

The 9th Balaton Symposium on High-Performance Separations Methods

4-6th September 2013, Siófok, Hungary

I am studying analytical chemistry, in the final year of my PhD. I came across this conference which seemed particularly relevant to my work as my main focuses are Capillary Electrophoresis (CE) and High Performance Liquid Chromatography (HPLC). Thanks to the generous student grant provided by the Hungarian Society for Separation Sciences and the travel grant provided by the Royal Society of Chemistry I was able to attend this meeting and present a talk highlighting the successes of my work.

I had a chance to meet Prof. Attila Felinger, the chair of the symposium on the first day of conference. The opening session included the recognition of Professors László Szepesy and Ernő Tyihák on their birthdays. The Halász Medal was awarded to Prof. Nobuo Tanaka (who couldn't attend) and the Csaba Horváth Memorial awarded to Prof. Pat Sandra who then presented an enlightening talk on new advances in Capillary GC. Professors Georges Guiochon and Grand-Guillaume then presented talks on the use of supercritical fluids in chromatography, and the use of UHPSFC.

After lunch a particularly interesting talk by Prof. Lee showed a homemade SPE cartridge prepared in a syringe. The social program that evening was very entertaining. There was a traditional Hungarian dancing and music performance, followed by a Gala dinner during which I had the opportunity to speak with many of the other conference delegates.

On Thursday the parallel session I attended included a talk by Dr. Fabrice Gritti on gradient chromatography. My session was chaired by Prof. Peter Schoenmakers and Dr. Tamás Janáky. Prof. Danilo Corradini presented his work on CE and HPLC analysis of plant metabolites. As my work also uses CE, I found this talk very interesting. I then presented my work on the CE analysis of rosin samples. In the time for questions after, I had a very interesting discussion with Prof. Gyula Vigh who has worked with cyclodextrins. He also suggested a couple of papers that I might find relevant to my work. The posters that were being presented covered a wide range of separation techniques and there were several concerning CE which I found noteworthy.

The morning session on Friday morning was chaired by Prof. Gert Desmet and Dr. László Drahos. Prof. Koji Otsuka presented his work on the use of nanoparticles including C60 fullerenes to coat capillaries. He also talked about capillaries with an affinity ligand encapsulated by hydrogels, work I had not previously been aware of. Prof. András Guttman then presented his work on the analysis of glucose units by CE. The final plenary session was chaired by Prof. Felinger and Dr. Frantisek Foret. Dr. Philip Marriott gave an interesting talk on analysis of fatty acid methyl esters. Prof. Vigh then talked on 'Fluorophores for the common man and women', an informative talk on fluorophores suitable for CE and HPLC. The final two talks were presented by Prof. Wolfgang Lindner and Prof. Schoenmakers. 12 poster awards were then presented and the 9th Symposium was closed.

Overall the Balaton Symposium was a very enjoyable and educational experience. During the talks I gained knowledge I can now put into practise in my work and made invaluable contacts. I would like to most sincerely thank the Hungarian Society for Separation Sciences and the Royal Society of Chemistry for providing me with the opportunity to attend.

Louise Mckean

The 9th Balaton Symposium on High-Performance Separations Methods

4-6th September 2013, Siófok, Hungary - Conference report

I am a PhD student at Maria Curie-Skłodowska University in Lublin (Poland) on the Faculty of Chemistry at the Department of Chromatographic Methods. This was the first time when I took part in Balaton Symposium. A student grant which I obtained from the *Hungarian Society for Separation Sciences* allowed me to attend at the Conference which took place in the hotel Azúr.

The Symposium was dedicated to two prominent Hungarian separation scientists: Professor László Szepeszy and Professor Ernő Tyihák on their birthdays. Opening ceremony included thanks to these Professors for their contribution to the development of separation sciences as well as the Halász Medal Award and the Csaba Horváth Memorial Award were presented.

During all three days, scientist from different countries from the entire world presented very interesting lectures concerning mainly GC, HPLC and CE as well as OPLC and extraction techniques. For me very enlightening was Parallel Session II which included lectures topics of my interest: advantages and possibilities of OPLC, BioArena system and Bioautography technique which is important part of my PhD topic. Many lectures presented during plenary sessions were also very interesting e.g. lecture of Prof. Beaver entitled “Focus on biopharmaceuticals” as well as Prof. Sandra’s lecture about capillary gas chromatography. Also last plenary session included particularly interesting talks. Prof. Philip Marriott gave interesting talk on analysis of fatty acids and Prof. Schoenmakers had a great talk about two-dimensional chromatography, that it was the last lecture.

During two poster sessions everybody could observe well-prepared poster presentations. The significant majority of them were focused on natural compounds used in medicine and phytochemical analysis so I could collect several useful informations and references.

The 9th Balaton Symposium on High-Performance Separation Methods gave me great possibility for scientific discussion about actual analytical problem on various research fields. The participation in this conference was a huge chance for me to expand knowledge about different separation methods and to make some connection with other scientists who work in the similar research topics as I do.

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Conference report

This was the second time I could participate in a conference of the series of Balaton Symposia. This time, a grant of the *Hungarian Society for Separation Sciences* allowed me to attend at the conference, which I greatly acknowledge once again. The event took place at the coast of the Lake Balaton, in the conference hotel Azúr. The conference hotel, and Siófok also offered a wide variety of entertainment possibilities, I rather focused on the scientific program though. The conference was an excellent place to see current trends in analytical chemistry and bioanalysis, and meet people working in this field. The conference was very well organized, it was characterized by high-quality scientific content.

Experts from many parts of the world presented lectures, which covered most major analytical techniques. The main focus points were multi-dimensional chromatography (both GC and LC), OPLC, chiral separations, electric field driven separations, and developments linked to the above, like monolithic separation media and sample preparation. Theoretical and practical approaches were also presented. As having used CE, LC/MS, GC/MS and TLC during my work, about $\frac{3}{4}$ of the lectures were presented about topics of my special interest, most of which I also visited. I found the following presentations most interesting: Philip Marriott had a great talk about fatty acid methyl ester mixtures' characterization with the help of 2D GC techniques, showing us impressive visualization of these high-dimensional data. Pat Sandra presented novel developments in the field of GC from the last 10 years, many of which are easy to implement. Peter Schoenmakers talked about theoretical possibilities, limitations and problems to be solved in comprehensive two-dimensional chromatography. Koji Otsuka presented a derivatization technique applied to capillaries in microscale electrophoretic analyses and a highly selective affinity electrophoretic approach. Gyula Vigh held an excellent lecture on fluorophore synthesis. Working with biological matrices, the analytic techniques of proteomics were also of interest for me. I had interesting discussions with several lecturers.

In my opinion, majority of the posters were well-structured, and the clarity of presentation was also high. Besides laboratories from universities from Hungary and abroad, manufacturer's labs also presented interesting posters (mainly from the pharmaceutical industry). The poster section was rather dominated by scientific results of Hungarian workgroups, which allowed insight to the current research interests of groups with similar methodologies. Some of the posters dealt with research of medicinal plant material, phytochemical analysis or microorganism-related topics, allowing discussions with their authors. Of the posters, I found the following most interesting: the ones dealing with phytochemical analyses, one about comprehensive chromatographic characterization of petroleum matrices, and the ones on *in silico* HPLC method development.

In the exhibition, it also was interesting to see the *in silico* HPLC method development software, DryLab in action, presented to me by Imre Molnár, one of the core developers.

During the conference, I could collect several useful references, and got ideas that will hopefully promote my work in the field of phytochemical analysis.

I'm looking forward to the next Balaton Symposium on Separation Sciences.

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