Volume 389 Issue 1 1 February 2007 ISSN 0921-4526

PHYSICA B

Recognized by the European Physical Society

CONDENSED MATTER

Proceedings of the
International Workshop
"35th Anniversary of Hyperfine Interactions at La Plata" &
"Humboldt Kolleg on Solid State Physics"

HFILP 2005

held in La Plata, Argentina
7–10 November 2005

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ScienceDirect
Physica B 389 (2007) xiii–xiv
PHYSICA B
www.elsevier.com/locate/physb

Foreword

The *International Workshop* "35th Anniversary of Hyperfine Interactions at La Plata (HFILP2005)" was held in La Plata, Argentina, from 7 to 10 November 2005. It was organised to celebrate 35 years of constant work in the field of Hyperfine Interactions and Solid State Physics at the *Universidad Nacional de La Plata* (UNLP). A *Humboldt Kolleg Meeting on Solid State Physics* was also developed in the framework of the workshop.

The event was carried out as part of the commemoration for the centennial anniversary of our university and our Institute of Physics. It was also held during the "Bienal de Ciencia y Tecnología 2005 de la Provincia de Buenos Aires", an event designed to show to the community the scientific activities developed in our region. As it is well known, all these scientific meetings occurred during the World Year of Physics, as declared by the United Nations in honour of the 100th anniversary of Albert Einstein's "miraculous year," when he published his three papers on light quanta, Brownian motion, and the special theory of relativity, discoveries that had and continue having a remarkable impact on science.

In March 1995, the First International Workshop had been organised to celebrate the 25th anniversary of Hyperfine Interactions in La Plata. Hence, the present is the second of a series of workshops that we pretend to be continued in the future. The recent workshop congregated several specialists, from Nuclear Physics to Biology, who presented contributions using the language of the hyperfine interactions but essentially of the wider field of Solid State Physics. Differently from other international conferences, this meeting brought together mostly physicists who knew the facilities and projects that were carried out at the LENIH (Hyperfine Interactions and Nuclear Spectroscopy Laboratory). This event allowed to probe the role of the scientific argentine community within the hyperfine interaction worldwide research. The increase and improvement of international collaborations and cooperation agreements were probably the most important yield of the workshop. Besides, graduated and advanced students had the opportunity to know the possibilities and interests of other groups abroad on the application of hyperfine interactions techniques to Condensed Matter problems. The up to date on technological progress in this field was very profitable.

The *Hyperfine Interactions and Nuclear Spectroscopy Laboratory* (LENIH) of the *Faculty of Exact Sciences* at the UNLP, which also belongs to the *Instituto de Física La Plata* (IFLP) of the *Consejo Nacional de Investigaciones Científicas y Técnicas* (CONICET), began its activities at the early 70s under the directives of Prof. Dr. Alberto R. López García.

At present, researchers and fellows are devoted to the study of several topics in condensed-matter physics. An important number of specialists in perturbed angular correlations and Mössbauer spectroscopy, assisted by other techniques as X-ray diffraction, thermal analyses, AC magnetic susceptibility, positron annihilation spectroscopy, synchrotron light techniques, quadrupole or magnetic nuclear resonance, resistivity, etc., are contributing to the nanoscopic knowledge of materials and its relation to materials' macroscopic properties. Six research lines that can be accessed at the IFLP website http://www.iflp.fisica.unlp.edu.ar are being developed by a staff of 20 scientists and about 20 graduated students.

Relevant scientists in hyperfine interactions or in Solid State Physics were invited to the conference. The German research groups of Bonn and Göttingen, who had a close contact with the group at La Plata from the very beginning, and specialists in hyperfine interactions from Brazil, with whom a tight cooperation is always kept, participated in the event. The participation of delegates from South Africa, USA, France, Belgium, Germany, Portugal, Switzerland, Brazil, and Argentina was appreciated. There were 32 local participants, 13 from other sites in Argentina and 17 foreign delegates. The workshop had 62 registered participants; but during several talks and poster sessions, the presence of unregistered students and members of the academic community was observed. We estimated in 80 the total number of participants.

The programme included 16 invited plenary lectures, 12 oral talks and 45 posters contributions.

In the first invited lecture, Prof. Dr. Bibiloni, the dean of the faculty, presented an entertaining and clear description of the LENIH evolution from its very beginning with research in Solid State Physics using hyperfine techniques to the current situation with research in new materials using an increasing variety of experimental techniques. This talk was the most cited during the meeting, since it

0921-4526/$ - see front matter
doi:10.1016/j.physb.2006.07.064

allowed the other speakers to point out in which way their fields and tools were connected with the present LENIH activities.

