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CURRICULUM VITAE



SUMMARY

Name Miroslav (Mirek) MACKA
Nationality Australia, Czech Republic

ACADEMIC QUALIFICATIONS

A/Prof 2008: Habilitation - Associate Professorship at Masaryk University (MU) in Brno
PhD 1994-1997: PhD in Chemistry, University of Tasmania, Hobart, Australia
RNDr 1976- 1981: equivalent to BSc + MSc in Chemistry, Masaryk University, Brno, Czech Republic, Graduated with Honours

CURRENT POSITION

Employer Dublin City University, School of Chemical Sciences
Position Marie Curie Excellence Fellow and Team Leader (EC FP6 senior fellowship)
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Email: mirek.macka@dcu.ie
URL: http://www.dcu.ie/chemistry/biographies/mirek_macka.shtml

RESEARCH

Areas Analytical chemistry, separation science, liquid chromatography, capillary electrophoresis, electrochromatography, multidimensional and hyphenated systems, miniaturised and microfluidic chip-based analysis, instrumental design, LEDs in chemistry, molecular spectrophotometry, microfluidic photochemistry

Publications Refereed journal articles = 125, book chapters = 3, full proceedings papers = 4, int. conference talks = 73, int. conf. posters = 133 = total refereed publications > 330:

Numerical indicators h = 25, citations >2,000, average cit. no.= 16.2 (growing), average journal IF= 3.4

Editorial duties Editorial Board Memberships: Electrophoresis (Wiley-VCH), Anal.Chim.Acta (Elsevier); Refereeing: ca. 50 manuscripts p.a. for over 10 analytical and multidisciplinary journals

Major achievements

- Co-founder of Separation Science Cluster, a transdisciplinary collaborative research unit at DCU from 2007 and from 2008 co-PI (1 of 4) on Irish Separation Science Cluster (ISSC), a SFI "Strategic Research Cluster" awarded €4.9Mil.;
 - 2005 awarded a prestigious highly competitive (ca. 6% success rate) EC senior level fellowship and grant Marie Curie Excellence Grant;
 - Among the 3 most productive analytical chemists in Australia from 1999 to 2006 (Based on publication output ranking, Analytical Abstracts, RSC);
 - 2000 awarded a prestigious highly competitive (ca. 10% success rate) mid-career Australian Research Council Fellowship (5 years);
 - Having successfully switched from industrial research to academic research career, with >80% of my publication output in the last 10 years (since 1997).
Allocated funds: € 3.19 Million from 2006 + AU\$ 1.3 Million from 1997 to 2005.
7 patents, active collaborations with 6 companies
- Team size 2 postdoctoral fellows, 1 technician, 10 postgraduate students (incl. advertised), academic + student visitors ca. 10 p.a.

Funding

Industrial research activities

Team size

TEACHING & SUPERVISION

Teaching 3rd year Analytical Methods (electromigration methods), 4th year Analytical Problem Solving, MSc course Advanced Analytical Methods incl. Miniaturisation, Lab-on-chip and Nanotechnology, special courses e.g. at Pittcon "LEDs in Chemistry"

Supervision 42 students, postdocs and technicians since 1996,
9 PhD students graduated since 1999.

OTHER

Languages Czech (native); English, German (daily usage, fluent including writing); Russian, Italian, Spanish, Latin (to varying degrees).

Other Interests

Speed reading (course, Australia), philosophy & history of science, management.

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1 ACADEMIC AND PROFESSIONAL QUALIFICATIONS

1.1 Degrees

- 2008 Habilitation - Associate Professorship: adjunct A/Prof. at [Masaryk University](#) (MU) in Brno, Czech Republic; Habilitation thesis “Capillary Electrophoresis – Contributions to Development of the Technique” (a commented compilation of 51 papers, 472 pages, in English, 22 April 2008); public lecture “Exotic monoliths for Separation Science”, in English, 22 April; defence before the Scientific Council, Faculty of Science, MU, 1 Oct. 2008; Letter of Appointment by the Rector of MU to follow before the end of 2008.
- 1994- PhD by research: submitted 26 June 1997, Chemistry Department, University of Tasmania, Hobart, Australia. Degree received PhD (Doctor of Philosophy). Thesis: “*Separations of Metal Ions by Capillary Electrophoresis using Complexation with Metallochromic Ligands*”.
- 1976- BSc, MSc: University studies of chemistry (5 years) equivalent to BSc+MSc at Masaryk University, Brno, Czech Republic, Faculty of Natural Sciences, Department of Chemistry. Graduated with honours. Degree received RNDr. (Doctor of Natural Sciences). Thesis: “*Spectrophotometric study of the acid-base and optical properties of the 5-bromo and 5-chloroderivatives of 2-(2-pyridylazo)-5-(diethylamino)phenol and their complexation equilibria with zinc(II) and cadmium(II) ions*”.

1.2 Other

Chartered Chemist: M.R.A.C.I. C.Chem. (1996), M.R.S.C. C.Chem. (2007).

2 CAREER RESUME

2.1 Employment history

- 2006- *Marie Currie Fellow and Excellence Team Leader* at Dublin City University, Ireland: FP6 funded senior research position to build a research team 'with a potential to reach excellence'.
- 2005 *ACROSS Senior Research Fellow*: Senior Research Fellow at the Australian Centre for Research On Separation Science (ACROSS), University of Tasmania (UTAS). Program and Team Leader.
- 2000- *ARC Research Fellow*: Australian Research Council Fellowship (5 years) - a prestigious
2005. fellowship (ca. 12% success rate, only 30 across *all* disciplines p.a.) for senior researchers. Program Leader of 'Program 3: Environmental Analysis', from 2001 also of 'Program 4: Food & Drug Analysis' at ACROSS, UTAS.
- 1997- *Research Fellow* with University of Tasmania, School of Chemistry, Separation Science Group
1999 (Prof. Paul Haddad), Formulation and management of several research projects, supervision of PhD and Honours students; research in the fields of capillary electrophoresis (CE), capillary electrochromatography (CEC) and ion chromatography (IC).; day-to-day running of the research group (safety, purchases, lab & office equipment, PCs etc.).
- 1994- *PhD student*, University of Tasmania, School of Chemistry, Separation Science Group of
1997 Prof. Paul Haddad: "Separations of Metal Ions by Capillary Electrophoresis using Complexation with Metallochromic Ligands"
- 1993 *Research Fellow* with LONZA AG, Department of Analytical Chemistry: Introduction of and method development for: Preparative reversed-phase HPLC, capillary supercritical fluid chromatography (SFC) and CE and micellar electrokinetic chromatography (MEKC).
- 1992 *Research Fellow* with the Academy of Sciences of the Czech Republic, Institute of Analytical Chemistry: Research in Electromigration Separation Methods (CE, MEKC).
- 1982- *Research Scientist* with Res. Instit. Fine Chemicals, Lachema a.s., Brno, Czech Rep.: HPLC,
1992 TLC, GC, TA/TGA, UV/Vis spectrometry, NMR, IR, EA, wet analysis, method validation (>50 mostly HPLC methods developed for both research and QC).

2.2 Fellowships and awards

- 2005: Marie Curie Excellence Grant & fellowship - prestigious highly competitive (ca. 6% success rate) EC senior level fellowship and grant with a budget of over € 1.2 million.
- 2000: Australian Research Council Fellowship - a prestigious highly competitive 5-year mid-career fellowship (10% success rate, only 30 fellowships awarded annually across *all* disciplines).
- 2000: Dean's Award for Research Excellence, as part of Separation Science Group, UTAS.
- 1994-2008: 9 prizes for outstanding conference presentations (talks: O35, posters: P 14, P 20, P 42, P 50, P 65, P 85, P 94, P 95) at major international conferences provide evidence of international recognition of my work.
- Articles 7 times featured on the front cover or as a special promotion (A18, A89, A92, A94, A100, A104, A107), from this 4x in 2007 and 2x in 2008 – see 8 List of publications.

2.3 Membership of academic organizations and other professional activities (in alphabetical order)

- American Association for the Advancement of Science (AAAS, USA, <http://www.aaas.org/>).
- American Chemical Society (ACS, USA, <http://portal.acs.org/portal/acs/corg/content>).
- Californian Separation Science Society – **Associate Director** (from 24 February 2009) (CASSS, <http://www.casss.org/>)
- Czech Chemical Society (CSCH, Czech Republic, <http://www.csch.cz/>).
- Material Research Society (MRS, USA, <http://www.mrs.org/>).
- Royal Australian Chemical Institute, MRACI CChem (RACI, Australia, <http://www.raci.org.au/>).
- Royal Society of Chemistry, MRSC CChem (RSC, UK, <http://www.rsc.org/>).

3 RESEARCH

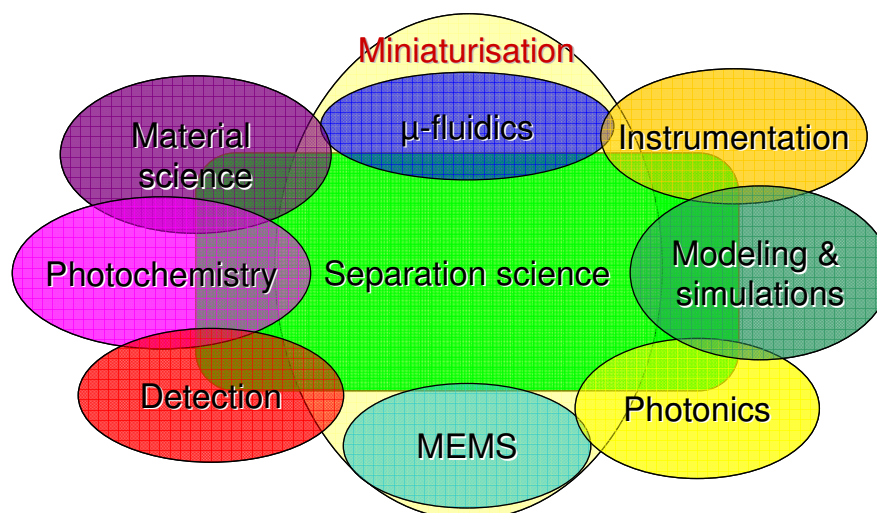
3.1 Statement of research

3.1.1 Vision & Mission

By systematically developing both basic and applied multi- and transdisciplinary research centred around the area of separation and analytical science, draw advantages from synergies between those various research areas, in this setting conduct world-class research and contribute to solving problems of the mankind/society; through this process educate a younger generation of scientists and strive to make this process enjoyable, attractive and visible, thus enhancing the standing of science in the society.

3.1.2 Positioning my research

Analytical and separation sciences are the areas where I have been formally educated and have had most practical experience. My view is that separation science can serve as an excellent basis for transdisciplinary research as illustrated in the scheme below.



I am convinced that overcoming discipline-based boundaries will lead to synergies amplifying the creativity and opportunities for innovation. This is crucial in creating a world-class research that would bring new solutions to the many problems our society is facing.

