Supporting information

Crystallography-Induced Correlations in Pore Ordering of Anodic Alumina Films

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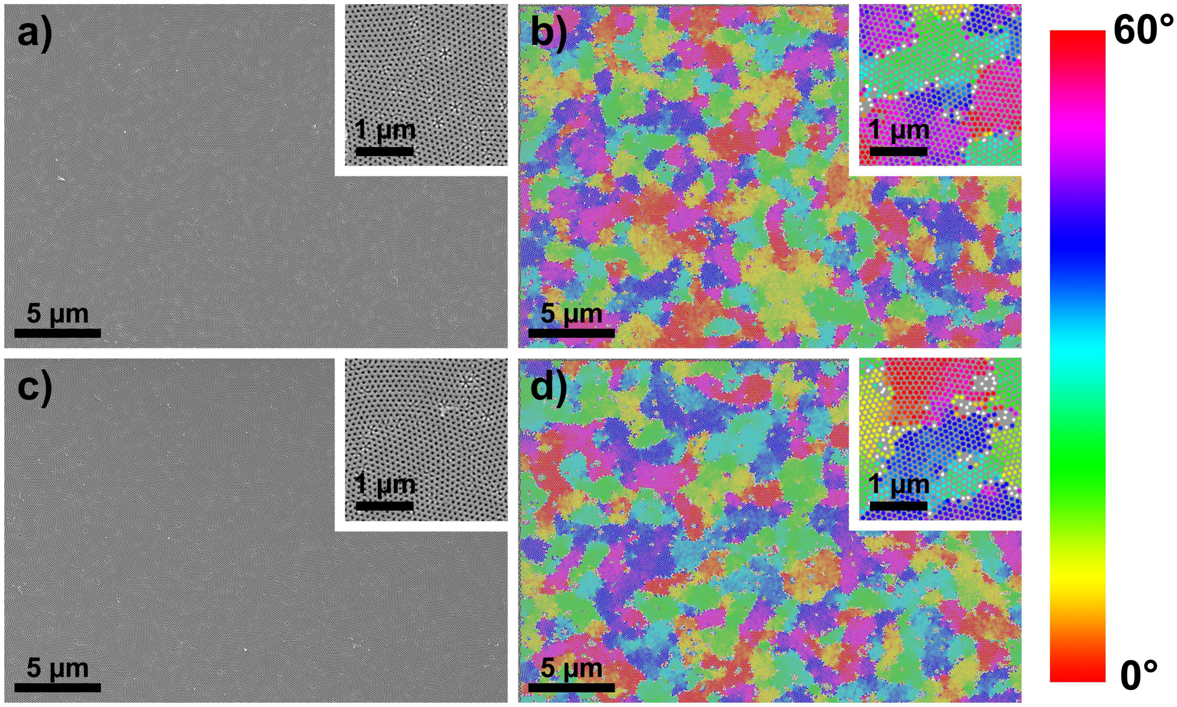

Figure S1. Morphology of anodic alumina films. SEM images of the bottom side of AAO membranes, grown on the Al(100) substrate (a) and on the vicinal facet of single crystal #1 tilted by 4.1° (c). The barrier layer was removed by chemical etching before SEM analysis. Color-coded patterns corresponding to SEM images in panels (a) and (c) are shown in (b) and (d), respectively. The insets display high-magnification images for the each panel.

