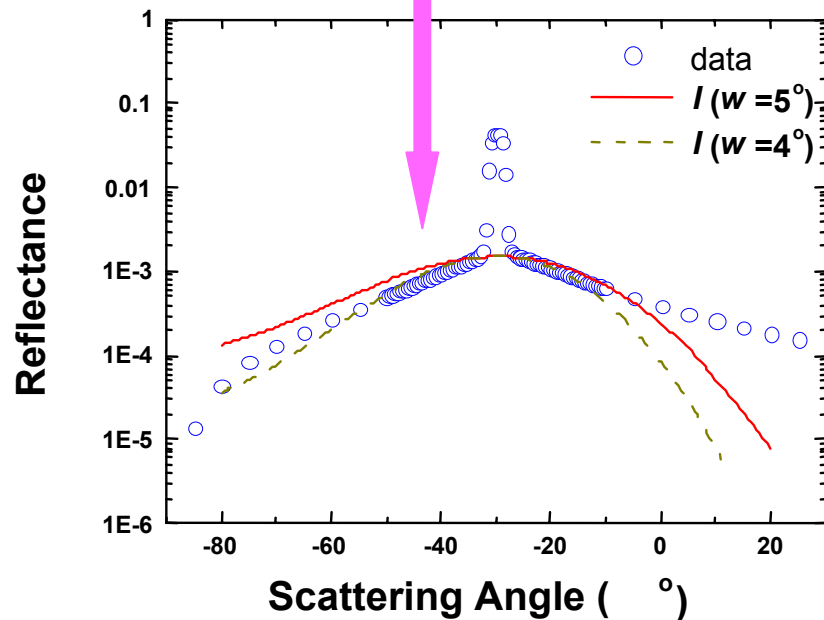
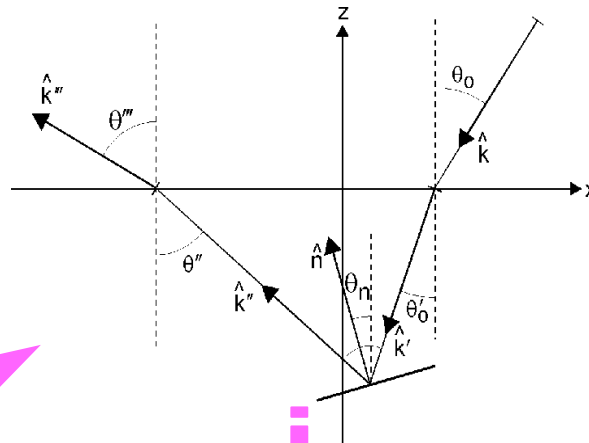
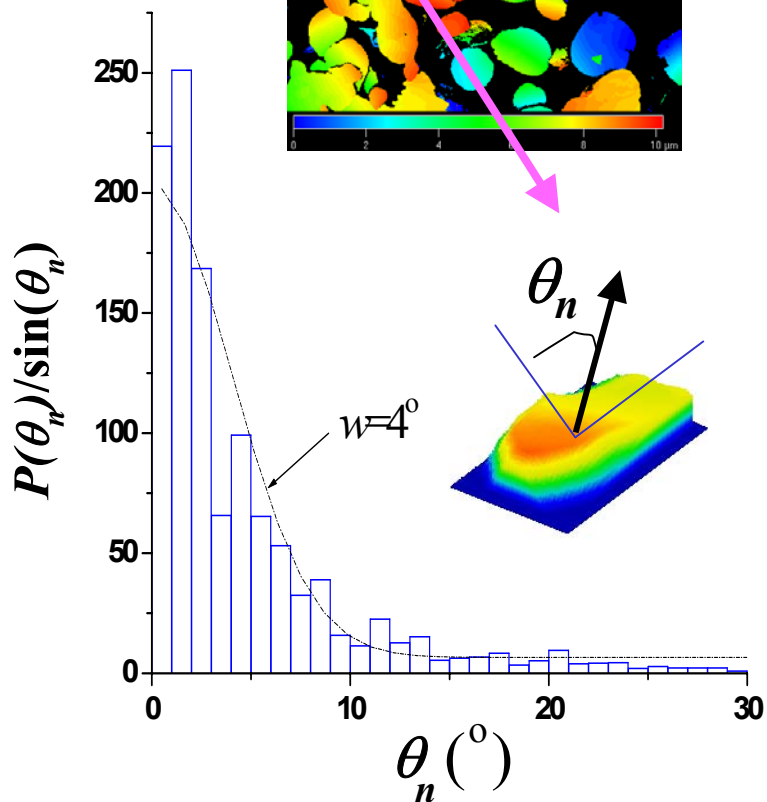
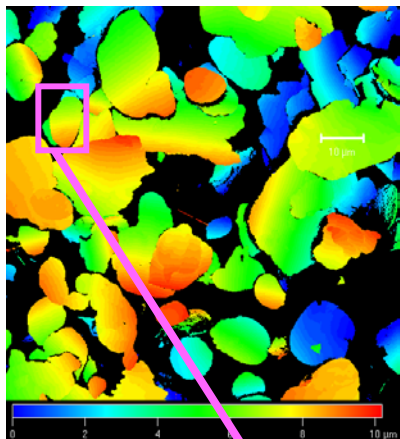


