

F70 (Sample 1) NiO (Sample 2) $CuCrO_2, N_2$ (Sample 2) $CuCrO_2, air$
 $X = 0.48$ $X = -0.498$ $X = -0.497$ $X = 0.48$
 $Z = -5.348$ $Z = -0.448$ $Z = -0.448$ $Z = -5.35$
 $\Theta = -80$ $\Theta = -80$ $\Theta = -80$ $\Theta = -80$
 Analyser slit 2200 eV $U_{gap} = 14$ 6600 eV $U_{gap} = 8.325$
 $I \approx 1.4 \cdot 10^{-9}$ $I \approx 3.4 \cdot 10^{-9}$
 250 eV $U_{gap} = 25.65$ 758 eV $U_{gap} = 40.4$ $I \approx 2.2 \cdot 10^{-9}$
 $I \approx 4.7 \cdot 10^{-9}$

Time	File name	Sample	Region	Spectrometer				Beamline				Y	Comments
				Start-End	Step	scans	Epass	tint	h ν	U gap	Current	tsample	
14:56	140006	F70	overview	1100 - -5	0.5	1	200	0.176	2200	14.4	$1.21 \cdot 10^{-9}$		-550
	140007	NiO	"	"	"	"	"	"	"	"	"		-550
	140008	$CuCrO_2, N_2$	"	"	"	"	"	"	"	"	"		-554
	140009	$CuCrO_2, air$	"	"	"	"	"	"	"	"	"		-554
16:08	140010	$CuCrO_2, air$	overview	89 - -5	0.1	1	70	0.176	250	25.65	$1.08 \cdot 10^{-9}$	20 μA	-554
	140015	"	"	"	"	"	"	"	"	"	"	"	-555
	140016	"	"	84 - -5	"	"	"	"	245	25.42	$1.06 \cdot 10^{-9}$	20 μA	-555
16:32	140017	"	"	89 - -5	0.1	5	"	"	250	25.65	$1.06 \cdot 10^{-9}$	20 μA	-554
16:52	140018	$CuCrO_2, N_2$	overview	89 - -5	"	"	"	"	"	"	"	"	-554
17:12	140019	NiO	"	"	"	"	"	"	"	"	"	"	-550
17:32	140020	F70	"	"	"	"	"	"	"	"	$1.09 \cdot 10^{-9}$	"	-550
18:09	140021	F70 F70	O1s	525-545	0.1	2	200	0.176	2200	14.4	$1.2 \cdot 10^{-9}$	"	"
			Sm3d	484-503	"	1							
			C1s	282-297	"	3							
			overview	-5-100	"	3							
			valence	-2-36	"	10							
			N1s	395-410	"	3							
			Na1s	1068-1079	"	2							
			Ca2p	190-210	"	3							
			O1s	525-545	"	2							

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Time	File name	Sample	Region	Spectrometer				Beamline				y	Comments
				Start-End	Step	scans	Epass	tint	h _v	U gap	Current	I sample	
19:25	140022	NiOx	O1s	725-545	2	0,1	200	0,176	2200	14,4	4,24.10 ⁻³	—	550,5
			Ni2p	845-895	3	—							
			Sn3d	484-503	2	—							
			C1s	282-297	3	—							
			long vac	-5-100	3	—							
			vacuance	-2-36	10	—							
			N1s	395-410	3	—							
			N1s	1068-1079	2	—							
			Al2p	190-210	3	—							
			O1s	525-545	2	—							
					NA								
14:0023	G ₂ G ₂ O ₂ N ₂	O1s		525-545	2								554,5
			Al2p	925-965	3								
			Cr2p	570-600	5								
			Sn3d	484-503	2								
			C1s	282-297	3								
			long vac	-5-100	3								
			vacuance	-2-36	10								
			N1s	395-410	3								
			N1s	1068-1079	2								
			Al2p	190-210	3								
			O1s	525-545	2								
					NA								

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A_{H} possible: $x = -0,098$ $A_{\text{H}} \text{ width} = 50$
 $y = -579.0$
 $z = -4,548$
 $\theta = -63$

