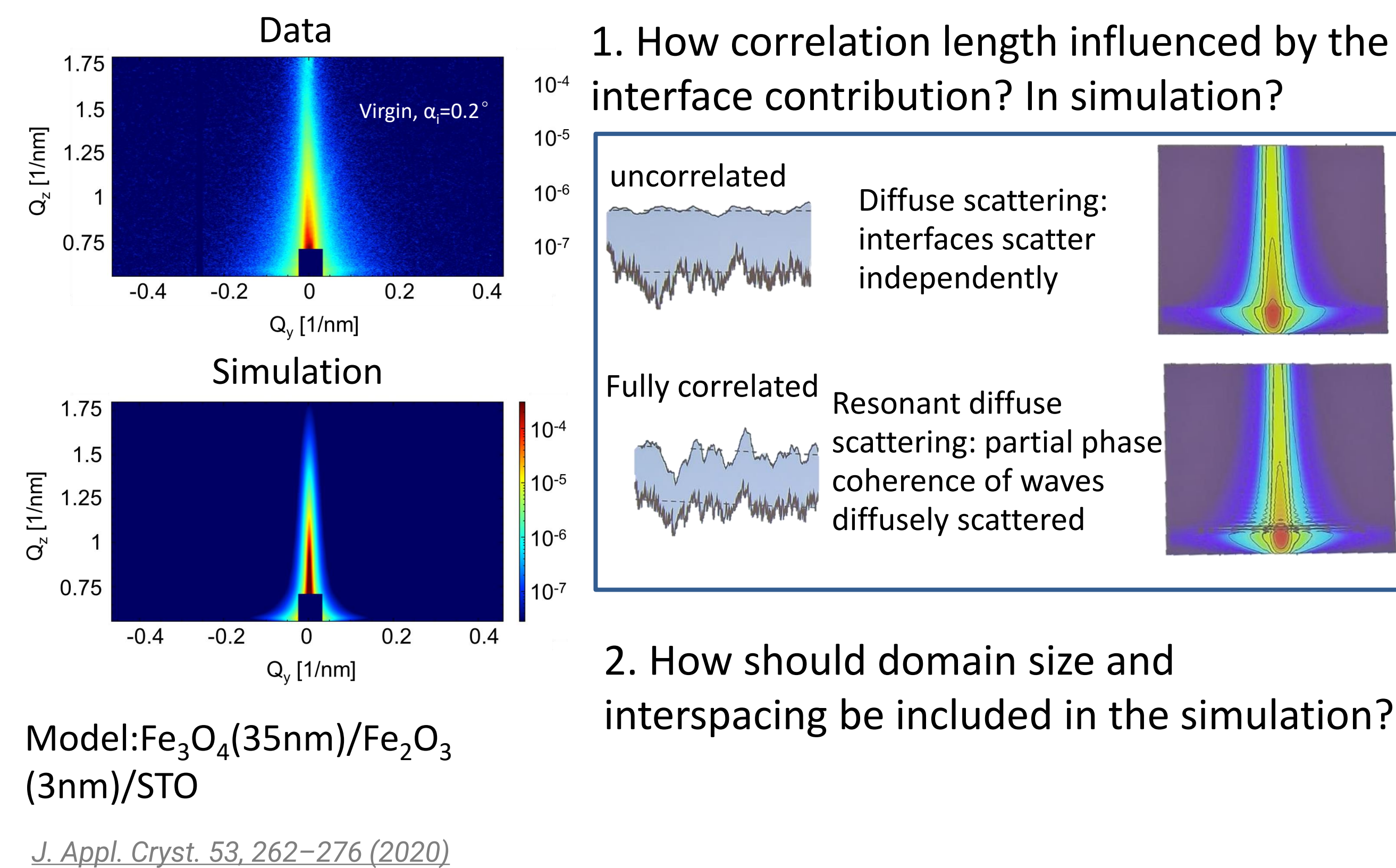


BornAgain simulation

Off-specular peak influenced by Roughness, Correlation length, Domain size and interspacing



