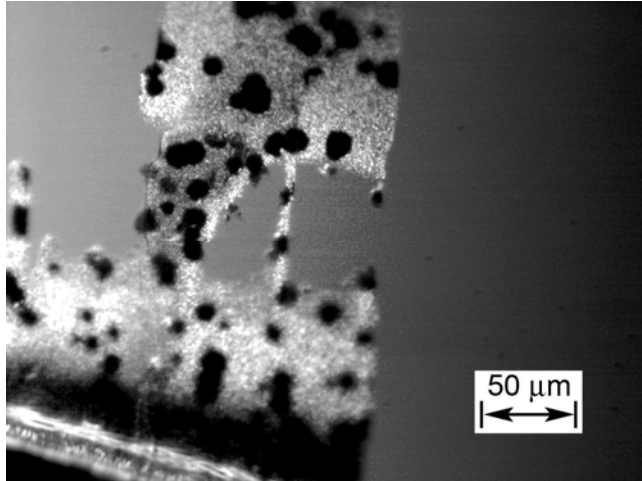
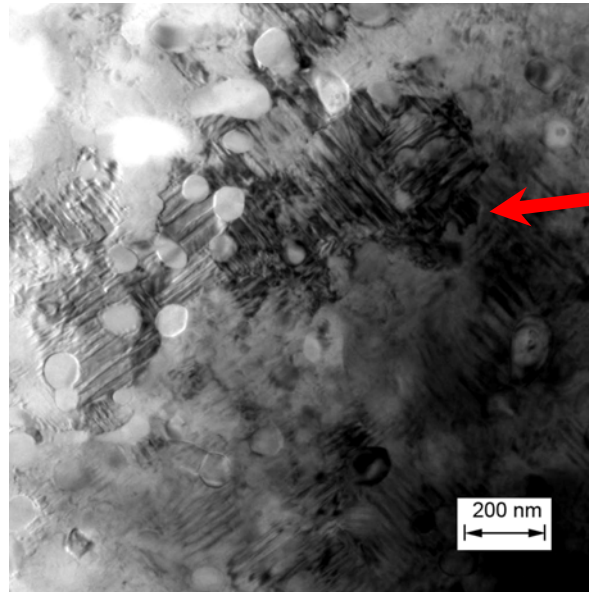
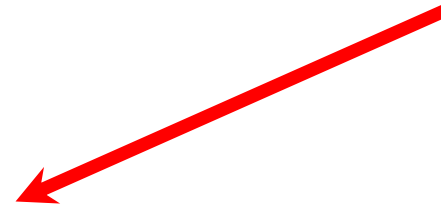


TEM plane-view of isolated YBCO nuclei



TEM sample,
Optical micrograph

Center
of the nucleus

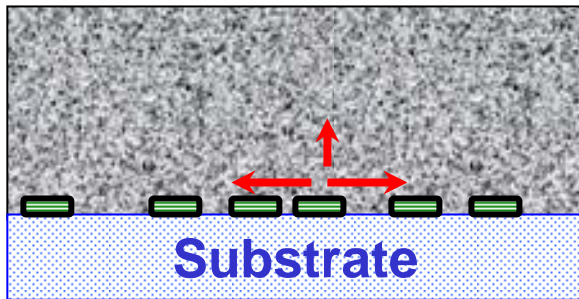


Grain boundary



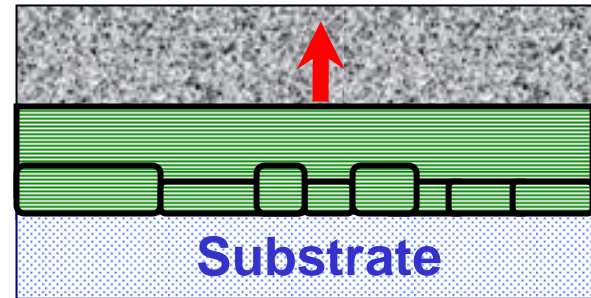
How can we break 2 MA/cm² barrier for 3 μm films?

Nucleation and ripening



We think we understand this.

2D laminar growth



Know little about this.

- ✓ How stable is 2D growth front?
- ✓ Are thermodynamic requirements for the nucleation compatible with the 2D front stability?