

*Proceedings of
XVIIIth International Conference
on
Raman Spectroscopy*



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Budapest, Hungary*

*Edited by
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**EIGHTEENTH
INTERNATIONAL CONFERENCE ON
RAMAN SPECTROSCOPY
(ICORS 2002)**

Proceedings of the
Eighteenth International Conference on
Raman Spectroscopy

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Budapest, Hungary

Edited by

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Preface

The Hungarian scientific community is proud to be hosting the *XVIIIth International Conference on Raman Spectroscopy* (ICORS-2002) in Budapest, Hungary, in the main building of the University of Economic and Public Administration. For us it is a great honor that after the 10th International Conference on Fourier Transform Spectroscopy (held in 1995) and the 23rd European Congress on Molecular Spectroscopy (1996) this is the third major international conference in the field of vibrational spectroscopy taking place in Hungary over the last 10 years. On behalf of the International Steering Committee, the Program Committee, the Organizing Committee, and the Honorary Presidium, we have pleasure in welcoming attending Raman spectroscopists at ICORS-2002, from all over the world.

This event is the eighteenth in a series of biennial conferences on recent advances in and applications of Raman spectroscopy and other light scattering processes. The preceding conferences were held in Beijing (2000), Cape Town (1998), Pittsburgh (1996), Hong Kong (1994), Würzburg (1992), Columbia, South Carolina (1990), London (1988), Eugene, Oregon (1986), Tokyo (1984), Bordeaux (1982), Ottawa (1980), Bangalore (1978), Freiburg (1976), Brunswick, Maine (1974), Reims (1972), Oxford (1970) and Ottawa (1969).

Since 1976 it has been customary to publish the Proceedings of the Raman Conference in a special hardback volume under the auspices of John Wiley and Sons, Ltd. The Editors thank the contributors for having submitted the abstracts in time, which made it possible to distribute the volume among the participants upon registration at the Conference.

This volume attests that we have a very colourful scientific program at hand, rich in content, reflecting the most important recent trends of development and a great diversity of applications, offering everybody something of interest. It comprises the abstracts of 435 presentations in all, including 72 invited lectures (2 keynote lectures, 18 plenary lectures and 52 invited section lectures), 48 submitted oral presentations and 315 posters.

The plenary lectures illuminate the most interesting actual research areas of Raman spectroscopy. The accounts of new scientific results being reported during the conference in four parallel oral sessions or displayed on posters presented in three scheduled poster sessions are grouped under the following topics:

(i) Theoretical Advances; (ii) Raman Spectroscopy under Extreme Conditions; (iii) Instrumentation; (iv) Ultra-fast Phenomena and Time-resolved Raman Spectroscopy; (v) SERS; (vi) Non-linear Effects; (vii) Resonance Raman Spectroscopy; (viii) X-ray and UV Raman Spectroscopy; (ix) Raman Optical Activity; (x) Advanced Materials: Fullerene and Carbon Nanotubes; (xi) Semiconductors; (xii) Superconductors; (xiii) The Solid State; (xiv) Inorganic and Organo-metallic; (xv) Macromolecules and Polymers; (xvi) Thin Films and Membranes; (xvii) Proteins and Peptides and Amino Acids and Enzymes; (xviii) Lipids and Bio-membranes and Viruses and Cells and Tissues; (xix) Artwork and

Archaeology; (xx) Surfaces; (xxi) Industrial Processes and Environmental Applications; (xxii) Applications and Analytical Chemistry; (xxiii) Medical and Biomedical and Pharmaceutical Applications; (xxiv) Applications in Mineralogy, Geology

The first part of this proceedings volume contains the four-page abbreviated texts of Keynote and Plenary Lectures. The rest of the book is devoted to the two-page extended abstracts of invited section lectures and submitted oral and poster presentations. These abstracts are reproduced here on the basis of the material supplied by the corresponding authors (marked by asterisks) who are primarily responsible for any errors and misprints therein.

The organizers are grateful to all those who have provided financial support, sponsorship and services; to organizations and individuals whose generous contribution has helped to make this conference successful. In particular, we thank the Hungarian Academy of Sciences, and the Ministry of Education for their financial support. The Editors of this volume are indebted to Éva Thiry for her professional handling of all submitted material, and thank those committee members who assisted in reviewing the abstracts. We also thank Zoltán Bacsik and Zsuzsanna Kovács for managing a substantial part of scientific correspondence, Lili Mink for organizing the instrument exhibition, and our colleagues from the Chemical Research Center of the Hungarian Academy of Sciences, and coworkers and students at University of Veszprém for their valuable work in arranging the technical program and a full range of social activities. Finally, we thank the members of the Steering and Program Committees for suggesting names of invited speakers and giving much useful advice. Last but not least, thanks are due to Professor Wolfgang Kiefer for his continuous support and invaluable guidance.

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