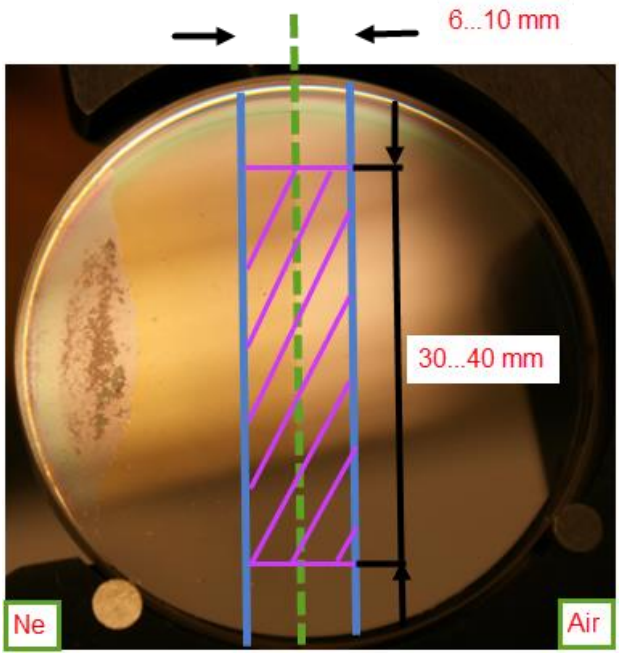

Figure 1. Area position of measuring

Table 1. XRR data on inner structures of some coatings.

Layer	Parameter		
	Thickness, nm	Density, g/cm^3	Roughness, nm
Mo/Si bilayer			
SiO_2 (top)	2.0	2.20	0.6
Si	4.1	2.33	0.9
Mo	7.3	8.2	1.3
Fused quartz (substrate)	-	2.50	0.5
HfO2/SiO2 bilayer			
SiO_2	181.7	2.20	0.3
HfO_2	135.1	9.68	1.4
Fused quartz (substrate)	-	2.50	2.2

Table 2. Specification of coatings

Parameter	Bilayer type		
	HfO_2/SiO_2	ZrO_2/SiO_2	Mo/Si
Bilayer number	11	11	300
Bilayer thickness, nm	316.8	306.0	11.4
Thickness ration	$\Delta_{HfO2}/\delta_{SiO2}\approx0.74$	$\Delta_{ZrO2}/\delta_{SiO2}\approx0.68$	$\Delta_{Si}/\delta_{Mo}\approx0.56$
Total thickness, nm	3484.8	3366.0	3420.0

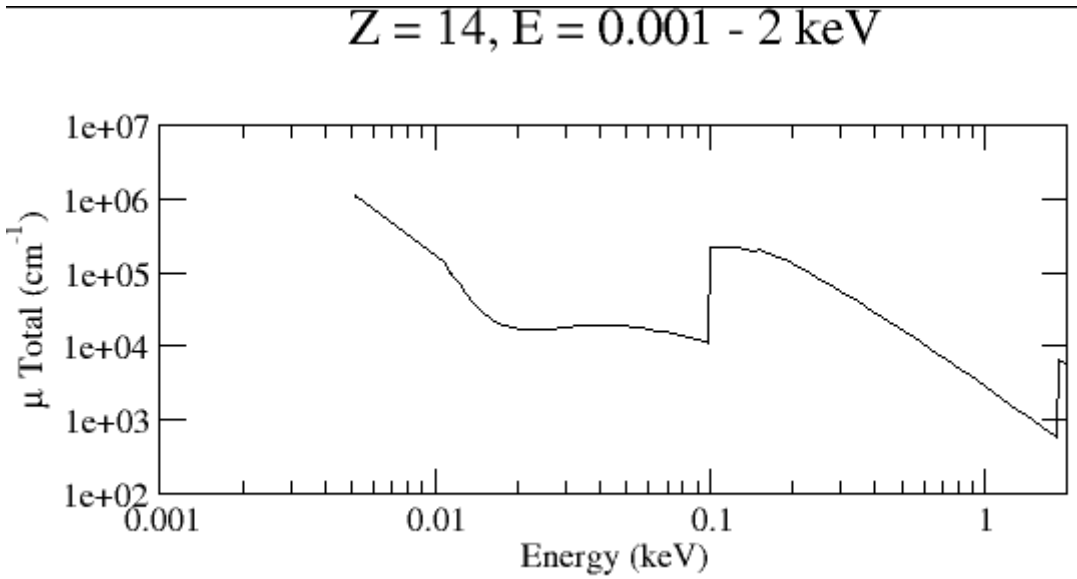

Figure 2. Linear attenuation coefficient vs quanta energy (calculated with NIST database)

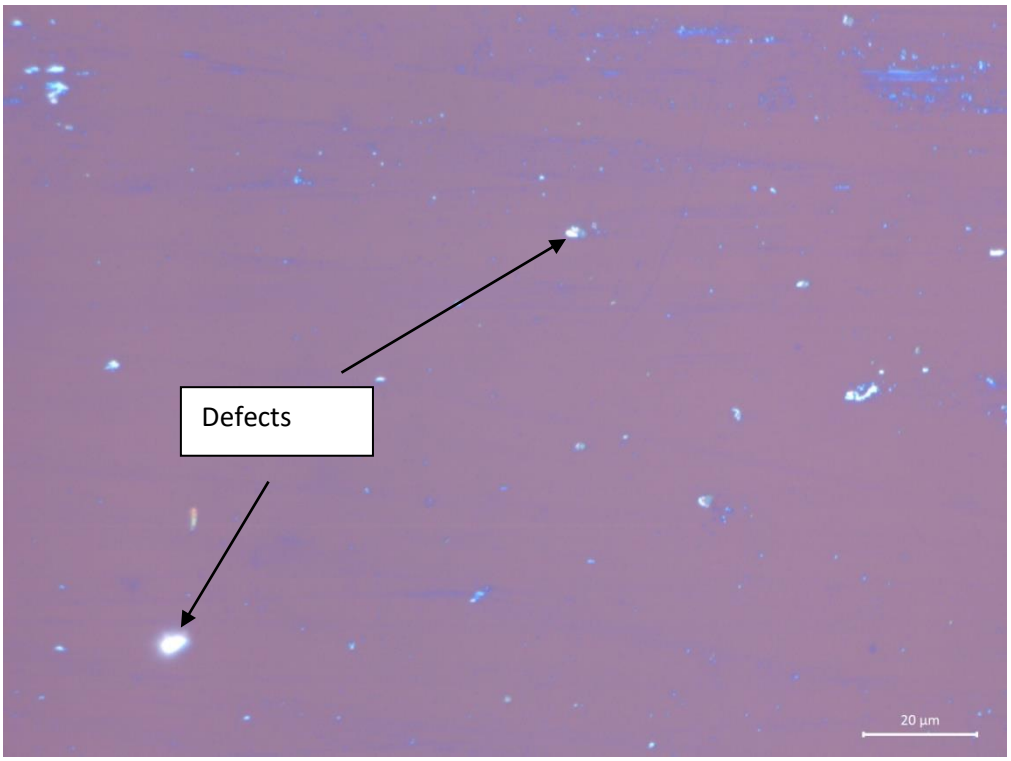

Figure 3. Defects of surface on HfO2/SiO2 coating