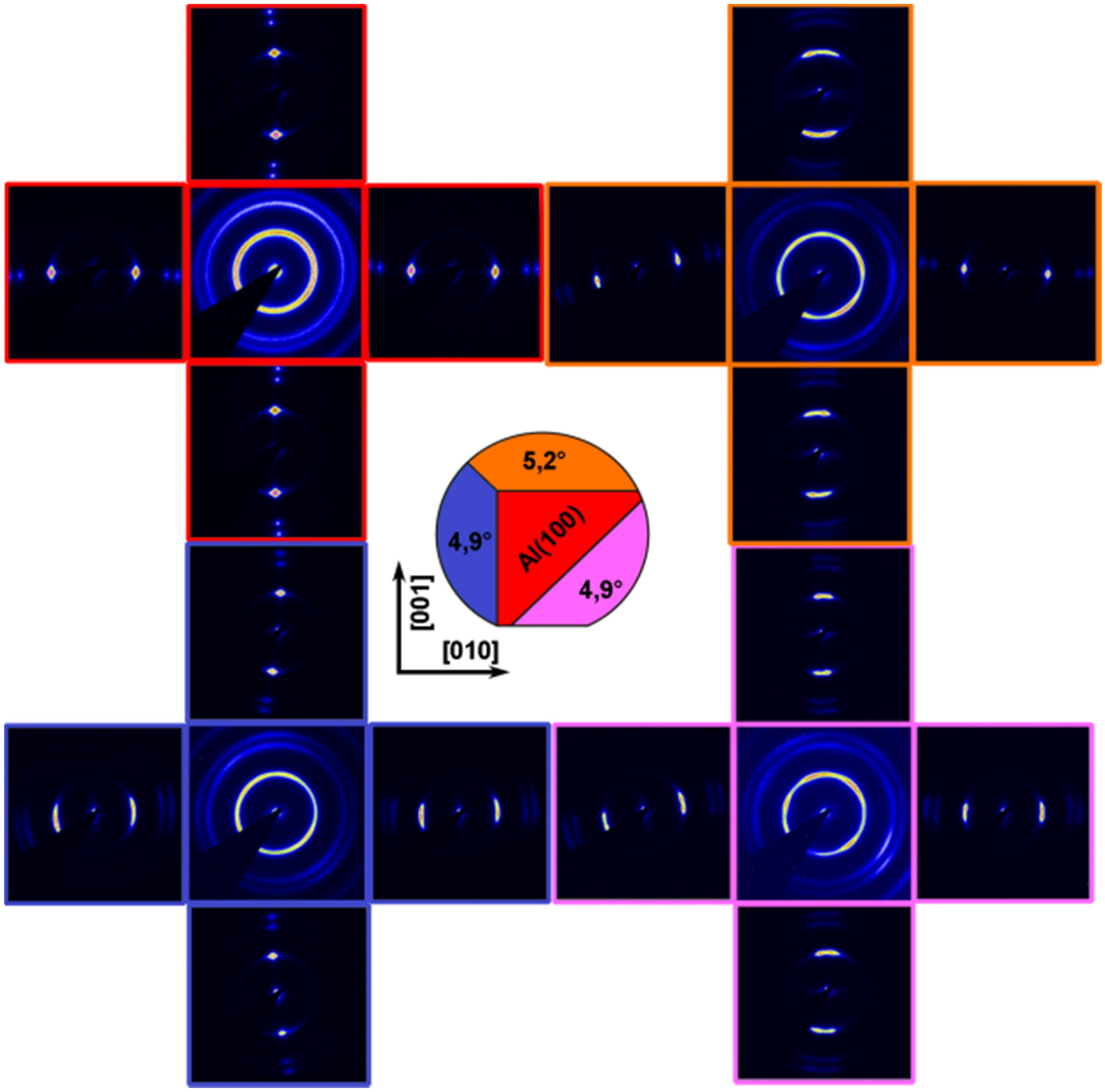

Figure S2. A sketch of aluminium single-crystal substrate with three vicinal zones (blue, orange and violet) tilted from the basal (100) plane by ca. 5° is shown in the centre. Small-angle diffraction patterns recorded at normal incidence of the X-ray beam to the AAO film surface (in the centre of each sets of diffraction patterns) and for rotation angles equal to ± 1.0º around the vertical (left and right patterns) and horizontal (top and bottom patterns) axes normal to the beam.

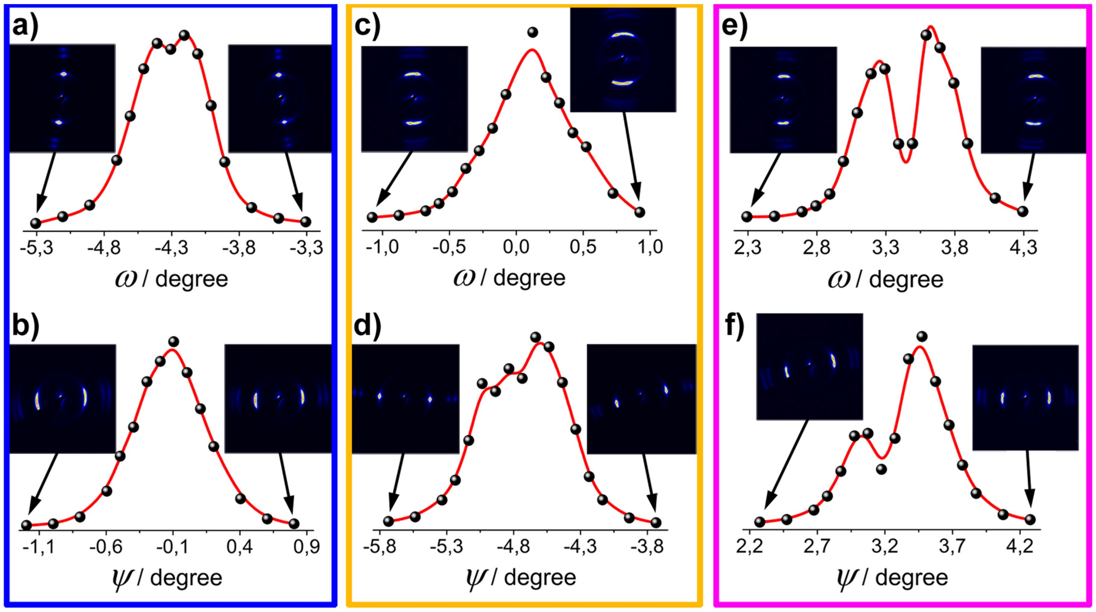

Figure S3. Rocking curves for 10 Bragg reflections, obtained during sample rotation around the vertical (ω-scan) and horizontal (ψ-scan) axis orthogonal to the beam. The oxide film was prepared in 0.3 M oxalic acid at 40 V on the vicinal faces of single crystal #2: (a, b) tilting angle is 4.9° around [001] (marked by a blue color); (c, d) tilting angle is 5.2° around [010] (marked by an orange color); (e, f) tilting angle is 4.9° around [011] (marked by a violet color). All colors marks correspond with figure 1(d) in the text of manuscript. The diffraction patterns for extreme rotation angles are shown.