# Article information:

Controlled Colloidal Growth of Ultrathin Single‐Crystal ZnS Nanowires with a Magic‐Size Diameter - Deng - 2010 - Angewandte Chemie International Edition - Wiley Online Library  
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# Article summary:

1. Zinc sulfide (ZnS) nanowires with a diameter below the exciton Bohr radius have attracted significant interest due to their unique properties and potential applications.

2. A simple, fast, green, and catalyst-free colloidal method has been developed for the synthesis of single-crystal ZnS NWs with diameters down to 1.2 nm.

3. High-resolution TEM images revealed that the NWs have a uniform and narrow diameter of 1.2 nm, with preferred crystallographic orientation of [111] and single-crystalline structure.

# 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:

The article is generally reliable and trustworthy in its reporting of the development of a new method for synthesizing ultrathin zinc sulfide nanowires with diameters below the exciton Bohr radius. The authors provide detailed descriptions of their experimental methods as well as results from transmission electron microscopy (TEM) and high-resolution TEM (HRTEM). The article also provides evidence for the formation of higher-order structures such as closely packed array structures and overlapping layers of arrays, which further supports the claim that the NWs have highly uniform diameters.

The article does not appear to be biased or one-sided in its reporting; it presents both sides equally by providing evidence for both the successful synthesis of ultrathin ZnS nanowires as well as potential challenges associated with this process such as low contrast in TEM images due to extremely small diameter of the NWs. Furthermore, there are no unsupported claims or missing points of consideration in this article; all claims are supported by evidence from experiments conducted by the authors or previous studies cited in this article.

The only potential issue is that there is no discussion on possible risks associated with using zinc nitrate salt as a precursor for ZnS NWs synthesis, which could be addressed in future studies if necessary. Other than that, this article appears to be reliable and trustworthy overall in its reporting on controlled colloidal growth of ultrathin single‐crystal ZnS nanowires with a magic‐size diameter.

# Topics for further research:

* Zinc sulfide nanowire synthesis
* Colloidal growth of nanowires
* Magic-size diameter nanowires
* Zinc nitrate salt precursor
* TEM and HRTEM imaging
* Higher-order nanowire structures

# Report location:

<https://www.fullpicture.app/item/c48181a25807cd43c72d91f440e3c852>