Therefore my philosophy of the transdisciplinary research that I have been developing and that I want to further advance into the future has separation and miniaturised analytical science as the uniting core filed 'surrounded' by other areas, finding common ground and exhibiting synergies (see the scheme above). The areas of material science, microfluidics, MEMS, photonics, detection methods, instrumentation, photochemistry and modelling/simulations are the most important ones but this list is not necessarily meant to be exhaustive.

3.2 Fields of research

So far a large majority of my papers have been clearly analytical, most of them in the area of separations and especially capillary electrophoresis. Through my research career, first in pharmaceutical industrial research and later in academic research, I accomplished a number of projects, both as basic research and applied, with very different background and aims. This allowed me to gain insight into numerous areas and later became helpful in my progress towards transdisciplinary research. In my academic career in the last 10 years I published most of my over 120 original research papers: for each of them the topic can be ascertained based on the full title in the *Publication List*. Recent gradual shift towards multi-, inter- and transdisciplinary research is obvious.

3.3 Novelty and significance

The novelty and significance of my publications are primarily witnessed by having been published in the best journals in the field (analytical chemistry), a high average IF number and a high citation number for my papers (see 8.2), but also by awards of poster prizes and an increasing number of invited talks.

3.4 Research areas and specific contributions

Below are examples (not exhaustive) of my specific contributions in the given areas:

- Fundamental processes in CE including changes in pH induced by electrolysis and Joule heat dissipation;
- Capillary electrophoresis of metal ions, metallochromic ligands and their complexes;
- Utilisation of light emitting diodes (LEDs) as cheap, reliable, low-noise, quasi-monochromatic light sources for photometric detection in CE/CEC or in compact portable photometers;
- 'Pulsed' potentiometric detection as a completely new electrochemical method;
- Design, synthesis and use of new isoelectric buffers for capillary electrophoresis;
- Polymers as a separation capillary in CE including PTFE and newer generation fluoropolymer;
- Instrumental design and miniaturisation in design of on-capillary detectors and portable CE;
- On-chip micro-SPE in-line combined with FIA and LED detection;
- Long monolithic columns in high resolution power fast LC.

3.5 Current research projects

The examples below illustrate the directions my research is going and illustrates the increasingly multidisciplinary nature:

- New 'Exotic' monolithic stationary phases with unusual properties including silica and polymer monoliths coated with gold nanolayer and nanoparticles;
- Analysis and separations in microfluidic chips;

- Utilisation of LEDs as small, low-heat, cheap, quasi-monochromatic light sources for photoinitiated polymerisations of monolithic chromatographic stationary phases;
- Combined on-capillary single-point-of-detection photometric, fluorimetric and contactless conductivity detection utilising LEDs;
- Electrohydrodynamic focusing in planar continuous flow chips;
- Design, synthesis and use of new analytical reagents: ampholytic buffers, novel fluorescent tags (derivatisation reagents);
- Microphotochemistry – photochemistry in microfluidic chips.

3.6 Evidence of national and international recognition

3.6.1 Citations of publications (as to 03/10/2009)

- Number of citations accrued: **2,030** from 125 journal articles (as to 03/10/2009, ISI WoS);
h-number = **25** (h journal articles that are each cited at least h times)

This gives an **average citation of 16.2** (tendency: growing). Note that >80% of my research output comes from within the last 10 years, which means that a significant number of my publications have not had time to accrue any substantial numbers of citations.

- Sum of journal impact factors: **422.6** (as to 034/10/2009)
(Sum of journal impact factors for all publications to date).

This corresponds to an **average impact factor for a journal publication of 3.4** (tendency growing) indicating the overall quality of journals I publish in. As an indicative, for example the best journal generally applicable for my area of research *Analytical Chemistry* (ACS) has an IF of 5.646 (2007).

3.6.2 Fellowships and Awards

See section 2.2.

3.6.3 Editorial and Refereeing duties

- Editorial Board membership:
 - Analytica Chimica Acta (Elsevier) (from 2009).
 - Electrophoresis (Wiley-VCH) (from 1.1.2009),
<http://www.wiley-vch.de/publish/en/journals/alphabeticalIndex/2027/>;
- Refereeing for over a dozen international chemistry journals (over 50 manuscripts per year):
 - Analytical and Bioanalytical Chemistry (Springer),
 - Analyst (RSC),
 - Analytica Chimica Acta (Elsevier),
 - Analytical Chemistry (ACS),
 - Electrophoresis (Wiley-VCH),
 - International Journal of Environmental Analytical Chemistry (Gordon & Breach),
 - Journal of Capillary Electrophoresis (ISC Technical Publications),
 - Journal of Chromatography A (Elsevier),
 - Journal of Chromatography B: Biochemical Applications (Elsevier),
 - Journal of Microcolumn Separations (Wiley-VCH),
 - Lab Chip (RSC),
 - Physical Chemistry Chemical Physics (RSC),
 - Rapid Communications in Mass Spectrometry (Wiley-VCH),
 - Talanta (Elsevier).
- Acting as a referee/judge for best presentation awards at international conferences, such as:

- μ TAS 2004, September 26-30, Malmö, Sweden or ISCCE 2007 Albuquerque, NM, USA.
- Assessing PhD and Honours theses from other universities (see 4.2 p. 17);
- Assessing various competitive grant and fellowship applications, such as ARC or internal university (IRGS) funding schemes, member of a UTas panel 2004 for funding in 2005.

3.6.4 Invitations

- Invited as visiting professor or fellow
 - Visiting Fellow, Edith Cowan University, Perth, WA, Australia, 7-15 May 2005;
 - Visiting Professor, Masaryk University, Brno, Czech Republic, 17th – 21st December 2001, 23rd June – 11 July 2003;
- Invited speaker at international conferences (see 0);
- Invited lectures/talks/seminars:
 - IL 1 “Shedding Led Light On The Synergies Between Bio-Separations, Microfluidics, Miniaturisation, Instrumentation Design, Nanomaterials, Photochemistry And Photonics”, seminar at AIBN, University of Queensland, Brisbane, Australia, 18 Dec 2008.
 - IL 2 “Capillary Electrophoresis - Contributions to Development of the Technique: A journey of discovery and inspiration”, Habilitation public talk before the Scientific Council, Faculty of Science, Masaryk University, Brno, Czech Republic, 1 October 2008;
 - IL 3 “Exotic monoliths for separation science (and beyond)”, TU Graz, Graz, Austria, 5 June 2008;
 - IL 4 “Exotic monoliths for separation science (and beyond)”, University Linz, Linz, Austria, 3 June 2008;
 - IL 5 “Exotic monoliths for separation science (and beyond)”, Habilitation public talk at Masaryk University, Brno, Czech Republic, 24 April 2008;
 - IL 6 “LEDs as light sources for photometric detection on-capillary and on microfluidic chip”, Knauer GmbH, Berlin, Germany, 2 November 2007;
 - IL 7 “In the search of tools for separation science: The potential of light emitting and laser diodes in chemical analysis”, Tyndall National Institute, Cork, Ireland, 20 October 2006;
 - IL 8 “Shining Bright: Light Emitting Diodes in Chemical Analysis”, Edith Cowan University, Perth, WA, Australia, 13 May 2005;
 - IL 9 “Miniaturisation in chemical analysis: Just another fashion?”, Curtin University of Technology, Perth, WA, Australia, 12 May 2005;
 - IL 10 “Miniaturisation in chemical analysis: Many faces, same goals”, Deakin University, Geelong, VIC, Australia, 26 November 2004;
 - IL 11 “Miniaturisation: Many faces, same goals”, University Innsbruck, Austria, 28 May 2004;
 - IL 12 “Indirect Detection in CE: What’s New?”, Masaryk University, Brno, Czech Republic, 9 July 2003;
 - IL 13 “Smaller, Faster, Better: Miniaturisation in Analytical Chemistry”, La Trobe University, Melbourne, VIC, Australia, 29 January 2003;
 - IL 14 “Indirect Detection in Capillary Electrophoresis: Pushing it to the Limits”, Dublin City University, Dublin, Ireland, 27 November 2002.
 - IL 15 “Capillary Electrophoresis at the beginning of the 00’s: The love affair is over – how much attraction is still there? ”, LONZA AG, Visp, Switzerland, 21 May 2002;
 - IL 16 “The Theory and Practice of CE”, Australian Biochemistry Society, Bicheno, Australia, August 1999.
- Invited lecturer at professional meetings, such as:
 - “Light Emitting Diodes in Chemical Analysis and Chemistry”, 1.5-day course at ‘Pittcon’, the largest chemistry international conference (ACS), course by Mirek Macka and Tomasz Piasecki, from 2009 (Chicago, IL, USA, 9-13 March 2009 <http://ca.pittcon.org/Technical+Program/tpabstra09.nsf/SCoursesByCat/25E9EE7FE1A7B344852574B7003C49E5?opendocument>);
 - “Capillary Electrophoresis in Ion Analysis: Principles and applications” ½-day course at International Ion Chromatography Conference (IICS series), an updated course

from 2009 (Dublin, Ireland, 21-24 September 2009:

<http://www.casss.org/displayconvention.cfm?conventionnbr=5974>);

- Part of the conference workshop 'Future trends' given at the International Ion Chromatography Symposium (IICS), San Diego, 21-24 September 2003, titled 'Miniaturisation of separation techniques using planar microfluidic devices – microchips', by M.Macka, R.Guit, and P.R.Haddad;
- Talk '*Smaller, Faster, Better: Miniaturisation in Chemistry*' at Professional Development Seminar for Yer 11/12 teachers organised by AIP, RACI, and the School of Maths and Physics, University of Tasmania, 9-10 December 2002;
- Full day international conference course on theory and practice of CE and CEC of small ions 'Short Course – Ion Analysis by CE and CEC' at the International Ion Chromatography Symposium (IICS) series, by P.R.Haddad and M.Macka, annually since 1999;
- Lecture on The Theory and Practice of CE for Australian Biochemistry Society, Bicheno, August 1999.
- Courses for Hons/PhD students at various universities (see 4.2 p. 17).

