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Supporting information for article:

Twinning and homoepitaxy cooperating to the already rich growth morphology of CaCO3 polymorphs. I. Aragonite

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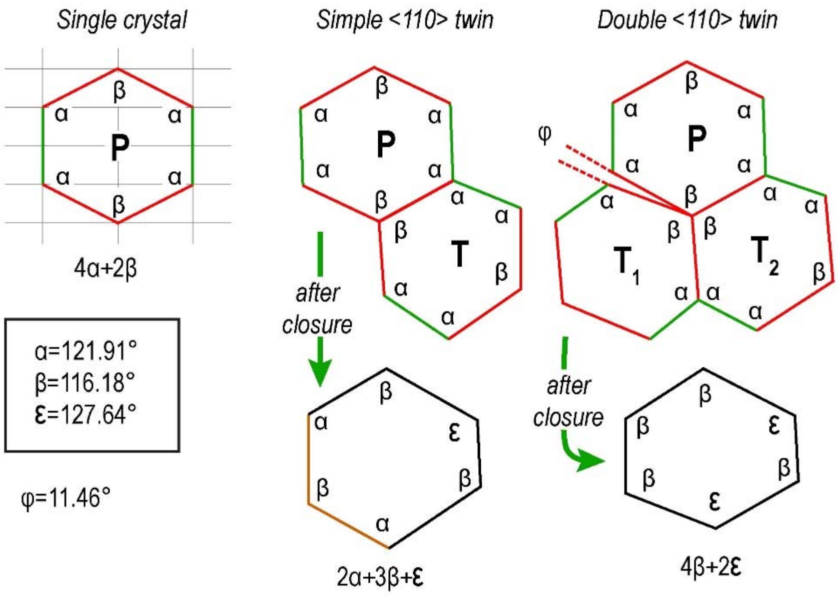

Figure S1. Complete scheme of the aragonite crystal (single and twinned) seen along its [001] direction. See Figure 3 of the text for a comparison. Here, single crystal along with simple and double twins are represented, before and after an imaged closure of each aggregate. The twin planes are always of the type <110>. It is plain that all the "closed" crystals are pseudo-hexagonal, but the distribution of the internal angles is markedly different. As a matter of fact, if the single crystal maintains the classic distribution $4\alpha + 2\beta = 720°$, the single twin has $2\alpha + 3\beta + \varepsilon = 720°$, while the double twin exhibits $4\beta + 2\varepsilon = 720°$. It is worth noting that the angle α disappeared in the transition from the single crystal to the closed double twin.

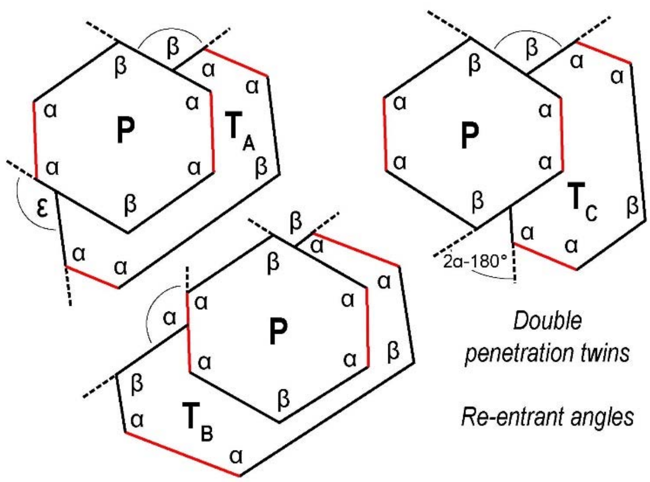

Figure S2. The re-entrant angles observed when looking at the three types (A, B, C) of the double penetration twins of aragonite. Type A: ($\beta+\varepsilon$); Type B: ($\beta+\alpha$); Type C: [$\beta+(2\alpha-180°)$]. This Figure is complementary to Figure (3a) of the main text.