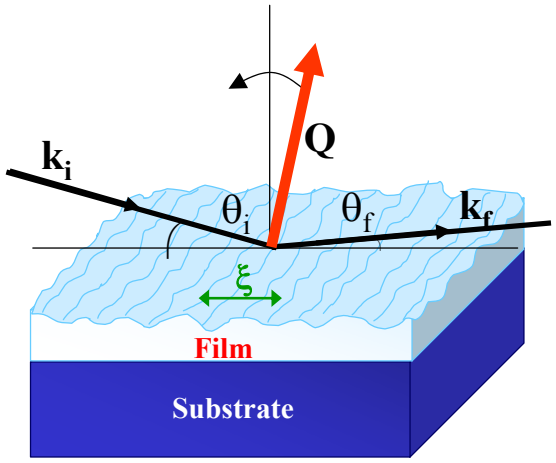
Measurement of Off-Specular Reflectivity



Measurement of the off-specular reflectivity provide information about the length scale of in-plane structural correlations. For transverse-Q_x scans (i.e., rocking curves), the scattering angle 2θ is held constant while θ_i and θ_f are varied equally in opposite directions ($\theta_i + \theta_f$ = *const*). Typically a narrow specular peak, evident at Q_x=0, can be separated from the underlying diffuse scattering which is broad. The width of the diffuse peak is indirectly related to the inverse of the coherence length ξ of the in-plane roughness.