# Article information:

Thermal Self‐Protection of Zinc‐Ion Batteries Enabled by Smart Hygroscopic Hydrogel Electrolytes - Yang - 2020 - Advanced Energy Materials - Wiley Online Library  
<https://onlinelibrary.wiley.com/doi/full/10.1002/aenm.202002898>

# Article summary:

1. Traditional strategies to mitigate thermal runaway of batteries rely on external thermal management systems, which consume additional energy and increase the complexity and footprint of the system.

2. Smart batteries with the function of thermal self-protection have emerged as an attractive strategy to achieve operation safety.

3. This article proposes a new strategy using smart hygroscopic hydrogel electrolytes to achieve efficient thermal self-protection of zinc-ion batteries.

# 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 written in a clear and concise manner, providing a comprehensive overview of the current state of research into thermal self-protection for zinc-ion batteries. The authors provide evidence for their claims by citing relevant literature, which adds credibility to their argument. Furthermore, they present both sides of the argument equally, noting potential risks associated with their proposed solution as well as its advantages.

However, there are some areas where the article could be improved upon. For example, while the authors discuss potential risks associated with their proposed solution, they do not provide any evidence or data to support these claims. Additionally, while they cite relevant literature throughout the article, they do not explore any counterarguments or alternative solutions that may exist in the field. Finally, there is no discussion about how this proposed solution could be implemented in practice or what further research needs to be done in order to make it viable for commercial use.

In conclusion, while this article provides a comprehensive overview of current research into thermal self-protection for zinc-ion batteries and presents both sides of the argument equally, it could benefit from further exploration into counterarguments and alternative solutions as well as more evidence and data to support its claims regarding potential risks associated with its proposed solution.

# Topics for further research:

* Alternative solutions for thermal self-protection of zinc-ion batteries
* Evidence for potential risks associated with thermal self-protection of zinc-ion batteries
* Practical implementation of thermal self-protection for zinc-ion batteries
* Counterarguments to thermal self-protection of zinc-ion batteries
* Commercial viability of thermal self-protection for zinc-ion batteries
* Further research into thermal self-protection of zinc-ion batteries

# Report location:

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