Message ID: **115** Entry time: **5/6/2021 2:38:26 PM**

Experiment Date:	2020 06 08
Duration (Days):	3
User:	M. Barac, Z. Siketic
Accelerator:	Tandetron
Beam Line:	Old uProbe
Project:	RADIATE JRA (H2020 projekt)
Experiment Title:	LE MeV SIMS Ar sputter cleaning + yield meas. of various inorganic samples
Beam:	200 keV Cu2+ (imaging: 555 keV Cu2+, 5 MeV Si4+)
Method:	MeV SIMS

ADDITIONAL: imaging of home-made hybrid organic/inorganic samples with 555 keV Cu2+ & 5 MeV Si4+ (1st try)

SETUP:

Me = 29.9; Ox = 19.3

x = 1.7; y = 7

V_chopper = +-200 V

chopper high = 100 us

chopper low = 100 us

1 channel = 3.33 ns

V_ext = +5 kV

V_det = -5 kV

200 keV Cu2+:

file	sample	I_before / kHz	I_after / kHz	notes
2006050	ITO	1.05	-	
Ar sputtering ITO, E= 3 keV, I_e = 10 mA, t = 15 min, dp = 6.3 x10-6 mbar				
2006051	clean ITO	-	1.07	
Ar sputtering TiO2, E= 3 keV, I_e = 10 mA, t = 15 min, dp = 6.3 x10-6 mbar				
2006052	clean TiO2	-	0.95	
Ar sputtering HfO2, E= 3 keV, I_e = 10 mA, t = 15 min, dp = 6.3 x10-6 mbar				
2006053	clean HfO2	-	0.92	
Ar sputtering ZrO2, E= 3 keV, I_e = 10 mA, t = 15 min, dp = 6.3 x10-6 mbar				
2006054	clean ZrO2	0.85	-	no yield (beam was on during sputtering?)
2006055	clean ZrO2 (again)	1.1	-	nothing there
2006056	MgO	1.1	0.9	
2006057	CsI	0.9	-	

Ar sputtering Ti bulk, E= 3 keV, I_e = 10 mA, t = 15 min, dp = 6.3 x10-6 mbar				
2006058	clean Ti	1.12	0.9	
Ar sputtering In, E= 3 keV, I_e = 10 mA, t = 15 min, dp = 6.3 x10-6 mbar				
2006059	clean In	-	1.15	
Ar sputtering V, E= 3 keV, I_e = 10 mA, t = 15 min, dp = 6.3 x10-6 mbar				
2006060	clean V	1.08	-	
Ar sputtering Sn, E= 3 keV, I_e = 10 mA, t = 15 min, dp = 6.3 x10-6 mbar				
2006061	clean Sn	0.92	-	
Ar sputtering Zr, E= 3 keV, I_e = 10 mA, t = 15 min, dp = 6.3 x10-6 mbar				
2006063	clean Zr	1.05	-	
Ar sputtering Co, E= 3 keV, I_e = 10 mA, t = 15 min, dp = 6.3 x10-6 mbar				
2006064	clean Co	1.16	1.12	
2006065	Li	1.12	-	
Ar sputtering Cr, E= 3 keV, I_e = 10 mA, t = 15 min, dp = 6.3 x10-6 mbar				
2006066	clean Cr	0.91	1	

hybrid samples imaging (test):

file	sample	beam	notes
2006067	ITO + phthalo	440 keV Cu2+	spectrum only
2006068	Cr + phthalo	440 keV Cu2+	spectrum only
2006069	ITO + leucine	440 keV Cu2+	spectrum only
2006070	Cr + leucine	440 keV Cu2+	spectrum only
5 MeV SI4+ triplet; Me = 91.3; Ox = 91.4; x = 10; y = 2.45, V_chopper = +-500 V			
2006071	ITO + phthalo	5 MeV Si4+	SS: 5x1
2006072	Cr + phthalo	5 MeV Si4+	SS: 5x1
2006073	ITO + phthalo (edge)	5 MeV Si4+	SS: 5x1
2006074	leucine + Cr interface	5 MeV Si4+	SS: 10x1 I_after = 5 kHz
Next day: Me = 95.4; Ox = 92.1			
2006075	leucine + Cr	5 MeV Si4+	I_before = 55 kHz I_after = 67 kHz
2006076	leucine + Cr	555 keV Cu2+	same rigidity
2006077	-//-		
2006078	another position	555 keV Cu2+	I_before = 2 kHz I_after = 2 kHz
2006079	In + leucine (grid)	555 keV Cu2+	
2006080	-//-, grid edge	555 keV Cu2+	