

Merlin, J.C., Turrell, S., Huvenne, J.P. (ed.): **Spectroscopy of Biological Molecules**. (6th European Conference on the Spectroscopy of Biological Molecules, 3 - 8 September 1995, Villeneuve d'Ascq, France), - Kluwer Academic Publishers, Dordrecht - Boston - London 1995. 626 pp. US \$ 274.00. ISBN 0-7923-3628-3.

The book contains texts of lectures and posters presented at the conference. As is usual in proceedings, the texts of lectures were restricted to 4 pages and those of posters to two pages in camera-ready form. The content of individual contributions is hence necessarily very brief. There are 285 contributions grouped into 9 sections. The sections are devoted mostly to individual molecular types or materials (Amides, Peptides, Proteins and Biopolymers (section II, 42 papers), Enzymes (III, 20), Chromophoric Proteins and Biological Pigments (IV, 50), Nucleotides, RNA and DNA (V, 40), Lipids and Membranes (VI, 26), Carbohydrates (VII, 17). There is an introductory section named General Survey (I, 13), a section dealing with Microscopic Analysis and Biomedical Applications (VIII, 66) and a concluding section Agrofood Problems (IX, 11).

Although the conference was traditionally oriented on the application of vibrational spectroscopies in studies of structure and dynamics of biological molecules, many other types of spectroscopies are presented. To name some of them, nuclear magnetic resonance (NMR), neutron inelastic scattering (NIS), UV- and visible absorption, electronic paramagnetic resonance (EPR), circular dichroism (CD), different types of luminescence (fluorescence, synchronous fluorescence, fluorescence resonance energy transfer (FRET), fluorescence enhancement, fluorescence quenching, delayed fluorescence, phosphorescence, *etc.*), differential scanning calorimetry (DSC) or X-ray absorption (EXAFS) should be mentioned.

The vibrational spectroscopy was represented predominantly by standard Fourier-Transform Infrared (FTIR), Resonance Raman (RR) spectroscopies, but also by more advanced modifications of these spectroscopies, *e.g.*, FT-Raman, Surface Enhanced Raman or Resonance Raman (SERS, SERRS), Coherent Antistokes Raman (CARS) spectroscopies, Attenuated Total Reflection Infrared Spectroscopy (ATR-IR), time resolved IR and RR, Raman Difference Spectroscopy, *etc.* Several experiments used the polarized radiation (*e.g.* linear dichroism (IR-LD)) and the modern Vibrational Circular Dichroism (VCD). A new spectrophotometer presented (by P. Fournier *et al.*) was that for measuring Polarization Modulation Infrared Reflection-Absorption Spectra (PM-IRRAS). Thermally induced changes were studied in some papers.

Several contributions were devoted to theoretical questions of vibrational spectroscopies, quantum chemical calculations of energy states, force field methods and normal coordinate analysis of vibrating molecules, thermodynamic calculations, *etc.*

Besides the works dealing with molecules, their interactions and aggregates, some papers concern also more complex biological phenomena or their models. Photomorphogenesis (phytochrome), DNA conformational changes and intercalation, membrane transport, photosynthesis (9 papers), cancer therapy and diagnosis or phase transitions may be mentioned among others.

The contributions are from authors from more than 35 countries all over the world. The most abundant number of papers (over 80) is from the host country - France. More than 20 papers came from Germany, USA, Russia and Belarus, more than 15 papers from Italy, Greece, Ukraine and Poland. The book is provided with the table of contents and the authors index.

The book can be of interest for those engaged in modern molecular spectroscopy and studies of biological systems at molecular level.

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