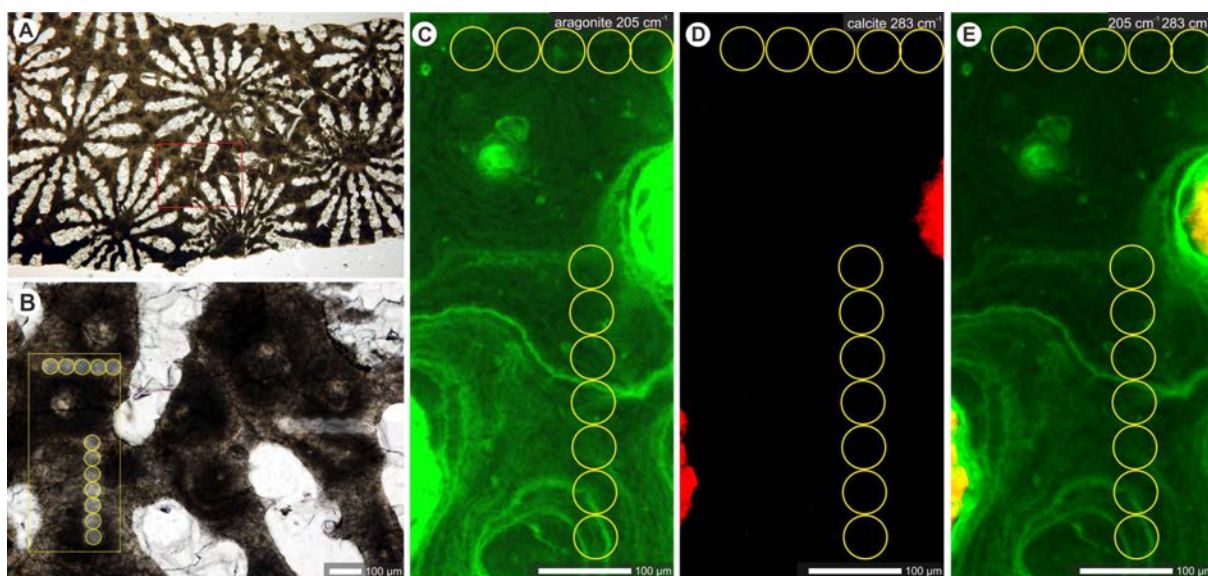
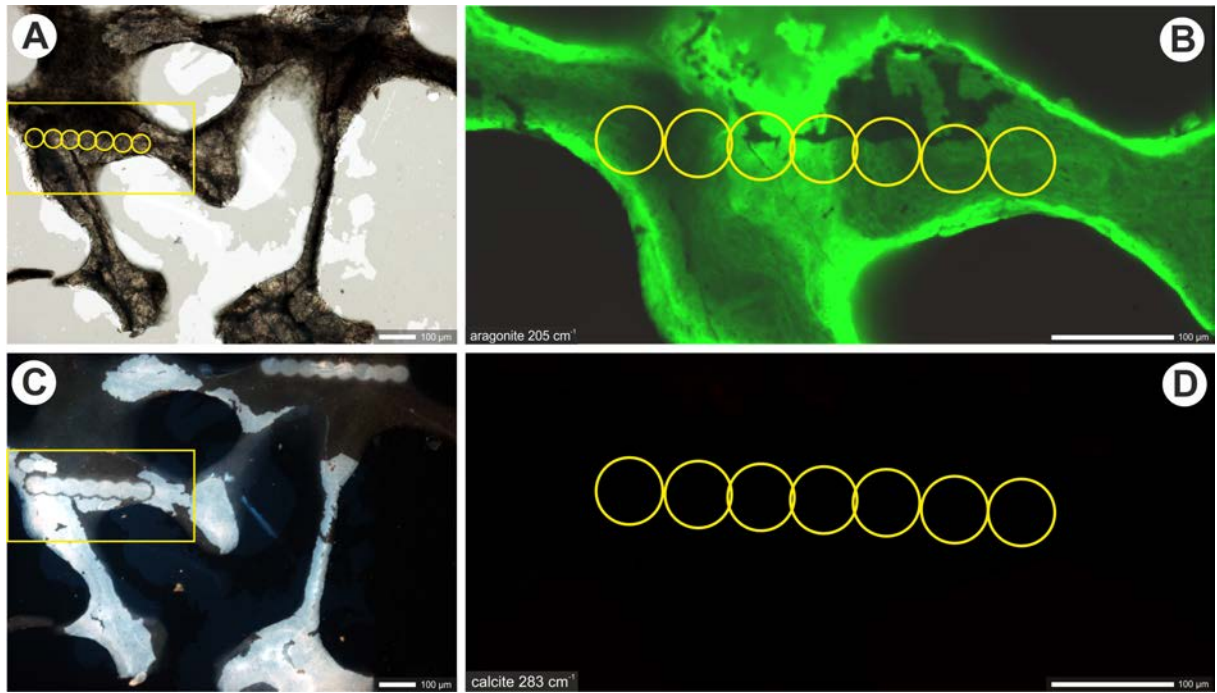


