

Electronic Annex

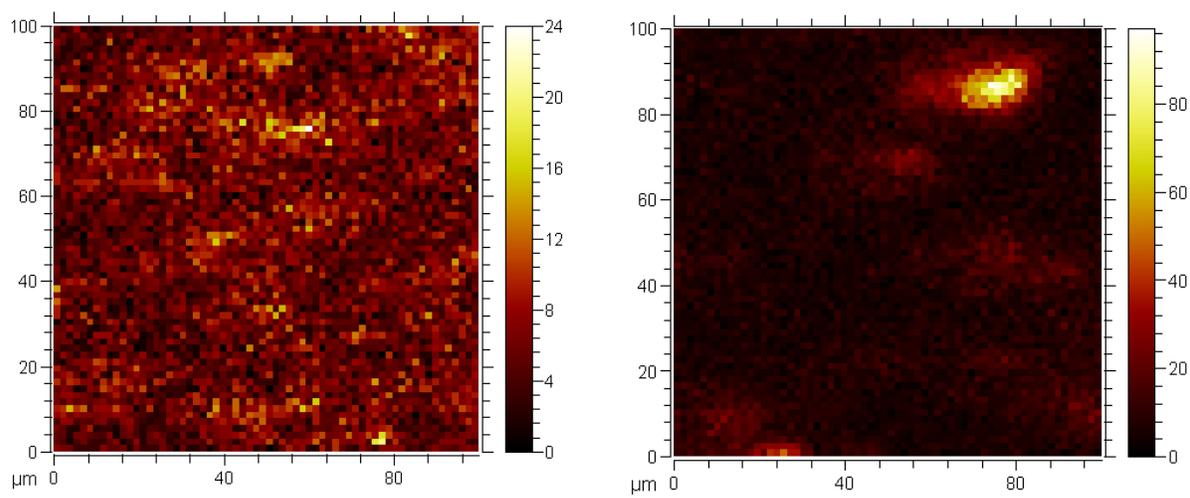


Figure A1 Summation of all scans of sample Pv_Pb_26n (left) and Pv_Pb_29 (right). Images are 64 x 64 pixel corresponding to an area of 100 x 100 μm . Scale bar is the integrated Pb-signal intensity in counts per second.

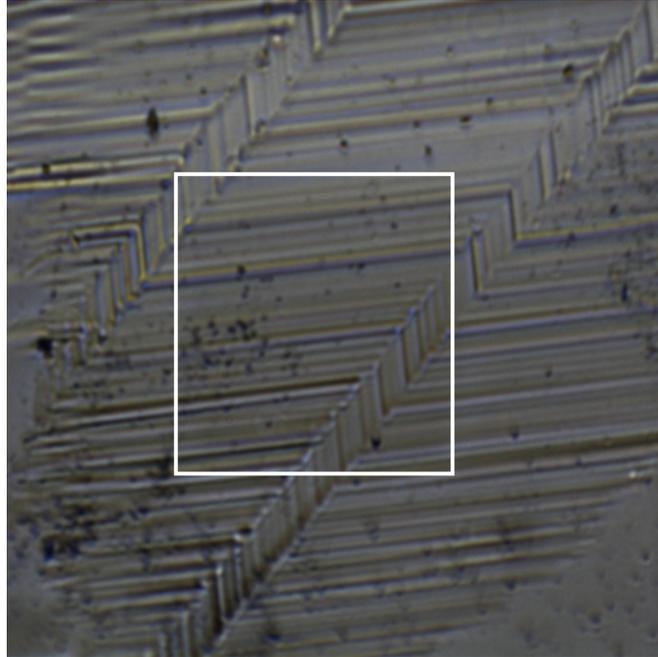


Figure A2 Reflected light image of sample Pv_Pb_25 after TOF-SIMS measurement. Field of view is 300 x 300 μm. The white frame represents the sputtered area of 100 x 100 μm. Clearly visible are the twin domains.

Table A3 EDX* analysis of the crystal substrate.

| | natural prv | synthetic prv |
|------------------|-------------|---------------|
| TiO ₂ | 61.26 (5) | 60.55 (33) |
| CaO | 38.74 (5) | 39.45(33) |
| Total | 100.0 | 100.0 |

prv = perovskite; *Energy dispersive analysis with ZAF correction on a Jeol JSM 6510 (20 kV acceleration voltage). The company who provided the synthetic prv claims a purity of 99.995 %.