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**Aqueously altered minerals in CM2 chondrites
Maribo and Murchison: A TEM study.**

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To gain insight into aqueous alteration episodes in carbonaceous chondrites, tochilinite-cronstedtite-intergrowths (TCI) were examined by TEM in Maribo and Murchison (both CM2). In Murchison, some low-Ni ($\ll 1$ wt%) TCI grains bear enclosed lenses (100-500 nm) of magnetite. These might represent precursor relict minerals from a previous aqueous alteration episode [1]. In Maribo, TCI grains with a layered texture have developed sequences of tochilinite and TCI with sharp boundaries. The TCI layers formed through interaction of a more Si-rich fluid with preexisting tochilinite. Furthermore, the preexisting tochilinite has grown into already existing calcite. This leads to a sequence of apparently three episodes of hydrous mineral formation in Maribo: Calcite precipitation (1) is followed by tochilinite (2) and TCI (3) formation. In general, this study demonstrates that TEM investigations can reveal multiple fine-scale episodes of aqueous alteration on the CM parent-body or pre-accretionary CM-like materials.

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