**Figure EA11a.** (A) Transmitted light microscope image and (B-D) Raman maps for sample E1. Areas shown in green in (B) correspond to zones containing aragonite. Areas shown in red in (C) correspond to zones containing calcite. (D) Combined map of B and C.

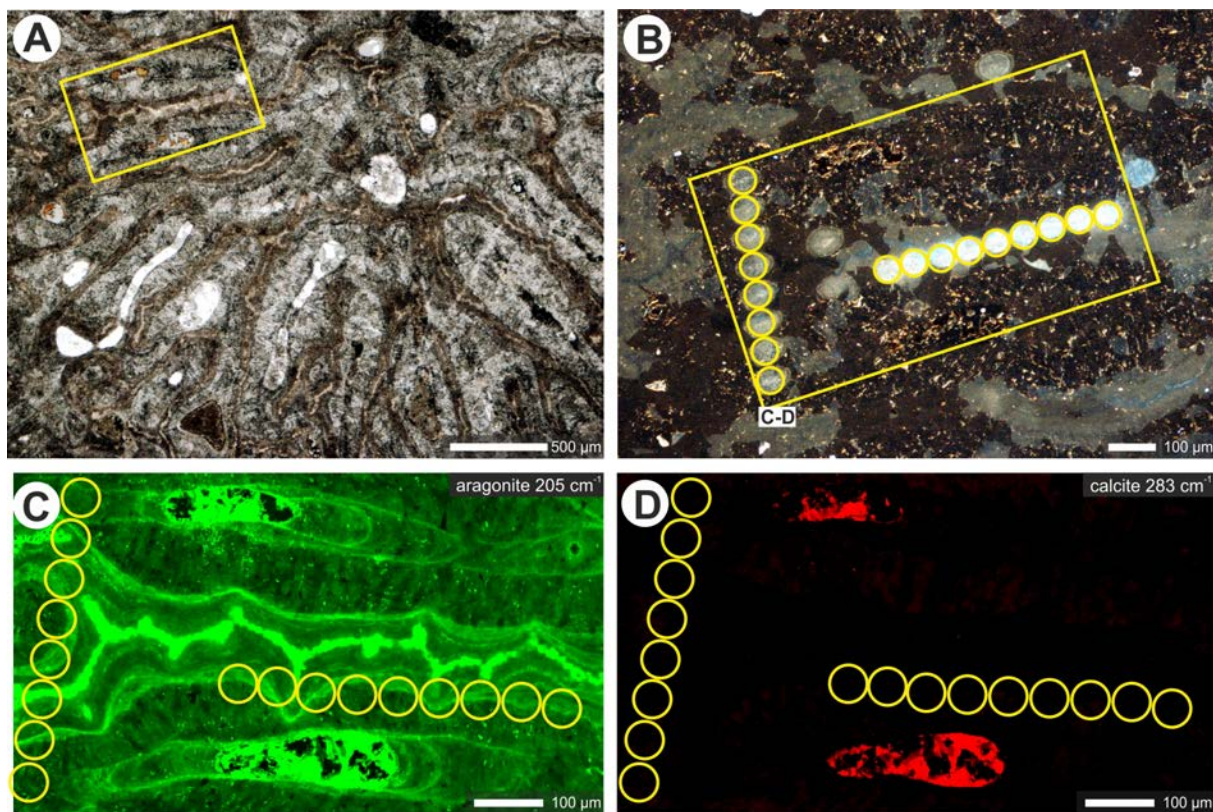


**Figure EA11b.** (A+B) Transmitted light microscope images and (C-E) Raman maps for sample E7. Areas shown in green in (B) correspond to zones containing aragonite. Areas

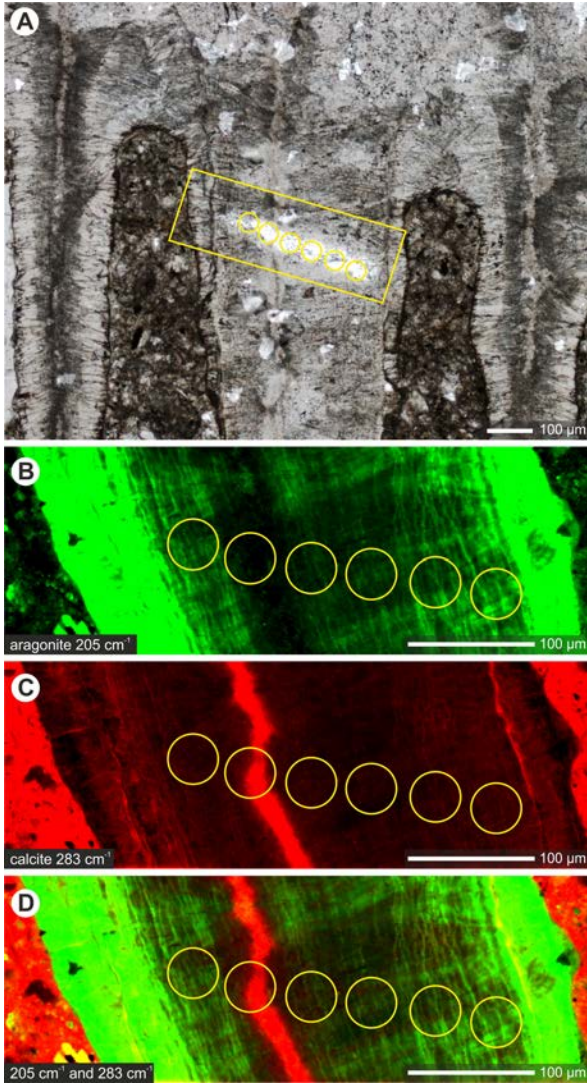
shown in red in (C) correspond to zones containing calcite. (D) Combined map of B and C. Results show the absence of calcite within the coral skeleton.



**Figure EA11c.** (A) Transmitted light microscope images, (B+D) Raman maps, and (C) reflected light image for sample E5. Areas shown in green in (B) correspond to zones containing aragonite. Areas shown in red in (D) correspond to zones containing calcite whereas black indicates the absence of calcite.



**Figure EA11d.** (A) Transmitted light microscope image, (B) reflected light image, and (C, D) Raman maps, for sample Pa2. Areas shown in green in (C) correspond to zones containing aragonite. Areas shown in red in (D) correspond to zones containing calcite whereas black indicates the absence of calcite.



**Figure EA11e.** (A) Transmitted light microscope image and (B-D) Raman maps, for sample K4. Areas shown in green in (B) correspond to zones containing aragonite. Areas shown in red in (C) correspond to zones containing calcite whereas black indicates the absence of calcite. (D) Combined map of B and C. Results show recrystallization and alteration of COCs. None of the SIMS analyses measured in the transect shown passed our Mn/Ca threshold test.