



Experiment Report Form

The double page inside this form is to be filled in by all users or groups of users who have had access to beam time for measurements at the ESRF.

Once completed, the report should be submitted electronically to the User Office using the **Electronic Report Submission Application:**

<http://193.49.43.2:8080/smis/servlet/UserUtils?start>

Reports supporting requests for additional beam time

Reports can now be submitted independently of new proposals – it is necessary simply to indicate the number of the report(s) supporting a new proposal on the proposal form.

The Review Committees reserve the right to reject new proposals from groups who have not reported on the use of beam time allocated previously.

Reports on experiments relating to long term projects

Proposers awarded beam time for a long term project are required to submit an interim report at the end of each year, irrespective of the number of shifts of beam time they have used.

Published papers

All users must give proper credit to ESRF staff members and proper mention to ESRF facilities which were essential for the results described in any ensuing publication. Further, they are obliged to send to the Joint ESRF/ ILL library the complete reference and the abstract of all papers appearing in print, and resulting from the use of the ESRF.

Should you wish to make more general comments on the experiment, please note them on the User Evaluation Form, and send both the Report and the Evaluation Form to the User Office.

Deadlines for submission of Experimental Reports

- 1st March for experiments carried out up until June of the previous year;
- 1st September for experiments carried out up until January of the same year.

Instructions for preparing your Report

- fill in a separate form for each project or series of measurements.
- type your report, in English.
- include the reference number of the proposal to which the report refers.
- make sure that the text, tables and figures fit into the space available.
- if your work is published or is in press, you may prefer to paste in the abstract, and add full reference details. If the abstract is in a language other than English, please include an English translation.

**Experiment title:**

Layered microporous zeotype materials modified at the University of Zaragoza

Experiment number:

25-01-754

Beamline:**Date of experiment:**

from: 06/05/2010 to: 08/05/2010

Date of report:

20/01/2011

Shifts:**Local contact(s):**

Iván Da Silva

*Received at ESRF:***Names and affiliations of applicants (* indicates experimentalists):**

Dr. Ir. Clara Casado Coterillo, Department of Chemical & Environmental Engineering, Universidad de Zaragoza, 50018 Spain

Mr. Alejandro Galve Guinea, Department of Chemical & Environmental Engineering, Universidad de Zaragoza, 50018 Spain

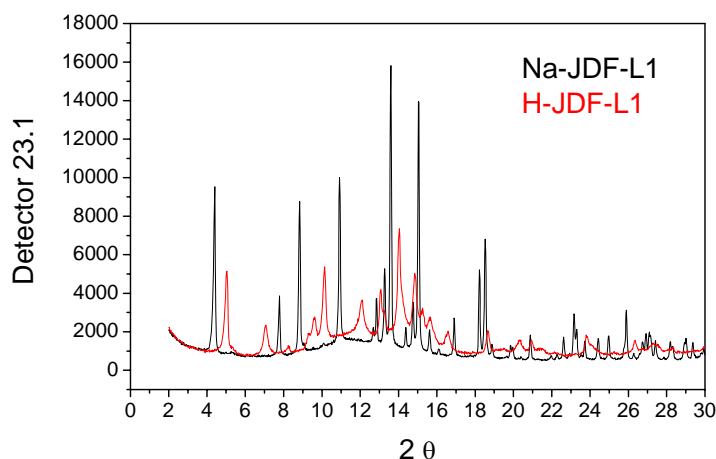
Mr. Joaquín Castán, Department of Organic Chemistry, Universidad de Zaragoza, 50018 Spain

Report:

All measurements that were planned to be measured, could be measured during allocated time.

-Layered microporous titanosilicate in Na-form (original) and H-form (protonated)

1. JDF-L1
2. H-JDF-L1



A shift in the 00l reflections are observed, as expected upon exchange of the larger cation Na⁺ for the smaller H⁺ proton.

The structure is also changed after ion-exchange. We would therefore be interested in applying for new beamtime in order to monitor *in-situ* ion-exchange reaction of different cations.

-Novel layered stannosilicate materials prepared from JDF-L1

3. s-8 (César) $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ + semillas JDF-L1
4. s-16(César) $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ sin semillas
5. s-18(César) $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ + semillas s-16
6. s-19(César) $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ + semillas s-16
7. s-20(César) $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ + semillas s-16

-Layered zeolite Nu6(1) and the product of its calcination, Nu6(2), prepared with varying Si/Al ratio

8. Nu6(1)091 Si/Al=24
9. Nu6(2)091 Si/Al=24
10. Nu6(1)066 Si/Al=42
11. Nu6(2)066 Si/Al=42
12. Nu6(1)057 Si/Al=73
13. Nu6(2)057 Si/Al=73
14. Nu6(1)052 Si/Al=350
15. Nu6(2)052 Si/Al=350
28. Nu6(1)069 Si/Al=74
29. Nu6(1)069 Si/Al=74 calcinada
30. Nu6(1)081 Si/Al=348
31. Nu6(1)081 Si/Al=348 calcinada

These data have been treated with Materials Studio software and a paper is in progress.

-Layered microporous titanosilicate AM-4 at temperatures 25, 200, 400 °C. For this, it was necessary to calibrate the detector up to 600 °C, but after measuring XRD at 400 °C, intensities were largely decreased and it was judged better not to increase the temperature further.

18. S-11 (Diego)

These data are being treated.

Swollen AM-4

20. H-8 (Diego)

A good diffractogram has been observed, as expected.

-Chiral ordered mesoporous silica prepared using L-, D. and DL- aminoacid form were measured from the smallest angle available, but the typical MCM-41 peak was not observed for the D- form.

21. L-P-COMS
22. L-P-COMS activada
23. DL-P-COMS
24. DL-P-COMS activada
25. DL-P-COMS activada_2
26. D-P-COMS
27. D-P-COMS activada