

**A comparative study on the carbonation activated calcium  
silicates as sustainable binders: Reactivity, mechanical  
performance and microstructure**

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## Table of Contents

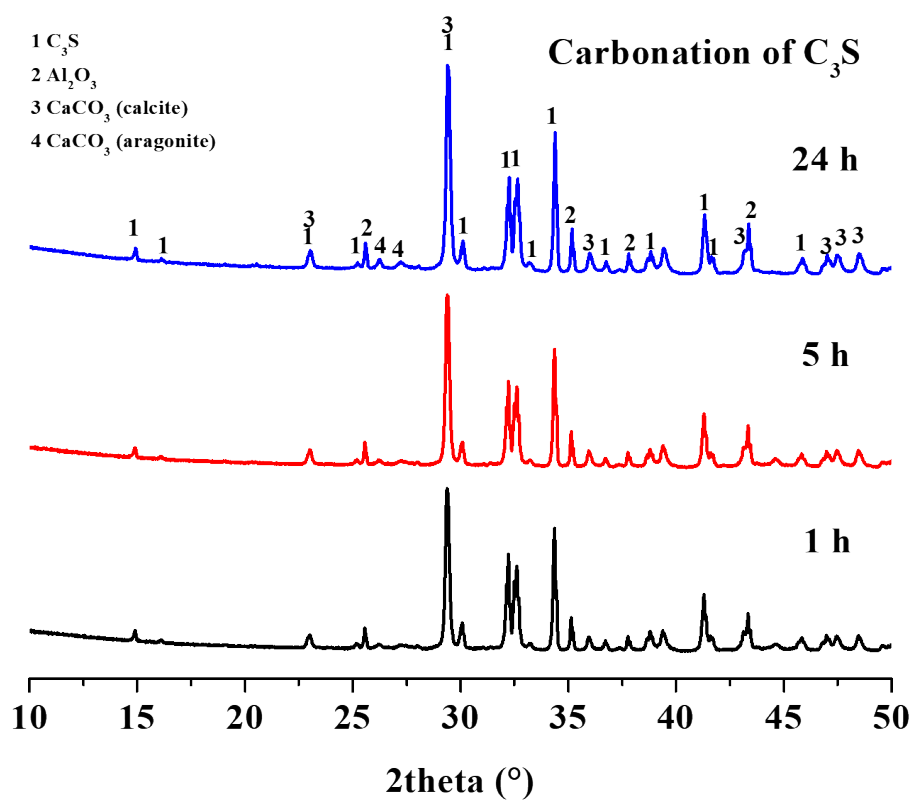
**Figure S1.** XRD patterns of carbonated  $C_3S$  with 10 wt. %  $Al_2O_3$  as internal standard.

**Figure S2.** XRD patterns of carbonated  $\beta$ - $C_2S$  with 10 wt. %  $Al_2O_3$  as internal standard.

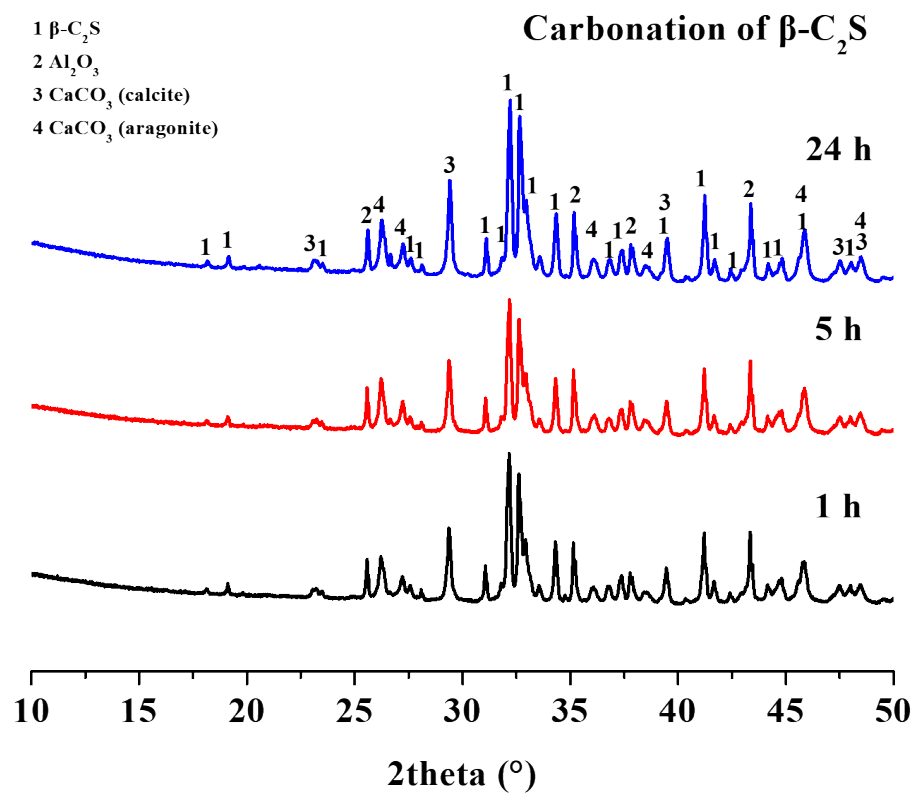
**Figure S3.** XRD patterns of carbonated  $\gamma$ - $C_2S$  with 10 wt. %  $Al_2O_3$  as internal standard.