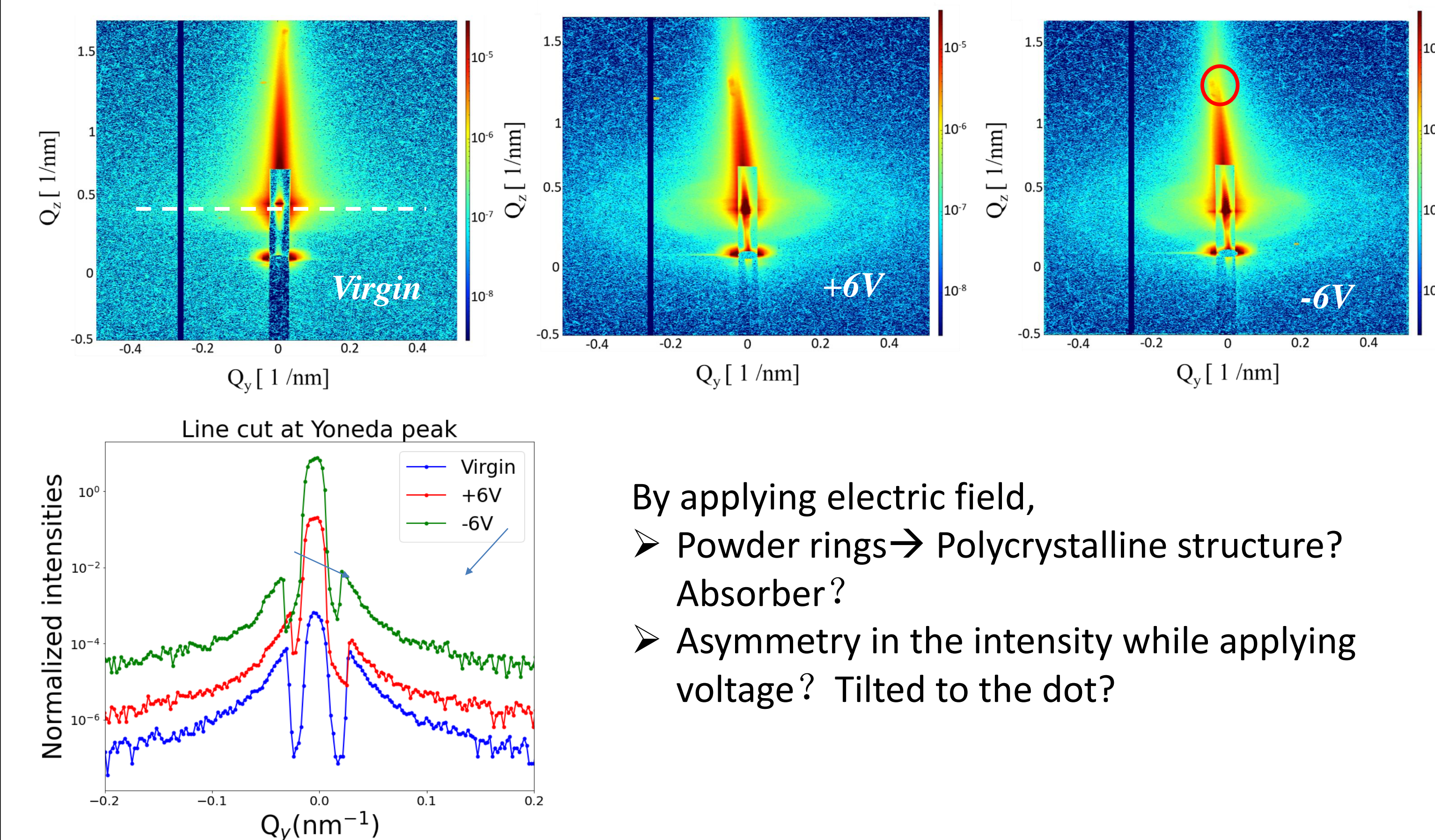
1. How correlation length influenced by the interface contribution? In simulation?

