extra triboelectric output.

3. The MH-TENG can be stretched up to 200% of its original length and is used for applications in wearable movement monitoring, high-precision written stroke recognition, and low-frequency mechanical energy harvesting.

# 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 about the development of a new triboelectric nanogenerator (TENG) based on MXene/polyvinyl alcohol (PVA) hydrogel with simple fabrication, high output performance, and versatile applications. The authors provide evidence for their claims by citing relevant literature and providing data from experiments conducted to test the performance of the MH-TENG. Furthermore, they discuss potential applications for this technology in detail.

However, there are some points that could be improved upon in terms of trustworthiness and reliability. For example, there is no discussion about possible risks associated with using this technology or any potential drawbacks that may arise from its use. Additionally, there is no mention of any counterarguments or alternative solutions that could be used instead of this technology. Finally, there is a lack of discussion about how this technology could be further developed or improved upon in the future.

# Topics for further research:

* Potential risks associated with triboelectric nanogenerator
* Drawbacks of triboelectric nanogenerator
* Alternative solutions to triboelectric nanogenerator
* Future development of triboelectric nanogenerator
* Counterarguments to triboelectric nanogenerator
* Safety considerations for triboelectric nanogenerator

# Report location:

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