3.6.5 Collaborations with internationally recognised scientists from America, Europe, Asia and Australia (past and present, alphabetically)

- Prof. Neil Barnett (Professor of Chemistry), Deakin University, Geelong, VIC, Australia;
- Ing. Hugo H.A. Billiet (Senior Research Scientist), Faculty of Chemical Technology and Material Science, Delft University of Technology, Delft, The Netherlands;
- Univ. Prof. Dr. Wolfgang Buchberger (Head and Professor of Chemistry), Institute of Analytical Chemistry, Johannes-Kepler-University, Linz, Austria;
- Prof. Petr Bocek (Director), Inst. Of Instrumental Analytical Chemistry, Czech Academy of Sciences, Brno, Czech Rep.;
- Dr. Michael Breadmore (Australian Research Council QEII Fellow), Australian Centre for Research on Separation Science, University of Tasmania, Australia;
- Dr. Mary Boyce (Senior Lecturer), Edith Cowan University, Perth, WA, Australia;
- Prof. Richard Cassidy (Professor of Chemistry), Chemistry Department, University of Saskatchewan, Canada;
- Dr. Philip Doble (Senior Lecturer), University of Technology Sydney, Australia;
- Dr. Frantisek Foret (Group Leader and Principal Research Scientist), Inst. Of Instrumental Analytical Chemistry, Czech Academy of Sciences, Brno, Czech Rep.;
- Prof. James S. Fritz (Distinguished Professor of Chemistry), Chemistry Department, Iowa State University, Ames, IA, USA;
- Prof. Paul Haddad (Australian Research Council Federation Fellow), Australian Centre for Research on Separation Science, University of Tasmania, Australia;
- Prof. Josef Havel (Professor of Chemistry), Dept. of Analytical Chemistry, Faculty of Sciences, Masaryk University, Brno, Czech Rep.;
- Prof. Peter Hauser (Professor of Chemistry), Chemistry Department, University of Basel, Switzerland;
- Prof. Charles Lucy (Professor of Chemistry), Department of Chemistry, University of Alberta, Alberta, Canada;
- Prof. Philip Marriott (Professor of Chemistry), RMIT University, Melbourne, VIC, Australia;

- Prof. Pavel Nesterenko (Professor of Separation Science),
ACROSS, UTAS, Australia (formerly of Lomonosov University, Moscow, Russia);
- A/Prof. Brett Paull (Head of School),
National Centre for Sensor Research, Centre for Bioanalytical Sciences and School of
Chemical Sciences, Dublin City University, Ireland;
- Prof. Janusz Pawliszyn (Professor of Analytical Chemistry),
University of Waterloo, Canada;
- A/Prof. Jan Preisler,
Dept. of Analytical Chemistry, Faculty of Sciences, Masaryk University, Brno, Czech Rep;
- Dr. Serge Rudaz (A/Prof, analytical and pharmaceutical chemistry),
University of Lausanne and University of Geneva;
- A/Prof. Leena Sunktorsuk,
Mahidol University, Thailand;
- Prof. Frantisek Svec (Professor of Chemistry),
Lawrence Berkeley National Laboratory, Berkeley, CA, USA.
- A/Prof. Andreas Zemann (Professor of Analytical Chemistry),
Department of Chemistry, Leopold-Franzens-University, Innsbruck, Austria.

3.6.6 Collaborations with companies (past and present, alphabetically)

- Agilent Technology, Waldbronn, Germany, <http://www.agilent.com>
(Dr. Gerard Rosing, Senior Scientific Consultant);
- Dionex Corporation, Sunnyvale, CA, USA, <http://www.dionex.com>
(Dr. Nebojsa Avdalovic, Head of Research);
- eDAQ, Sydney, Australia, <http://www.edaq.com/>
(Dr. Boris Schlensky, CEO)
- Knauer GmbH, Berlin, Germany, <http://www.knauer.net/>
(Dr. Speck, Senior Manager, Dr. Herbert Knauer, proprietor and advisor)
- Optical Polymer Research, Inc., Gainesville, Florida USA, <http://www.opri.net/>
(Dr. Paul D. Schuman, President);
- Paraytec, York, UK,
(Prof. David Goodall, Chief Scientific Officer, Dr. Mebs Surve, Business Devel. Director);
- Picometrics, Lyon, France, <http://www.picometrics.com/>
(Dr. Jocelyne Tahar, Senior Scientist and Dr. Bernard Feurer, CEO)
- Red Box Direct, Dublin, Ireland, <http://www.redboxdirect.com/>
(Dr. Rory Geoghegan, Director)
- Tasmanian Alkaloids Inc., Westbury, Tasmania, Australia, <http://www.tasalk.com.au/>
(Dr. Paul Gee, Principal Research Scientific Adviser);

3.7 My role and the size of my research activity at DCU

My role at DCU is “Marie Curie Excellence Team Leader”, a FP6 funded senior research position of a Team Leader to build a research team ‘with a potential to reach excellence’. From my appointment in April 2006 I obtained numerous competitive grants (see section 3.8 Funding) that allowed to grow the size of my group ‘Microfluidic Analysis’ ([μ-FAn](#)) by a factor of about 4 to 3 PDFs, 1 technical assistant, 10 PG students (including advertised positions); this together with 4th year students and various visiting students (such as Erasmus Mundus within EC) and visiting academics resulting from numerous collaborations within Europe and worldwide (see section 3.6.5) brings my group size to a typical number around 15 researchers.

I also initiated formation of a cross-disciplinary Research Cluster at DCU ‘Separation Science Cluster’ ([SSC](#)) bringing together currently 4 research groups from 3 different Schools within DCU.

This paved the way for the later successful Science Foundation Ireland Strategic Research Cluster funding, where I am one of total of five principal investigators on the award “Irish Separation Science Cluster” funded to €5Mil. (see section 3.8 Funding).

3.8 Funding

- Competitive industrial and institutional grants - European Council (EC) – FP6, Science Foundation Ireland (SFI), Dublin City University (DCU), Environmental Protection Agency (EPA), Enterprise Ireland (EI), Australian Research Council (ARC), University of Tasmania (UTAS) etc. - since 2000 a total of:
 - Approx. € 3.288 Million (from 2006 at DCU: 10 extramural + 2 DCU grants)
 - Plus approx AU\$ 1.3 Million (between 1997-2005)

<i>Year</i>	<i>Authors/Investigators</i> <i>(PI/CI = Principal/Chief Investigator)</i>	<i>Type of funding</i>	<i>Amount</i> <i>€ / US\$ / AU\$</i>
2009	Peter O'Brian, William Henry, Allen Morrison, Macka M (co-PIs)	<i>Capital Expenditures 2009 - National Access Programme (NAP), Science Foundation Ireland: Fineplacer 145 "PICO"</i>	€ 50,000
2009-2010	Macka M (PI), Paul B	<i>Agilent competitive grant programme, Agilent G.m.b.H.:</i> ”Study of Microfluidic Capillary Electrophoresis and Applications” (Dr. Fritz Beck, Dr. Gerard Rozing, Agilent G.m.b.H., Waldbron, Germany)	US\$ 75,650 (€ 56,782)
2009-2010	Macka M (PI)	<i>International Visitors Programme, Dublin City University:</i> Funding visits by internationally recognised scientists (Prof. Cornelius Ivory, WSU, USA)	€ 4,155
2009	Macka M	<i>Proof of Concept, Enterprise Ireland:</i> ” Open tubular capillary columns obtained by evanescent wave photopolymerisation” (POC/2008/339)	€ 69,185
2009-2013	Paul B. , Macka M., Glennon J., O'Connor B., Nesterenko P.	<i>Science Foundation Ireland Large Scale Initiative Strategic Research Cluster “Irish Separation Science Cluster” (ISSC)</i>	€ 4.9 Mil. allocated ca. 1 Mil.
2008-2011	Macka M (PI), Oelgemoeller M (co-PI1)	<i>Environmental Technologies, Environmental Protection Agency, Ireland:</i> “Micro-photochemistry - a New Resources-Efficient R&D Approach” (2008-ET-MS-2, Progr. 2007 – 2013)	€ 349,824
2008-2010	Macka M (PI), Oelgemoeller M (co-PI1)	<i>Environmental Technologies, Environmental Protection Agency, Ireland:</i> “LED-Micro-photochemistry - a New Resources-Efficient Synthesis Tool” (EPA Masters 2008-S-ET-q, Progr. 2007 – 2013)	€ 39,983

2008- 2009	Macka M (PI)	<i>National Access Programme (NAP), Science Foundation Ireland:</i> LED–optical filter–optical fibre (LED-OF ²) micro-packaged light source devise for fluorescence detection in capillary, microcolumn and microfluidic chip formats” (NAP171)	€ 55,309
2008- 2009	Macka M (PI)	<i>International Visitors Programme, Dublin City University:</i> Funding visits by internationally recognised scientists (<i>Prof. Janusz Pawliszyn, Canada</i>)	€ 3,950
2008- 2009	Macka M (PI), Paull B	<i>Proof of Concept, Enterprise Ireland:</i> ”Gold Nano-Layers on Monolithic Scaffolds” (PC/2008/004)	€ 93,599
2007- 2014	Diamond D., Regan F., MacCraith B., McDonagh C., O’Kennedy R., Paull B., Macka M. , Smeaton A., O’Connor N.	<i>Marine Institute Beaufort Research Awards, Department of Communications Energy and Natural Resources, Ireland:</i> ”Marine Environmental Sensing and Informatics”	€106,000 allocated (in total € 2.4 Mil.)
2007- 2010	Macka M (PI), Paull B, Breadmore MC	<i>Frontiers Programme, Science Foundation Ireland:</i> ”Electrohydrodynamic Focusing in 2-Dimensional Planar Microfluidic Devices for Preconcentration of Low Abundance Bioanalytes” (CHEF/755)	€ 126,900
2007- 2010	Oelgemoeller M (PI), Macka M (co-PI1), Jähnisch K (co-PI2)	<i>Frontiers Programme, Science Foundation Ireland:</i> ”Micro-Photochemistry” - a new tool in drug development” (CHEF/817)	€ 127,500
2006- 2007	Macka M (PI), Paull B (PI)	<i>International Visitors Programme, Dublin City University:</i> Funding visits by 4 internationally recognised scientists	€ 8,800
2006- 2010	Macka M (PI)	<i>Marie Curie Excellence Grants (European Community, grant scheme FP6-2002-Mobility-8)</i> ”Hybrid microfluidic devices for complex chemical analysis” (MEXT-CT-2004-014361)	€ 1.2 Mil. (AU\$ 1.9 Mil.)
2006+		<i>Subtotal for grants from 2006 in €</i>	€ 3,181,050
2006- 2008	Macka M (CI)	Towards Microfluidic-based Advanced Remote Analysis <i>ARC Discovery Project grant No. DP0662838 ^{a)}</i> http://www.arc.gov.au/rtf/DP06_Tasmania.rtf	AU\$ 75,000 AU\$ 75,000 AU\$ 75,000

