Application Note RSMD-20101835

View on rigaku.com

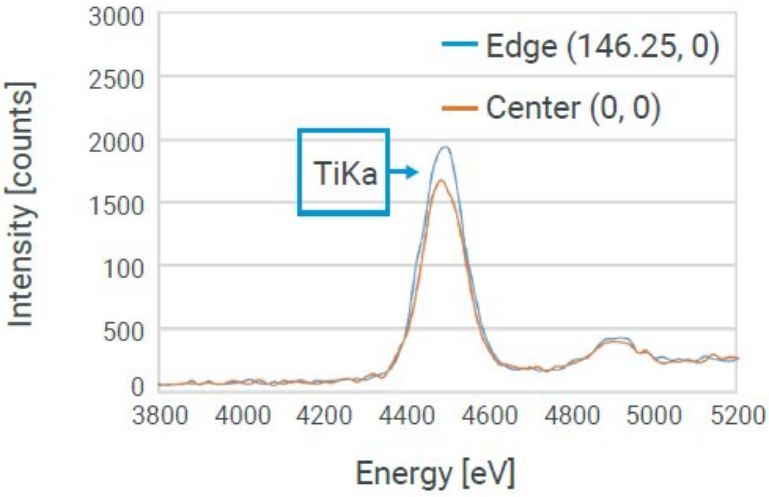
Ultrathin film thickness

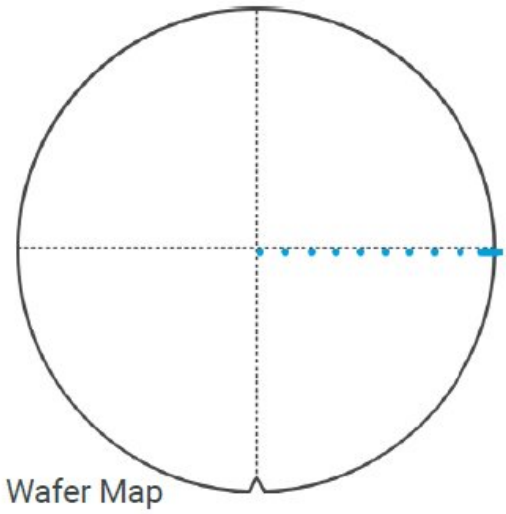
FEOL wafer processing / blanket wafer

Site comparison of 3 nm TiN layer – titanium nitride

- XRF spectra comparison of two sites of TiN, 3 nm nominal thickness.
- Ultrahigh sensitivity to thickness variation of down to 1 Å was demonstrated.
- The titanium peak was measured.

2 Sites – titanium nitride film

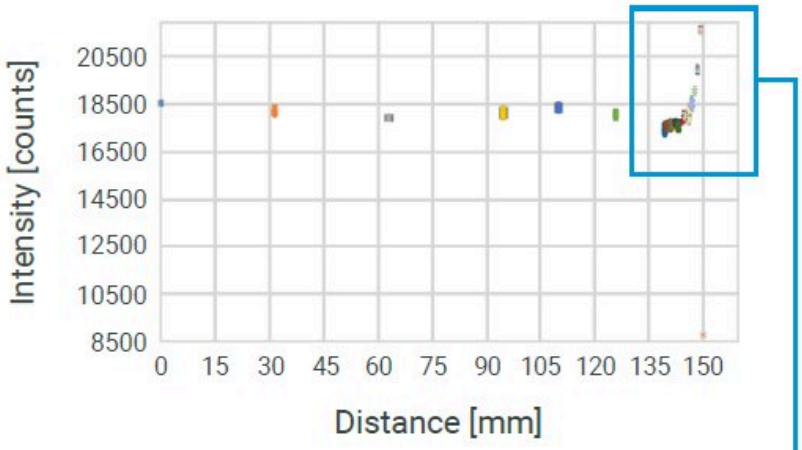




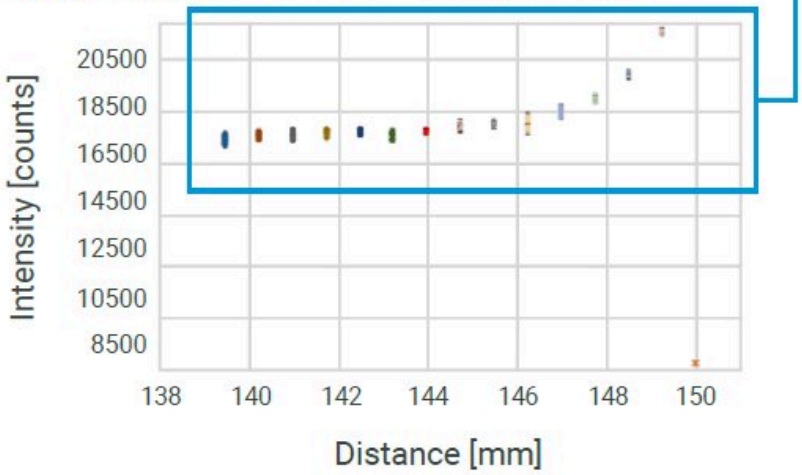
Repeatability vs. Across-wafer variation – cobalt

- These graphs represent the process variation and tool precision of ultrathin film of cobalt.
- The layer thickness is 3 nm.
- The error bars represent 1σ error, based on 10 repetitions.

HALF WAFER SCAN – COBALT FILM



WAFER EDGE SCAN – COBALT FILM



Related products

ONYX 3000

EDXRF and optical hybrid metrology tool for automated X-ray analysis, 3D scanning, and 2D microscope for film thickness and composition measurements on blanket and patterned wafers for up to 300 mm wafers