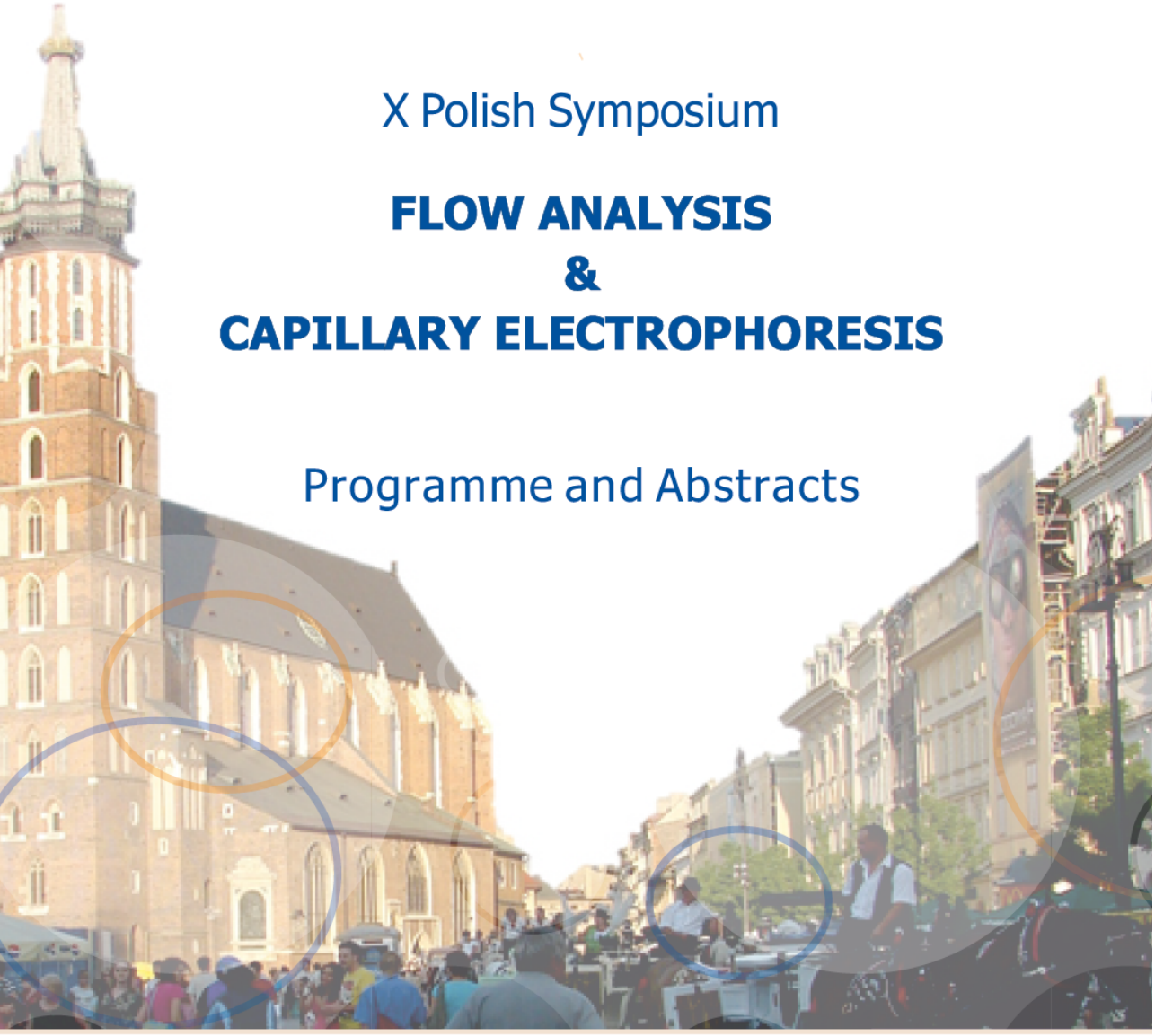
FA&CE 2016

X Polish Symposium

FLOW ANALYSIS
&
CAPILLARY ELECTROPHORESIS

Programme and Abstracts



Krakowskie Konsorcjum Naukowe im. Mariana Smoluchowskiego materia energia przyszłość