2006	Haddad PR, Clark MG, Reid JB, Bowie AR, Macka M , McMeekin TA, Bowman JP, Ross JJ, Breadmore MC, Hilder EF, Guijt RM, Shellie RA, Jacobson GA	Hyphenated Capillary Electrophoresis – Mass Spectrometry Facility <i>ARC Linkage Infrastructure Equipment And Facilities (LIEF) grant No. DP0662838</i>	AU\$ 262,706
2005	Breadmore MC, Hilder EF, Macka M , Haddad PR	Programmable Pneumatic Press for Rapid Prototyping of Polymer Microchips, <i>UTas Major Equipment Grant</i>	AU\$ 37,000
2005	Haddad PR, Stack KR, Hilder EF, Breadmore MC, Macka M , Guijt RM	Particle Characterisation System, <i>UTas Major Equipment Grant</i>	AU\$ 40,000
2004 – 2006	Macka M. (CI1), Marriott P (CI2)	ARC Discovery Project: Enhancing Selectivity and Detection in Miniaturised Analytical Separation Systems <i>ARC Discovery Project grant No. DP0452763</i>	AU\$ 100,000 AU\$ 60,000 AU\$ 60,000
2003-2004	Macka M. , Haddad P.R.	Infrastructure grant, University of Tasmania: Construction of semi-clean-room laboratory	AU\$ 36,400
2003	Macka M (a 30-member group of prominent Australian analytical chemists), Denholm LJ admisnistator	ARC Linkage Project: Australian Research Network in Analytical Science (ARNAS) <i>ARC No. SR0354560</i>	AU\$ 10,000
2003	Dicinoski G.W.(CI), Macka M. (AI1), Yates B. (AI2)	Can molecular modelling be used to predict electrophoretic mobilities of molecules of critical importance to capillary electrophoresis? <i>IRGS grant, University of Tasmania</i>	AU\$ 14,000
2003	Macka M. (CI)	Pulsed Potentiometric Detection: A New Electrochemical Detection Technique for Capillary Electrophoresis and Chip-Based Miniaturised Analytical Devices <i>IRGS grant, University of Tasmania</i>	AU\$ 16,000
2002	Macka M. (CI)	Light Emitting Diodes as Light Sources for Compact Portable Photometers and photometric Detectors <i>IRGS grant, University of Tasmania</i>	AU\$ 13,000
2001	Macka M. , Haddad P.R.	Development of CE methods for analysis of opioid alkaloids <i>Industry grant – Tasmanian Alkaloids</i>	AU\$ 5,000
2000 - 2005	Macka M. (CI)	Capillary Electrochromatography of Small Ions Using New Ion-Exchange Stationary and Pseudo-Stationary Phases with Indirect and Direct Detection ARC Australian Research Fellowship <i>ARC No. F00000869</i>	AU\$ 80,257 p.a . for 5 years

2000	Haddad P.R., Macka M. , et al.	Dean's Award for Research Excellence to the Separation Science Group (University of Tasmania, Faculty of Science & Engineering)	AU\$ 10,000
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a) Could not be accepted as moved overseas.

- It should be pointed out that during 1997-2006 I have had some input into the preparation of some of the ARC grants that were awarded to Prof. Paul Haddad, the Director of ACROSS. The total funding to the group (Hobart node of ACROSS) during 1997-2005 was about AU\$1 mil. p.a.

3.9 Summary of publications

3.9.1 Summary according to publication type

Type of publication	No.	Reference numbers
<i>Book chapters and review articles</i>	16	[B1 – B16]
<i>Research articles in refereed journals (published + in press)</i>	112	[A1 – A112]
ALL REFEREED ARTICLES & BOOKS	128	(see. List at the end of the CV)
<i>Refereed full written papers at international conferences</i>	4	[F1 – F4]
<i>Posters at international meetings, refereed</i>	133	[P1 – P133]
<i>Oral presentations at international meetings, refereed</i>	73	[O1 – O73]
ALL REFEREED PUBLICATIONS incl. refereed conference publications	338	(see. List at the end of the CV)
<i>Patents</i>	7	[T1 – T7]
<i>Papers in non-refereed journals</i>	3	[N1 –N3]
ALL PUBLICATIONS incl. patents and not refereed articles	348	(see. List at the end of the CV)

3.9.2 Summary according to publication year

Year	Papers in refereed journals (published + in press + submitted)	Posters at international meetings	Talks at international meetings (delivered + co-authored)
2000	11	6	4 (1+3)
2001	12	6	4 (0+4)
2002	11	9	5 (2+3)
2003	10	10	8 (1+7)
2004	14	2	7 (2+5)
2005	6	3	7 (2+5)
2006	10	8	4 (2+2)
2007	11	13	4 (2+2)
2008	7	16	8 (5+3)

3.9.3 Career 10 best publications (in order as published)

- BP 1 **Macka M.**, Borák J., Chromatographic behaviour of some platinum(II) complexes on octadecylsilica dynamically modified with a mixture of a cationic and an anionic amphiphilic modifier, *J. Chromatogr.*, 641(1), 101-113, **1993**. IF = 3.359, Cit.# = 15
 [A5] *A very novel work on a mixed cationic and anionic modifier containing mobile phase producing a dynamically modified C18 stationary phase behaving like a mixed cation-anion-exchanger.*
- BP 2 Doble P., **Macka M.**, Andersson P., Haddad P.R., Buffered chromate electrolytes for separation and indirect absorbance detection of inorganic anions in capillary electrophoresis, *Anal. Commun.*, 34(11), 351-353, **1997**. IF = 2.783, Cit.# = 27
 [A15] *Counter-ion-buffered electrolytes for CE with indirect photometric detection first introduced in this paper.*
- BP 3 **Macka M.**, Andersson P., Haddad P.R., Changes in electrolyte pH due to electrolysis during capillary zone electrophoresis, *Anal. Chem.*, 70(4), 743-749, **1998**. IF = 5.45, Cit.# = 56
 [A18] *A groundbreaking work with coloured photographs featured on the front cover of the issue.*
- BP 4 **Macka M.**, Nesterenko P., Andersson P., Haddad P.R., Separation of uranium(IV) and lanthanides by capillary electrophoresis using on-capillary complexation with arsenazo III, *J. Chromatogr. A*, 803(1-2), 279-290, **1998**. IF = 3.359, Cit.# = 40
 [A19] *A highly cited work combining a CE separation of the most rare earth cations with a sensitive detection involving a dynamic complexation with Arsenazo III in the electrolyte.*
- BP 5 Zakaria P., **Macka M.**, Gerhardt G., Haddad P.R., Pulsed potentiometric detection in capillary electrophoresis using platinum electrodes, *Analyst*, 125(9), 1519-1523, **2000**. IF = 2.783, Cit.# = 15
 [A36] *Paper presenting the absolutely novel concept of pulsed potentiometric detection by demonstrating it as a detection method in CE.*
- BP 6 Breadmore M.C., Palmer A. S., Curran M., **Macka M.**, Avdalovic N., Haddad P.R., On-column ion-exchange preconcentration of inorganic anions in open-tubular capillary electrochromatography with elution using transient-isotachophoretic gradients. III implementation and method development, *Anal. Chem.*, 74 (9), 2112-2118, **2002**. IF = 5.45, Cit.# = 41
 [A49] *Third in a series of articles introducing the concept of a novel powerful preconcentration method.*
- BP 7 **Macka M.**, Hutchinson J., Zhang S., Zemann A., Haddad P.R., Miniaturised contactless conductivity detector for capillary electrophoresis, *Electrophoresis*, 24(12-13), 2144-2149, **2003**. IF = 4.04, Cit.# = 20
Presenting so far the smallest or one of the very smallest contactless conductivity detectors for CE.
- BP 8 Rodemann T., Yang WC, Johns C, **Macka M.**, Paul R Haddad, New isoelectric buffers for capillary electrophoresis II: Bis-morpholine-derivative of a carboxylic acid as a low-molecular weight isoelectric buffer, *Anal. Chem.*, 77(1), 120-125, **2005**. (IF= 5.45, Cit.#=9)
 [A76] *The work presents the concept of low-MW isoelectric compounds, which can be used as unique buffers that are overall uncharged; published in the highest IF analytical journal (5.45).*
- BP 9 Silvijia Abele, Fu-Qiang Nie, František Foret, Brett Paull, **Mirek Macka**, UV-LED photopolymerised monoliths, *Analyst*, in print, **2008** (DOI:10.1039/B802693A). IF=3.55, Cit.# = 1
 [A104] *This work introduces a new concept of low-UV LEDs for photopolymerisations of monoliths.*
Chosen for promotion in the RSC supplement Chemical Technology;
Featured on the cover of the issue .
Selected as an Analyst Hot Article, Top ten accessed articles.
- BP 10 Zarah Walsh, Silvijia Abele, Brian Lawless, Dominik Heger, Petr Klán, Michael C. Breadmore, Brett Paull, **Macka M.**, Photo-initiated Polymerisation of Monolithic Stationary Phases Using Visible Region LEDs, *Chem. Commun.*, in print (DOI: 10.1039/B816958F), **2008**. IF= 5.14, 0 (only recently publ.)
 [A107] *This work features a new way of photopolymerisations of monoliths inside polyimide coated capillaries that are opaque for light up to 550 nm using photopolymerisation in visible region with red LEDs.*
Featured on the cover of the issue.

4 TEACHING

4.1 Supervision

Academic supervision from 1996 (after the career change to academia):

- Supervised in total over 40 students and postdoctoral fellows;
- 21 PhD and MSc, graduated 11;
- 5 Honours students (Australia) + 6 4th year project students (Ireland)

<i>Student/Postdoc (PD) *Primary supervisor</i>	<i>University</i>	<i>Degree or course</i>	<i>Commence</i>	<i>Completed</i>
1. Emily Hilder	UTAS	Hons	1996	1996
2. Michael Breadmore	UTAS	Hons	1997	1997
3. Emily Hilder	UTAS	PhD	1997	2000
4. Michael Breadmore	UTAS	PhD	1998	2001
5. Phil Zakaria	UTAS	Hons	1999	1999
6. Cameron Johns	UTAS	PhD	1999	2002
7. Ruby Ragonese	UTS, Sydney	PhD	1999	2001
8. Martin Muzikar	Masaryk University, Brno, Czech Republic	PhD	1999	2001
9. Phil Zakaria	UTAS	PhD	2000	2003
10. Sun Baoguo	UTAS	PhD	2000	2004
11. Jeff Mason	UTAS	Hons	2001	2001
12. Joe Hutchinson	UTAS	PhD	2001	2004
13. Samra Tulumovic	UTAS	Hons	2002	2002
14. Chisato Obara	UTAS, exchange student - Hokaido University, Japan	MSc	2002 (at UTAS)	2003 (at UTAS)
15. Evenhuis Chris *	UTAS	PhD	2004	2006
16. Fariborz Momenbeik	UTAS, exchange student - University of Isfahan, Iran	MSc	2004 (at UTAS)	2004 (at UTAS)
17. Tom Kazarian	UTAS	Hons	2005	2005
18. Thomas Kelly*	DCU	NCSR Hamilton Scholarship	2006	2006
19. Eva Mendel *	DCU, exchange student - TU Berlin	Internship	2007	2007
20. Dr. Silvija Abele *	DCU	(PDF) [†]	2006	current
21. Zarah Walsh *	DCU	PhD	2006	current
22. Marco Grundmann *	DCU	BSc 4 th Y.	2007	2007
23. Martha Purcell *	DCU	BSc 4 th Y.	2007	2007
24. Anna Stjernlöf *	DCU, exchange student - Karlstadt University, Sweden	MSc	2007	2007
25. Sébastien Cueff *	DCU, exchange student – INSA, Rennes, France	NCSR Hamilton Scholarship	2007	2007
26. Sébastien Mehlen *	DCU, exchange student – ENSICET, Toulouse, France	Internship	2007	2007
27. Lenka Krčmová *	DCU, exchange student –	PhD Erasmu	2007	2007

