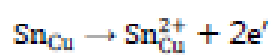
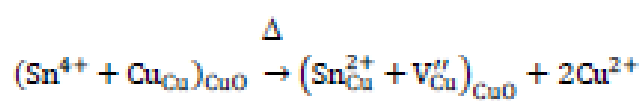
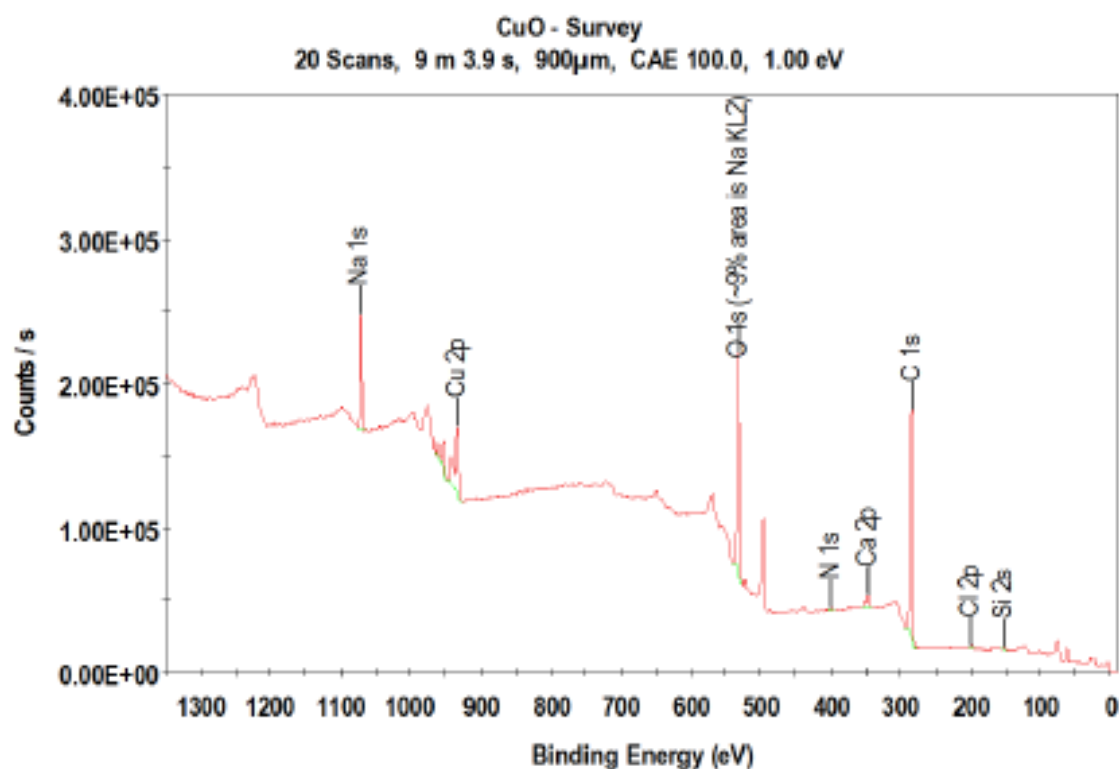


Summary of O 1s, Cu 2p, and Sn 3d XPS results

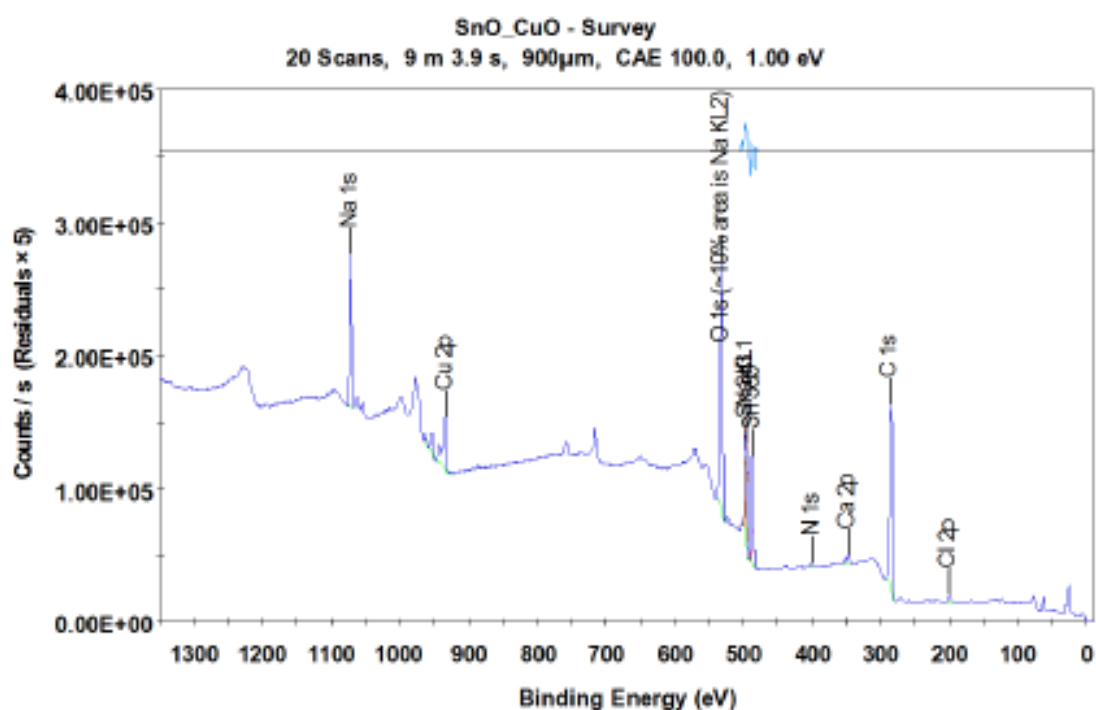
Electrode	$O_{\text{Ads}}/O_{\text{Latt}}$	$\text{Cu}^{2+}/\text{Cu}^+$	Sn^{4+}	Sn^{2+}
Cu_xO	2.4/2.3	0.7/1.4	-	-
$\text{Sn-Cu}_x\text{O}$	4.3/1.1	0.4/1.4	0.4	1.0



XPS survey of Cu_xO



XPS survey of $\text{Sn/Cu}_x\text{O}$



Sn-doped Cu_xO elemental composition

<i>Name</i>	<i>Peak BE</i>	<i>Atomic %</i>
C 1s	284.9	58.4
O 1s (~10% area is Na KL2)	531.3	30.2
Na 1s	1071.8	6.1
Cu 2p	934.1	2.0
Sn 3d5	486.4	1.3
Cl 2p	199.7	0.9
N 1s	400.0	0.6
Ca 2p	347.0	0.6

Cu_xO elemental composition

<i>Name</i>	<i>Peak BE</i>	<i>Atomic %</i>
C 1s	284.4	65.5
O 1s (~9% area is Na KL2)	531.0	24.7
Na 1s	1070.7	4.9
Cu 2p	933.6	2.8
Ca 2p	347.1	0.8
Si 2s	152.5	0.5
Cl 2p	198.8	0.4
N 1s	398.8	0.3