2. How should domain size and interspacing be included in the simulation?

In-situ GISAXS

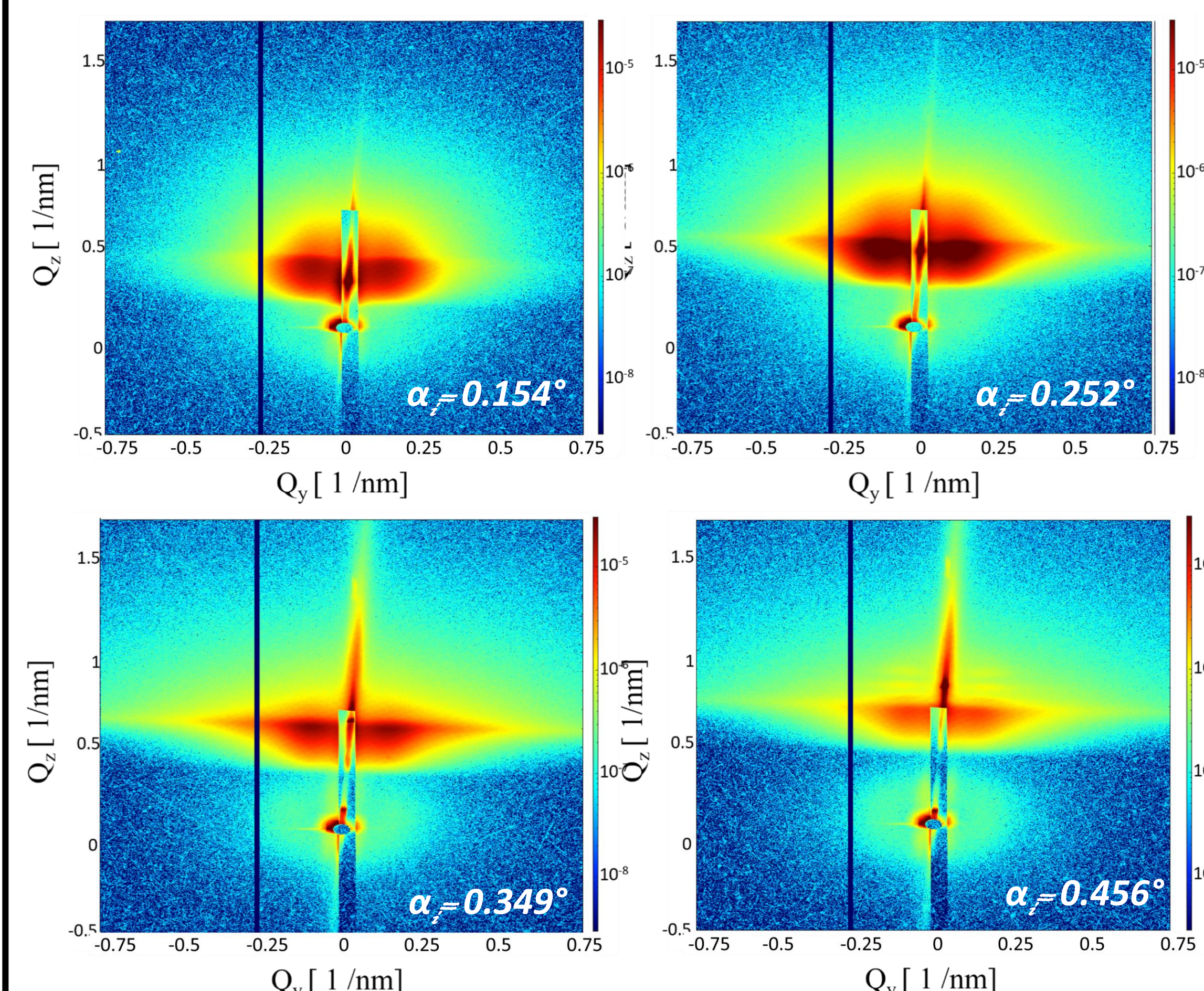
In-situ GISAXS

$\alpha_i = 0.2^\circ$

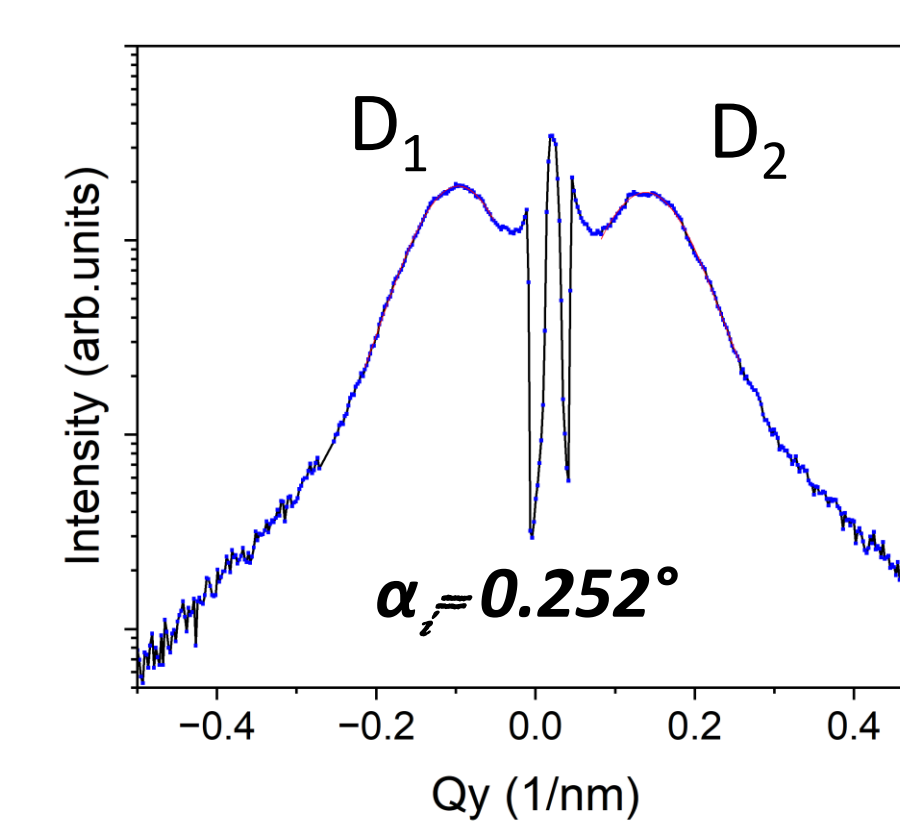


Ex-situ GISAXS

After +12V in GISAXS