	Charles University, Hradec Králové, Czech Rep.	Exchange		
28. Hana Kalábová *	DCU, exchange student – Charles University, Hradec Králové, Czech Rep.	PhD Erasmus2007 Exchange	2007	
29. Aine Moyna	DCU	PhD	2007	current
30. Markéta Ryvolová *	DCU, exchange student – Masaryk University, Brno, Czech Republic	PhD Erasmus2007 Exchange		current
31. Sonya Gallagher	DCU	PhD	2007	current
32. Tomasz Piasecki *	DCU	PhD	2008	current
33. Amy Smith *	DCU	BSc 4 th Y.	2008	current
34. Philip McSweeney *	DCU	BSc 4 th Y.	2008	current
35. Uģis Daņilēvičs *	DCU	PhD	2008	current
36. Jennifer Su Be Tan *	DCU	PhD	2008	current
37. Aoibheann McGuigan *	DCU	BSc 4 th Y.	2008-9	current
38. Michael Norton*	DCU	BSc 4 th Y.	2008-9	current
39. Oxana Shvydkiv *	DCU	PhD	2008	current
40. Dr Fei Chen *	DCU	(PDF)	2008	current
41. Oksana Yavorska *	DCU	(technician)	2008-9	current
42. Nantana Nuchtavorn	Mahidol University, Thailand	PhD	2009	from 2009

† PDF = Postdoctoral Fellow; 4th Y. = 4th year student

4.2 Teaching/Lecturing

4.2.1 Summary of all teaching activities

2006–now, DCU	Analytical/multidisciplinary/miniaturisation/microfluidics/nanotechnology oriented courses CS302, CS409, CS453, CS454, CS502, CS504, special courses at other universities and at conferences
2000–2005, UTAS	KRA303, special courses at other universities and at conferences
1996–2006, UTAS	Supervisor or co-supervisor of Research students (Honours, BSc, MSc, PhD) and postdoctoral fellows, special courses at other universities and at conferences

- Undergraduate courses
 - 2006–to date: 3rd year CS302 Analytical Chemistry, part ‘Electromigration separation techniques’, Dublin City University, all lectures using digital media and PowerPoint and available through the university teaching & learning web-based portal <http://moodle.dcu.ie/>;
 - 4th year CS409 ‘Problem Solving’,
 - 4th year CS4453, CS454 ‘Project’ – a 10 week project including a detailed literature search with marked reports on both;
 - 2000–2005: 3rd year KRA303 Instrumental Analytical Chemistry, part ‘Electromigration separation techniques’, University of Tasmania;
 - My lectures “Capillary Electrophoresis, Part 1: Basic Principles” (48 slides), “Part 2: Technical & Instrumental Aspects” (42 slides) and “Part 3: Capillary Electrochromatography (CEC), CHIP technology & new developments” (69 slides) at UTAS were available to the students through my web page (<http://www-ssg.chem.utas.edu.au/Mirek/Teaching.html> till 04/2006) and through the university

WebCT teaching & learning web-based portal. My SETL evaluations were consistently excellent: 3.95-4.0 (new scale of 1-5) and 1.9 - 2.4 (old scale of 5-1).

- Postgraduate courses
 - 2006-to date: 5th year (Masters class) of advanced analytical techniques CS502 Separation Techniques and CS504 Portable, Process and Miniaturised Techniques (Miniaturisation, Lab-on-chip, Nanotechnology, each section ca. 80 slides), Dublin City University, all lectures using digital media and PowerPoint and available through the university teaching & learning web-based portal <http://moodle.dcu.ie/>.
- Special courses for PG / UG students and professionals
 - “Light Emitting Diodes in Chemical Analysis and Chemistry”, 1.5-day course at ‘Pittcon’, the largest chemistry international conference (ACS), course by Mirek Macka and Tomasz Piasecki, from 2009 (Chicago, IL, USA, 9-13 March 2009 <http://ca.pittcon.org/Technical+Program/tpabstra09.nsf/SCoursesByCat/25E9EE7FE1A7B344852574B7003C49E5?opendocument>);
 - “Capillary Electrophoresis in Ion Analysis: Principles and applications” ½-day course at International Ion Chromatography Conference (IICS series), an updated course from 2009 (Dublin, Ireland, 21-24 September 2009: <http://www.casss.org/displayconvention.cfm?conventionnbr=5974>);
 - “SPME – Solid Phase Micro-Extraction” given with Prof. Janusz Pawliszyn, University of Waterloo, Canada, 7-7 October 2008.
 - “ANN II - Applications-Oriented Use of Artificial Neural Networks in Science” given with Prof. Josef Havel, DCU, 10-11 March 2008.
 - “Applications-Oriented Use of Artificial Neural Networks in Science” given with Prof. Josef Havel, DCU, 6-7 June 2007.
 - 2-day series of lectures and courses on ‘CE / CEC’, ‘Miniaturisation in Analytical Chemistry’, and ‘Lab-on-a-chip’, as part of a 5-day course ‘Analysis of Bioactive Compounds’, Faculty of Pharmacy, Mahidol University, Bangkok, Thailand, 23-24 February 2004.
 - Basic CE course: ‘Introduction to CE and CEC’, Thammasat University, Bangkok, Thailand, 7 January 2002.
 - Advanced CE course: ‘Electrolytes for Indirect detection and Bioanalytical Instrumentation’, Masaryk University, Brno, Czech Republic, 17-19 December 2001, presented together with Dr. F. Foret, Institute of Analytical Chemistry, Academy of Sciences of the Czech Republic, Brno;
 - Advanced CE course: ‘CE of Inorganic and Low MW Organic Ions’, Masaryk University, Brno, Czech Republic, 19-20 September 2000.
- Talks at local high schools aiming at promoting studying chemistry, such as:
 - 1-day series of presentations ‘Science and Chemistry can be cool!’ for year 12 students at Elizabeth College, Hobart, Tasmania, Australia, 30 July 2004, and invited to Claremont College for July/August 2005.
- Invited lecturer and giving courses at professional meetings (see 3.6.4 p. 8).
- Adjunct Lecturer at the Department of Analytical Chemistry, Faculty of Sciences, Masaryk University, Brno, Czech Republic, from 2001; lecturing during the terms of invitations as Visiting Professor in 2001 and 2003.

4.2.2 Teaching at DCU (Dublin City University, from 2006)

Lectures (L), Tutorials (T), Seminars (S), Consultations (C),
Laboratory Project (P) were given as per the tables below:

<i>Years</i>	<i>University / Module Year Coordinator</i>	<i>Lectures (L), Tutorials (T), Seminars (S), Consultations (C), Laboratory Project (P)</i>	<i>No. of hours</i>	<i>Average student number p.a.</i>
2008/2009	DCU / CS504 Portable, process and miniaturised techniques 5 th year Gillian McMahan	Portable, process and miniaturised techniques - advanced analytical techniques: Miniaturisation Lab-on-chip Nanotechnology (each section ca. 80 slides) Credit rating: 5	L: 12 T: 2	15
2008/2009, 2007/2008, 2006/2007	DCU / CS302 Separation Techniques 3 rd year Prof.B.Paull	Capillary electrophoresis and related electromigration separation techniques: 1. Part 1: Basic Principles” (55 slides), 2 “Part 2: Technical & Instrumental Aspects” (43 slides), “Part 3: Capillary Electrochromatography (CEC), CHIP technology & new developments” (71 slides) Deliverables: Written exam; marked Credit rating: 5	L: 6 T: 1	50
2007/2008	DCU / CS502 Separation Techniques 5 th year Prof.B.Paull	Capillary electrophoresis and related electromigration separation techniques: Deliverables: Written exam; marked Credit rating: 5	L: 14 T: 2	15
2008/2009, 2007/2008, 2006/2007	DCU / CS409 Analytical Problem Solving 4 th year Prof.B.Paull	Analytical Problem Solving: Each student selects 2 “problems” from a broader area of applications of analytical techniques from a choice of ca. 20, conducts literature searches and delivers a written report, presents a talk a poster. Deliverables: (i) Written report, (ii) Talk and (iii) Poster; marked Credit rating: 5	T,S: 11 C: 4	3-5
2008/2009, 2007/2008, 2006/2007	DCU / CS453 Literature Survey 4 th year Dr.P.James	Literature survey on a given topic, usually background of the chosen Project (CS454) Deliverables: Report ca. 50pp.; marked Credit rating: 5	C: 5-10	2

2008/2009, DCU / CS454	Project – laboratory based experimental work on a chosen/assigned topic	P: 10-20	2
2007/2008, Project			
2006/2007 4 th year	Deliverables: Report ca. 50pp.; marked		
Dr.P.James	Credit rating: 20		

My lectures CS302 a CS305 are accessible through DCU teaching & learning web-based portal <http://moodle.dcu.ie/>.

4.2.3 Teaching at UTAS (University of Tasmania, 2000-2005)

Lectures (L), Tutorials (T), Seminars (S), Consultations (C), Laboratory Project (P) were given as par the tables below:

<i>Years</i>	<i>University / Module Year Coordinator</i>	<i>Lectures (L), Tutorials (T), Consultations (C), Laboratory Practical (P)</i>	<i>No. of hours</i>	<i>Average student number p.a.</i>
2005	UTAS / KRA303	Capillary electrophoresis and related	L: 9	20
2004	Instrumental	electromigration separation techniques:	T: 1	
2003	Analytical	1. Part 1: Basic Principles” (51 slides),		
2002	Chemistry	2 “Part 2: Technical & Instrumental		
2001	(semester 2 unit)	Aspects” (43 slides),		
2000	3 rd year	“Part 3: Capillary Electrochromatography		
	Dr.G.Dicinoski	(CEC), CHIP technology & new developments” (71 slides)		
		Deliverables: Written exam; marked		
		Credit rating: 12.5 %, 70% thereof		
2005	UTAS / KRA303	Supervision and practical guidance in the	P, C: 26	20
2004	Instrumental	laboratory, consultations on the Experiment		
	Analytical	topics.		
	Chemistry	Deliverables: Written Assignments; marked		
	3 rd year	Credit rating: 12.5 %, 30% thereof		
	Dr.G.Dicinoski			

My lectures KRA303 were accessible at UTAS, Australia, through web (<http://www-ssg.chem.utas.edu.au/Mirek/Teaching.html> till 04/2006) and also through the UTAS WebCT teaching & learning web-based portal <http://www.utas.edu.au/coursesonline/>. My SETL (Student Evaluation of Teaching and Learning) results were consistently excellent: 3.95-4.0 (new scale of 1-5) a 1.9 - 2.4 (old scale of 5-1).

