
X-ray absorption measurements for XANES reconstruction.

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March 2, 2022 – March 7, 2022

Example 1: Reconstructing first spectra (CTC-03 – Set 1)

Column Name				
Scan #	Energy (keV)	.csv File name	pixel_number*	As[]*
129	11.8665	CTC_03_goodXBIC_scan129	0	882.738
130	11.87	CTC_03_goodXBIC_scan130	0	1252.22
131	11.8735	CTC_03_goodXBIC_scan131	0	2103.17
132	11.8765	CTC_03_goodXBIC_scan132	0	2658.71
133	11.879	CTC_03_goodXBIC_scan133	0	2374.77
134	11.8855	CTC_03_goodXBIC_scan134	0	1939.81
135	11.9	CTC_03_goodXBIC_scan135	0	1804.39
136	11.904	CTC_03_goodXBIC_scan136	0	1885.74
137	11.9095	CTC_03_goodXBIC_scan137	0	1691.83

* Column name as listed in .csv file

Disclaimer or Presentation info

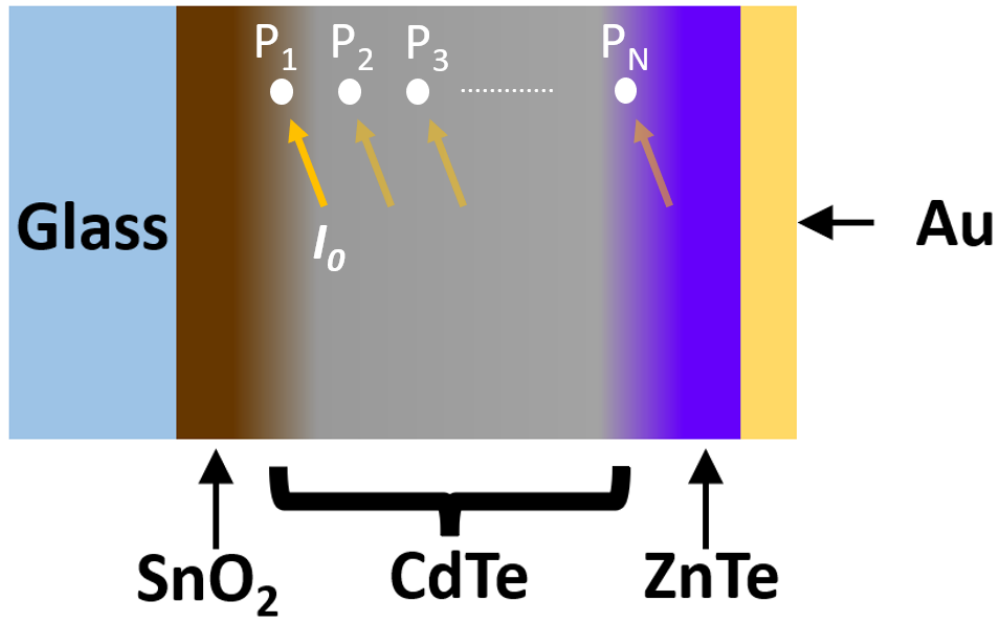
Example 1: Reconstructing another spectra (CTC-03 – Set 1)

Column Name				
Scan #	Energy (keV)	.csv File name	pixel_number*	As[]*
129	11.8665	CTC_03_goodXBIC_scan129	1	850.053
130	11.87	CTC_03_goodXBIC_scan130	1	1152.43
131	11.8735	CTC_03_goodXBIC_scan131	1	1609.89
132	11.8765	CTC_03_goodXBIC_scan132	1	1642.3
133	11.879	CTC_03_goodXBIC_scan133	1	1448.1
134	11.8855	CTC_03_goodXBIC_scan134	1	1367.78
135	11.9	CTC_03_goodXBIC_scan135	1	1363.87
136	11.904	CTC_03_goodXBIC_scan136	1	1358.43
137	11.9095	CTC_03_goodXBIC_scan137	1	1256.76

* Column name as listed in .csv file

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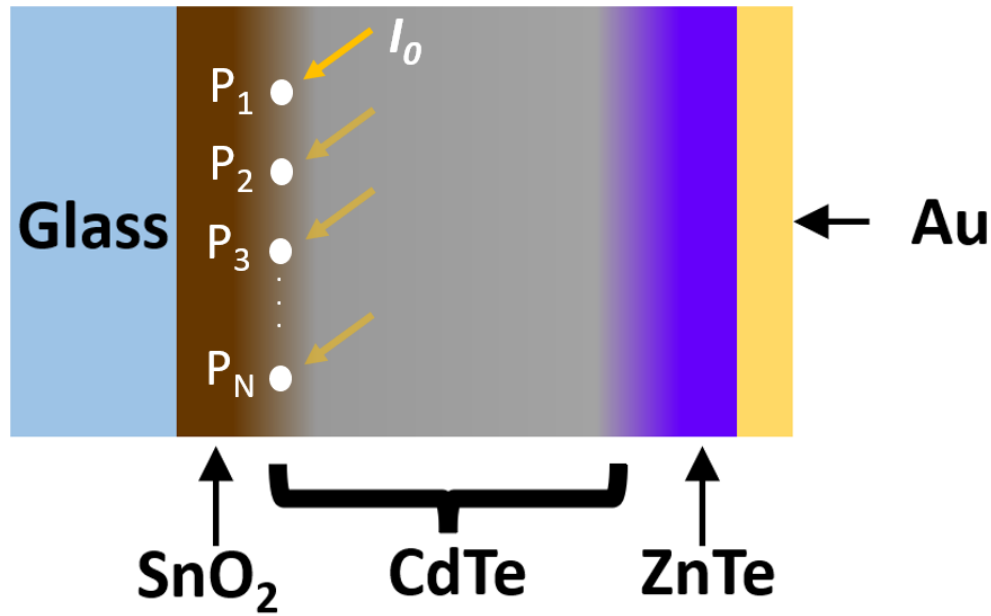
Sets 1, 2, 4, and 5 – measurement details



Schematic of measured sample. X-rays of energy I_0 are incident across the depth of the CdTe layer.
Figure by Angel De La Rosa

- Each scan file contains 15 data points ($N = 15$) of absorption intensity vs. position. Incident energies for each scan are specified in Excel file "*Respective energies for scans*".
- Columns of importance in .csv files are:
 - Column A ("pixel_number" = measurement at position P_n of sample)
 - Column G (absorption intensity)
- Step size between measurements is 0.2 microns. Total scan length is 2.8 microns.

Set 3 – measurement details



Schematic of measured sample. X-rays of energy I_0 are incident across the TCO/CdTe interface.
Figure by Angel De La Rosa

- Each scan file contains 5 data points ($N = 5$) of absorption intensity vs. position. Incident energies for each scan are specified in Excel file "*Respective energies for scans*".
- Columns of importance in .csv files are:
 - Column A ("pixel_number" = measurement at position P_n of sample)
 - Column G (absorption intensity)
- Step size between measurements is 6.0 microns. Total scan length is 24.2 microns.

Arsenic standards included

Scan #	Standard	File name
6	As metal	lineAs_metal_scan006.mda
8	Cd_3As_2	lineCd3As2_scan008.mda
9	As_2O_3	lineAs2O3_scan009.mda
11	As_3Te_2	lineAs3Te2_scan011.mda