# Article information:

双质量悬臂梁式可调频压电俘能器\_中国工程科技知识中心  
<https://www.ckcest.cn/default/es3/detail/1003/dw_thesis_copy/d1638baedf0791f94c125a12649432eb>

# Article summary:

1. This paper proposes a new type of piezoelectric energy harvester with adjustable frequency, which can capture the environmental vibration energy and provide power for wireless sensor nodes.

2. The paper analyzes the relationship between the output voltage of the frequency-adjustable piezoelectric energy harvester, the external excitation frequency and the load resistance, and then specifically analyzes the impact of each parameter on the energy harvesting efficiency.

3. The paper puts the energy harvester on the bridge and uses ANSYS to establish an analysis model to give the output voltage of the piezoelectric energy harvester under the bridge.

# 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 overall reliable and trustworthy in its content. It provides a detailed explanation of how a new type of piezoelectric energy harvester with adjustable frequency works, as well as its potential applications in bridge monitoring systems. The article also provides an analysis of how different parameters affect its efficiency, as well as numerical simulations to demonstrate its effectiveness in real-world scenarios.

The article does not appear to have any major biases or one-sided reporting, nor does it make unsupported claims or omit important points of consideration. All claims are backed up by evidence from theoretical and numerical methods, and all relevant counterarguments are explored in detail. There is no promotional content or partiality present in this article either.

The only potential issue with this article is that it does not explicitly mention any possible risks associated with using this technology, such as potential safety hazards or environmental impacts that may arise from its use. However, since this is an academic paper rather than a policy document, it may be assumed that these issues have been taken into consideration by researchers prior to publication but were simply not mentioned in this particular article due to space constraints.

# Topics for further research:

* Piezoelectric energy harvester safety
* Piezoelectric energy harvester environmental impacts
* Bridge monitoring system safety
* Bridge monitoring system environmental impacts
* Piezoelectric energy harvester efficiency
* Bridge monitoring system efficiency

# Report location:

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