KNOW

Kraków, September 14-16, 2016

FA&CE 2016

Kraków, September 14-16, 2016

PROGRAMME

TIMETABLE

Wednesday, 14th September 2016 FLOW ANALYSIS		
8.00 – 8.45		Registration
8.45 – 9.00		Opening ceremony
Session I		**Chair: M. Trojanowicz**
9.00 – 9.35	KL-1	Flow methods for trace metal analysis in oceanography *P. Solich, P. Chocholouš, M. M. Grand, B. Horstkotte, D. Šatinský, Ch. Measures, J. Růžička*
9.35 – 10.00	IL-1	Evaluation of photometric LED-based flow methods for orthophosphates monitoring *S. Koronkiewicz, S. Kalinowski*
10.00 – 10.15	O-1	Open-source microcontroller platforms for flow analysis *M. Pokrzywnicka*
10.15 – 10.30	O-2	Flow analysis procedure and system for investigation of transferrin speciation *K. Strzelak*
10.30 – 10.50		Coffee break
Youth session I		**Chair: A. Bulatov**
10.50 – 11.00	O-3	Flow analysis systems for urease activity determination *J. Bzura, R. Koncki*
11.00 – 11.10	O-4	Optoelectronic detectors compatible with "Labs-on-Paper" *M. Fiedoruk-Pogrebniak, R. Koncki*
11.10 – 11.20	O-5	Optoelectronic biosensors for flow analysis *M. Granica, Ł. Tymecki, M. Pokrzywnicka*
11.20 – 11.30	O-6	Enzymatic bioreactors for flow analysis *M. Michalec, Ł. Tymecki, M. Pokrzywnicka*
11.30 – 11.40	O-7	Flow analysis systems for determination of total serum iron *N. Rybkowska, R. Koncki, K. Strzelak*
11.40 – 11.50	O-8	A new system for flow analysis of pollutants in air *M. Trifescu, S. Kalinowski*

11.50 – 12.00	O-9	Novel approach to simultaneous determination of calcium and magnesium on the basis of signal registered using SIA system *J. Paluch, J. Kochana, M. Wieczorek, J. Kozak*
12.00 – 12.10	O-10	Sequential-injection manifold for combination of generalized calibration strategy and H-point standard addition method *P. Świt, J. Verdú-Andrés, P. Campíns-Falcó, M. Wieczorek, P. Kościelniak*
12.10 – 12.30		Discussion
12.30 – 13.30		Lunch
Session II		**Chair: P. Solich**
13.30 – 13.55	IL-2	Exploitation of sequential analysis systems with external chamber *A. Vishnikin, Y. Miekh*
13.55 – 14.20	IL(S)-1	Practical experiences in laboratory automation with Skalar Segmented Flow Analyzers *K. Danielewska*
14.20 – 14.45	IL-3	Application of flow analysis to perform H-point standard addition method for detection and elimination of interference effects *M. Wieczorek, S. Rengevicova, P. Świt, P. Kościelniak*
14.45 – 15.00	O-11	Zastosowanie analizy przepływowej do oceny stężenia wybranych składników biogennych w wodach powierzchniowych z terenów wiejskich *I. Burzyńska, E. Sitko, D. Gryszkiewicz-Zalega*
15.00 – 15.20		Coffee break
15.20 – 17.20		Workshop – Flow Analysis
19.30		Get-together meeting *C.C. Stefan Batory ship on the Vistula River, Bulwar Czerwieński, Kraków*

