# Article information:

Controllable synthesis of all the anhydrous CaCO3 polymorphs with various morphologies in CaCl2-NH3-CO2 aqueous system - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0032591018303371>

# Article summary:

1. This article studies the synthesis of CaCO3 with CaCl2-NH3-CO2 aqueous system, which can be used as a step for developing a perfect green process with 100% theoretical utilization of the reacted atoms.

2. The results show that all three anhydrous CaCO3 polymorphs with various morphologies (e.g., cubic, lamellar, spherical, needle-like and branched) can be obtained in the absence of any additives by simply regulating the reaction conditions.

3. The crystal growth process can be well explained based on either Ostwald ripening or dissolution-recrystallization mechanism, depending on the reaction conditions.

# 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 is generally reliable and trustworthy in its reporting of the controllable synthesis of all the anhydrous CaCO3 polymorphs with various morphologies in CaCl2-NH3-CO2 aqueous system. The authors provide detailed information about their research methods and results, as well as their interpretations of these results. They also provide evidence to support their claims, such as XRD patterns and SEM images to demonstrate the formation of different polymorphs and morphologies under different reaction conditions.

The article does not appear to have any major biases or one-sided reporting; it presents both sides equally and fairly without promoting any particular point of view or agenda. It also does not make any unsupported claims or omit important points of consideration; all claims are backed up by evidence from experiments conducted by the authors. Furthermore, there are no unexplored counterarguments or missing evidence for the claims made; all possible risks are noted and discussed in detail throughout the article.

In conclusion, this article is reliable and trustworthy in its reporting on controllable synthesis of all the anhydrous CaCO3 polymorphs with various morphologies in CaCl2-NH3-CO2 aqueous system.

# Topics for further research:

* Controllable synthesis of CaCO3
* Anhydrous CaCO3 polymorphs
* CaCl2-NH3-CO2 aqueous system
* XRD patterns of CaCO3
* SEM images of CaCO3
* Risks associated with CaCO3 synthesis

# Report location:

<https://www.fullpicture.app/item/1c4a5fa543e6c852f6de73670a484abe>