4.2.4 External teaching / special courses at various universities

**Lectures (L), Tutorials (T), Seminars (S), Consultations (C),
Laboratory Project (P) were given as per the tables below:**

Year	University Course dates	Course Lectures (L), Tutorials (T), Consultations (C), Workshop (W)	No. of hou Average student number p.a.
2008 10-11 March	DCU, Dublin, Ireln	ANN II: Applications-Oriented Use of Artificial Neural Networks in Science (L, W, C)	L, W: 8 C: 8 15
2007 6-7 June	DCU, Dublin, Ireln	ANN: Applications-Oriented Use of Artificial Neural Networks in Science (L, W, C)	L, W: 8 C: 8 15
2004 23-24 February	Mahidol University, Bangkok, Thailand	“CE / CEC”, “Miniaturisation in Analytical Chemistry”, “Lab-on-a- chip” (L, T, C)	L, T, C:16 30
2002 7 January	Thammasat University, Bangkok, Thailand	“Introduction to CE and CEC” (L, T, C)	L, T, C: 8 30
2001 17-19 December	Masaryk University, Brno, Czech Republic	“Electrolytes for Indirect detection and Bioanalytical Instrumentation” (presented together with Dr. F. Foret, IACH ASCR Brno)	L, T, C: 8 10-20
2000 19-20 September	Masaryk University, Brno, Czech Republic	“CE of Inorganic and Low MW Organic Ions”	L, T, C: 8 10-20

5 OTHER SKILLS AND INTERESTS**5.1 Modern management and leadership methods**

- Workshops/courses such as with SkillPath (USA) – 2000, 2001, 2002 (Managing Multiple Projects, Hobart, 23.09.2002).

5.2 Computer & software skills

- **Domain administrator**
 - For OS Windows NT 4.0 (School of Chemistry UTAS, 1998-2006).
- **Software**
 - Advanced level user of: MS Office 2000 Professional software and others such as general databases (File Maker) and literature databases (Reference Manager 8.0, EndNote);
 - User of chemistry-oriented software such as ChemSketch and HyperChem Pro 6.

5.3 Language skills

5.3.1 Language skills

- Thre languages spoken & written fluently, others learnt to varying levels:

<i>Language</i>	<i>Level</i>	<i>Certificates or Exams Passed</i>
1. Czech	Native Language	High School leaving exam 1976
2. English	Fluent incl. writing, daily usage	TOEFL exam November 1991 – total score 577; using English daily at workplace since 02/1994
3. German	Fluent incl. writing, daily usage	State Examination, 1986, Brno, Certif. No. 194/8 using German daily at workplace during 01-12/1993 and at home from 2001
4. Russian	Reading & basic conversation	High School leaving exam 1976
5. Italian	Reading & basic conversation	
6. Spanish	Reading & basic conversation	
7. Latin	Basics (2 years at high school)	
8. French	Basics (1 sem.: pronunciation)	
9. Portuguese	Basics (1 sem.: pronunciation)	

5.3.2 Speed reading

- Completed a course in Speed reading (English) in 1999 (reading at about 500 words/min).

6 REFEREES (ALPHABETICALLY)

All the referees listed below include only those I worked with at some stage at the same location or on an officially funded shared project.

<p>Dr. Michael Bokel QA Manager, LONZA AG, CH-3930 Visp, Switzerland Ph.: +41-27-9486 104, Fax: +41-27-9476 104 E-mail: Michael.Bokel@lonza.ch URL: http://www.lonza.ch</p>	<p>Univ. Prof. Dr. Wolfgang Buchberger Institute of Analytical Chemistry, Head, Johannes-Kepler-University, Altenbergerstrasse 69, A-4040 Linz, Austria Ph.: +43-732 2468 8724, Fax: +43 732 2468 8679 E-mail: wolfgang.buchberger@jku.at URL: http://www.</p>
<p>Prof. Paul R. Haddad, DSc. Director, Australian Centre for Research on Separation Science (ACROSS), University of Tasmania, GPO Box 252C, Hobart, Tasmania 7001, Australia Ph.: +61-3-6226 2179, Fax: +61-3-6220 2858 E-mail: Paul.Haddad@utas.edu.au URL: http://www-ssg.chem.utas.edu.au/</p>	<p>Prof. RNDr. Josef Havel, DrSc. Department of Chemistry, Faculty of Sciences, Masaryk University, Kotlářská 2, 61137 Brno, Czech Republic Ph.: +420-5-41129568, Fax: +420-5-41211214 E-mail: havel@chemi.muni.cz URL: http://www.chemi.muni.cz/~analytika/</p>
<p>Prof. Philip Marriott Professor of Separation Science, School of Applied Science, RMIT, GPO Box 2476V, Melbourne, Victoria 3001, Australia Ph.: +61-3-9925 2632, Fax: +61-3-96391321 E-mail: philip.marriott@rmit.edu.au URL: http://www.rmit.edu.au/appchem/chromatography</p>	<p>A/Prof. Brett Paull School of Chemical Sciences, Head, Dublin City University, Dublin 9, Ireland Ph.: +353-1-7005060, Fax: +353-1-7005503 E-mail: brett.paull@dcu.ie URL: http://www.dcu.ie</p>

7 COPIES OF OFFICIAL DOCUMENTS

7.1 University Diploma (RNDr. 1981, Masaryk University, Brno) 5-year, equivalent to BSc + MSc.

Diploma 'with honours' from the 'Universita J.E.Purkyně', today's Masaryk University, Brno, Czech Republic.

ČESKOSLOVENSKÁ SOCIALISTICKÁ REPUBLIKA

Vysoká škola: Univerzita J. E. Purkyně v Brně
Číslo diplomu | * 3456

Fakulta
přirodovědecká
C 100-60/81-51

DIPLOM

S VYZNAMENÁNÍM

Miroslav MACKA
(jméno a příjmení)

narodeno(a) dne 5. února 19 57 v Brně okres Brně

ukončil(a) studium výkonem státní závěrečné zkoušky, absolvoval(a) studium s vyznamenáním a získal(a) vysokoškolské vzdělání ve studijním oboru chemie

Podle § 44 odst. 2 nebo § 46 odst. 2 zákona č. 39/1980 Sb., o vysokých školách, se mu (jí) přiznává titul

