

Structural Analysis of Polymorphs in Ga₂O₃ using ACOM-TEM

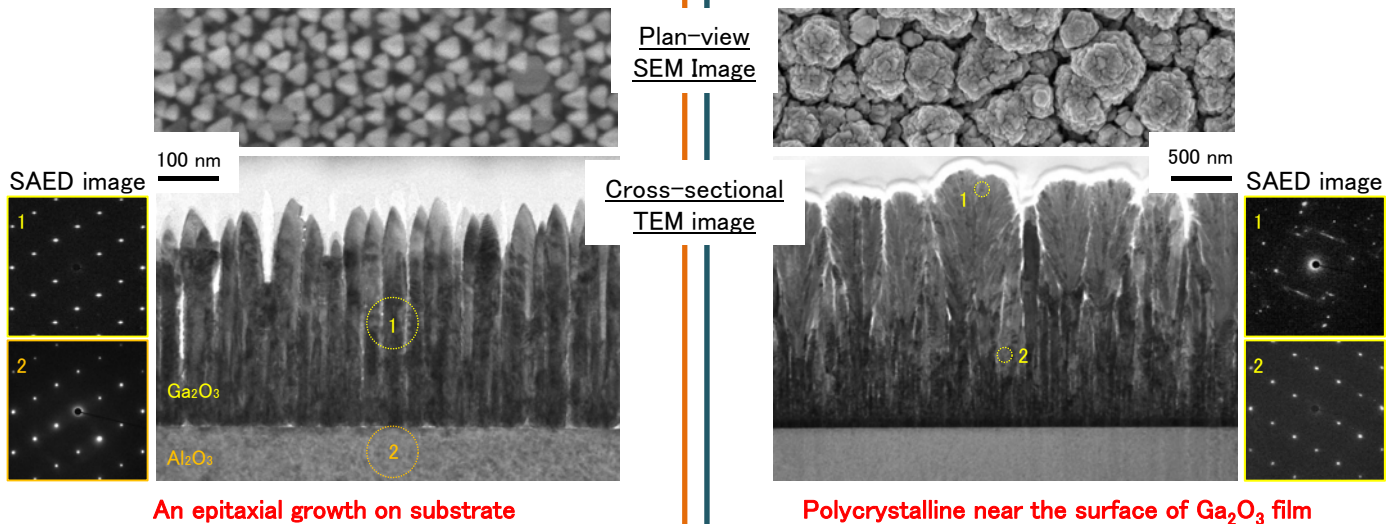
Gallium oxide (Ga₂O₃) is one of next candidates for power semiconductor materials. Since Ga₂O₃ has a variety of polymorphs, it is necessary to control the formation of polymorphs to growth of high quality Ga₂O₃. We introduce a new structural analysis method using ACOM-TEM.

【Sample】 Ga₂O₃ film (mist-CVD method) / Al₂O₃ substrate : *2 samples deposited in different temperature

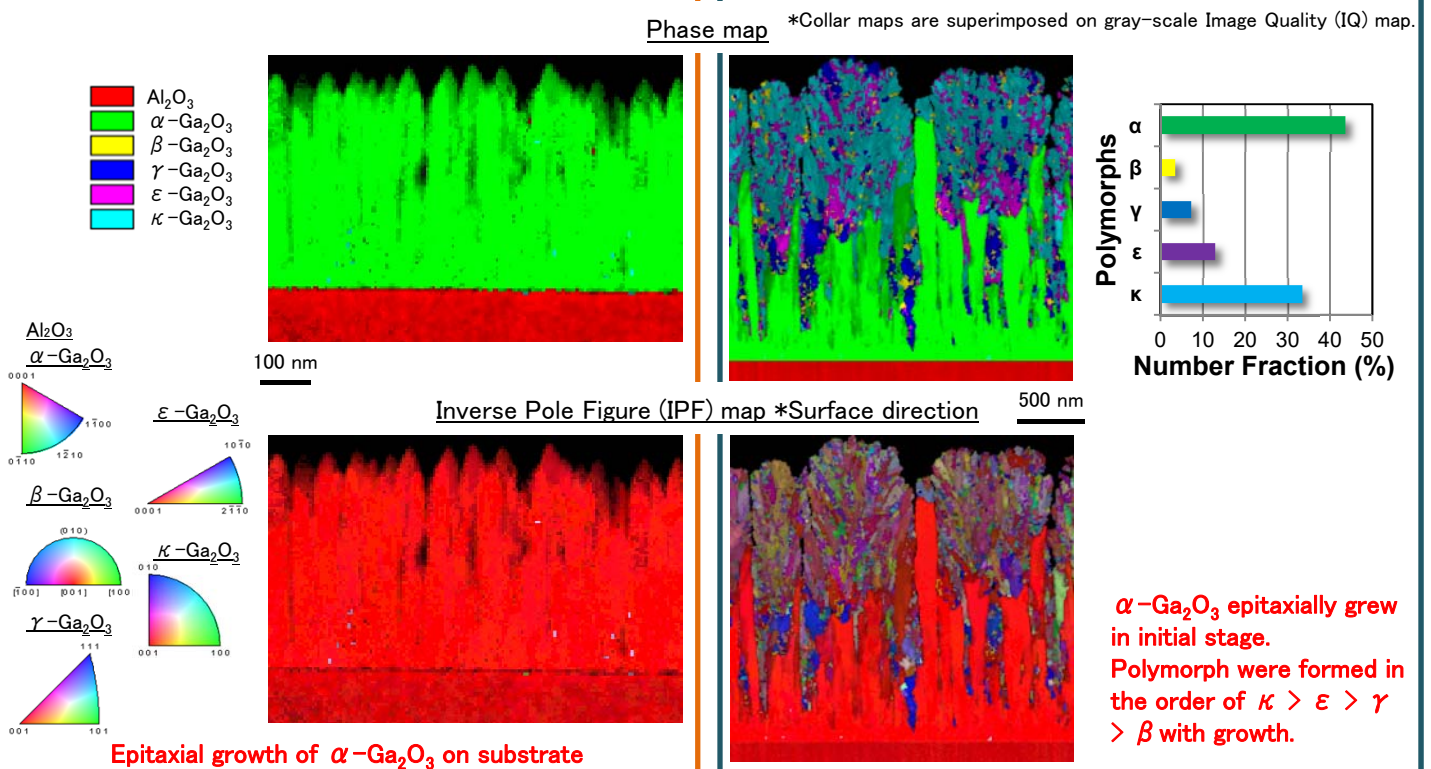
Sample : A

Sample : B

1. Morphological observation / SEM, TEM, Selected-area electron diffraction (SAED)



2. Structural analysis / Automated Crystal Orientation Mapping in TEM (ACOM-TEM) : ASTAR



Crystal structure such as polymorphs can be analyzed in high spatial resolution using ACOM-TEM.