**Bacterial Insights into the Formation of Opaline Stromatolites from the Chimalacatepec Lava Tube System, Mexico**

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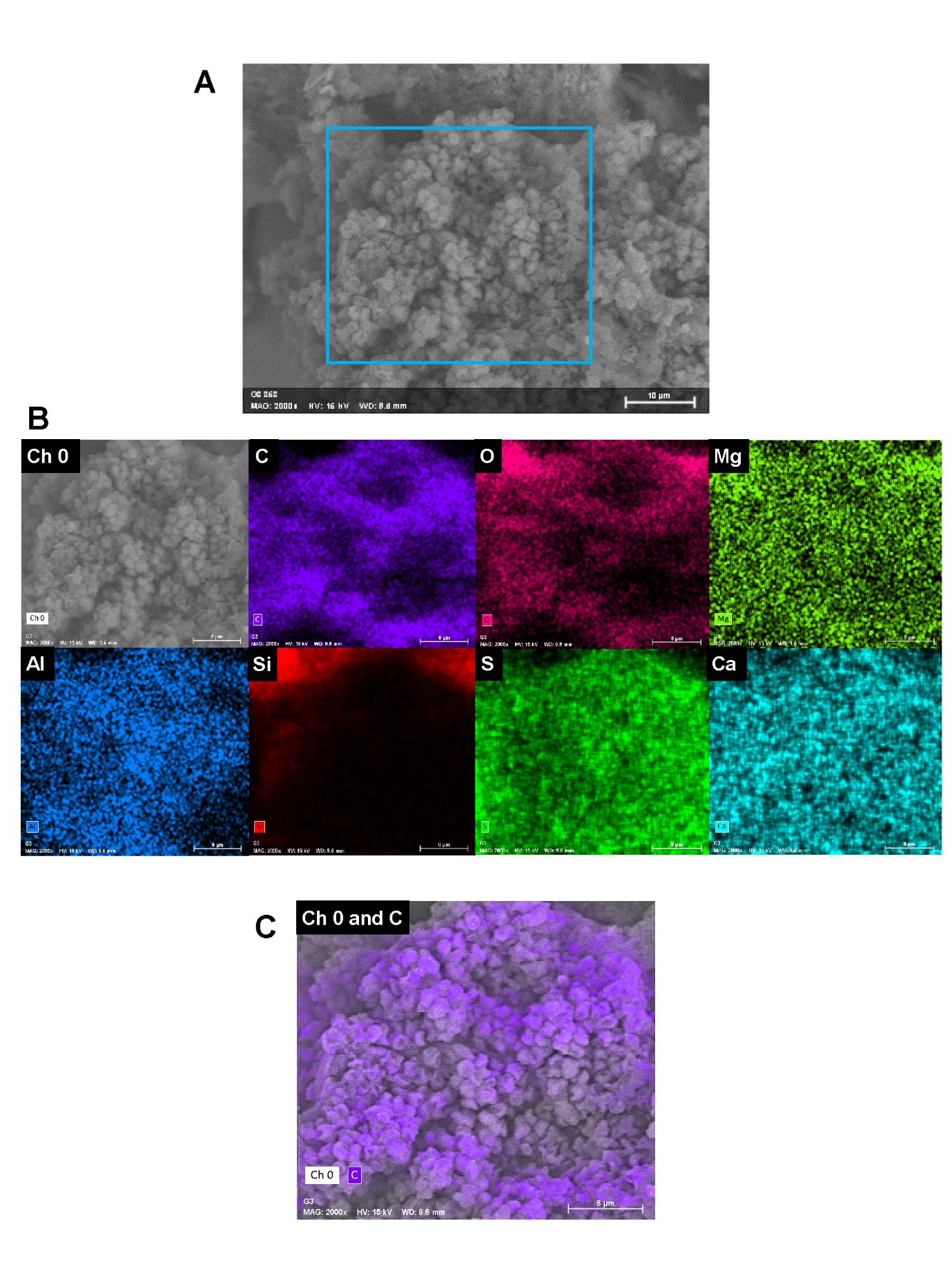


Figure S1. EDS elemental mapping of a representative microbial cluster in a siliceous stromatolite. A. SEM image. B. The corresponding elemental mapping of C, O, Mg, Al, Si, S, and Ca, respectively. C. Merge-image of the SEM micrograph and the EDS mapping of the carbon.