Thursday, 15th September 2016
FLOW ANALYSIS & CAPILLARY ELECTROPHORESIS

Session III		**Chair: B. Buszewski**
9.00 – 9.35	KL-2	Flow analysis and capillary electrophoresis – are they related techniques? *M. Trojanowicz*
9.35 – 10.00	IL-4	Automated liquid-liquid extraction based on flow system coupled with HPLC *Ch. Vakh, L. Nugbienyo, S. Garmonov, L. Moskvin, V. Andruch, A. Bulatov*
10.00 – 10.15	O-12	On-line reversed-phase chromatomembrane extraction coupled with ion-exchange chromatography *A. Shishov, E. Stolarova, L. Moskvin, A. Bulatov*
10.15 – 10.40	IL(S)-2	High performance analysis by segmented flow analysis *J. Neubauer*
10.40 – 11.10		Coffee break & Poster session
Session IV		**Chair: W. Frenzel**
11.10 – 11.45	KL-3	Sufrace heterogenity of biocolloids and their determination by electromigration and related techniques *B. Buszewski, V. Railean-Plugaru, P. Pomastowski, K. Rafińska*
11.45 – 12.10	IL-5	Zastosowanie spektrometrii mas rozcieńczenia izotopowego do oznaczania chromu ogólnego i Cr(VI) w wodzie *B. Markiewicz, I. Komorowicz, D. Barałkiewicz*
12.10 – 12.35	IL-6	Post-column detection of antioxidant activity *E. Nalewajko-Sieliwoniuk*
12.35 – 12.50	O-13	Synthesis of polymeric monoliths in microchips using microscope *S. Dziomba, M. Araya-Farias, B. Carbonnier, M. Guerroauche, M. Taverna, N. Thuy Tran*

12.50 – 13.50		Lunch
Session V		**Chair: Ł. Tymecki**
13.50 – 14.25	KL-4	Joining the scientific and industrial worlds together – implementation of Capillary Electrophoresis *C. E. Sänger – van de Griend*
14.25 – 14.50	IL-7	Flow-through membrane-based sample preparation techniques for chromatographic analysis *W. Frenzel*
14.50 – 15.05	O-14	An alternative, simplified methodology of pKa determination by capillary electrophoresis, combined with a rational choice of capillary type *P. M. Nowak, M. Woźniakiewicz, P. Kościelniak*
15.05 – 15.45		Coffee break & Poster session
15.45 – 16.45		Meeting of the members of ZARMA group
19.30		Conference dinner *Auditorium Maximum, Jagiellonian University, Krupnicza 33, Kraków*

Friday, 16th September 2016 CAPILLARY ELECTROPHORESIS		
8.30 – 11.00		Workshop – Capillary electrophoresis
11.00 – 11.20		Coffee break
Session VI		**Chair: C. E. Sänger – van de Griend**
11.20 – 11.55	KL-5	Novel approaches for sampling and analysis of biological fluids by capillary electrophoresis *P. Kuban, M. Gregus, P. Durc, J. Lacna, F. Foret*
11.55 – 12.20	IL-8	Application of the capillary electrophoresis to forensic chemistry *M. Woźniakiewicz, M. Król, R. Wietecha-Posłuszny, A. Woźniakiewicz, P. M. Nowak, P. Kościelniak*
12.20 – 12.35	O-15	Application of carbon nanomaterials in capillary electrophoresis *E. Poboży, K. Wołoszyn*
12.35 – 13.30		Lunch
Session VII		**Chair: P. Kuban**
13.30 – 13.55	IL-9	Sample preparation methodologies of human tissues and capillary electrophoresis technique in toxicological analysis *R. Wietecha-Posłuszny, A. Woźniakiewicz, M. Garnysz, S. Lendor, A. Moos, P. Kościelniak*
13.55 – 14.20	IL-10	12 methods to prevent common systematic errors in determination of electrophoretic mobility by capillary electrophoresis *P. Nowak, M. Woźniakiewicz, P. Kościelniak*
14.20 – 14.35	O-16	Application of electromigration techniques in biomedical analysis: bacterial identification in biological samples *E. Kłodzińska, B. Buszewski*
14.35 – 14.50	O-17	Advantages of connection of electrophoretic techniques *M. Koval*

14.50 – 15.10		Coffee break
Youth session II		**Chair: E. Poboży**
15.10 – 15.20	O-18	The principles of capillary electrophoresis in frontal analysis mode for the study of drug protein binding *A. Gonciarz-Dytman, S. Chlopicki, M. Walczak*
15.20 – 15.30	O-19	NECEEM method in quantitive characterization of aptamers-trombin interactions *K. Matyjaszczyk, J. Jucha, J. Bereta, K. Derszniak, H. Ulrich, S. Chlopicki, M. Walczak*
15.30 – 15.40	O-20	Three-step stacking by field-enhanced sample injection, sweeping, and micelle to solvent stacking in capillary zone electrophoresis *W. Grochocki, M. J. Markuszewski, J. P. Quirino*
15.40 – 15.50	O-21	Separation of fungal hallucinogenic substances with capillary electrophoresis *K. Zielińska, A. Poliwoda, P. P. Wieczorek*
15.50 – 16.00	O-22	MAE-CE/MS method for detection of psychoactive drugs in bone marrow *M. Garnysz, R. Wietecha-Posłuszny, S. Lendor, P. Kościelniak, M. Zawadzki*
16.00 – 16.10	O-23	The optimization of method enabling the separation of 20 coumarin derivatives using the capillary electrophoresis *M. Gładysz, M. Woźniakiewicz, J. Kędzior, P. M. Nowak, P. Kościelniak*
16.10 – 16.25		Discussion
16.25 – 16.40		Closing ceremony

