

Supporting Information (SI) document: Enhanced precipitation of magnesium carbonates using carbonic anhydrase†

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1 SI: Set-up

The photo of the set-up used in this work is shown in Figure 1.

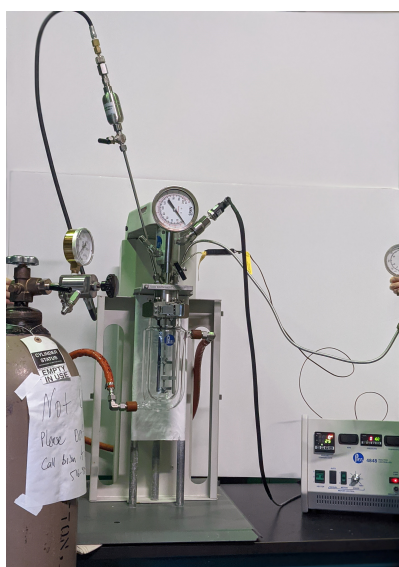


Fig. 1 Photo of the set-up used in the experiments reported in this work.

2 SI: Saturation index values of brucite

The saturation index values of brucite ($\text{Mg}(\text{OH})_2$) calculated with PHREEQC are reported on the composition diagram in Figure 2.

3 SI: Correlation between total solids and CA activity

We measured the activity of the enzyme during the experiments using the procedure explained in section 2.4 of the manuscript. The goal was to create a relationship between the total suspended solids (TSS) related to algae and the activity of CA enzyme. The results are shown in Figure 3.

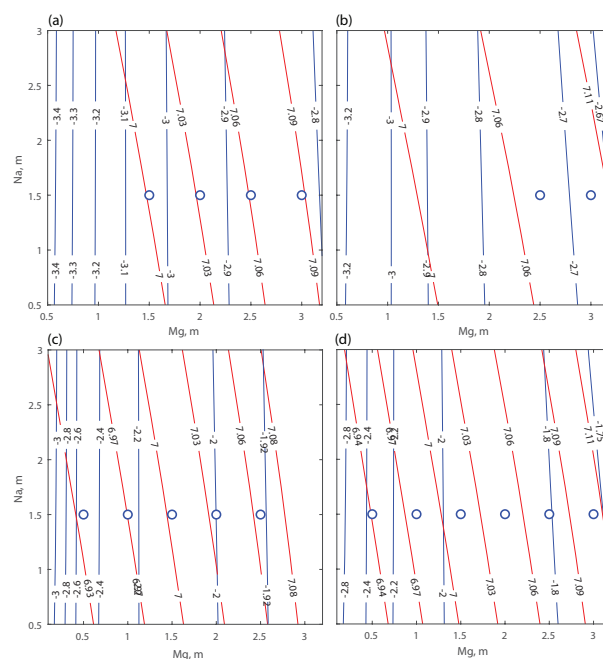


Fig. 2 Saturation index (*SI*) values of $\text{Mg}(\text{OH})_2$ at the applied operating conditions, namely: (a) 25 °C and 1 bar of p_{CO_2} ; (b) 25 °C and 0.1 bar of p_{CO_2} ; (c) 40 °C and 1 bar of p_{CO_2} ; and (d) 40 °C and 0.1 bar of p_{CO_2} .

In parts a and b, the data and the linear regression are reported for bovine CA and CA in the microalgae *Scenedesmus obliquus*, respectively.

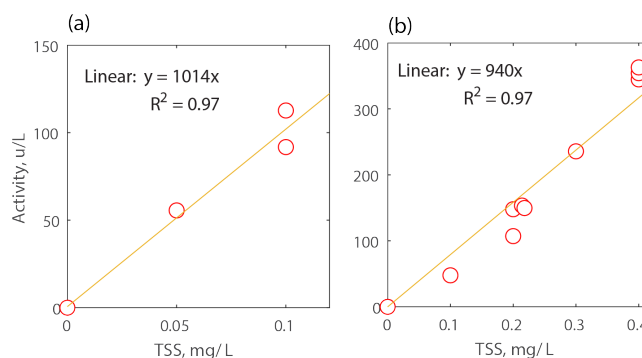


Fig. 3 CA activity as a function of total suspended solids (TSS) for (a) bovine CA and (b) CA in microalgae *Scenedesmus obliquus*.

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