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Foreword

Approximately 200 scientists from all five continents gathered in Nice from 11 to 14 September 2000, to attend the 13th International Ion Chromatography Symposium (IICS 2000). The symposium took place in the Plaza Concorde Hotel and was perfectly managed by Janet Strimaitis. It was a great pleasure to work with her; she is very professional, but also very friendly.

In spite of sunny skies and the delightful Mediterranean Sea, delegates filled the halls to hear 60 oral presentations and to attend the poster sessions, where 90 posters were on display. Together with the increasing acceptance of capillary electrophoresis (CE), ion chromatography (IC) continues to generate much interest, in research directed toward improved technologies and a better understanding of retention mechanisms as well as in new applications.

Presentations were divided into eight sessions: IC separation selectivity, optimizing IC analysis, emerging technologies in ion analysis, CE methods for ion analysis, advances in detection, environmental applications, analysis of ions in drinking water, anion analysis in industrial samples, and trace analysis in the chemical and semiconductor industries.

As usual, the symposium started with two keynote lectures: P.G. Righetti (Verona, Italy) reported on quantifying protein adsorption on bare silica tubing and assessing the efficacy of amino quenchers, added to the background electrolytes. A. Seubert (Marburg, Germany) demonstrated that the prospects of IC–ICP (inductively coupled plasma) are excellent, due to the mutual benefits of the two techniques. Atomic spectrometry serves as a sensitive, versatile, and rugged detection method for almost any ion.

In the Selectivity session, P.R. Haddad and coworkers reported new results in electrostatic ion chromatography, the mechanism of which is still a matter of debate. M. Rey presented recent advances in stationary phases, designed for operation with sodium hydroxide as eluent. This obviously is the ideal eluent, since it provides the highest detection sensitivity and lowest noise. In this session 27 posters were on display.

Optimization in IC is much more difficult than in classical HPLC with neutral solutes. Computer-assisted prediction of retention times and response surfaces was provided by P.R. Haddad and coworkers in what they called a virtual column. Optimization is not restricted to the choice of columns, but also involves sample pretreatment and detection. It is not so straightforward in biotechnological analysis.

A considerable amount of work has been done on disinfecting agents for public water supplies. Bromate analysis presents a major challenge. Three possible detection methods are available: conductivity detection, post-column derivatization, and combination with ICP or ICP-APCI-MS (atmospheric-pressure chemical-ionization mass spectrometry).

Fields of application expand with improved detection capabilities. The power of IC greatly depends on the availability of appropriate detectors. Suppressed-conductivity detection is the predominant mode of detection. Over the years, IC suppressors have evolved and continue to evolve.

There were numerous posters on environmental, food, and industrial applications. CE is an efficient method for separating charged species. Part of the symposium was devoted to the capabilities of both IC and CE. One drawback of CE is the lack of methods for improving the selectivity of separations.

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C.A. Lucy introduced a combination of CE and electrostatic IC.

This volume contains many contributions on the analysis of drinking water, environmental analysis, retention selectivity, and capillary electrophoresis. Although it does not cover the entire symposium, it gives a good insight into the advances in the field. Most papers were presented in the form of posters, and posters are really at the core of a symposium. They provide a unique opportunity for fruitful discussions with many scientists in a short period of time.

Young scientists were encouraged to present their results, and the Scientific Committee selected four students for Student Travel Awards. The recipients were: Helmy Cook from P.R. Haddad's team (University of Tasmania), Jeremy Melanson, working with C.A. Lucy (University of Alberta), K. Iso from the Tokyo Institute of Technology, and R. Schöftner from W. Buchberger's laboratory (Johannes Kepler University).

Delegates enjoyed a short (in distance, but not in time) trip to the small village of Eze, where they could visit the city and watch the sunset, overlooking the bay from the botanical gardens. Some of the delegates tried their hand at a traditional bowling game of Southern France. We hope most of them brought back pleasant memories of IICS 2000.

On behalf of the symposium attendees, I would like to thank the people from Dionex, particularly, M. Merrion, P. Donnelly, and C. Tinet for their help with the preparations and organization. E. Heftmann had the tough job of collecting the manuscripts and editing this volume; I wish to thank him on behalf of the Committee. I also wish Lynn Vanatta a very successful 14th Meeting in Chicago.

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