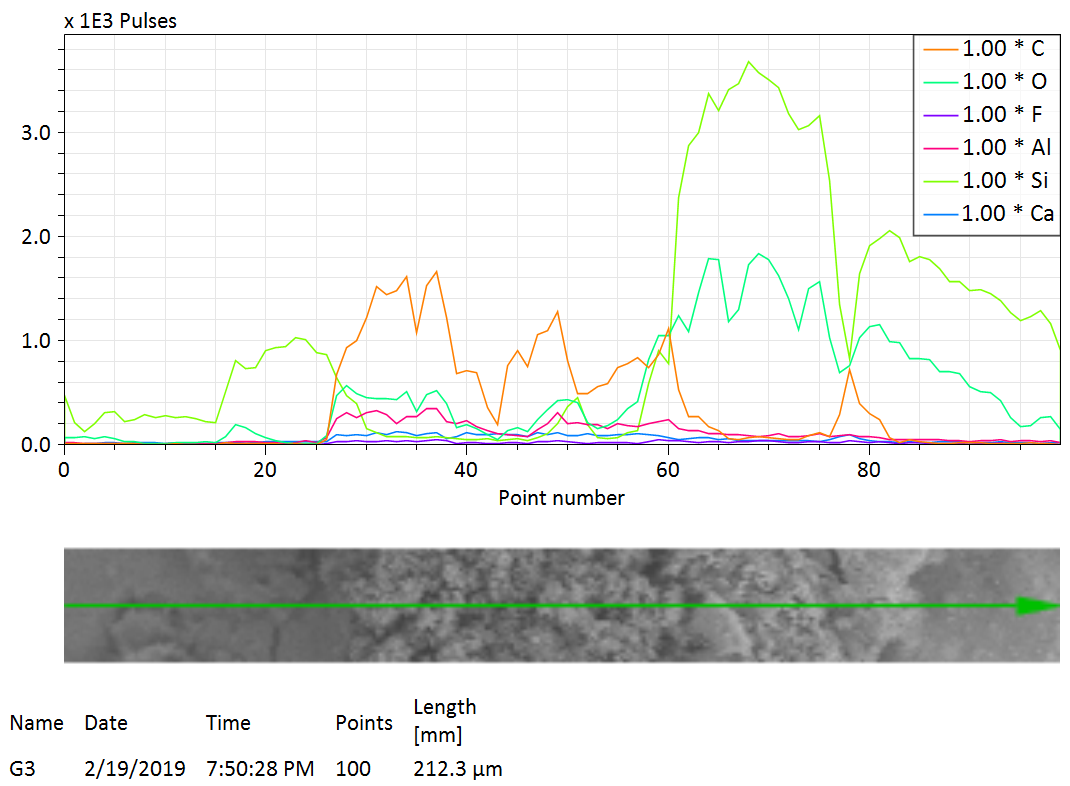
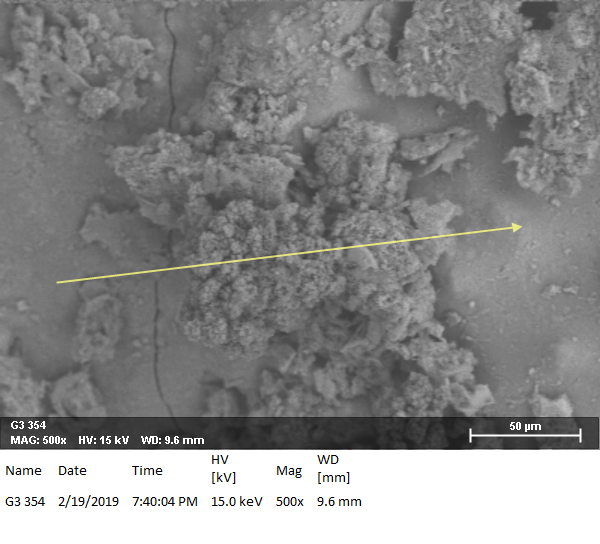


Figure S2. SEM micrograph with EDS linescan along the yellow arrow (upper image) of a microbial cluster within a siliceous stromatolite. The cluster is surrounded by a siliceous (Si-O) matrix, while the cluster display shows a higher content of C, as can be observed in the plot where the carbon concentration profile is enlarged when the microbial cluster is scanned.