# Article information:

Superstructures of Calcium Carbonate Crystals by Oriented Attachment | Crystal Growth & Design
<https://pubs.acs.org/doi/10.1021/cg050051d>

# Article summary:

1. Calcium carbonate is an important mineral due to its various industrial applications and its significance as a biomineral.

2. Vaterite supercrystals with hexagonal symmetry can be formed via the vapor diffusion method under specific conditions in the absence of any additional additives, confirming the active influence of ammonium ions on calcium carbonate precipitation.

3. The formation of these unusual morphologies is due to the aggregation of nanoparticles via an oriented attachment mechanism, which is stabilized by weakly adsorbed ammonium ions.

# 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 “Superstructures of Calcium Carbonate Crystals by Oriented Attachment” provides a detailed overview of the formation of vaterite supercrystals with hexagonal symmetry via the vapor diffusion method under specific conditions in the absence of any additional additives, confirming the active influence of ammonium ions on calcium carbonate precipitation. The article is well-written and provides a comprehensive overview of the research conducted, including detailed descriptions and explanations for each step in the process.

The article does not appear to have any biases or one-sided reporting, as it presents both sides equally and does not make unsupported claims or omit counterarguments. Furthermore, it provides evidence for all claims made and explores possible risks associated with this process. Additionally, there is no promotional content present in this article, nor does it appear to be partial in any way.

In conclusion, this article appears to be trustworthy and reliable as it provides a comprehensive overview of its topic without any biases or one-sided reporting.

# Topics for further research:

* Calcium Carbonate Crystal Formation
* Oriented Attachment Process
* Ammonium Ion Influence
* Vapor Diffusion Method
* Vaterite Supercrystals
* Hexagonal Symmetry Formation

# Report location:

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