# Article information:

Strain‐Based In Situ Study of Anion and Cation Insertion into Porous Carbon Electrodes with Different Pore Sizes - Black - 2014 - Advanced Energy Materials - Wiley Online Library
<https://onlinelibrary.wiley.com/doi/10.1002/aenm.201300683>

# Article summary:

1. This article examines the expansion of porous carbon electrodes in a room temperature ionic liquid (RTIL) using in situ atomic force microscopy (AFM).

2. The effect of carbon surface area and pore size/pore size distribution on the observed strain profile and ion kinetics is studied.

3. Molecular dynamics (MD) simulations are used to compare with and provide molecular insights into the experimental results.

# 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 generally reliable and trustworthy, as it provides detailed information on the study conducted, including the methodology used, results obtained, and conclusions drawn. The authors have also provided evidence for their claims through molecular dynamics simulations, which adds to the trustworthiness of the article. Additionally, all sources of bias have been identified and discussed in detail, which further adds to its reliability. However, there are some areas where more information could be provided; for example, more details about the potential scan rate used in the experiment could be included to provide a better understanding of how this affects the strain response. Additionally, more information about possible risks associated with using RTILs could be included to provide a more comprehensive overview of this topic.

# Topics for further research:

* Molecular Dynamics Simulations
* Strain Response of RTILs
* Potential Scan Rate Effects
* Risks of Using RTILs
* RTILs in Energy Storage Applications
* RTILs in Electrochemical Devices

# Report location:

<https://www.fullpicture.app/item/4dac71c3ad472a5b034b0ee3c4eee570>