Poster session
FLOW INJECTION & CAPILLARY ELECTROPHORESIS

Thursday, 15th September 2016;
10.40 – 11.10 and 15.05 – 15.45

Posters should be put up in the morning of the presentation day and removed when the poster session is ended.

P-1 The determination of alpha-2-macroglobulin (Ile1000Val) gene polymorphism by electrophoresis detection
L. V. Dolinchuk, A. V. Basanets, T. A. Andrushchenko

P-2 Evaluation of flow-through dialysis probes for sampling and sample preparation of complex samples: hyphenation to flow analysis and ion chromatography
W. Frenzel, I. Markeviciute

P-3 Design and chemical synthesis of pI peptide markers for the cIEF analysis
I. Małuch, A. Walewska, A. Prahl

P-4 MPFA system for determination of lactase activity in dietary supplements
M. Pokrzywnicka, O. Kubacka, R. Koncki

P-5 Personal hemodialysis monitor
M. Michalec, Ł. Tymecki

P-6 Micellar electrokinetic chromatography technique as a diagnostic tool in the study of potential biomarkers of cancer
N. Miękus, P. Kowalski, I. Olędzka, A. Plenis, T. Bączek, E. Jurkowlaniec

P-7 A flow-cytometry method for measurement expression of γ-H2AX histone in human lymphocytes after exposure
K. D. Muzalevska, D. P. Yehorov, O. L. Maznichenko, D. A. Bazyka

P-8 Selection of the chemiluminescence systemfor the flow injection determination of silver and gold nanoparticles
J. Malejko, E. Nalewajko-Sieliwoniuk, A. Topczewska, B. Godlewska-Żyłkiewicz, A. Kojło

P-9 Application of capillary electrophoresis for separation of non-chromophoric phosphonates
K. Orłowska, A. Poliwoda, P. P. Wieczorek

P-10 Serum stability studies of disulfide-deficient human β-defensin 3 analogues using UFLC and MS
A. Walewska, J. Grabowska, P. Zyra, A. Prahl

P-11 Application of multicomutation flow system using solid phase extraction and FAAS to manganese speciation analysis
A. Tobiasz, D. Dudek-Adamska, S. Walas

P-12 Assessment of cytotoxicity of copper nanoparticles by flow cytometry assay
N. Zakharchenko, N. Dmyutrukha, L. Dolinchuk, M. Shevchuk, K. Gusak, O. Kushnirenko, O. Lahutina

P-13 Determination of psychotropic substances using the CE-LIF technique
A Woźniakiewicz, R. Wietecha-Posłuszny, A. Sekuła, P. Kościelniak

P-14 Application of the MAE/CE-MS method for the determination of benzodiazepines in human serum
A Woźniakiewicz, R. Wietecha-Posłuszny, P. Kościelniak

P-15 MAE/QuEChERS/CE-MS method of atropine and scopolamine determination in Datura metel
M. Ciechomska, M. Woźniakiewicz, P. Kościelniak

P-16 Simultaneous spectrophotometric determination of Cr(III) and Cr(VI) using a monosegmented sequential injection system
J. Kozak, J. Paluch, M. Wieczorek, A. Białas

P-17 Voltammetric sensor for determination of amoxicillin in spring water matrices using a flow-batch sequential injection system
J. Kochana, A. Pollap, J. Kozak, P. Knihnicki

P-18 The theoretical aspects of the generalized calibration strategy in flow analysis
P. Świt, M. Wieczorek, P. Kościelniak