# Article information:

In Situ XRD of Thin Film Tin Electrodes for Lithium Ion Batteries - IOPscience  
<https://iopscience.iop.org/article/10.1149/2.077203jes>

# Article summary:

1. Tin is an attractive material for lithium ion battery (LIB) anode applications due to its high specific capacity, cascading voltage profile, safety, wide availability, and low cost.

2. Thin film tin electrodes were sputtered onto the current collector of a recently developed in situ X-ray diffraction (XRD) and were monitored continuously by XRD while cycling.

3. A phase transformation from white tin, to Li2Sn5, to β-LiSn, to Li22Sn5 was observed during lithiation with the same phases detected in reverse order during delithiation.

# 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 evidence for its claims through the use of X-ray diffraction (XRD). The authors have also provided citations for their sources which adds credibility to their work. Furthermore, the article does not appear to be biased or one-sided as it presents both sides of the argument equally. However, there are some points that could be improved upon such as providing more evidence for the claims made and exploring counterarguments more thoroughly. Additionally, there is no mention of potential risks associated with using thin film tin electrodes which should be noted in future research on this topic.

# Topics for further research:

* Thin film tin electrode risks
* X-ray diffraction applications
* Advantages of thin film tin electrodes
* Disadvantages of thin film tin electrodes
* Thin film tin electrode fabrication methods
* Comparison of thin film tin electrodes to other materials

# Report location:

<https://www.fullpicture.app/item/30dfff1ca274fdec009cce533f553875>