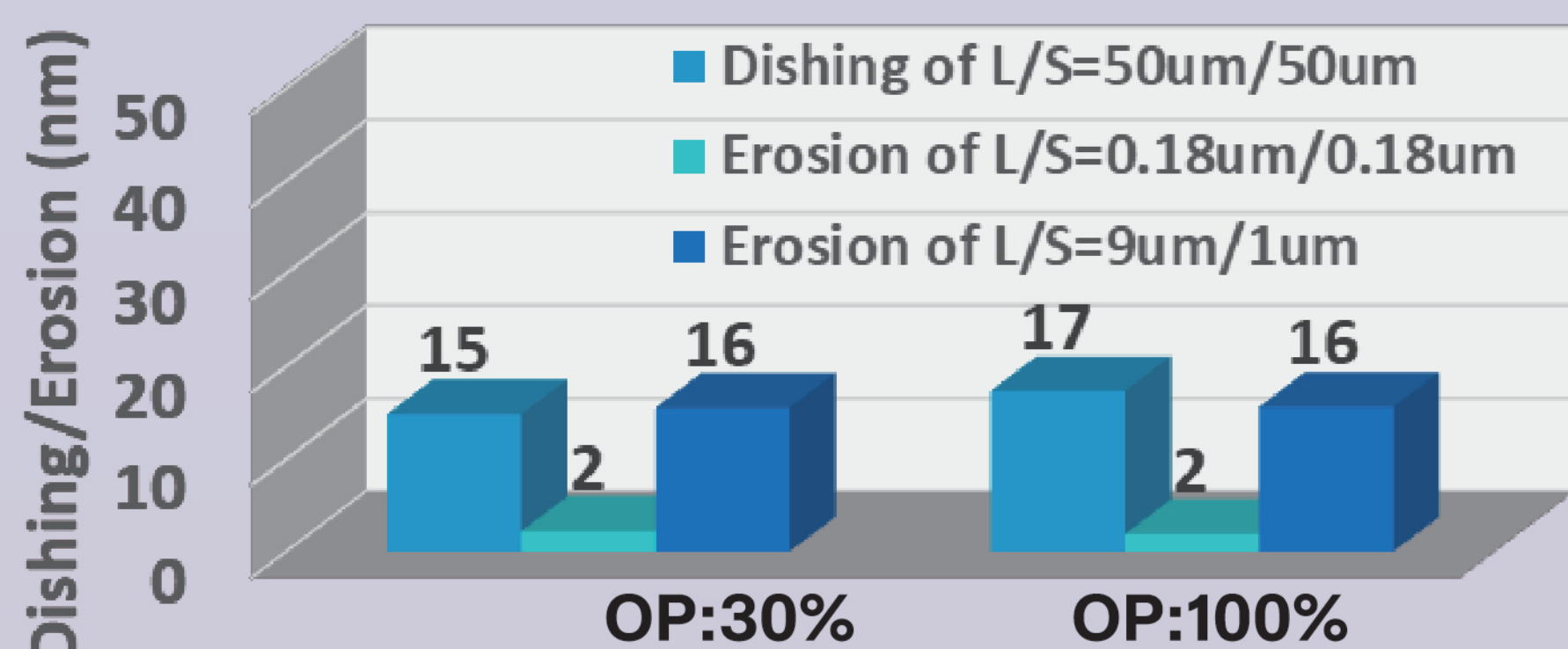
