# Article information:

A porous membrane electrolyte enabled by poly(biphenyl piperidinium triphenylmethane) for dendrite-free zinc anode with enhanced cycling life - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S1385894722009123>

# Article summary:

1. A novel porous membrane electrolyte of poly(biphenyl piperidinium triphenylmethane) (PBPT) incorporated into glass fiber (GF) is proposed for dendrite-free zinc anode with enhanced cycling life.

2. The tertiary amines on PBPT backbones have specific affinity to Zn2+, which benefits the uniform Zn2+ flux through the membrane electrolyte.

3. The GF/PBPT-42% membrane has been demonstrated its application as the electrolyte in the Zn/MnO2 cell with enhanced cycling stability at both room temperature and -10°C.

# 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:

This article provides a detailed overview of a novel porous membrane electrolyte enabled by poly(biphenyl piperidinium triphenylmethane) (PBPT) for dendrite-free zinc anode with enhanced cycling life. The article is well written and provides a comprehensive description of the research conducted, including the synthesis of PBPT, fabrication of GF/PBPT-42%, and demonstration of its application in Zn/Zn and Zn/MnO2 cells. The authors provide evidence to support their claims, such as mechanical robustness data, cyclic stability data, and electrochemical performance data.

The article does not appear to be biased or one-sided in its reporting; it presents both sides equally and does not make any unsupported claims or omit any points of consideration. It also does not contain any promotional content or partiality towards any particular viewpoint or opinion. Furthermore, possible risks are noted throughout the article, such as corrosion reactions that can lead to capacity decay in ZIBs.

In conclusion, this article appears to be trustworthy and reliable due to its comprehensive coverage of the research conducted and lack of bias or unsupported claims.

# Topics for further research:

* Zinc anode dendrite formation
* Poly(biphenyl piperidinium triphenylmethane) synthesis
* Zinc-ion battery cycling life
* Zinc-ion battery corrosion reactions
* Mechanical robustness of porous membranes
* Electrochemical performance of zinc-ion batteries

# Report location:

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