COST539 Action :
Electroceramics from Nanopowders Processed by Innovative Methods (ELENA)

2nd Training School

"*Advanced Functional Characterization Techniques of Nanostructured Materials*"

Monday 23 February, 2009

Instituto de Ciencia de Materiales de Madrid (ICMM-CSIC) Cantoblanco. 28049-Madrid (Spain)

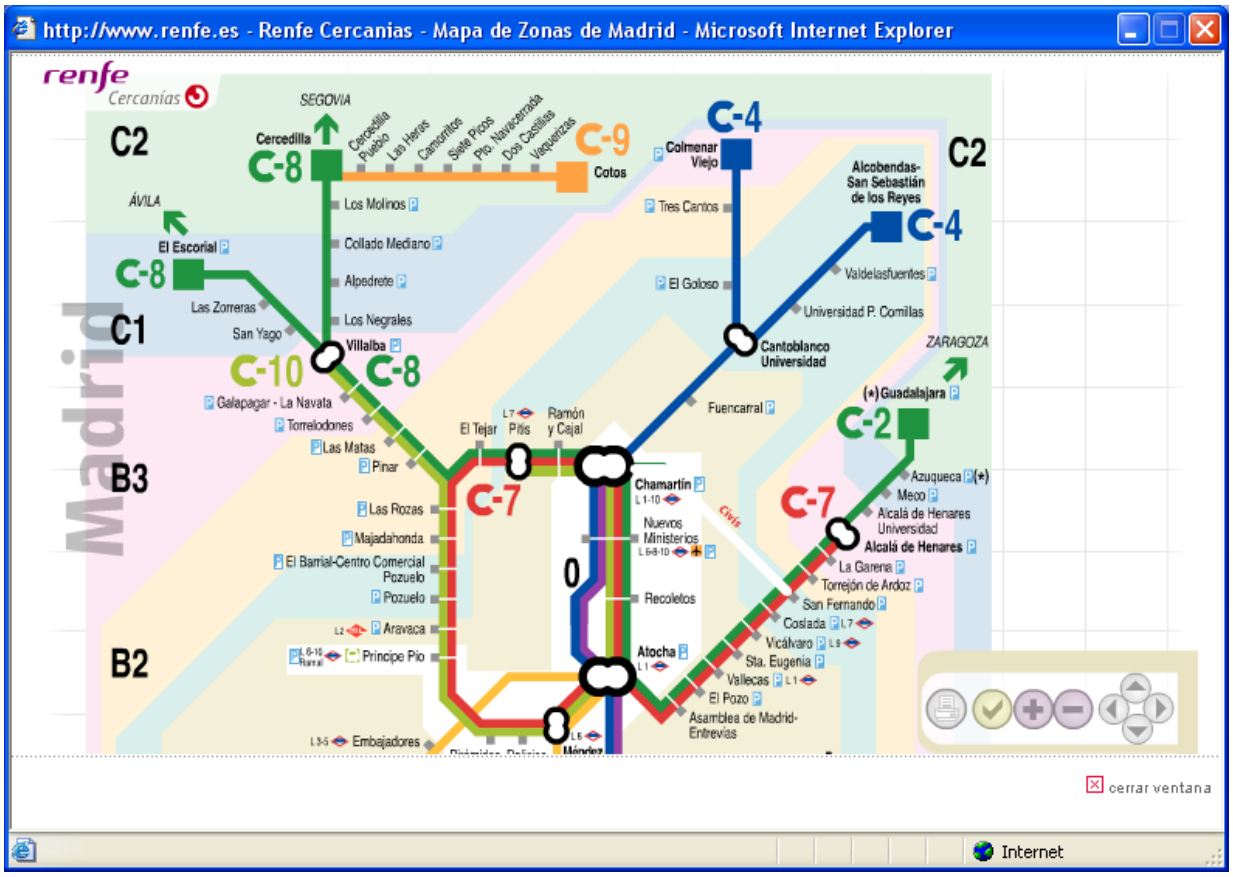
PROGRAMME

PRACTICAL INFORMATION

How to arrive

ICMM is located within the Campus of the Autonomous University of Madrid, some 16 Km North of the city.