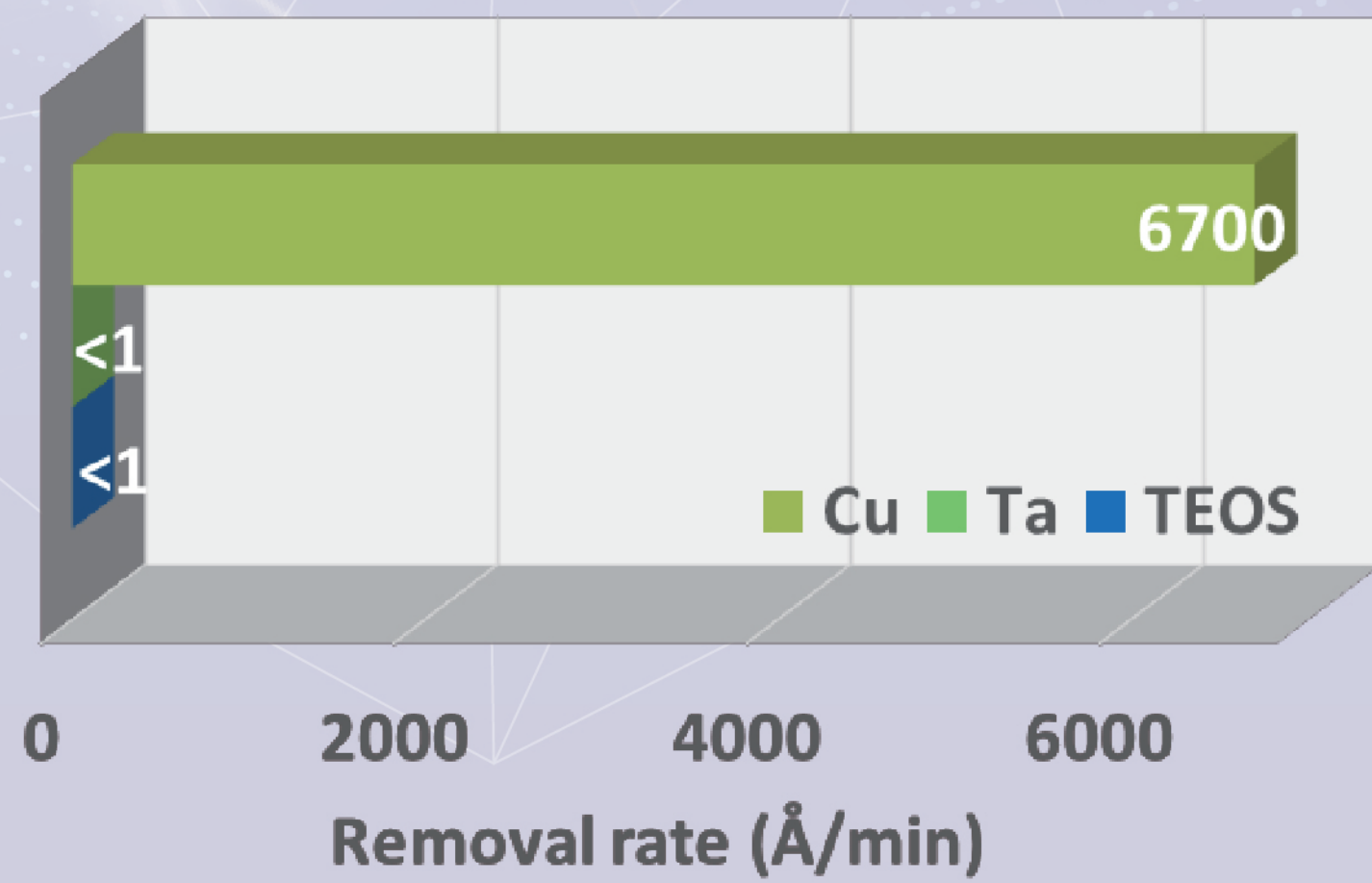


