Work report 140222: Co-sputtered ZnO-SnO_2

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1 Overview

Samples for Binghampton. Co-sputtered ZTO films on conductive substrates.

Note that the composition profile now runs diagonally from bottom left to top left instead of horizontally from left to fight. This is because the SnO2 target was removed and re-installed for use with a different magnetron.

2 Samples

Table 1: Sample deposition parameters. Film deposited on 1mm thick aluminaborosilicate glass (ABS) substrates coated with a 250 nm thick film of ITO (10 Ω/square).

ID	140519_3
Material	ZnO:SnO_2
RF power (W)	70:109
Ar pressure (mTorr)	5
dep. time (min)	30
T_{dep} (°C)	18

3 Film profiles

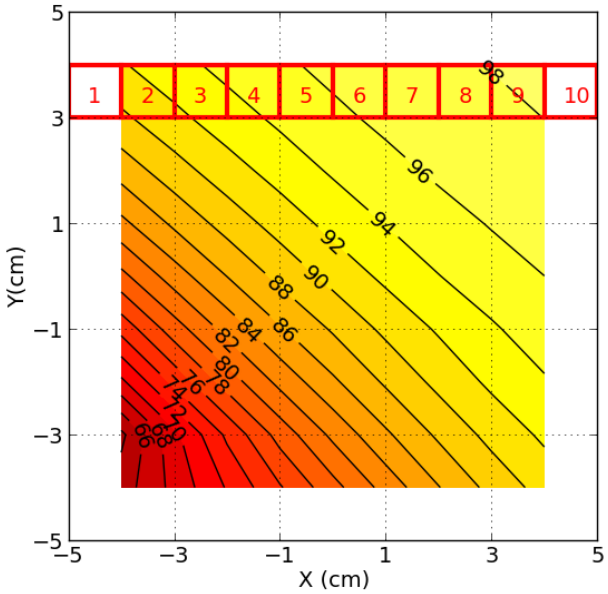

Figure 1: 140519_2_ZnO_SnO_2: % wt. SnO_2 profile of co-sputtered film. Red sample series cut from sample.

Table 2: Aporoximate % wt. SnO_2 content series cut from ZTO samples.

Piece	Red Series
1	89.9
2	91.6
3	93.1
4	94.4
5	95.5
6	96.4
7	97.1
8	97.7
9	98.0
10	98.1