Progress in Fourier Transform Spectroscopy

Edited by
J. Mink, G. Keresztury,
R. Kellner

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Proceedings of the
10th International Conference,
August 27 – September 1, 1995,
Budapest, Hungary

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Preface

The 10th International Conference on Fourier Transform Spectroscopy (ICOFTS) was held in the Budapest Convention Centre, Budapest, Hungary, between August 27 and September 1, 1995.

To highlight the 10th event of the highly successful ICOFTS-series with a special opening session, the conference started with a lecture by Nobel Laureate Richard R. Ernst on "The Complementarity of Frequency, Time and Space Domains in Spectroscopy" which provided a glimpse into our prominent "neighbour": FT-NMR.

Also during the opening session, the Fritz-Pregl Medal was awarded to Professor Peter R. Griffiths, while the Friedrich-Emich Medal was given to Professor János Mink by Prof. M. Grasserbauer, president of the Austrian Society for Analytical Chemistry.

The regular sessions were opened by Jeanette G. Grasselli-Brown with a short overview of the history of ICOFTS from its start in 1970. The 19 invited plenary lectures given in the order of their appearance in this volume have provided a framework to the conference that covered advances in the most important areas of Fourier-transform spectroscopy. More than 350 further communications have presented the results of recent research done in 30 countries from five continents, in the poster sessions. In addition, round table discussions have been organized in three parallel sessions around prominent topics of current interest, namely on Catalysis, Environmental and Life Sciences, and Quantitative Accuracy of FTIR Spectrometry.

There were more than 400 registered participants at the meeting, e.g. from Germany (75), Hungary (50), USA (46), Austria (28), UK (26), the Netherlands (22), Russia (16), France (15), Japan (13), Switzerland (11), Italy (10), etc.

The scientific content of the Conference clearly demonstrated that Fourier-transform spectroscopy is already a well established method used in a great variety of scientific fields. Progress has been reported in new and quickly developing fields like FT-Raman, 2D-FTS, step-scan, photoacoustic, time-resolved and emission spectroscopy, FT-IR and FT-Raman microscopy, vibrational circular dichroism and a broad variety of applications in analytical chemistry, biology, catalysis, semiconductors, polymers, coupled techniques, chemometrics, high-pressure, low temperature, matrix-isolation, high-resolution, environmental and atmospheric studies, etc. The very broad and practically unlimited field of applications gathered scientists from very different areas, indicating the high degree of interdisciplinarity of Fourier transform spectroscopy.

Despite the many challenges that Budapest offers to visitors, most participants preferred the spacious, air-conditioned quarters of the Convention Centre using the opportunity for lively discussions. The attendance was very high at all scientific sessions from the Monday morning opening till the end of the last lecture on Friday afternoon.

The conference was sponsored and supported by the following organizations:

- Federation of European Chemical Societies (under Event no. 203)
- Hungarian Acadamy of Sciences (HAS)
- Working Committee on Laser Physics and Spectroscopy of the HAS
- Ministry of Culture and Education of Hungary
- Austrian Society for Analytical Chemistry
- International Union of Pure and Applied Chemistry
- Hungarian National Committee for Technological Development
- Institute of Isotopes of the HAS
- University of Veszprém
- Central Research Institute for Chemistry of the HAS.

The organizers thank Bio-Rad, Bruker and Perkin-Elmer who generously sponsored the social events.

The conference was highlighted by technical exhibitions from instrument manufacturers, software companies and science publishers:

AABSPEC International Ltd. ABL&E – JASCO Hungary Ltd., Academic Press Ltd., ATI Unicam Analytical Technology, Inc., Bio-Rad Laboratories Ltd., Sadtler Division, Bomem/Hartman & Brown, Bühler AG/ANSATEC, CIC Photonics, Inc., Galactic Industries Corporation, Harrick Scientific Corporation, High Pressure Diamond Optics Inc., Inovex GmbH/MIDAC Corporation, Jasco Europe srl., Marcel Dekker, Inc., Marco Polo Bt., MTEC Photoacoustics, Inc., M. Theiss, Nicolet Instrument Corporation, Renishaw plc Transducer Systems Division, Sentech Gesellschaft für Sensortechnik GmbH, Shimadzu Europa GmbH, Soft Science, Spectra-Tech Ltd and Springer-Verlag Wien.

The editors of this volume would like to thank Silvia Schilgerius, Elisabeth Hunger and the technical staff of Springer-Verlag Wien, for their cooperation and technical assistance in the preparation of this volume. Well deserved thanks are due to the participants of the conference and all authors of these articles for patiently waiting for the appearance of the Proceedings.

In accordance with our tradition to maintain a high scientific standard of the Proceedings, all papers appearing in this volume have been refereed. The editors are indebted to the experts who served on the referees' panel during and after the conference for their extremely valuable help.

The 11th International Conference on Fourier Transform Spectroscopy is being organized by James A. de Haseth and Richard A. Dluhy, and will be held in Athens, Georgia, USA, August 10–15, 1997.

J. Mink, G. Keresztury, R. Kellner

Editorial note:
All papers in this volume have undergone the refereeing procedure required by *Mikrochimica Acta*. The accepted papers – corresponding to the 19 plenary lectures and 203 of the presented 350 posters – are arranged in the following way:

1. Plenary Lectures, L1 to L19.
2. Poster papers grouped in 17 topical sections.

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Lectures

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