JSR CMP Slurry and pCMP Clean

Cu Bulk Slurry

Excellent over polish margin
Proven quality at multiple customers

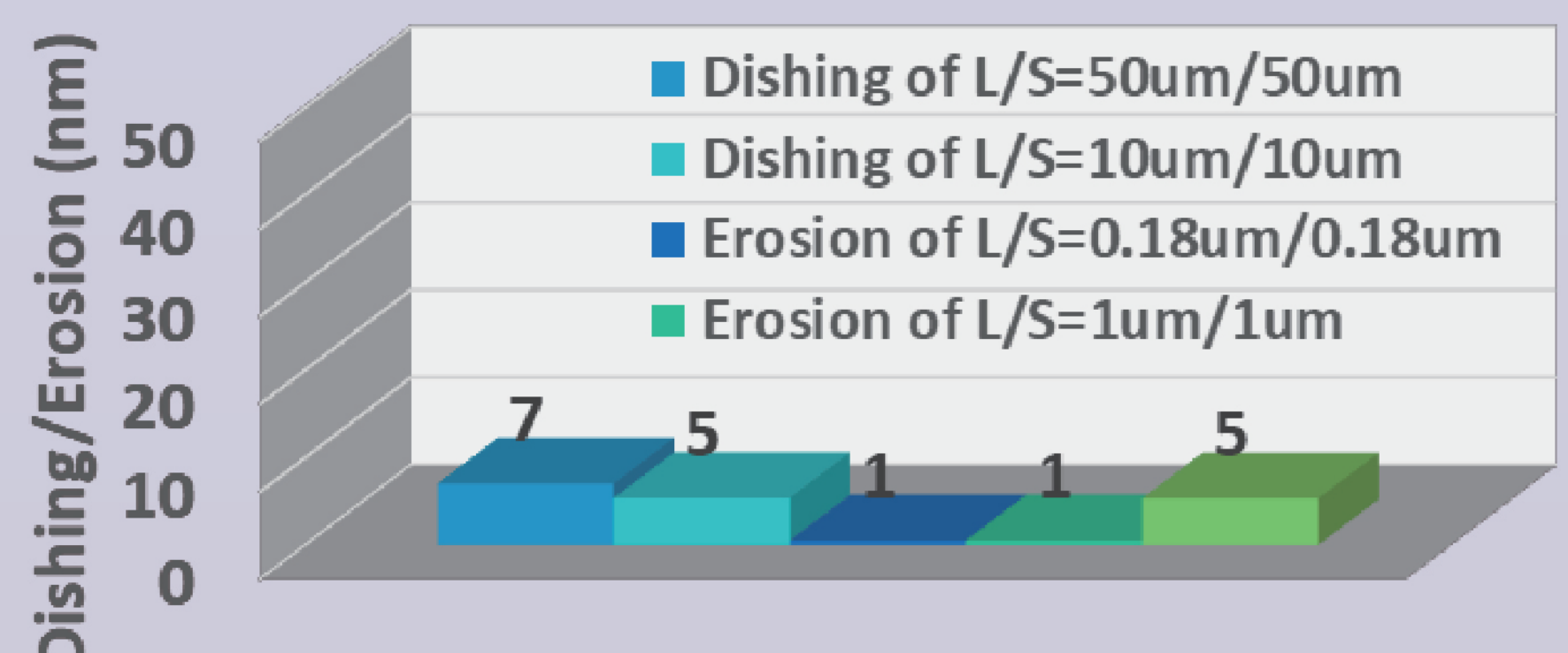
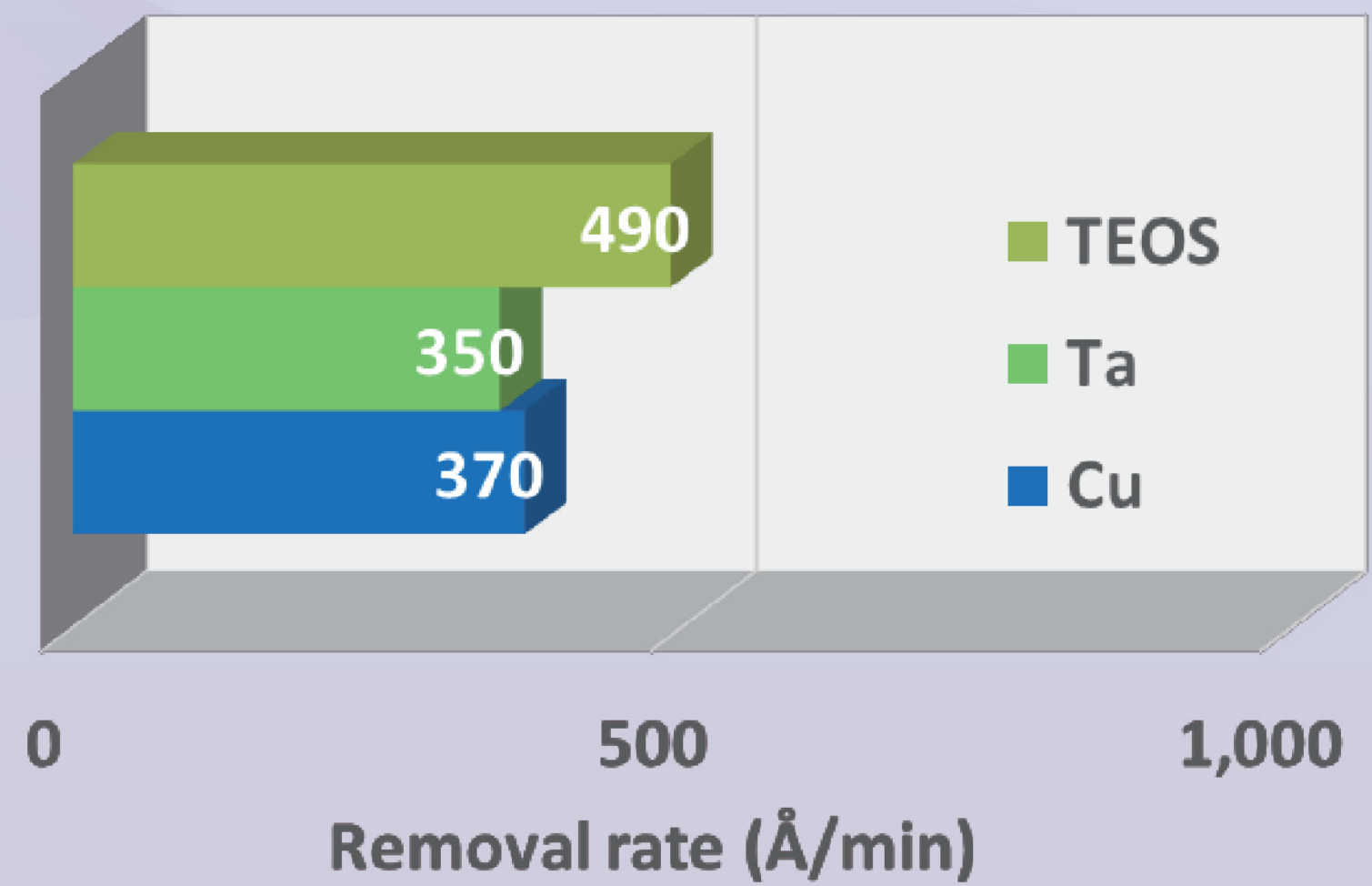
*Oxidizer: Ammonium persulfate