The best way to arrive is the use of “Cercanías” train line C4 (see attached document). For scheduled trains and prices you can check: http://www.renfe.es/cercanias/madrid/
From “Atocha” station the trip takes some 25 minutes.

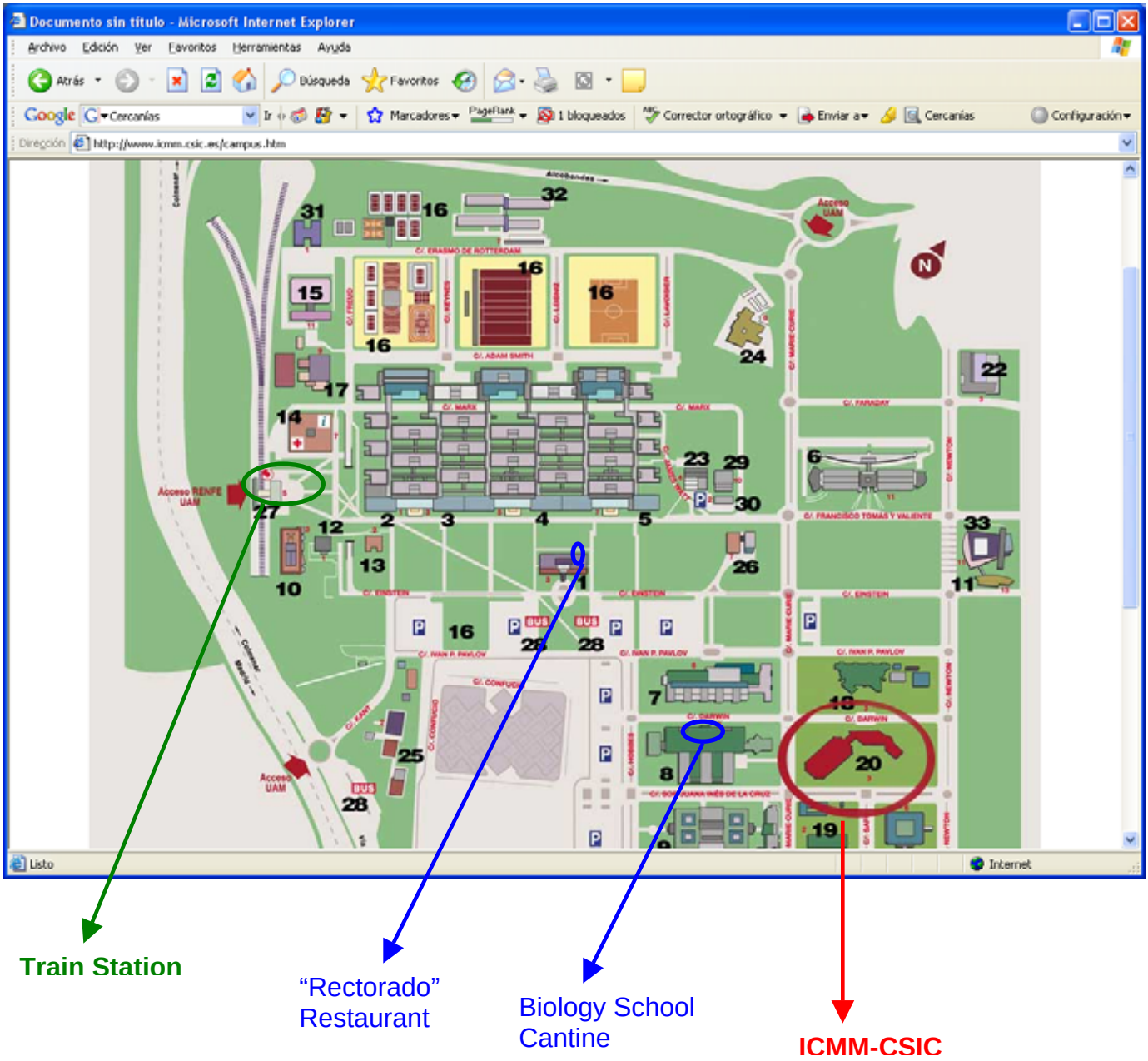


By car the ICMM can be reach via road M-607 (to Colmenar Viejo) exit to Autonomous University (Camino de Valdelatas) at Km 16.