**Figure S4.** XRD patterns of carbonated  $C_3S_2$  with 10 wt. %  $Al_2O_3$  as internal standard.

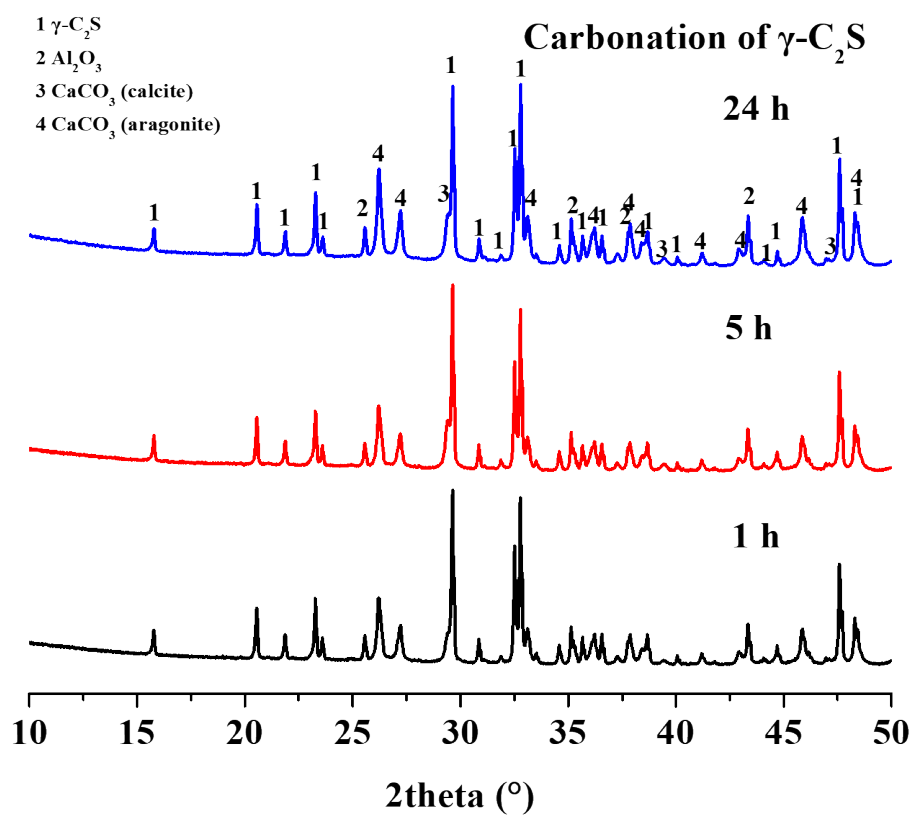
**Figure S5.** XRD patterns of carbonated  $CS$  with 10 wt. %  $Al_2O_3$  as internal standard.



