

Experiment Summary Report Template for Online Submission

This experiment summary report template can be used to draft your report details and then copy and paste them into the online form.

1. Report Title

To measure x-ray diffraction of LaCoO_3 and its depended form

2. Authors

For registered SPring-8 users, enter the user card numbers only; both last and first names and affiliations are required of unregistered users.

	User Card Number	Last Name	First Name	Affiliation
First Author	0043823	Singh	Amol	NSRRC
Coauthor #1	0045035	Huang	Ting-Chun	NSRRC
Coauthor #2	-	-	-	-
Coauthor #3	-	-	-	-

Add more lines if needed.

3. Body (about one A4 page)

- Purpose
- Samples, experiment method, BL and equipment used, experiment/measurement conditions
- Summary of measurement and results

The lattice constant of LaCoO_3 is mismatch with LSAT substrate. Tensile-strain of interface induces plentiful physics properties. We want to investigate the crystal structure of LaCoO_3 thin film on LSAT and the effect of strain through X-ray diffraction.

Figure 1 shows the normal orientation (110) of sample. We can know thin film be grown along the substrate orientation. In order to know strain effect we further measure off normal orientation (222) of samples shown by Figure 2.

After we defined the orientation matrix, we do the reciprocal space scan that is shown on figure 3.

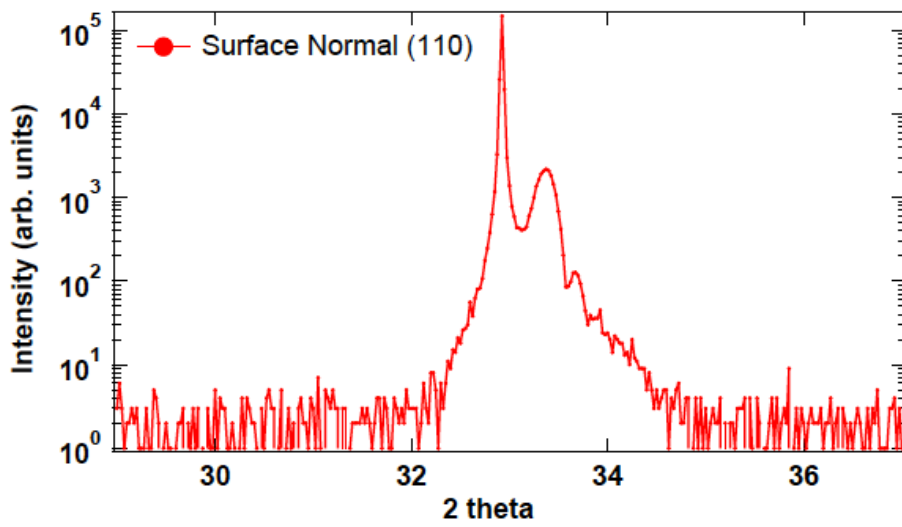


Figure 1. Surface normal (110) diffraction spectrum

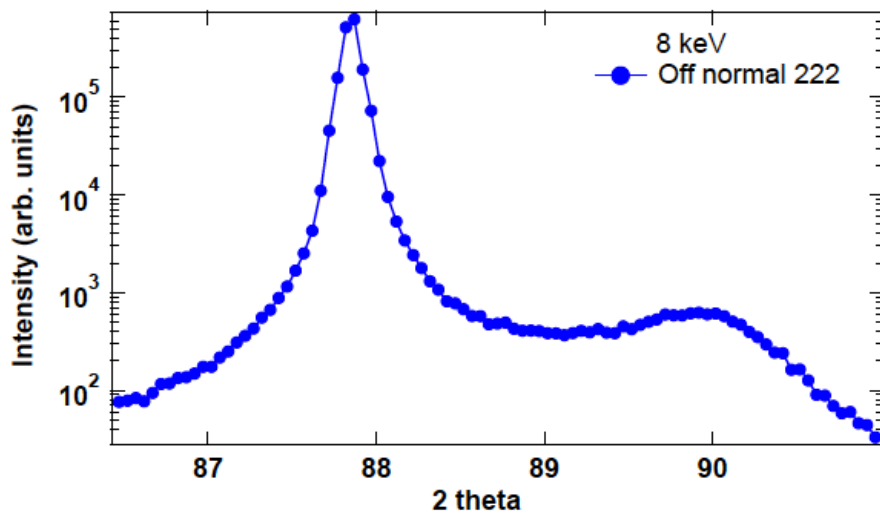


Figure 2. Off-normal (222) diffraction spectrum

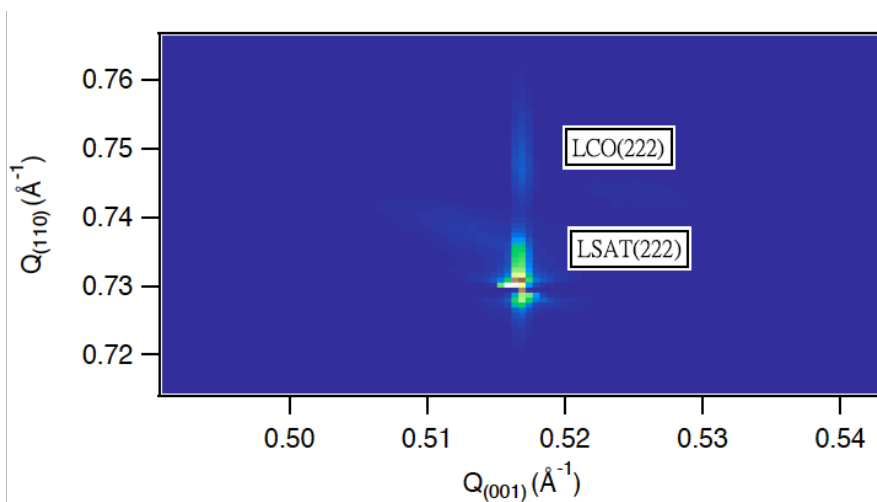


Figure 3. Reciprocal space mapping along (222)

4. Attachment (up to two files)

Acceptable file formats are JPEG (.jpg/.jpeg), GIF(.gif), PNG (.png) only.

--	--

Information provided below is kept private and will not be disclosed.

5. Publication Schedule

Type of Publication*: Regular article	Journal/Conference title: physics review B	Expected Date of Publication**: 2019
--	---	--

*Refereed Journals, Review Articles, Proceedings, Books, Awards, Patent, Others,
Invited Talks, Other Oral

**within 3 months, 6 months, 1 year, 2 years, or more

If you are not sure when you will publish your results, specify the reason and provide the publication schedule.

6. Comments and Suggestions