Planarity on over polish 30% & 100%

Barrier Metal Slurry

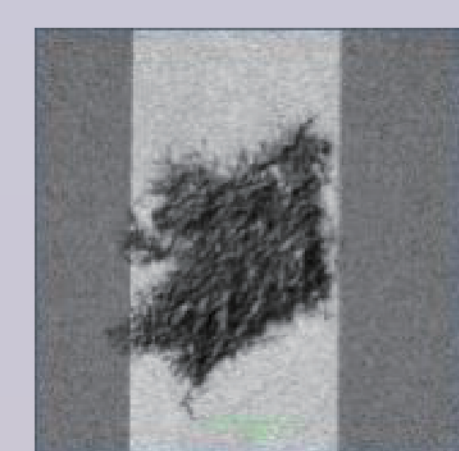
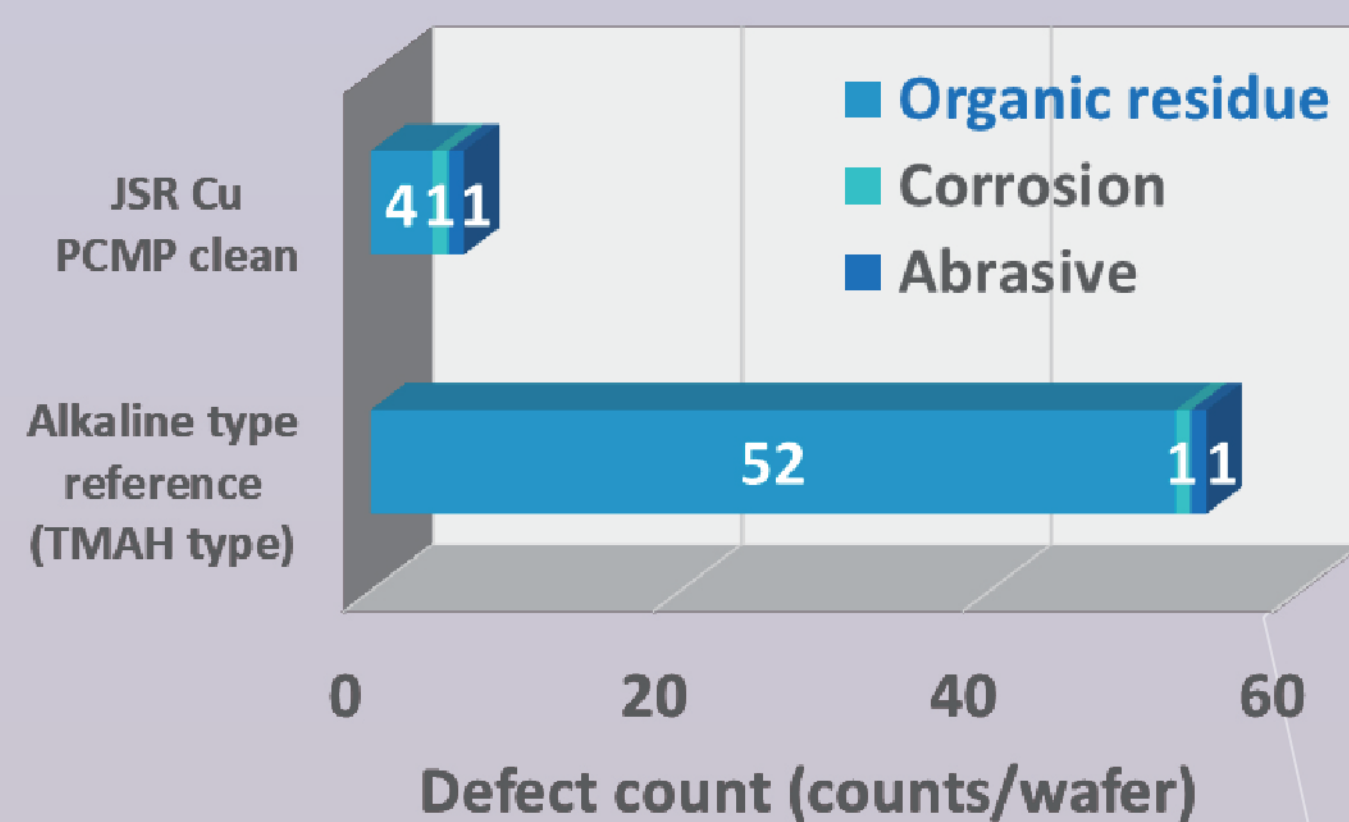
World-class planarity with combination of JSR Cu Slurry



Planarity of JSR Cu & BM slurry

Cu pCMP Clean for Ta/Ti BM

TMAH free alkaline clean
Complete organic residue removal
Cu surface stability allows long Q-time



