# Article information:

Improve harvesting efficiency of tri-stable energy harvester by tailoring potential energy | SpringerLink  
<https://link.springer.com/article/10.1140/epjp/s13360-022-02471-7>

# Article summary:

1. Vibration-based energy harvesting technology is a promising way to convert vibration energy into electric energy.

2. Tri-stable energy harvesters have advantages over bi-stable ones in terms of wider effective bandwidth and higher energy harvesting efficiency.

3. The improved tri-stable energy harvester (ITEH) increases harvesting efficiency under weak random excitation by tailoring potential energy shape and increasing jumping times between potential wells, resulting in a dense snap-through motion and high output voltage.

# Article rating:

Appears strongly imbalanced: The article is written in a biased or one-sided way, and the information it provides is not trustworthy enough to be considered a reliable source. You should consult other sources to find reliable information on the presented issues.

# Article analysis:

该文章主要介绍了一种改进的三稳态能量收集器，旨在提高其在弱随机激励下的收集效率。然而，该文章存在以下问题：

1. 偏袒：该文章只介绍了三稳态能量收集器的优点，并未探讨其缺点或与其他类型能量收集器的比较。这可能导致读者对该技术的实际应用和局限性缺乏全面的了解。

2. 片面报道：该文章只介绍了一些研究结果，但并未提及任何可能存在的争议或不确定性。这可能会误导读者认为该技术已经得到广泛认可和应用。

3. 缺失考虑点：该文章没有考虑到实际环境中可能存在的干扰因素，如温度变化、湿度等。这些因素可能会影响能量收集器的性能和寿命。

4. 无根据主张：该文章声称添加小磁铁可以改善三稳态能量收集器的性能，但并未提供足够的证据来支持这一主张。此外，该文章也没有探讨添加小磁铁可能带来的风险或副作用。

5. 宣传内容：该文章似乎更像是一篇宣传文章，而非客观的科学研究。这可能会误导读者对该技术的实际应用和局限性缺乏全面的了解。

综上所述，该文章存在一些偏袒、片面报道、无根据主张、缺失考虑点和宣传内容等问题。因此，读者需要谨慎对待该文章提出的观点，并在查阅其他相关文献后做出自己的判断。

# Topics for further research:

* Limitations of tri-stable energy harvesters
* Controversies and uncertainties surrounding the technology
* Environmental factors that may affect performance and lifespan
* Evidence supporting the use of small magnets in improving performance
* Risks and potential side effects of adding small magnets
* Objectivity and scientific rigor in the article

# Report location:

<https://www.fullpicture.app/item/13f92e6b317ae0532ae99478894ebad9>