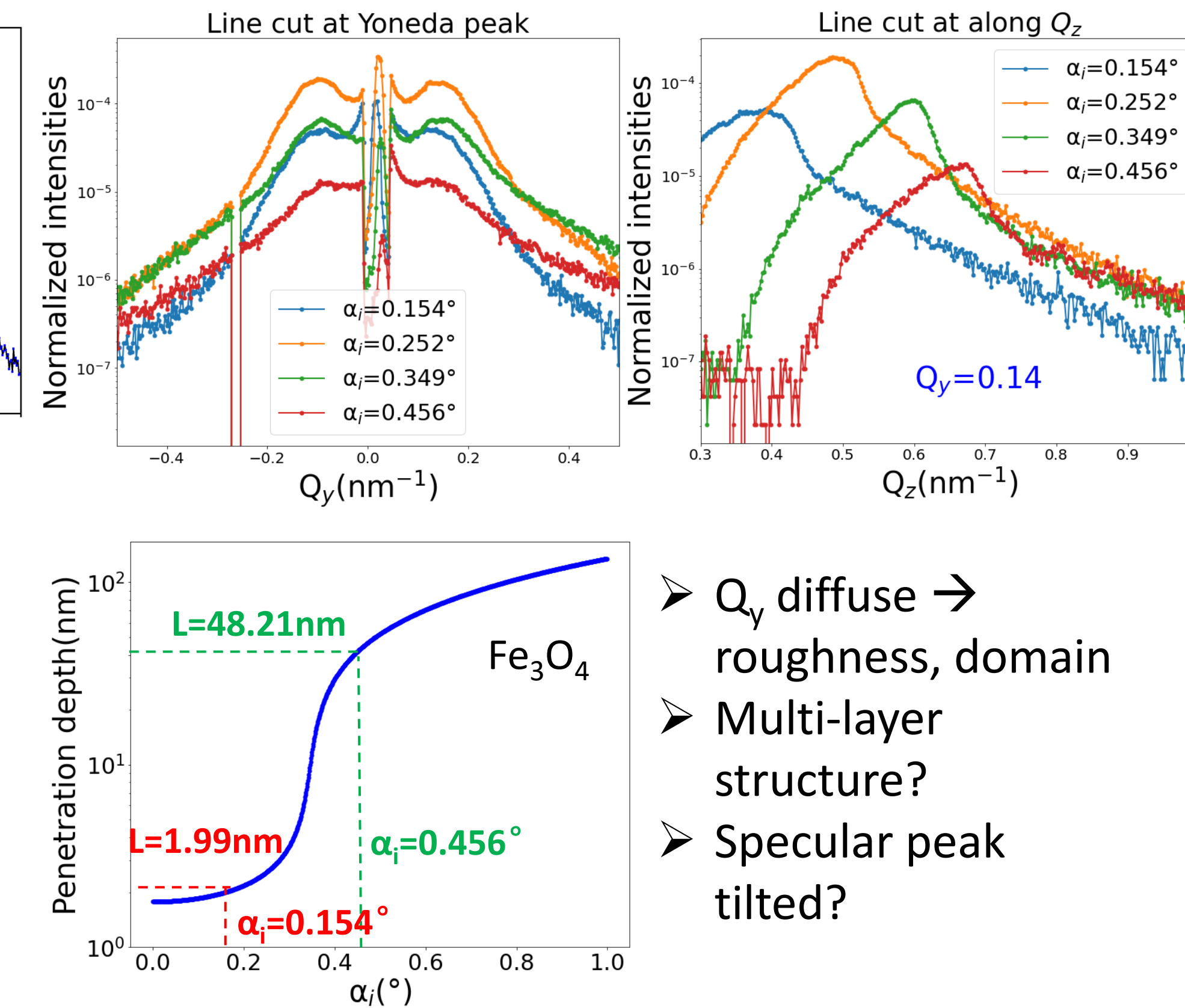
1. Domain size



Scherrer Equation
 $D = K\lambda / \text{FWHM}(Q)$
 $D_1 = 61.6\text{nm} \pm 0.1\text{nm}$
 $D_2 = 58.9\text{nm} \pm 0.1\text{nm}$
 $D_{\text{average}} = 60.3\text{nm} \pm 0.1\text{nm}$

