# Article information:

Recent Advances in Rolling 2D TMDs Nanosheets into 1D TMDs Nanotubes/Nanoscrolls - Aftab - 2023 - Small - Wiley Online Library  
<https://onlinelibrary-wiley-com.manchester.idm.oclc.org/doi/full/10.1002/smll.202205418?casa_token=dMXgXxpXUroAAAAA%3Aj9YPlf7ZVoKnqaX58w4y4OpJH8BMbsf9-pGWdqWqYRC9Jxn65Kt4x81aLyBrZwh8J0SERMlv7GntlA>

# Article summary:

1. 介绍了碳纳米管和石墨烯的发现及其在纳米技术领域中的应用。

2. 单壁碳纳米管具有优异的物理、化学和机械性质，可以组装成各种形态，如垂直排列的毡和纤维等。

3. 近年来，将二维过渡金属硫族化合物（TMDs）纳米片滚动成一维TMDs纳米管/卷轴的研究取得了进展。

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

该文章主要介绍了碳纳米管和石墨烯的发现及其在纳米技术领域中的应用。然而，该文章存在一些偏见和不足之处。

首先，该文章没有提到碳纳米管和石墨烯的制备过程中可能存在的环境污染和安全风险。这些材料的生产需要使用高温、高压等条件，可能会产生有害气体和废水等污染物。此外，碳纳米管和石墨烯具有极小的尺寸和高表面积，可能对人体健康造成潜在危害。

其次，该文章过于强调了碳纳米管和石墨烯的优点，但没有充分探讨它们的局限性。例如，碳纳米管容易出现结构缺陷和杂质，并且难以实现大规模制备；而石墨烯则容易受到氧化、层间剥离等问题影响其稳定性。

此外，该文章没有涉及其他类似材料的发展情况。例如，二维过渡金属硫化物（TMDs）也具有优异的电学、光学性能，并且相对于碳纳米管和石墨烯更容易制备和控制其结构。因此，将TMDs转化为一维纳米管或纳米卷曲物也是当前的研究热点之一。

总之，该文章存在一些偏见和不足之处，需要更全面、客观地呈现碳纳米管、石墨烯及其他相关材料的发展情况，并充分考虑它们的潜在风险和局限性。

# Topics for further research:

* Environmental pollution and safety risks in the production of carbon nanotubes and graphene
* Potential health hazards of carbon nanotubes and graphene due to their small size and high surface area
* Limitations of carbon nanotubes and graphene
* such as structural defects
* impurities
* and difficulty in large-scale production
* Stability issues of graphene
* such as oxidation and interlayer peeling
* Development of other similar materials
* such as two-dimensional transition metal dichalcogenides (TMDs)
* Conversion of TMDs into one-dimensional nanotubes or nanocoils as a current research focus.

# Report location:

<https://www.fullpicture.app/item/b6abbbfb681470038b4f92aea34d1980>