

Electronic Supplementary Information

Epitaxies of Ca-sulfates on calcite (CaCO₃). I. Gypsum {010} on calcite {10.4} form: epi-twins of gypsum induced by the calcite substrate

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Table S1. 2D coincidences between substrate {10.4}_C and deposit {010}_G. Less innovative and higher rankings with respect to Tables 1 and 2 (main text) have been here listed.

Ranking	{10.4} _C lattice vectors (Å)	{010} _G lattice Vectors (Å)	Maximum linear and area misfit (Δ%)	Obliquity	Notes and linear misfits
	$\frac{1}{3} \times [4\bar{1}\bar{1}] = 9.516$ $3 \times [010] = 14.969$	$[\bar{1}01] = 9.941$ $-[301] = 15.461$	+4.46 +3.29		$[\bar{1}01]_G$ is not relevant for epitaxy
3a	(3×) 121.293	(4×) 128.339	+5.81	2.633°	Coherent linear misfits
	$\frac{1}{3} \times [7441] = 12.85$ $\frac{1}{3} \times [4.11.\bar{1}] = 17.02$	$2 \times [001] = 12.46$ $3 \times [100] = 16.86$	-3.13 -0.95		To be better investigated; $[001]_G$ is relevant
3b	(5×) 202.153	(6×) 192.508	-5.01	1.35°	Coherent linear misfits
	$-\frac{1}{3} \times [48\bar{1}] = 12.85$	$2 \times [001] = 12.46$ $3 \times [100] = 16.86$	-3.13 -0.57		To be better investigated; $[001]_G$ is

	$\frac{1}{\sqrt{3}}[81\bar{2}] = 16.957$				relevant
3c	(5×) 202.153	(6×) 192.508	-5.01	1.86°	Coherent linear misfits
	$-2 \times [010] = 9.979$ $[42\bar{1}] = 24.309$	$[201] = 10.474$ $[10\bar{3}] = 22.425$	+4.95 -8.40		
4	(6×) 242.584	(7×) 234.684	-3.36	2.33°	Opposite linear misfits
	$-3 \times [010] = 14.969$ $\frac{2}{\sqrt{3}}[42\bar{1}] = 16.206$	$-[102] = 16.148$ $[30\bar{2}] = 16.639$	+7.88 +2.67		
5	(6×) 242.584	(8×) 268.21	+10.56		Coherent linear misfits

Other 2D-CCs (having higher coincidences lattices) have been finely illustrated in the Supporting Information of the following paper:

L. Pastero, R. Giustetto and D. Aquilano, *CrystEngComm*, 2017, **19**, 3649-3659.