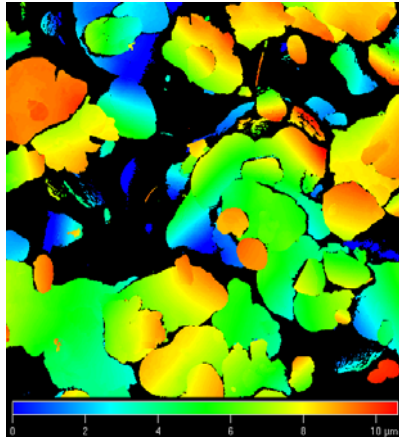
Optical Reflectance of Metallic Coatings Calculated from Flake Orientation Distribution

Ray scattering model



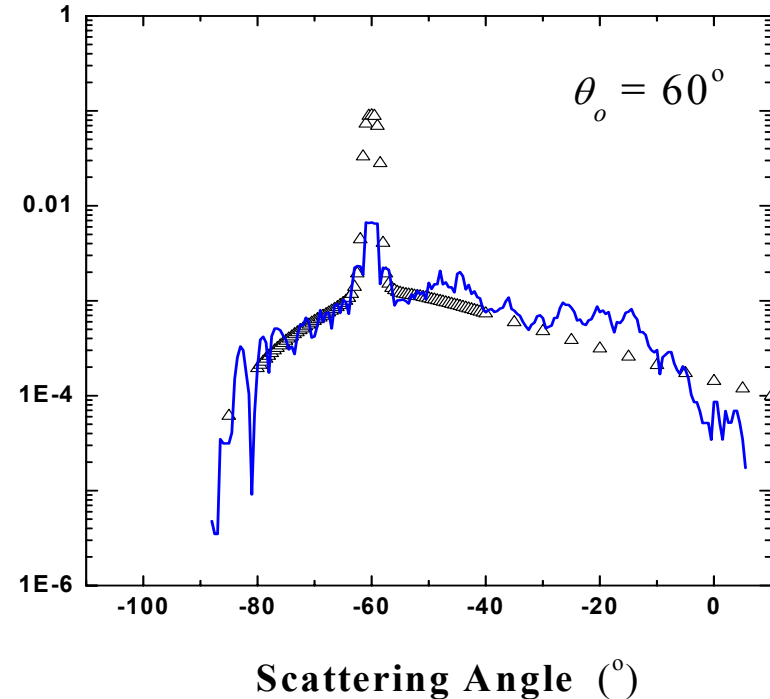
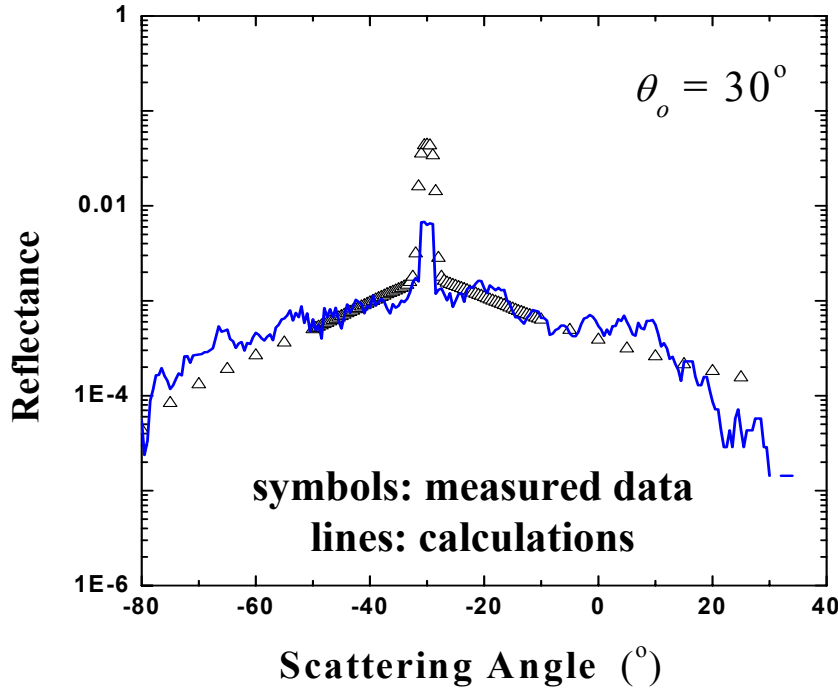
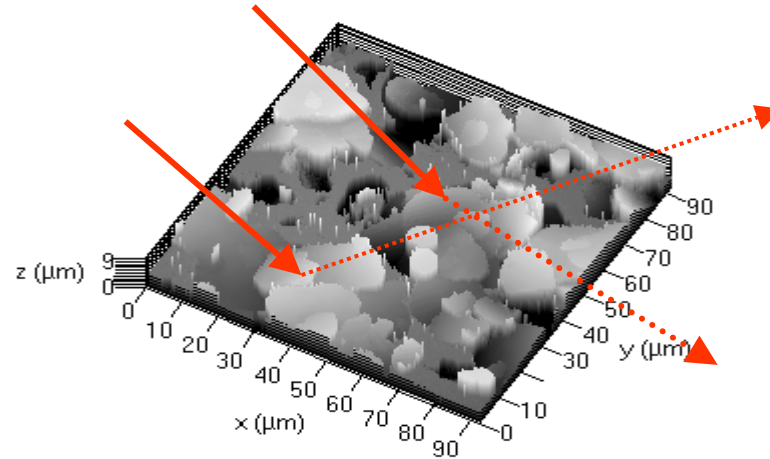
$P(\theta_n) = \Sigma$ (area) of flake having surface normal angle of θ_n

