



# Journal of Chromatography A



## NEWS SECTION

**PRESENTATION OF HTC AWARD TO PROFESSOR DR. AVIV AMIRAV**, at the *7th International Symposium on Hyphenated Techniques in Chromatography and Hyphenated Chromatographic Analyzers (HTC-7)*, Bruges, 6–8 February 2002.

During the HTC symposia a prestigious HTC Award, sponsored by Elsevier Science, is traditionally presented to the most innovative paper or poster contribution of the symposium. The international ad-hoc jury was chaired by Professor Dr. Pat Sandra, chairman of the Scientific Committee. The recipient of the HTC-7 Award was selected by the jury on the basis of the novelty of the scientific content of the abstract and the presentation in the general framework of the themes of the symposium. The jury noted that several excellent presentations met these criteria very well and that there was a profusion of innovative developments in the general area of the symposium. However, with unanimity the jury selected to attribute the Award to Dr. Aviv Amirav, Professor of Chemistry at the Tel Aviv University, Israel.

The nomination was based on two contributions presented at the meeting, namely “A New Approach for Election Ionization LC-MS” and “Supersonic GC-MS”. In LC-MS, the LC mobile phase is vaporized at atmospheric pressure, as in atmospheric pressure chemical ionization, and expended from a supersonic nozzle into the vacuum system as neutral

molecules. The vibrationally cold molecules in the supersonic molecular beam (SMB) are ionized at 70 eV electrons in a fly-through EI ion source and mass analyzed by a quadrupole mass analyzer. This new approach is characterized by the following features: enhanced molecular ion is provided together with the library searchable fragments, automatic AMDIS (NIST software) sample identification is enabled under complex matrix and/or fast LC co-elution conditions, non-polar compounds are amenable for LC-MS analysis in addition to the standard range of APCI compounds and no external gas is required as the vaporized solvent serves as the supersonic molecular beam carrier gas. In the supersonic GC-MS approach, a SMB inlet and ion sources are coupled to a quadrupole MS. Major attributes of the Supersonic GC-MS are enhanced molecular ion and mass spectral information, hyperthermal surface ionization (HSI) enables ultra sensitive and selective detection of drugs and aromatic compounds and a broader range of sample compounds becomes amenable to fast GC-MS analysis.

Professor Amirav was born in 1950 in Tel Aviv and in 1979 he received his Ph.D. from Tel Aviv



Fig. 1. Professor Aviv Amirav at the HTC-7 Conference.



Fig. 2. Professor Pat Sandra, presenting the HTC-Award to Professor Aviv Amirav.

University with *Summa cum Laude*. The title of his dissertation was “Isotope Separation and R.F. Spectroscopy from Supersonic Molecular Beams”. In 1980 Professor Amirav joined the School of Chemistry and from 1989 he is a full professor of chemistry at Tel Aviv University.

Professor Amirav is the author and co-author of 145 peer review papers, 22 additional manuscripts and the inventor and owner of 12 patents in 45 countries in the field of analytical instruments.

Professor Amirav started his scientific career in the field of chemical physics, performing research in spectroscopy, intra molecular dynamics and gas surface dynamics. From 1989 to 1991 he began a gradual transition to the field of Analytical Instruments Development and currently he focuses his research in the development of novel analytical

instruments, including GC, GC-MS and LC-MS.

In 1993 Professor Amirav received the Heinrich Emanuel Merck Prize for his development of the Pulsed Flame Photometric Detector (PFPD) at Euroanalysis VIII in Edinburgh, Scotland. The PFPD developed by Professor Amirav is now in wide spread use and is commercially available from Varian and OI Analytical. Professor Amirav also developed the ChromatoProbe sample introduction device, which is available from Varian and a gas cylinder free flame ionization detection (FID) and GC-FID. Currently his research is focussed on GC-MS and LC-MS with Supersonic Molecular Beams.

Dr. Robert Smits  
(Chairman of the Organizing Committee)