Example of Organic residue

Defectivity of Cu/Ta Type Patterned Wafer

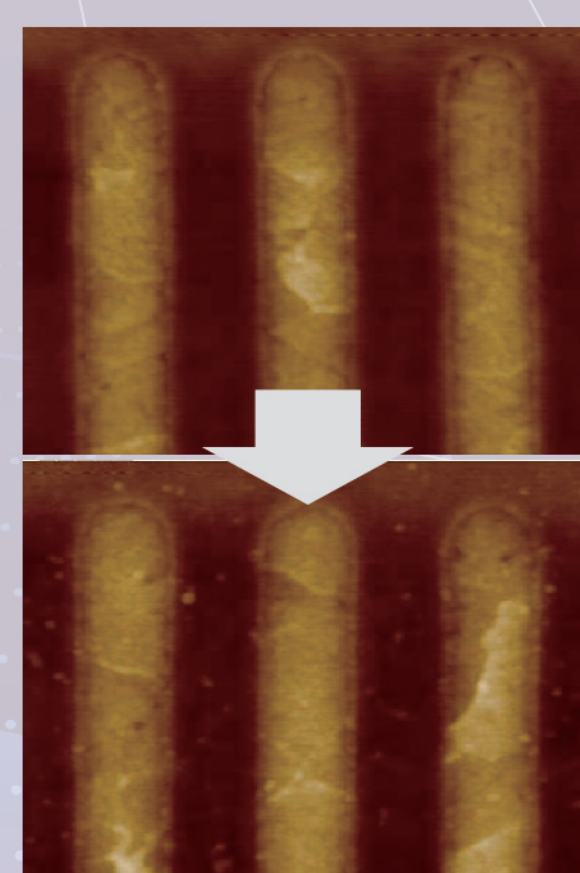
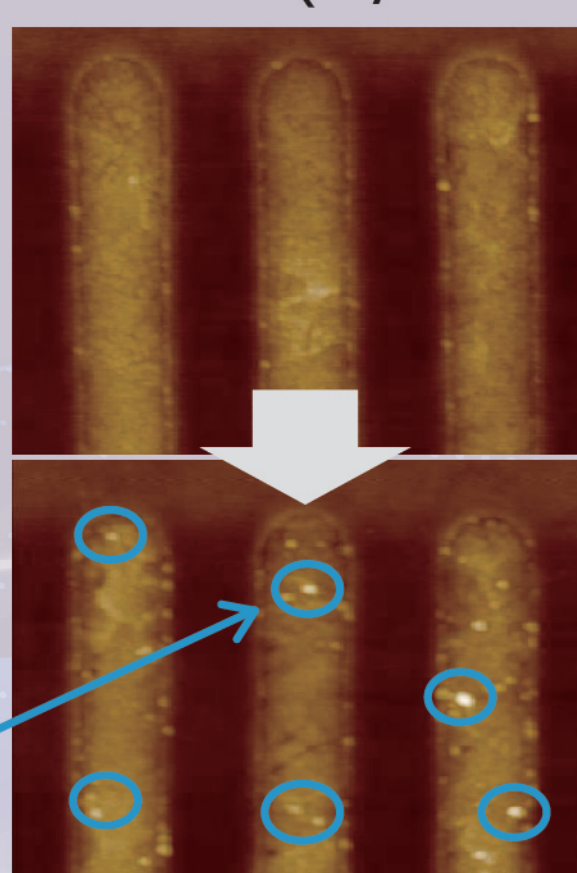
Reference (w/ TMAH)

