Supplementary material

Table S1. Misorientations between martensitic variant V1 and other variants (V2 to V24) from the ideal Kurdjumov-Sachs orientation relationship [22].

V2	60.0°[0.58; −0.58; 0.58]	**V10**	50.5°[−0.49; −0.46; 0.74]	**V18**	47.1°[−0.30; −0.63; −0.72]
V3	60.0°[0.00; −0.71; −0.71]	**V11**	14.9°[0.35; −0.93; −0.07]	**V19**	50.5°[−0.62; 0.17; −0.77]
V4	10.5°[0.00; 0.71; 0.71]	**V12**	57.2°[0.36; −0.71; 0.60]	**V20**	57.2°[−0.36; −0.60; −0.71]
V5	60.0°[0.00; 0.71; 0.71]	**V13**	14.9°[0.93; 0.35; 0.07]	**V21**	20.6°[0.96; 0.00; −0.30]
V6	49.5°[0.00; −0.71; −0.71]	**V14**	50.5°[−0.74; 0.46; −0.49]	**V22**	47.1°[−0.71; 0.30; −0.63]
V7	49.5°[−0.58; −0.58; 0.58]	**V15**	57.2°[−0.25; −0.63; −0.74]	**V23**	57.2°[−0.73; −0.25; 0.63]
V8	10.5°[0.58; −0.58; 0.58]	**V16**	20.6°[0.66; 0.66; 0.36]	**V24**	21.1°[0.91; 0.41; 0.00]
V9	50.5°[−0.19; 0.77; 0.62]	**V17**	51.7°[−0.66; 0.36; −0.66]		

Table S2. Predicted misorientations between martensitic variants expected from the ideal Kurdjumov-Sachs orientation relationship [16].

10.53°[0.577; 0.577; 0.577]	20.61°[0.955; 0.296; 0.000]	49.47°[0.577; 0.577; 0.577]	57.21°[0.714; 0.603; 0.357]
10.53°[0.707; 0.707; 0.000]	21.06°[0.912; 0.410; 0.000]	50.51°[0.739; 0.490; 0.462]	57.21°[0.738; 0.628; 0.246]
14.88°[0.933; 0.354; 0.650]	47.11°[0.719; 0.626; 0.302]	50.51°[0.767; 0.615; 0.186]	60.00°[0.577; 0.577; 0.577]
20.61°[0.659; 0.659; 0.363]	49.47°[0.707; 0.707; 0.000]	51.73°[0.659; 0.659; 0.363]	60.00°[0.707; 0.707; 0.000]