LACAME 2012
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Editors

LACAME 2012

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Mössbauer Spectroscopy is an experimental technique based on the nuclear resonant emission and absorption of gamma rays. It was discovered in 1958 by Professor Rudolf Mössbauer who received the Nobel Prize for Physics in 1961. Due to its high sensitivity to the local physical properties of the systems under study, the technique has proven to be very useful in several areas of scientific and technological research.

The “Latin American Conference on the Applications of the Mössbauer Effect-LACAME” is a series of conferences started in 1988 in Rio de Janeiro and has grown steadily since then, changing every 2 years the venue from different nations in which Mössbauer research laboratories exist. The purposes of LACAME are to bring together the Latin American and the International community, to promote activities of basic and applied research, to encourage participation and interaction among students, young and senior researchers, and to strengthen international cooperation around the field. LACAME is the best opportunity to share experiences gained in the process by each of the different countries as well as a good opportunity for the students of Latin American countries to discuss their researches with specialists of Latin America and abroad that work with the same experimental characterization technique. Topics addressed in these conferences include Advances in Experimentation and Data Processing, Amorphous, Nanocrystals and Nanoparticles, Applications in Soils, Mineralogy, Geology and Archaeology, Biological and Medical Applications, Catalysis, Corrosion and Environment, Chemical Applications, Structure and Bonding, Industrial Applications, Magnetism and Magnetic Materials, Multilayers, Thin Films and Artificially Structured Materials, Physical Metallurgy and Materials Science, and others related with the use of Mössbauer spectroscopy.

In 2012, the Institute of Physics at the Universidad de Antioquia (Medellín-Colombia) had the privilege to lead the planning and development of this important academic event in cooperation with Planetario de Medellín “Jesús Emilio Ramírez González” and Parque Explora. In order to ensure the continuity of the Latin American Mössbauer Community, in LACAME-2012 different activities were programmed encouraging the creation of the new generation for Mössbauer spectroscopy in Latin America. Therefore, the “International School on Recent Advances in Mössbauer Spectroscopy”, the “Rudolf Mössbauer Latin American Thesis Award”, and the “Best Presentation Award” were specially organized to promote active participation of young scientists. Additionally, internationally recognized experts of the highest scientific level as well as young prominent researchers from Latin America were invited as Speakers and also as Tutors of the International School.
The Organizing Committee decided to honor the outstanding scientific contributions of Prof. R. Mössbauer, who passed away in 2011, through the “Rudolf Mössbauer Latin American Thesis Award-2012”. Also, several academic sessions were devoted to honor the memory of our friends and colleagues Profs. Fernando González-Jiménez (Venezuela), I. P. Suzdalev (Russia), A. Vértes (Hungary) and H. Rechenberg (Brazil), who regretfully passed away in the last years. Soon after finishing the Conference, we received the sad news, that our colleague and friend Dra. Judith Dessimoni (Argentina) died on November 26 of 2012. We certainly shall miss all of them.

Medellín, known as the ‘city of the eternal spring’, welcomed the Mössbauer community. Nowadays, this city has been chosen as the most innovative city in the world by the Urban Land Institute, Citigroup and The Wall Street Journal. It is becoming the destination of choice for many new and seasoned visitors. It is a vibrant, vital and rapidly developing place that offers an excellent platform for varied activity as tourism, conventions and academic conferences.

We are convinced that the readers will enjoy the scientific contributions published in the present volume, which give an overview of the science currently done around the Applications of the Mössbauer Effect. We would like to express our deep gratitude to all the institutions supporting LACAME 2012, and thank all the presenters, participants, and members of the Organizing, Latin American and Scientific Committees for making this conference possible. The conference counted with the presence of 131 participants, mostly students, including leading researchers in the field coming from 16 countries of Latin America, Europe, Asia, and North America. Over 120 works were presented both domestic and from abroad; all of them with excellent scientific quality and valuable contributions to the field. In this proceeding volume, the papers accepted for publication in the Journal of Hyperfine Interactions were submitted through the online system via editorial management newly provided by Springer.

C.A. Barrero Meneses and J. Mazo-Zuluaga (Chairs)
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