# Article information:

Stabilizing Zn Anode Interface by Simultaneously Manipulating the Thermodynamics of Zn Nucleation and Overpotential of Hydrogen Evolution - Wang - 2022 - Advanced Functional Materials - Wiley Online Library  
<https://onlinelibrary.wiley.com/doi/10.1002/adfm.202207898>

# Article summary:

1. Introducing sericin molecules as an electrolyte additive to modulate the Zn nucleation and overpotential of hydrogen evolution can construct a stable solid-electrolyte-interface (SEI) layer.

2. This SEI layer increases the nucleation overpotential during Zn plating, leading to finer-grained, dense, and uniform Zn deposition.

3. The assembled full cells using Na2V6O16·3H2O cathodes endure 2000 cycles with high capacity retention of 81.7% at 5.0 A g−1.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is overall reliable and trustworthy in its claims and evidence presented. It provides a comprehensive overview of the research conducted on stabilizing zinc anode interface by manipulating the thermodynamics of zinc nucleation and overpotential of hydrogen evolution, including detailed descriptions of the methods used, results obtained, and conclusions drawn from them. The authors have provided sufficient evidence for their claims through experiments conducted on zinc|zinc symmetric cells with sericin additives as well as zinc|copper cells with Na2V6O16·3H2O cathodes. Furthermore, they have discussed potential risks associated with their research such as dendrite growth, hydrogen evolution, and zinc corrosion during plating/stripping processes which could lead to catastrophic failure of batteries.

The article does not appear to be biased or one-sided in its reporting; it presents both sides equally by discussing both the advantages and disadvantages associated with using sericin molecules as an electrolyte additive for stabilizing zinc anode interface. Additionally, there are no unsupported claims or missing points of consideration in the article; all claims are backed up by evidence from experiments conducted by the authors themselves or other researchers mentioned in the article's references section. There is also no promotional content present in this article; it is purely focused on providing scientific information about stabilizing zinc anode interface through manipulating thermodynamics of zinc nucleation and overpotential of hydrogen evolution without any attempts at marketing or advertising any products or services related to this research topic.

# Topics for further research:

* Zinc anode interface stabilization
* Thermodynamics of zinc nucleation
* Hydrogen evolution overpotential
* Zinc
* zinc symmetric cells
* Zinc
* copper cells
* Na2V6O16·3H2O cathodes

# Report location:

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