Optical Reflectance Calculation from Microstructure Measurements



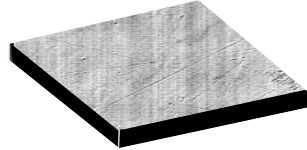
Metallic Coatings

scattering from topographic map

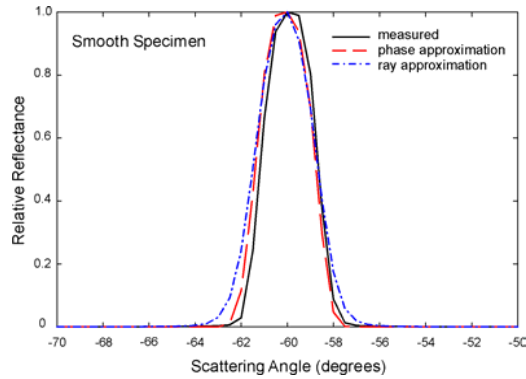
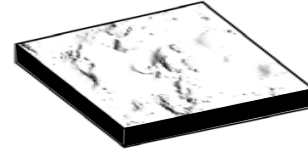


Predicting Appearance from Surface Morphology

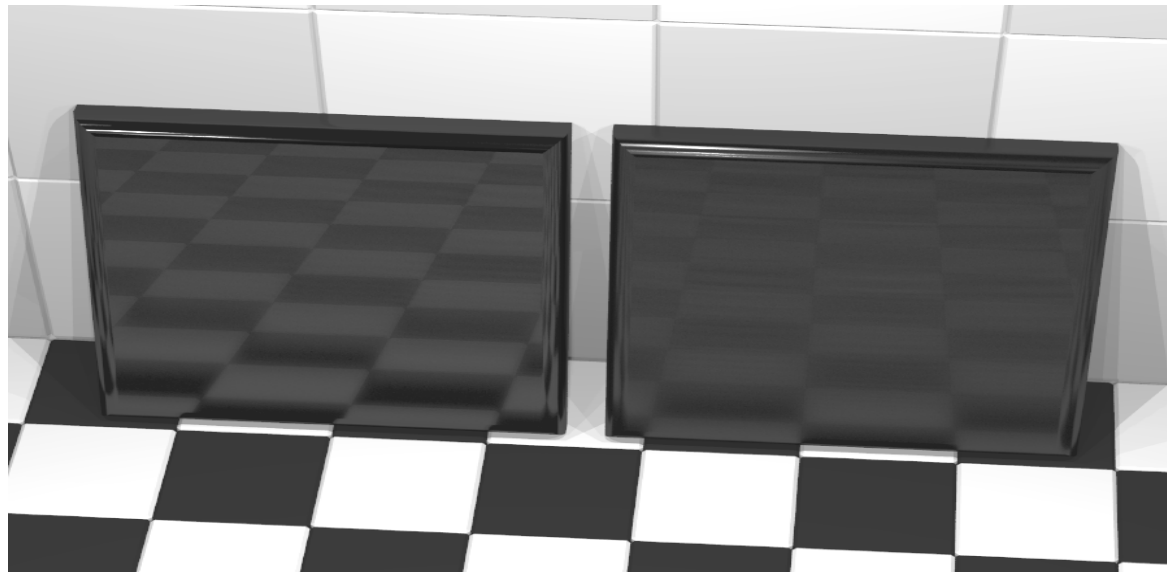
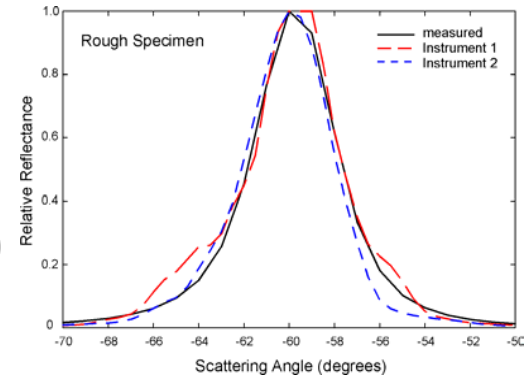
rms ~ 200 nm



rms ~ 800 nm ← Surface Roughness



**Bidirectional Reflectance
Distribution Function (BRDF)**



Rendered Image