RNDr.
doktor přírodních věd

V Brně dne 2. června 19 81

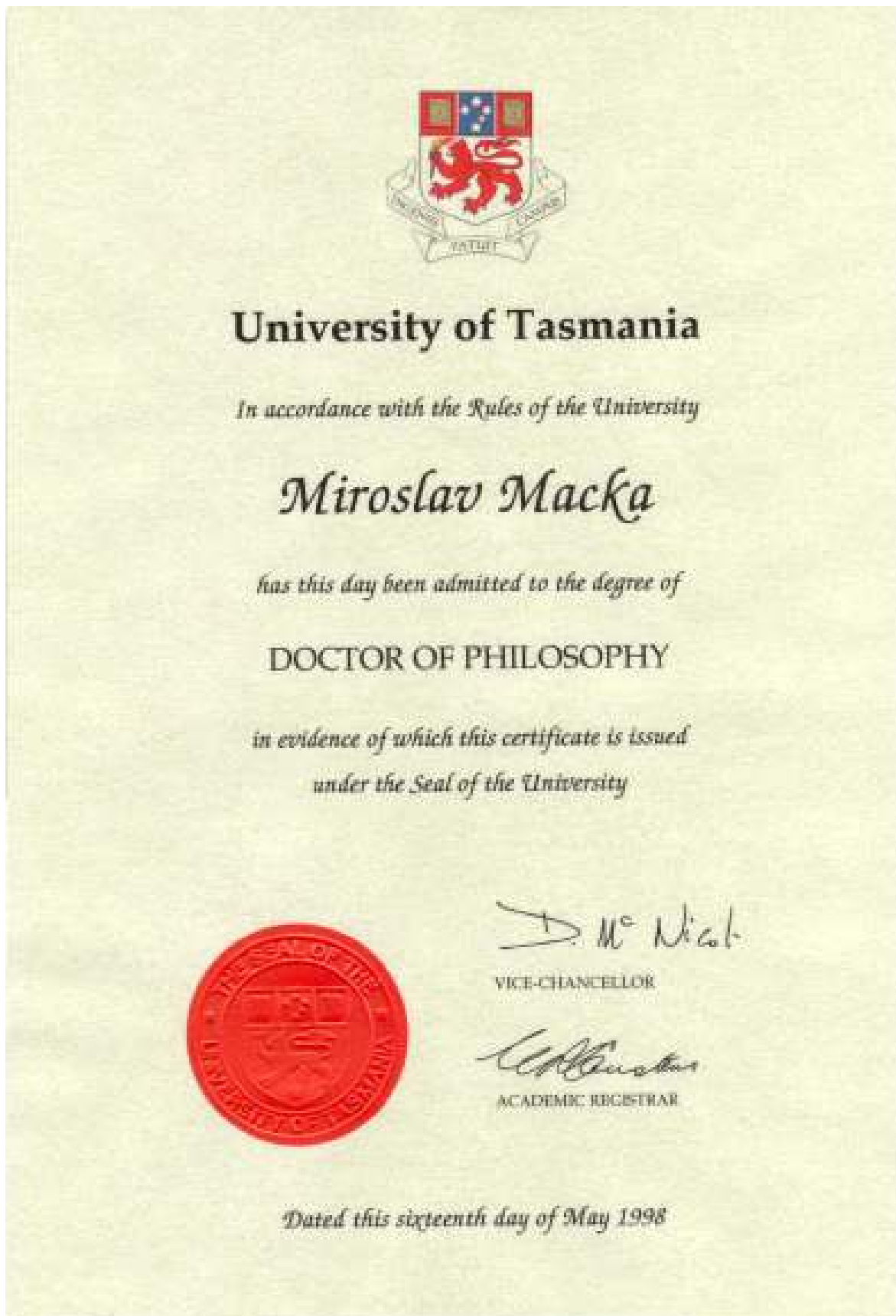
[Signature]
rektor vysoké školy

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děkan fakulty

7.2 PhD Diploma (PhD 1998, UTAS, Hobart, Australia)

7.2.1 Diploma



7.2.2 Confirmation of the Entry in the PhD Registry UTAS (1998)

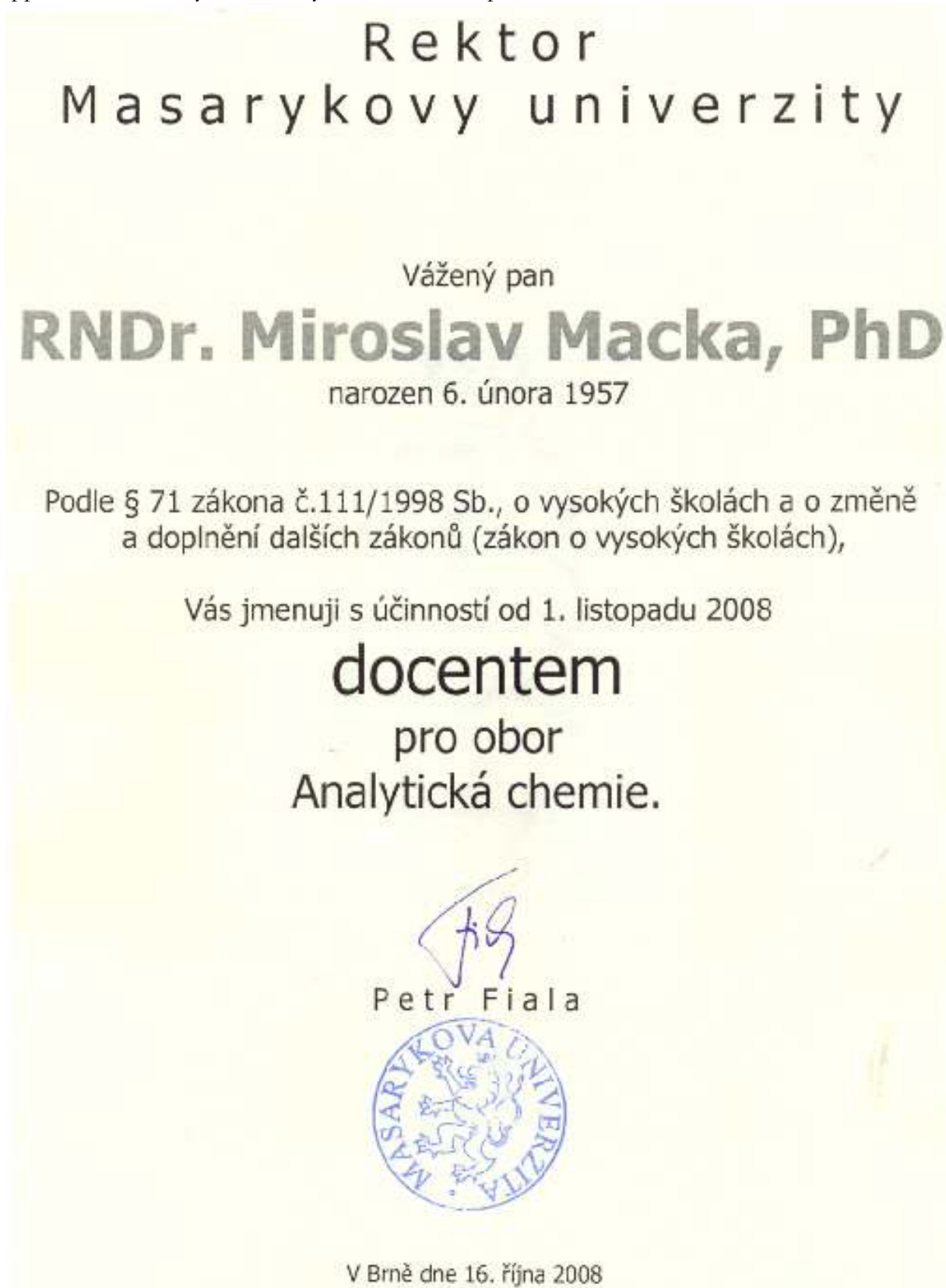


**7.3 Associate Professor (“Docent”) Appointment Decree
(16 Oct. 2008, Masaryk University, Brno)**

Appointment: Masaryk University, Brno, Czech Republic, 16 Oct. 2008.

7.3.1 Appointment Decree by the Rektor (President) of Masaryk University

Appointment: Masaryk University, Brno, Czech Republic, 16 Oct. 2008.



7.3.2 Letter of Appointment by the Rektor (President) of Masaryk University

MASARYKOVA UNIVERZITA

Potvrzení ke jmenování docentem

Brno 16. října 2008

Č. j. 13 181/2008

Masarykova univerzita, zastoupená rektorem prof. PhDr. Petrem Fialou, Ph.D., potvrzuje tímto, že se pan **RNDr. Miroslav Macka, PhD**, nar. 6. února 1957, bytem 17 Edden Grove, Doonabate, Co., Dublin, Irsko, dne 1. října 2008 úspěšně habilitoval před Vědeckou radou Přírodovědecké fakulty podle § 72 zákona č. 111/1998 Sb., o vysokých školách a o změně a doplnění dalších zákonů (zákon o vysokých školách) v oboru Analytická chemie.

Habilitační práce: Kapilární elektroforéza – příspěvky k rozvoji techniky

Habilitační komise: prof. Ing. Vratislav Chromý, CSc., předseda
prof. RNDr. Zdeněk Gatz, CSc.
doc. Ing. Pavel Janoš, CSc.
prof. RNDr. Juraj Ševčík, Ph.D.
prof. Ing. Karel Štulík, DrSc.

Oponenti habilitační práce: prof. RNDr. Lumír Sommer, DrSc.
prof. Ing. Pavel Jandera, DrSc.
Ing. František Foret, CSc.



prof. PhDr. Petr Fiala, Ph.D.
rektor Masarykovy univerzity

7.4 Certifications

7.4.1 Certification of Teaching Activities (DCU)



Dublin City University
 Ollscoil Chathair Bhaile Átha Cliath

School of Chemical Sciences
 Dublin 9, Ireland

Prof. Brett Paull
 Head of School

Letter of confirmation of teaching activities at DCU of Dr. M. Macka

Herewith it is confirmed that Dr. Miroslav Macka has been teaching the below specified modules at Dublin City University from 2006.

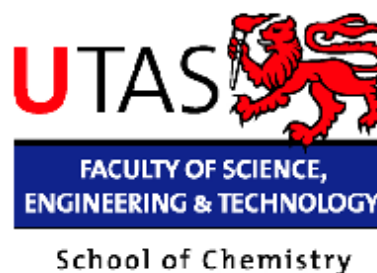
Years	University / Module Year Coordinator	Lectures (L), Tutorials (T), Seminars (S), Consultations (C), Laboratory Project (P)	No. of hours	Average student number p.a.
2007/2008 06/2007	DCU / CS302 Separation Techniques 3 rd year Prof. B. Paull	Capillary electrophoresis and related electromigration separation techniques: 1. Part 1: Basic Principles* (48 slides), 2. Part 2: Technical & Instrumental Aspects* (42 slides), *Part 3: Capillary Electrochromatography (CEC), CHIP technology & new developments* (66 slides) Deliverables: Written exam, marked. Credit rating: 5	L: 6 T: 1	50
2007/2008	DCU / CS502 Separation Techniques 5 th year Prof. B. Paull	Capillary electrophoresis and related electromigration separation techniques: Deliverables: Written exam, marked. Credit rating: 5	L: 14 T: 2	15
2007/2008 06/2007	DCU / CS405 Analytical Problem Solving 4 th year Prof. B. Paull	Analytical Problem Solving. Each student selects 2 "problems" from a broader area of applications of analytical techniques from a choice of ca. 20, conducts literature searches and delivers a written report, presents a talk a poster. Deliverables: (i) Written report, (ii) Talk and (iii) Poster, marked Credit rating: 5	T, S: 11 C: 4	3-5
2007/2008 06/2007	DCU / CS453 Literature Survey 4 th year Dr. P. James	Literature survey on a given topic, usually background of the chosen Project (CS454) Deliverables: Report ca. 50pp.; marked Credit rating: 5	C: 5-10	2
2007/2008 06/2007	DCU / CS454 Project 4 th year Dr. P. James	Project – laboratory based experimental work on a chosen/assigned topic Deliverables: Report ca. 50pp.; marked Credit rating: 20	P: 10-20	2

Lectures CS302 a CS305 are available for the students through DCU School of Chemical Sciences internal server and through DCU teaching & learning web-based portal <http://moodle.dcu.ie/>

Prof. Brett Paull, Head
 School of Chemical sciences
 Dublin City University

Telephone: 353 (0)1 700 5305
 Facsimile: 353 (0)1 700 5503
 Email: brett.paull@dcu.ie
 Website: www.dcu.ie

7.4.2 Certification of Teaching Activities (UTAS)



Letter of confirmation of teaching activities at UTAS of Dr. M. Macka

Herewith it is confirmed that Dr. Miroslav Macka was teaching the below specified modules at the University of Tasmania.

Years	University / Module Year <u>Coordinator</u>	Lectures (L), Tutorials (T), Consultations (C), Laboratory Practical (P)	No. of hours	Average student number p.a.
2005 2004 2003 2002 2001	UTAS / KRA303 Instrumental Analytical Chemistry (semester 2 unit) 3 rd year Dr.G.Dicinoski	Capillary electrophoresis and related electromigration separation techniques: 1. Part 1: Basic Principles" (51 slides), 2 "Part 2: Technical & Instrumental Aspects" (43 slides), "Part 3: Capillary Electrochromatography (CEC), CHIP technology & new developments" (71 slides) Deliverables: Written exam; marked Credit rating: 12.5 %, 70% thereof	L: 5 T: 1	20
2005 2004	UTAS / KRA303 Instrumental Analytical Chemistry 3 rd year Dr.G.Dicinoski	Supervision and practical guidance in the laboratory, consultations on the Experiment topics. Deliverables: Written Assignments; marked Credit rating: 12.5 %, 30% thereof	P, C: 16	20

Lectures for KRA303 were available for the students through the web (<http://www.ssg.chem.utas.edu.au/Mirek/Teaching.html> till 04/2006) and through UTAS WebCT teaching & learning web-based portal <http://www.utas.edu.au/courseonline/>. SETL (Student Evaluation of Teaching and Learning) evaluations were consistently excellent: 3.95-4.0 (new scale of 1-5) and 1.9 - 2.4 (old scale of 5-1).

Brian Yates

Professor Brian Yates
Head, School of Chemistry

Private Bag 75, Hobart
Tasmania 7001 Australia
Telephone + 61 3 6226 2167
Facsimile +61 3 6226 2858
<http://www.utas.edu.au/chem>
Email Brian.Yates@utas.edu.au

7.4.3 Certification of Registration as PhD Supervisor (UTAS 2005-2008)



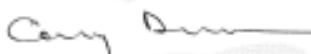
CERTIFICATE OF REGISTRATION

This is to certify that

Dr Miroslav Macka

has been approved as a Supervisor and/or Co-supervisor for
graduate research candidates at the
University of Tasmania

Registration Number: 940328
Period of registration: 23-May-05 to 22-May-08


Chair, Board of Graduate Research


Chair, Academic Senate

7.4.4 Letter of Invitation as a Visiting Professor (MU 2001)



MASARYK UNIVERSITY, Faculty of Science, Department of Analytical Chemistry
Brno, Czech Republic

To whom it is concerned

CONFIRMATION

I confirm herewith that

Dr. Miroslav MACKA, PhD

ARC Australian Research Fellow

from : ACROSS (Australian Centre for Research on Separation Science), School of Chemistry, University of Tasmania., GPO Box 252-75, Hobart, TAS 7001, AUSTRALIA.

has, as an **INVITED PROFESSOR**, given a course of **Capillary Electrophoresis and Capillary Electrochromatography with a content**

CE/CEC Course

Part 1: Electrolytes for indirect detection

Part 2: Capillary Electrochromatography (CEC) and new developments

at Department of Analytical Chemistry, Faculty of Science, MASARYK UNIVERSITY, Czech Republic,

December 17-21, 2001.

Dr. Macka gave the lectures at our university and the course have had a high level and it was very positively evaluated both by non-graduated and graduated PhD students as well as other participants from the other chemistry departments of Faculty of Science and Academy of Sciences research institute.

