# Article information:

PVDF-HFP based polymer electrolytes with high Li+ transference number enhancing the cycling performance and rate capability of lithium metal batteries - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0169433221026404>

# Article summary:

1. PVDF-HFP based polymer films possess good wettability and liquid retention ability.

2. The lithium ions transference number of GPEs is up to 0.513 at 25 °C.

3. LiFePO4| PPL122 electrolyte |Li battery delivers a desired cycling performance with a capacity retention of 92% after 1000 cycles at 1 C.

# 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 “PVDF-HFP based polymer electrolytes with high Li+ transference number enhancing the cycling performance and rate capability of lithium metal batteries” is an informative and reliable source of information on the topic of lithium metal batteries and their potential applications in energy storage technologies. The article provides detailed information on the preparation process, properties, and performance of PVDF-HFP based polymer electrolytes, as well as their potential use in lithium metal batteries. The authors provide evidence for their claims by citing relevant research studies, which adds to the trustworthiness and reliability of the article. Furthermore, the authors present both sides equally by discussing both the advantages and disadvantages of using PVDF-HFP based polymer electrolytes in lithium metal batteries.

However, there are some points that could be improved upon in order to make the article more comprehensive and trustworthy. For example, while the authors discuss the potential risks associated with using PVDF-HFP based polymer electrolytes in lithium metal batteries, they do not provide any evidence or data to support their claims. Additionally, while they discuss various advantages associated with using these materials in energy storage technologies, they do not explore any counterarguments or alternative solutions that could be used instead. Finally, while they cite relevant research studies throughout the article, it would be beneficial if they provided more detailed information on these studies so readers can better understand how these findings relate to their own research.

# Topics for further research:

* Alternative solutions for lithium metal batteries
* Advantages and disadvantages of PVDF-HFP based polymer electrolytes
* Li+ transference number in lithium metal batteries
* Safety risks associated with lithium metal batteries
* Research studies on PVDF-HFP based polymer electrolytes
* Rate capability of lithium metal batteries

# Report location:

<https://www.fullpicture.app/item/8da7405da0c5e2969f5020cf62d37997>