Prof. Dr. Peter Lieb, from Göttingen University, who elaborated the "concluding remarks", pointed out as a very positive feature the site where the meeting took place. He said that the conference atmosphere, plenty of peace, serenity and culture had contributed significantly to the success of the meeting. The workshop was held in one of the most beautiful buildings of La Plata city: the *Municipal Palace* (the Town Hall). This building, opposite to the Cathedral on the other side of Moreno square, has a German Renaissance style and has a great resemblance with the Köln cathedral. It was designed by the German architect Uberto Stier from the Hannover School and the construction, initiated in 1883, was directed by the architect Ernesto Meyer. The building and its surrounding gardens cover an area of 14,400 m^2. The workshop was carried out in the *Golden Hall*, which is on the first floor and can be reached by means of a magnificent marble staircase with French, Roman and Greek influence. The floors are made of Slovenia Oak, the stained glass windows are German, and the bronze chandeliers contain 78 bulbs and weight 1200 kg.

Taking advantage that the scope of the workshop was wide enough and that the invited speakers were mainly specialists in Solid State Physics who used hyperfine techniques as well as other techniques, a Humboldt Kolleg was organised as a part of the celebration of our 35 years of research activities. We understood that this Humboldt Kolleg was another means to show our constant interest in the scientific international interaction and a way to acknowledge the support and advice of some German Institutions in such sense. The German University is, in general, a propitious environment for the international interaction and an important part of our current relationships with other countries (such as Portugal, Brazil, South Africa and Belgium) were originated and are reinforced by a common interaction with Germany. In touch with this, the *Alexander von Humboldt Foundation* has always supported financially regional and interdisciplinary conferences organised by individual Humboldtians. Its aim is to strengthen regional and interdisciplinary networking of Humboldtians.

The idea of including a Humboldt Kolleg in this commemoration event was in correspondence with the aims to continue with the Humboldt Kolleg activities in Solid State Physics in Latin America, initiated in the SLAFES'05 Conference at La Habana (Cuba) in December 2004, to give publicity to the AvH programme as a way of retribution for its constant support and to emphasise the relationship between our laboratory and the German University.

During the opening talk, Prof. Bibiloni put special emphasis in the LENIH scientific connection with the German Hyperfine Group of the Bonn University from its very beginning. Today, our lab has grown up and diversified expanding its research field, but the connections with our German colleagues do continue. We wanted to describe this long and fruitful interaction to motivate junior scientists in sharing with us the close relationship that we have with Germany. All along the workshop we saw many good examples of the importance of a very profitable interaction between Germany and our country (supported by several German foundations, like *DAAD*, *Volkswagenwerk Stiftung, AvH-Stiftung* and others from Argentine such CONICET and *Fundación Antorchas*).

We think that the Humboldt Kolleg was a good way to inform students and junior physicists about the possibility of developing postdoctoral studies in Germany and to provide them with an incentive to plan a future deep collaboration with German research centres. Also, the students could recognise the way that Humboldtians interact and help each other. During the event we have had a great opportunity to explore the possibilities to foster international scientific cooperation by projecting joint research activities and organising international conferences.

In this route, the workshop contained a special schedule for Humboldtian talks on several topics of Solid State Physics. Also, there was discussed several ways to encourage young physicists in carrying out postdoctoral activities in Germany. A future Humboldt Kolleg to be held in 2 years was planned, to evaluate the progress in our projects and to analyse the success of our actions in improving the number of applications to *AvH-Stiftung* from South America. This future Humboldt Kolleg could be carried out along the "*XIV International Conference on Hyperfine Interactions*" which will take place in August 2007 at Iguassú Falls, at the Argentina–Brazil border, as a joint organisation of both countries.

The meeting also had several social activities programmed for favouring the interaction between the participants. There was a welcome cocktail and everyday the delegates had lunch together in a restaurant in the neighbourhood of the Town Hall. There was also a lunch in the countryside and an excursion to the big river. At the end of the poster presentations a snack was served, always trying to keep people at the meeting site still a little more. The programme also included a concert of the UNLP's Strings Quartet and a local folk music band played during the conference banquet.

Finally, we would like to thank the team of people who collaborated in all aspects of the workshop, the institutions that sponsored the meeting and all the participants. We also thank the committee members for their constant help and advice and the reviewers, who enabled the international refereeing process taking care of the quality of the manuscripts published in this issue of Physica B.

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