JSR PCMP clean

t = 0 hr

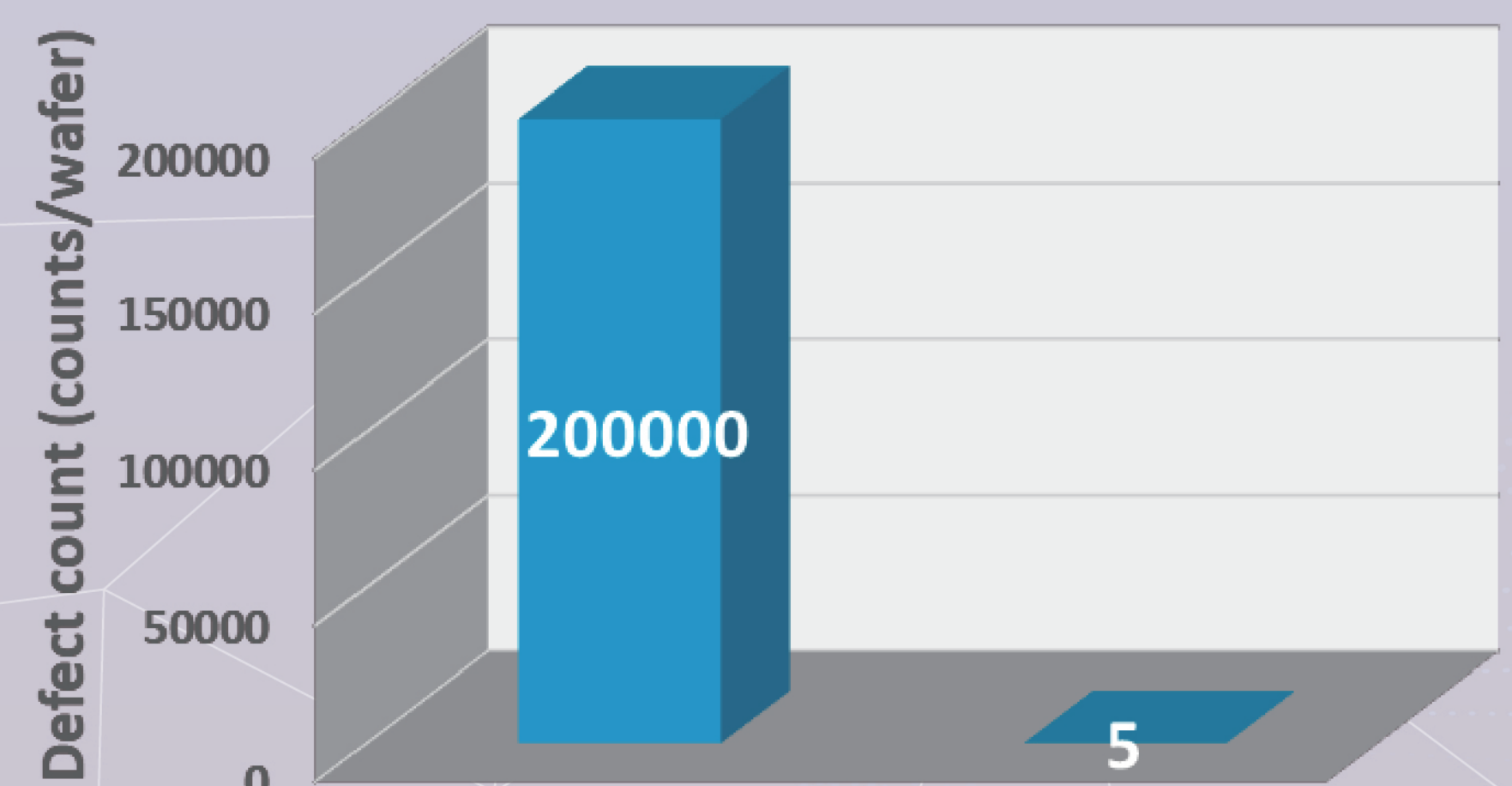
t = 168hr

CuO_x particle (~40nm)



Platen Clean for SiN film

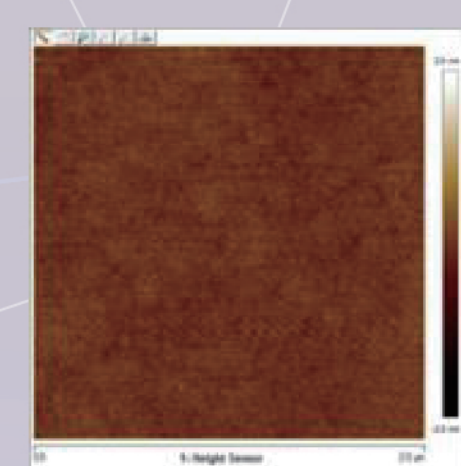
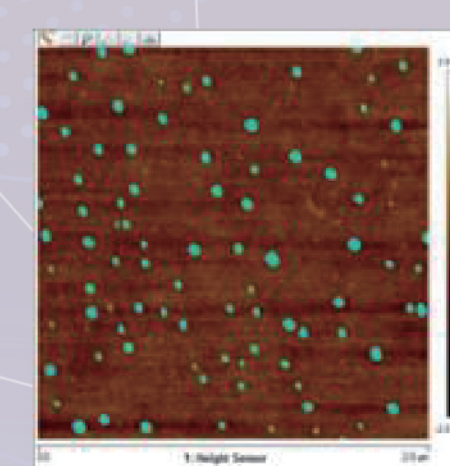
>99.99% defect improvement by on-platen cleaning



DIW

Platen clean

Defectivity of PE-SiN



AFM

Surface roughness of PE-SiN