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Preface

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The Mössbauer effect is the resonant emission and absorption of gamma rays. Through the hyperfine interactions of the probe nucleus with its solid state environment, it gives results highly sensitive to the local chemical and physical properties of the investigated systems. This information, at times irreplaceable, is of great importance to condensed matter and materials science. Because ^{57}Fe is the best Mössbauer isotope and forms part of $\approx 2\%$ of natural iron, which is the fourth most abundant element in the Earth's crust, the effect has been applied to a wide range of scientific subjects, like solid state physics, catalysis, magnetism, chemistry, mineralogy, geology, corrosion and environmental studies, new biological materials and medical drugs. Its relatively simple and not too expensive experimental setup has been of great importance to the scientific development in Latin America, whose Mössbauer community exhibits a growing number of laboratories across the region and shows the highest relative increase rate in publications and development in the world.

Although soon after the discovery of the Mössbauer effect several laboratories across Latin America were set up, Mössbauer spectroscopy (MS) did not catch up scientific momentum until the series of Latin American Conferences on the Applications of the Mössbauer Effect, LACAMEs, which have been held without interruption each two years since 1988. The venues have been Rio de Janeiro, Havana, Buenos Aires, Santiago de Chile, Cusco, Cartagena de Indias, Caracas, Panama City, and Mexico D.F. A new round has started with the LACAME 2006 in Rio de Janeiro. Consequently, MS in Latin America has consolidated into a well-known community that in particular, in Argentina alone, has produced in the last ten years more than 45 Ph.D. theses based mainly on results obtained through MS.

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