Time	File name	Sample	Region	Spectrometer				Beamline				y	Comments
				Start-End	Step	scans	Epass	tint	h ν	U gap	Current	I sample	
	140024	C ₆ H ₆ onr	O15	535-545	0.1	2	200	0.146	2200	14.4	1.2 $\cdot 10^{-9}$	—	-574.5
			C ₂₀	925-965	~	3							
			C ₂₀	570-600	~	5							
			M _{3d}	484-503	~	2							
			C15	282-297	~	3							
			boron	-5-100	~	3							
			reference	-2-36	~	10							
			N15	535-410	~	3							
			N ₄ 15	1068-1079	~	2							
			C ₂₀	190-210	~	3							
			O15	525-545	~	2							
23:01	140026	A _H	A _H 4p	80-89	0.1	1	70	0.146	250	25.65	0.37 $\cdot 10^{-9}$	20 μ m	X gap = 0.5 ~
	140027	A _H	A _H 4p	-5-10	0.1	3	—	—	—	—	1.4 $\cdot 10^{-9}$	20 μ m	X gap = 3.0 ~
	140028	A _H	A _H 4p	85-95	0.1	2	200	0.146	2200	14.4	1.21 $\cdot 10^{-9}$	—	
23:49	140030	BOD-CO ₂ H	orenic	89-5	0.1	1	70	0.146	250	25-65	1.1 $\cdot 10^{-9}$	20 μ m	and drop-cast on FTO
	140031	P1	"	"	"	"	"	"	"	"	"	"	"
00:15	140032	P1	overlayer	-5-1100	0.5	1	200	0.146	2200	14.4	1.2 $\cdot 10^{-9}$	—	-570
00:26	140033	NH ₂ O	—	—	—	—	—	—	—	—	—	—	-574
00:37	140034	A _H 2	—	—	—	—	—	—	—	—	—	—	—
00:48	140035	BOD-COOH	—	—	—	—	—	—	—	—	—	—	-570

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Time	File name	Sample	Region	Spectrometer				Beamline				y	Comments
				Start-End	Step	scans	Epass	tint	h _v	U gap	Current	I sample	
01:45	140036	BOD-COOH	O1s	525-545	0.1	3	200	0.176	2200	14.5	1.21.10 ⁻⁸	✓	-549.5
			F1s	682-696	-	3							
			N1s	392-410	-	5							
			CEP B1s	189-212	-	5							
			C1s	282-293	-	3							
			Su3d	484-503	-	2							
			Na1s	1068-1079	-	2							
			valence	-2-40	-	15							
			O1s	525-545	-	3							
			overview	-5-1100	0.5	1							
140037	P1			repeated	sequence								-549.5
140038	NH ₂ O			repeated	sequence								-549
140039	PH ₂			repeated	sequence								-549
140040	BOD-COOH			-11-	-								-549.5
140041	P1			-11-	-								-549.5
140042	NH ₂ O			-11-	-								-549.5
140043	PH ₂			-11-	-								-549.5

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Time	File name	Sample	Region	Spectrometer				Beamline				Y	Comments
				Start-End	Step	scans	Epass	tint	h _v	U gap	Current	I sample	
10:56	140044	BOD-coat	OIS	525-545	0.1	1	200	0.176	2200	14.4	1.24-10 ⁻⁹	—	-579
	to 140049		F15	682-696	—	1							
			NIS	395-410	—	1							
			CLP B15	189-212	—	1							
			CL5	282-297	—	1							
11:32	140050	P1	OIS										-549
	to 140055		NIS										
			Sup										
			CL5										
12:01	140056	N100	OIS										-577
	to 140061		F15										
			NIS										
			CLP B15										
			CL5										
	140062	P42	OIS										-577
	to 140067		F15										
			NIS										
			CLP B15										
			CL5										
				-5-89									
13:25	140068	BOD-coat	overview	525-545	0.1	1	70	0.176	250	25.65	1.8-10 ⁻⁹	20μ	-579.25
			vacuum	-1-40	0.1	5	70	—	—	—	—	—	
			overview	-5-89	0.1	1	70	—	—	—	—	—	

