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## PbS colloidal quantum dots for near-infrared optoelectronics

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DOI:

[10.33612/diss.172171198](https://doi.org/10.33612/diss.172171198)

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*Document Version*

Publisher's PDF, also known as Version of record

*Publication date:*

2021

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Bederak, D. (2021). *PbS colloidal quantum dots for near-infrared optoelectronics*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen. <https://doi.org/10.33612/diss.172171198>

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1. Many comparison studies of the influence of tetraalkylammonium halides as ligands or dopants for solution-processable semiconductors are missing two important points: having water in fluoride precursor misrepresents the outcome while the (only available) anhydrous fluoride precursor is incompatible with many chosen solvents (Chapter 2).
2. The industrialization of PbS CQD technologies requires an enormous upscaling of CQD synthesis and, probably, more sophisticated synthetic methods.
3. PbS CQD inks can be stored for months if they are properly engineered (Chapter 4).
4. It is essential to achieve efficient, cheap and durable large-scale solar fuel production for combating global warming.
5. Researchers often say “something worked/did not work” and “good/bad results”. Such language is misleading.
6. Spending an extra hour on reading and planning an experiment can save a few hours in the lab or during the data analysis. However, sometimes it is easier and faster just to try something.
7. If I get a euro whenever someone fails to reproduce someone’s results, I would be a millionaire.
8. The goal of chess is the checkmate and not capturing the queen or another piece. Even though, capturing a piece often leads to the checkmate.