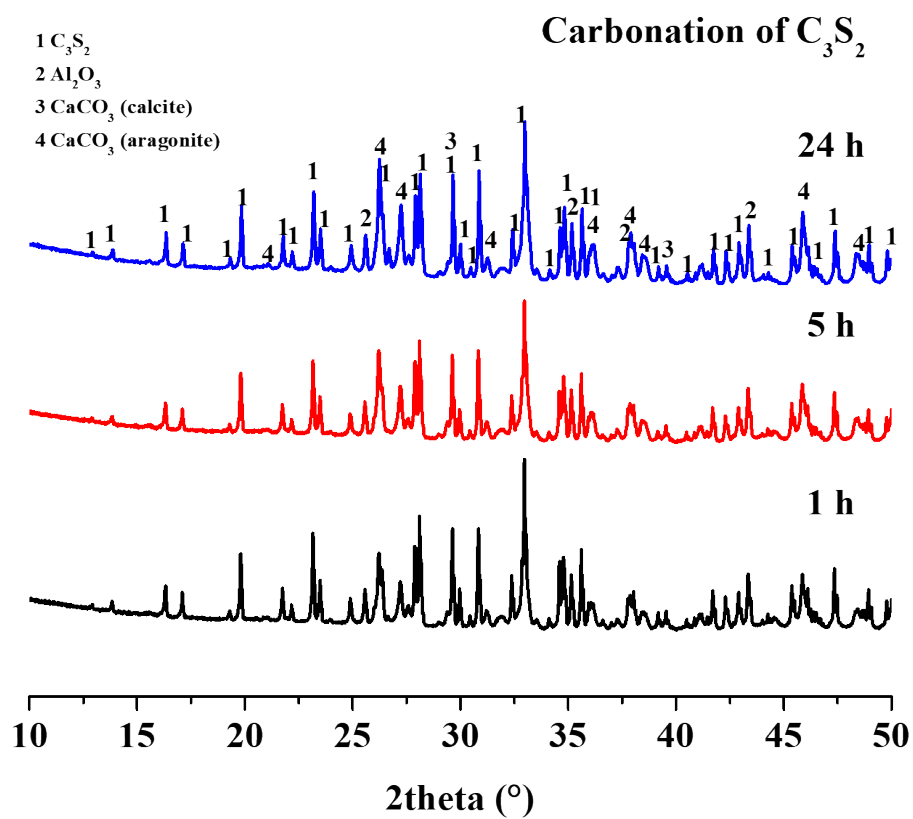
**Figure S1.** XRD patterns of carbonated C<sub>3</sub>S with 10 wt. % Al<sub>2</sub>O<sub>3</sub> as internal standard.



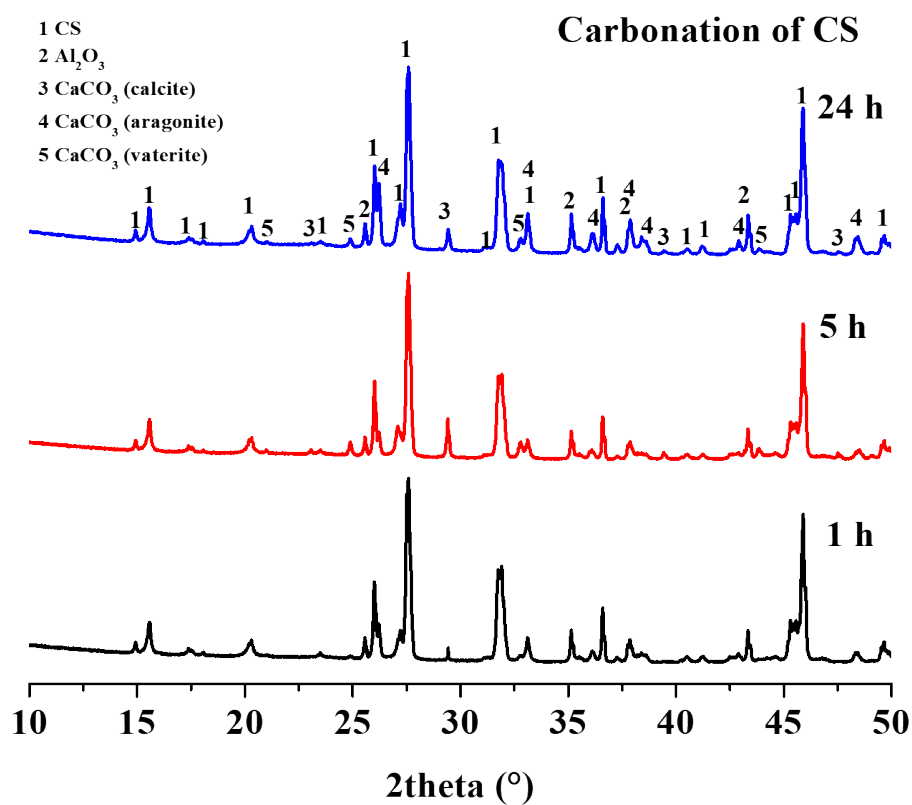
**Figure S2.** XRD patterns of carbonated  $\beta$ -C<sub>2</sub>S with 10 wt. % Al<sub>2</sub>O<sub>3</sub> as internal standard.



**Figure S3.** XRD patterns of carbonated  $\gamma$ -C<sub>2</sub>S with 10 wt. % Al<sub>2</sub>O<sub>3</sub> as internal standard.



**Figure S4.** XRD patterns of carbonated  $C_3S_2$  with 10 wt. %  $Al_2O_3$  as internal standard.



**Figure S5.** XRD patterns of carbonated CS with 10 wt. %  $\text{Al}_2\text{O}_3$  as internal standard.