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Time	File name	Sample	Region	Spectrometer					Beamline				Y	Comments
				Start-End	Step	scans	Epass	tint	hv	U gap	Current	1-sample		
	140059	P1	Overview	-5-89	0.1	1	70	0.126	250	25.65	1.18e-9	20μ	-50.25	
			valence	-1-40		5	-	-	-	-	-	-	-	
			Overview	-5-83	-	1	-	-	-	-	-	-	-	
	140070	NiO	Overview	-5-89	-	1	-	-	-	-	-	-	-50.25	
			valence	-1-40	-	5	-	-	-	-	-	-	-	
			Overview	-5-89	-	1	-	-	-	-	-	-	-	
	140071	Pt2	Overview	-5-89	-	1	-	-	-	-	-	-	-50.25	
			valence	-1-40	-	5	-	-	-	-	-	-	-	
			Overview	-5-83	-	1	-	-	-	-	-	-	-	
	140072	P1	valence	-1-39	0.1	1	20	0.176	150	20.45	1.1e-9	20μ	-50.25	
	140073	"	"	"	"	1	"	"	"	"	1.6e-9	20μ	"	
	140075	"	"	"	"	"	"	"	"	"	"	"	"	Low Pass
	140076	"	"	"	"	"	50	"	"	"	"	"	"	Low Pass, Any 45
	140077	"	"	"	"	"	50	"	120	18.05	1.9e-9	30μ	"	Low Pass
	140078	"	"	"	"	"	"	"	"	"	"	"	-54.75	"
	140079	NiO	"	"	"	"	"	"	"	"	"	"	-50.4	"
	140080	"	"	"	"	"	20	"	"	"	"	"	"	"

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① NN00/Ni0
 $x = 0,3$
 $y = -550,576 - 548$
 $z = -4,6$
 $\theta = -80$

② P1/Ni0
 $x = -0,55$
 $y = -548$
 $z = 0,6$
 $\theta = -80$

③ BOD-coat/Ni0
 $x = -0,65$
 $y = -552,576 - 551$
 $z = 0,6$
 $(\theta = -80)$

④ P42-BOD/Ni0
 changing

Time	File name	Sample	Region	Spectrometer				Beamline				y	Comments
				Start-End	Step	scans	Epass	tint	hv	U gap	Current	1sample	
15:40	140082	NN00/Ni0x	overview	-5-1400	0,5	1	200	0,76	2200	14,4	1,21-10 ⁻⁸	✓	-548
	140083	P1/Ni0x	val	-	-	-	-	-	-	-	-	-	-
16:01	140084	BOD-coat/Ni0x	val	-	-	-	-	-	-	-	-	-	-552,5
	140085	P42/Ni0x	val	-	-	-	-	-	-	-	-	-	-548,5
16:30	140086	NN00/Ni0x	valence	-1-39	0,1	1	50	0,76	120	18,02	1,37-10 ⁻³	30µ	-548
	140087		val	-	-	-	-	-	120	18,13	0,56-10 ⁻³	30µ	-548
	140088	-	val	-	-	-	-	-	-	-	-	-	-549,2
	140089	P1/Ni0x	valence	-	-	-	-	-	-	-	-	-	-548,25
	140090	BOD/Ni0x	val	-	-	-	-	-	-	-	-	-	-549,25
	140091	An	An Feus	-5-10	0,1	5	50	-	-	-	-	-	An positions
17:38	140095	NN00/Ni0x	overview	-5-89	0,1	1	70	0,76	250	25,65	1,14-10 ⁻⁸	20µ	-548,5
			val	-1-25	"	5	"	"	"	"	"	"	"
			overview	-5-83	"	1	"	"	"	"	"	"	"
	140096	P1/Ni0	overview	-	-	1	-	-	-	-	-	-	-548,5
			val	-	-	5	-	-	-	-	-	-	-
			overview	-	-	1	-	-	-	-	-	-	-
	140097	BOD/Ni0	overview	-	-	1	-	-	-	-	-	-	-553
			val	-	-	5	-	-	-	-	-	-	-
18:09	140098		overview	-	-	1	-	-	-	-	-	-	-
18:19	140098	An	An Feus	-5-10	0,1	3	70	0,76	250	25,65	1,13-10 ⁻³	20µ	An positions
18:34	140099	An	An Feus	70-83	0,1	1	200	-	1100	50,5	1,57-10 ⁻⁶	10µ	-
	140100	An	val	-	-	-	-	-	-	57,2	1,7-10 ⁻³	20µ	-

