# Article information:

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# Article summary:

1. The review discusses the need for zero carbon emission fuels to replace conventional hydrocarbon fuels that produce harmful pollutants.

2. Ammonia is a promising carbon-free fuel, but its low burning velocity and high NOx emissions limit its large-scale usage.

3. The review explores the potential of hydrogen and methane as secondary fuels to aid ammonia combustion and addresses the impacts, limitations, and future perspectives of each system.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article titled "A review on ammonia, ammonia-hydrogen and ammonia-methane fuels" provides a comprehensive overview of the potential of ammonia as a carbon-free fuel. The authors discuss the physicochemical and combustion characteristics of ammonia, as well as its limitations, such as low burning velocity and high NOx emissions. They also explore the use of hydrogen and methane as secondary fuels to aid in ammonia combustion.

Overall, the article appears to be well-researched and informative. However, there are some potential biases and limitations that should be considered.

Firstly, the authors primarily focus on the advantages of using ammonia as a fuel source over conventional hydrocarbon fuels. While this is an important point to make, it would have been beneficial for them to also address any potential drawbacks or risks associated with using ammonia as a fuel. For example, there may be safety concerns related to handling and storing large quantities of ammonia.

Additionally, the article does not provide much information on the economic feasibility of using ammonia as a fuel source. It would have been helpful for the authors to discuss any cost considerations or barriers that may prevent widespread adoption of this technology.

Another limitation of the article is that it primarily focuses on research conducted by the authors themselves or their colleagues. While this is understandable given their expertise in this area, it may limit the scope of their analysis and prevent them from considering alternative viewpoints or counterarguments.

Finally, there is some promotional content in the article that may bias readers towards viewing ammonia as a superior fuel source without fully considering other options. For example, the authors state that "ammonia offers several advantages over hydrogen," but do not provide much evidence to support this claim.

In conclusion, while "A review on ammonia, ammonia-hydrogen and ammonia-methane fuels" provides valuable insights into the potential benefits of using ammonia as a carbon-free fuel source, readers should approach it with some caution due to its potential biases and limitations.

# Topics for further research:

* Safety concerns of using ammonia as a fuel source
* Economic feasibility of using ammonia as a fuel source
* Comparison of ammonia as a fuel source to other carbon-free alternatives
* Environmental impact of producing and using ammonia as a fuel source
* Challenges in implementing ammonia as a fuel source on a large scale
* Potential regulatory barriers to using ammonia as a fuel source

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