By bus use Line 714 from Plaza de Castilla (terminal, andén 13) that ends at Cantoblanco Universidad.

From the train station of “Cantoblanco Universidad” there is a 15 minutes walk to ICMM crossing the Campus.

The following map shows the ICMM location marked with a red circle, the train station with a green one and the places selected for lunch during the Workshop in blue.



At the Training School

There is a **wireless internet connection** avaliable in the area of the Lecture rooms. If you want to conect to it, select ssid="**portal-csic**". IP will be automatically given to your computer by the system.

Coffe breaks are free of charge for Training School attendees and will be served twice in the day.

There are two options for **lunch** in the Campus (see map):

University Cantine at Biology School :

Self-service menu, consisting of an entrance, main dish and fruit or dessert, cost 4.85 euros (including bread), there are several choices for each item in the menu every day.

Sandwich and single dishes can also be purchased at a lower price.

"Rectorado" Restaurant:

There will be an special menu prepared for the Workshop attendees and these will be served at the price of 13,5 euros. There will be 3 choices (soup, pasta, vegetables) for the first course and 2 choices (fish or meat) for the second course of the meals. The price include also bread, dessert, beverages and coffe.

To be able to use this service, you shall indicate it at the registration desk at your arrival.

Advanced Functional Characterization Techniques of Nanostructured Materials
COST539 Action ELENA 2nd Training School

09:00-09:15
Wellcome and Introduction to the Course
Biljana Stojanovic (COST539 Action Chair) and Lorena Pardo

Session A
Chair: Juras Banys (Vilnius University. Lithuania)

09:15-10:00
"Nanostructured Materials: Electrical Properties and Applications"
Paula María S.Vilarinho – UA (Portugal)
10:00-10:45
"Ferro-piezoelectric Polycrystals: Fundamentals of Properties and Characterization".
Lorena Pardo – ICMM (Spain)
10:45-11:30
"Ferroelectric Phase Transitions and Properties Determination: Electrical Advanced Characterization Techniques of Thin Films and Bulk Ceramics. Part I: Ferroelectric Hysteresis Loops".
Ricardo Jiménez – ICMM (Spain)

11:30-11:45 Coffe Break

Session B
Chair: Amador M. Gonzalez (UPM. Spain)

11:45-12:30
"Piezoelectric characterization techniques: the resonance method".
Lorena Pardo – ICMM (Spain)
12:30-13:15
"Ferroelectric Phase Transitions and Properties Determination: Electrical Advanced Characterization Techniques of Thin Films and Bulk Ceramics. Part II : Pyroelectric Measurements".
Ricardo Jiménez-ICMM (Spain)

13:15-14:30 LUNCH at Autonomous University Campus

Parallel Lab Sessions

14:30-17:30
Introduction to the laboratories and in situ measurements on reference samples under tutorials of LorenaPardo and Alvaro García (piezoelectric characterization of ceramics) and Ricardo Jiménez and David Alonso (ferroelectric characterization of thin films and ceramics).
Measurements will run in parallel sessions for four groups (4-5 persons/group) that will carry-on four succesive practices.

17:30-18:00 Farewell Coffe Break

Training School attendees are wellcome to provide samples for measurement. If this is the case, please, contact in advance to Lorena Pardo (lpardo@icmm.csic.es) for the required characteristics for the samples to be measurable. It may not be possible to measure all samples during the Training School.

List of Attendees

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