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Time	File name	Sample	Region	Spectrometer					Beamline				y	Comments
				Start-End	Step	scans	Expass	tint	h ν	U gap	Current	I sample		
8:49	140101	BOD COOH/NiOx	overview	-5-300	0.5	1	100	0.176	1100	57.2	$1.7 \cdot 10^{-9}$	20 μ	-545	
	140102	-	-	-15-829	-	-	-	-	1090	54	$1.3 \cdot 10^{-9}$	20 μ	-	
	140103	-	-	-15-530	-	-	200	-	820	46	$1.33 \cdot 10^{-9}$	20 μ	-	
	140104	-	-	-15-540	-	-	-	-	830	46.24	$1.43 \cdot 10^{-9}$	20 μ	-	
19:42	140107	NiOx / NiOx	O1S	526-542	0.1	1	200	-	200	14.14	$1.46 \cdot 10^{-9}$	-	-548.35	
	140112		Ni2P	845-892										
			F1S	680-697										
			N1S	396-409										
			C1S	282-295										
	140113	P1 / NiOx	O1S	526-542									-548.35	
	140118		Ni2P	845-892										
			N1S	396-409										
			S2p	159-179										
			C1S	282-295										
	140119	BOD COOH / NiOx	O1S	526-542									-548.35	
	140124		Ni2P	845-892										
			F1S	680-697										
			N1S	396-409										
			C1S	282-295										
22:53	140125	P1 / NiOx	overview	-5-540	0.5	1	200	-	830	46.24	$1.5 \cdot 10^{-9}$	20 μ	-549	
	140126	NiOx / NiOx	-	-	-	-	-	-	-	-	-	-	-549	

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Time	File name	Sample	Region	Spectrometer					Beamline					Y	Comments
				Start-End	Step	scans	Epass	tint	hv	U gap	Current	I sample			
23:08	140122	NN00/NiOx	Cr2pB1s	185-210	0.1	6	200	0.176	2200	14.4	1.5-10 ⁻⁸	23	-548.25		
			Ni2p	845-892	0.1	1	—	—	—	—	—	—	—		
	140128	P1/NiOx	Cr2pB1s	—	—	6	—	—	—	—	—	—	—		
			Ni2p	—	—	1	—	—	—	—	—	—	—		
	140129	B00 COOH/NiOx	Cr2pB1s	—	—	6	—	—	—	—	—	—	-543.25		
			Ni2p	—	—	1	—	—	—	—	—	—	—		
23:57	140130	Al ₂	Al2s	70-89	0.1	1	200	—	830	46.22	1.47-10 ⁻⁷	22	—		
	140131	—	—	74-89	—	—	50	—	—	—	—	—	—	Al ₂ post-burn	
00:01	140132	NN00/NiOx	O1s	520-536	0.1	1	200	—	830	46.22	1.48-10 ⁻⁷	20	-549.25		
	140141	—	Ni3p	55-80	—	1	200	—	—	—	—	—	—		
			Fls	676-689	—	1	50	—	—	—	—	—	—		
			N1s	390-403	—	1	200	—	—	—	—	—	—		
			Cr2pB1s	179-204	—	1	200	—	—	—	—	—	—		
			S2p	153-173	—	1	200	—	—	—	—	—	—		
			C1s	276-289	—	1	200	—	—	—	—	—	—		
	140142	P1/NiOx	repeated sequence												
X10	140151	—	repeated sequence												
X10	140152	B00 COOH/NiOx	repeated sequence												
	140161	—	repeated sequence												
	140162	NN00/NiOx	Ni2p	845-892	1	0.1	200	0.176	2200	14.4	1.2-10 ⁻⁸	—	-549.5		
			Cr2pB1s	845-892	15	—	—	—	—	—	—	—	—		
			Ni2p	845-892	1	—	—	—	—	—	—	—	—		

