The silicon requirement of coccolithophore calcification

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Some coccolithophores, such as *Coccolithus braarudii*, need silicon in order to grow and to calcify, while others, such as *Emiliania huxleyi*, do not. Here we present a survey of a number of species across the phylogenetic tree that shows a distinct cluster-pattern of species that require silicon and those that do not. The specific reason for coccolithophore silicon requirement is still unknown. We show that silicon plays a key role in coccolith morphogenesis and argue that some morphogenetic processes can be excluded as the site of silicon action.