# Article information:

High yield exfoliation of two-dimensional chalcogenides using sodium naphthalenide | Nature Communications  
<https://www.nature.com/articles/ncomms3995>

# Article summary:

1. Transition-metal dichalcogenides (LTMDs) such as MoS2 and WS2 have attracted attention due to their large intrinsic bandgap, direct bandgap, high current on/off ratios, and remarkable mechanical and optical properties.

2. Lithium intercalation has been used to exfoliate LTMDs into single-layer sheets, but this process is slow and yields low amounts of single-layer flakes.

3. This article explores the use of sodium naphthalenide as an intercalating agent for the exfoliation of LTMDs in order to produce high yield, high purity, and large-sized flakes.

# 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 comprehensive overview of the potential applications of two-dimensional chalcogenides and the challenges associated with their exfoliation using lithium intercalation. The authors present a novel approach to exfoliating these materials using sodium naphthalenide as an intercalating agent which could potentially lead to higher yields of single-layer flakes with improved purity and size. The article is well written and provides a clear explanation of the research conducted by the authors.

The article does not appear to be biased or one-sided in its reporting; it presents both sides of the argument fairly and objectively. It also provides evidence for its claims in the form of references to previous studies which support its conclusions. Furthermore, it does not appear to contain any promotional content or partiality towards any particular viewpoint or product.

The article does not appear to be missing any points of consideration or evidence for its claims; all relevant information is provided in sufficient detail for readers to make informed decisions about the research presented here. Additionally, there are no unexplored counterarguments or missing counterpoints that could weaken the authors' conclusions; all possible risks are noted throughout the text.

In conclusion, this article appears to be trustworthy and reliable in its reporting; it provides a comprehensive overview of two-dimensional chalcogenides and presents a novel approach for their exfoliation using sodium naphthalenide which could potentially lead to higher yields with improved purity and size.

# Topics for further research:

* Two-dimensional chalcogenides properties
* Exfoliation of two-dimensional chalcogenides
* Lithium intercalation of two-dimensional chalcogenides
* Sodium naphthalenide intercalation of two-dimensional chalcogenides
* Single-layer flakes of two-dimensional chalcogenides
* Challenges associated with two-dimensional chalcogenides exfoliation

# Report location:

<https://www.fullpicture.app/item/99134f2d0f986cc381de96fcd2165c00>