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Sample plate 5

F70

x = 0.3
y = -550.75 to -548.5
z = -5

PH₂ and NIO

x = -0.65
y = -550.75 to -548
z = 0.4

CuCrO₂(CN)₂

x = 0.3
y = -555.5 to -554
z = -5

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Time	File name	Sample	Region	Start-End	Spectrometer					Beamline			Y	Comments
					Step	scans	Epass	tint	hν	U gap	Current	Sample		
10.33	140190	CuCrO ₂ /N ₂ /washed	overview	-5 to 1100	0.5	1	200	0.176	2200	14.4	1.23.e-9		-554	heated + crushed
	140191	F70/washed	"	"	"	"	"	"	"	"	"		-548.5	heated + washed
	140192	PH ₂ /NIO	"	"	"	"	"	"	"	"	"		-548	
	140193	"	overview	-15 to 540	11	"	"	0.176	830	46.27	1.52e-9	20µm	-548	
	140194	F70/washed	"	"	"	"	"	"	"	"	"	"	-548.5	
	140195	CuCrO ₂ /washed	"	"	"	"	"	"	"	"	"	"	-554	
11.26	140196	PH ₂ /NIO	OK	520-546	0.1	1	200	0.176	830	46.27	1.52e-9	20µm	-548.5	
	x8		Ni3p	55-80	"	1	"	"						
	to 140203		F15	676-679	"	1	50	"						
			Ni15	390-405	"	1	200	"						
			CRP OK	179-204	"	1	"	"						
			S2p	153-173	"	1	"	"						
			C5	226-289	"	1	"	"						
	140204	"	Ni7p	845-892	0.1	1	200	"	2200	14.4	1.2e-9	-	-549	
			valence	-2-40		15	"	"						
			Ni7p	845-892		1	"	"						
	140205	"	OK	526-542	0.1	1	"	"	2200	14.4	1.2e-9		-549.5	
	to		Ni2p	845-892	"	1	"	"						
			F6	680-692	"	1	"	"						
			Ni15	396-409	"	1	"	"						
			CRP OK	185-210	"	3	"	"						
			C15	282-295	"	1	"	"						

sample is degrading

Time	File name	Sample	Region	Spectrometer				Beamline				y	Comments
				Start-End	Step	scans	Epass	tint	hv	U gap	Current	I-sample	
14:38	140211	Cu ₂ Ox (N ₂)	O1s	520-536	0.1	1	200	0.176	830	46/22	1.7-10 ⁻⁹	20L	-534.5
to	140216	washed	N1s	390-403									
			background	-10-82									
			Cl1s	226-283									
			Su3d	478-496									
	140218	Cu ₂ Ox (N ₂)	O1s	526-542	0.1	1	200	0.176	2200	14/4	1.2-10 ⁻⁹		-535
to	140223	washed	Cu2p	925-965									
			Cu2p	570-600									
			N1s	390-409									
			Cl1s	282-295									
			Su3d	484-503									
	140217	Cu ₂ Ox (N ₂)	Cu2p	925-965	0.1	1	200	0.176	2200	14/4	1.2-10 ⁻⁹		-534.75
		washed	background	-2-40		15							
			Cu2p	925-965		1							
17:05	140224	FTO (washed)	O1s	520-536	0.1	1	200	0.176	830	46/27	1.66-10 ⁻⁹		-538.75
to	140226		N1s	390-418									
			background	-10-82									
			Cl1s	276-289									
			Su3d	478-496									
	140227		Su3d	484-503									
			background	-2-40									
			Su3d	484-503	0.1	1	200	0.176	2200	14/4	1.2-10 ⁻⁹		-549

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