# Magnetic Resonance and Related Phenomena

Edited by E. Kundla, E. Lippmaa and T. Saluvere

# Magnetic Resonance and Related Phenomena

Proceedings of the XXth Congress AMPERE Tallinn, August 21-26, 1978

Edited by E.Kundla, E.Lippmaa and T.Saluvere



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### **PREFACE**

The Proceedings contain the 21 invited papers and 501 contributed papers presented at the XXth Congress AMPERE on Magnetic Resonance and Related Phenomena held in Tallinn, USSR, on August 21-26, 1978. The scientific program of the Congress included papers on original research and covered the full range of magnetic resonance and relaxation, with applications in physics, chemical physics and biophysics.

The XXth Congress AMPERE was organized by the Department of Physics of the Institute of Cybernetics of the Estonian Academy of Sciences together with the Scientific Council on Radiospectroscopy of Condensed Matter of the USSR Academy of Sciences, in cooperation with the AMPERE Group.

The support given by the sponsors, the Academy of Sciences of the Estonian SSR, the Academy of Sciences of the USSR, the International Union of Pure and Applied Physics, and the European Physical Society is greatly appreciated. The help received from the Secretary of the AMPERE Group, the Members of the International Advisory Committee, the International Organizing Committee and from the Council of Ministers of the Estonian SSR and the City of Tallinn is gratefully acknowledged. Special thanks are due to the Rectorate of the Tallinn Technical University, where all the Congress sessions and the Exhibition were held.

At the Opening Ceremony the President of the Estonian Academy of Sciences, K.Rebane, welcomed the participants. The Congress was then declared open by the Chairman of the International Organizing Committee, A.S.Borovik-Romanov. After a short welcome by the Chairman of the Council of Ministers of the Estonian SSR, V.Klauson, the President of the AMPERE Group, E.R.Andrew, gave an address. During the Congress a reception was held in the City Hall where guests were welcomed by the Mayor of the City of Tallinn, I.Kallion. The plenary lectures were held in the morning and some contributed papers were presented in four parallel sessions in the early afternoon. Thereafter all papers scheduled for the day, including the plenary lectures and others presented orally, were presented at the poster session arranged in the Sports Hall of the University, which also housed the Exhibition of sci-

entific instruments and a Bar. The poster session proved to be an important factor in bridging the language gaps. The scientific contents of the Congress was dominated by NMR, especially high resolution NMR in solids, and resonances in magnetic systems (FMR, AFMR), with somewhat less emphasis on EPR in paramagnetics. Applications in chemistry and molecular biology were also well represented.

The research laboratories of the Department of Physics of the Institute of Cybernetics were open to visitors throughout the Congress. The recently installed Bruker-Physik CXP-200 solid state high resolution NMR spectrometer was certainly the center of attention there.

In addition to the reception in the City Hall, the Opening Mixer and the Congress Dinner, social activities included a reception in the Glehn Castle where the participants were welcomed by the Rector of the Technical University, B.Tamm. A day-time social program primarily intended for non-scientific participants included tours of the Old City and other local sights and industries.

All work relating to registration, accommodation, finance and the scientific program was undertaken by the Executive Secretary T.Saluvere, with expert help from A.Olivson (finances) and H.Vallaste (accommodation).

Arrangeme ts for the lecture theatres and especially for the poster sessions were the responsibility of L.Pirn while the Exhibition was organized under the supervision of P.Kask. T.Karu arranged the social program. All work with the printing of the Program, Book of Abstracts and Congress Proceedings was carried out by E.Kundla. Transportation problems were handled by J.Puskar and those of culinary nature by M.Vinnal.

On behalf of the Organizing Committee I wish to express to everyone who helped in the successful organization of the XXth Congress AMPERE in Tallinn our most cordial thanks for their hard work, enthusiasm and cooperation. Finally, I wish to thank the chairmen, plenary lecturers and all the participants who made the Congress a stimulating scientific event.

E. Lippmaa

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