➤ Domain interspacing?

2. Penetration depth ~ incident angle

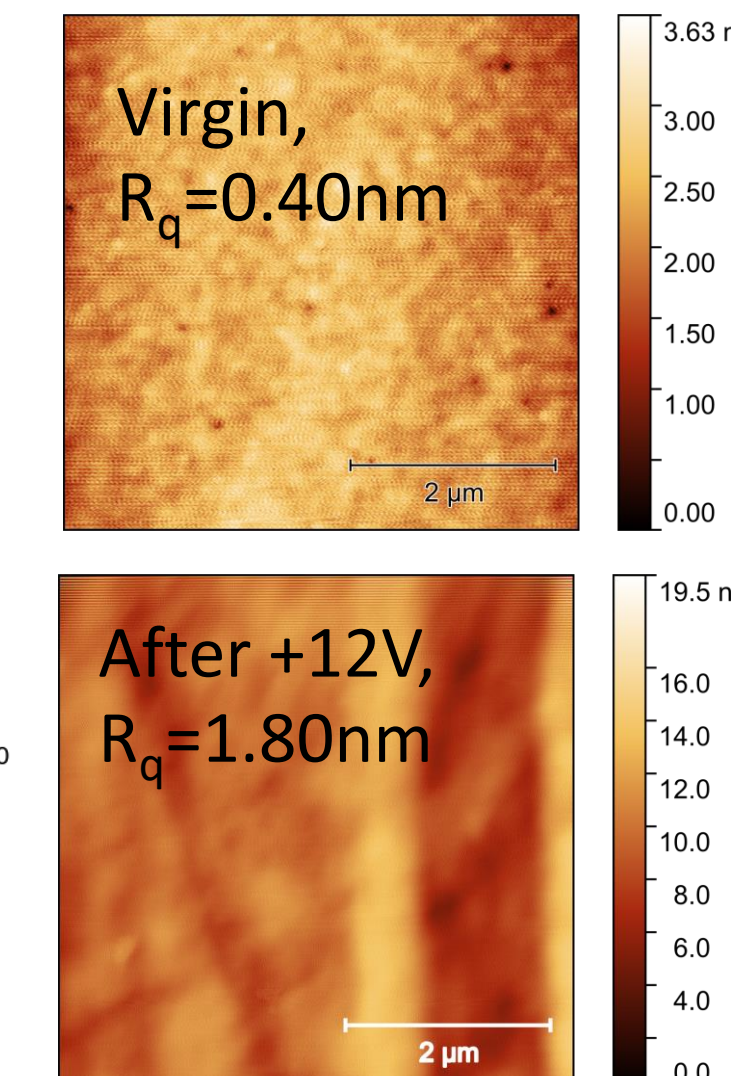


➤ Q_y diffuse → roughness, domain

➤ Multi-layer structure?

➤ Specular peak tilted?

3. Ex-situ AFM



➤ Stripes → Asymmetry?