Brno, August 5, 2002

Prof. RNDr Josef HAVEL, DrSc,
Head

MASARYKOVA UNIVERZITA V BRNĚ
Přirodovědecká fakulta
3020 KATEDRA ANALYTICKÉ CHEMIE
602 00 Brno, Koliářská 2

7.4.5 Letter of Invitation as a Visiting Professor (MU 2003)



MASARYK UNIVERSITY, Faculty of Science, Department of Analytical Chemistry
Brno, Czech Republic

To whom it is concerned

CONFIRMATION

I confirm herewith that

Dr. Miroslav MACKA, PhD

ARC Australian Research Fellow

from : ACROSS (Australian Center for Research on Separation Science), School of
Chemistry, University of Tasmania., GPO Box 252-75, Hobart, TAS 7001, AUSTRALIA,
has been invited as a

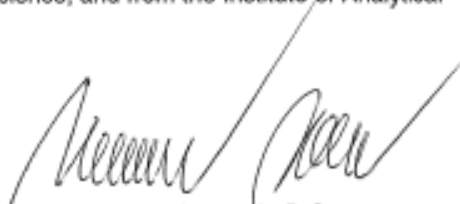
VISITING PROFESSOR

at Department of Analytical Chemistry, Faculty of Science, MASARYK UNIVERSITY,
Czech Republic,

from 23rd June to 11th July 2003.

Dr. Macka gave a seminar at our university that was very positively welcomed both by
non-graduated and graduated PhD students as well as other participants from other
chemistry departments of the Faculty of Science, and from the Institute of Analytical
Chemistry, Czech Academy of Science.

Brno, 9 July, 2003


Prof. RNDr Josef HAVEL, DrSc,
Head

Masaryk University
DEPARTMENT OF ANALYTICAL CHEMISTRY
Kotlářská (street) 2
611 37 BRNO Czech

7.4.6 Letter of Invitation as a Visiting Fellow (ECU, Perth, 2005)

14 April 2005

Dr Mirek Macka
 Australian Centre for Research on Separation Science
 School of Chemistry
 University of Tasmania
 GPO Box 252C Hobart
 Tasmania 7001



JOONDALUP CAMPUS
 100 Joondalup Drive,
 Joondalup
 Western Australia 6027
 Telephone 134 328
 Facsimile (08) 9280 1257
 ABN 54 261 485 261

Dear Dr Macka,

LETTER OF INVITATION – VISITING FELLOW TO THE UNIVERSITY

I am delighted to confirm that the Faculty of Computing, Health and Science is prepared to welcome you as Visiting Fellow in our School of Natural Sciences from 7 May to 15 May 2005.


Dr Mary Boyce from the School of Natural Sciences has been advised of the success of your application and no doubt will liaise with you in the interim prior to your arrival.

I would like to outline a few matters with which we must comply:

- Your visit will be supported from the Faculty funds to a maximum of AUS2,164 for items such as accommodation or transport. Please provide receipts as they become available to Mrs Marilyn Crosthwaite (contacts below*) and Marilyn will be happy to organise your reimbursement promptly. Please note that the receipts must clearly show the amount as "paid". We are not able to pay accounts on your behalf as this involves GST and other implications.
- You will need to ensure that you comply with visa requirements and also Australian Immigration Department regulations and that you are aware of any implications well before you leave your home country. For your information, the Department's home page is <http://www.immi.gov.au>.
- Finally, please ensure that you and any persons you wish to accompany you are covered by adequate medical insurance; further details may be obtained from the web page quoted above. Please also bear in mind that this letter of invitation is directed solely to you. No other accompanying family members or friends are included.

I extend a very warm welcome to you on behalf of the University, I am sure your visit will prove both enjoyable and productive.

With my best wishes,


 Prof Linda Kristjansson
 Associate Dean, Office of Research and Higher Degrees
 Faculty of Computing, Health and Science
 Edith Cowan University
 Joondalup WA 6027

Tel: (08) 9304 2617
 Fax: (08) 9304 2885
 Email: L.kristjansson@ecu.edu.au

*Mrs Marilyn Crosthwaite
 Research and Higher Degrees Office
 Building 19
 100 Joondalup Drive
 Joondalup WA 6027
 Tel: (08) 9304 2474

Cc: Professor Tony Watson, Executive Dean

8 LIST OF PUBLICATIONS

Scientometric data to: 03/10/2009

* Denotes publications submitted as the corresponding author.

8.1 Book chapters and reviews (refereed)

IF denotes the latest journal impact factors and Cit. the numbers of citations to date.

	Publication	IF	Cit.
B1	Haddad P.R., Macka M. , Hilder E.F., Bogan D.P., The separation of metal ions and metal containing species by Micellar electrokinetic capillary chromatography, including utilisation of metal ions in separations of other species, a review, <i>J. Chromatogr. A</i> , 780, 329-341, 1997 .	3.359	30
B2	Macka M. , Haddad P.R., Determination of metals by CE, an invited review, <i>Electrophoresis</i> , 18(12-13), 2482-2501, 1997 Nov.	4.	92
B3	Haddad P.R., Doble P., Macka M. , Developments in sample preparation and separation techniques for the determination of inorganic ions by ion chromatography and capillary electrophoresis, a review, <i>J. Chromatogr. A</i> , 856(1-2), 145-177, 1999 Sep 24.	3.359	51
B4	Doble P., Macka M. , Haddad P.R., Design of background electrolytes for indirect detection of anions by capillary electrophoresis, an invited review, <i>TRAC</i> , 19, 10-17, 2000 .	3.888	27
B5	Macka M. , Haddad P.R., <i>Inorganic Ions – Capillary Electrophoresis</i> , in Wilson I (Ed), <i>Encyclopaedia of Separation Science</i> , Academic press, London, August 2000 , pp. 3128-3140.	0	7
B6	Fritz J.S., Macka M. , Solid Phase Trapping of Solutes for Further Chromatographic or Electrophoretic Analysis, an invited review, <i>J. Chromatogr. A</i> , 902(1), 137-166, 2000 .	3.359	32
B7*	Macka M. , Johns C., Doble P., Haddad P.R., Indirect detection in capillary electrophoresis: I. Principles, an invited article for <i>LC-GC</i> , 19(1), 38-47, 2001 .	0.519	31
B8*	Macka M. , Johns C., Doble P., Haddad P.R., Indirect detection in capillary electrophoresis: II. Practical Rules, an invited article for <i>LC-GC</i> , 19(2), 178-188, 2001 .	0.519	23
B9	Baoguo S., Macka M. , Haddad P.R., Speciation of tin, lead, mercury, arsenic and selenium compounds by capillary electrophoresis, a review, <i>Int. J. Environ. Anal. Chem.</i> , 81(3), 161-205, 2001 .	0.691	18
B10	Breadmore M.C., Hilder E.F., Macka M. , Haddad P.R., Determination of Inorganic Anions by Capillary Electrochromatography, <i>TRAC</i> , 20(6-7), 355-364, 2001 Jun-Jul.	3.888	14
B11	Johns C., Macka M. , Haddad P.R., Enhancement of Detection Sensitivity for Indirect Photometric Detection of Anions and Cations in Capillary Electrophoresis, a review, <i>Electrophoresis</i> , 24(12-13), 2150-2167, 2003 Jun, DOI:10.1002/elps.200305446.	4.040	22
B12*	Evenhuis C.J., Guijt R.M., Macka M. , Haddad P.R., Determination of Inorganic Ion using Microfluidic Devices, a review, <i>Electrophoresis</i> , 25(21-22), 3602-3624, 2004 Nov, DOI 10.1002/elps.200406120 (accepted 15 Sep 2004, Published Online 26 Nov 2004).	3.743	23
B13	Guijt R.M., Evenhuis C.J., Macka M. , Haddad P.R., Conductivity detection for conventional and miniaturised capillary electrophoresis systems, a review, <i>Electrophoresis</i> , 25(23-24), 4032-4057, 2004 Dec, DOI 10.1002/elps.200406156 (accepted 12 Aug 2004).	3.743	61

B14	Macka M. , Haddad P.R., <i>Capillary Electrochromatography</i> , in Worsfold P.J., Townshend A., Poole C. F. (Eds.), <i>Encyclopaedia of Analytical Science</i> , 2nd Ed., Elsevier, Oxford, January 2005 , Vol. 1, pp. 323-334 (accepted 07 Apr 2004).	0	1
B15	Evenhuis C.J., Guijt R.M., Macka M. , Marriott P., Haddad P.R., Heat Production and Dissipation in Capillary Electrophoresis, in Landers J (Ed.), <i>Capillary Electrophoresis</i> , 3 rd Ed., 2007 (submitted 27 Jul 2006).	0	0
B16	Michael C. Breadmore, Cameron Johns, Mirek Macka, Markéta Ryvolová, Paul R. Haddad, Recent significant developments in the determination of inorganic ions by capillary electrophoresis, <i>Electrophoresis</i> , in print, 2009 , DOI:10.1002/elps.2009_____ (accepted 16 March 2009).	4.1	0
	TOTAL book chapters and reviews	39.208	432

8.2 Refereed Articles in Scholarly Journals

	Publication	IF	Cit.
A1	Macka M. , Kubán V., Spectrophotometric study of the acid-base and optical properties of the 5-bromo and 5-chloro derivatives of 2-(2-pyridylazo)-5-(diethylamino)phenol (BrPADAP, CIPADAP) and their complexation equilibria with zinc (II) ions, <i>Collect.Czech.Chem.Commun.</i> , 47(10), 2676-91, 1982 .	1.062	13
A2	Kubán V., Macka M. : Spectrophotometric study of the complexation equilibria of cadmium ions with 5-bromo and 5-chloro derivatives of 2-(2-pyridilazo)-5-diethylaminophenol (BrPADAP, CIPADAP), <i>Collect.Czech.Chem.Commun.</i> , 48(1), 52-59, 1983 .	1.062	9
A3	Kubán V., Macka M. , Nonova D., Stojanov K., Köthe J., Comparison of extraction spectrophotometric and tenside-solubilization spectrophotometric methods of determination of zinc (II) and cadmium (II) ions with halogen derivatives of 2-(2-pyridylazo)-5-(diethylamino)-phenol (BrPADAP, CIPADAP), <i>Scripta Fac.Sci.Nat.Univ.Purk.Brun.</i> , 14(10), 503-15, 1984 .	0.1	0
A4	Salamoun J., Macka M. , Nechvátal M., Matousek M., Knesel L., Identification of products formed during UV irradiation of tamoxifen and their use for fluorescence detection in high performance liquid chromatography, <i>J. Chromatogr.</i> , 514(2), 179-197, 1990 Aug 29.	3.359	15
A5*	Macka M. , Borák J., Kiss F., Separation of some platinum(II) complexes using ionic strength gradient on solvent generated ion-exchange sorbent, <i>J. Chromatogr.</i> , 586(2), 291-295, 1991 Nov 22.	3.359	15
A6*	Macka M. , Borák J., Chromatographic behaviour of some platinum(II) complexes on octadecylsilica dynamically modified with a mixture of a cationic and an anionic amphiphilic modifier, <i>J. Chromatogr.</i> , 641(1), 101-113, 1993 .	3.359	15
A7*	Macka M. , Seménková L., Borák J., Mikes V., Popl M., Determination of acyclovir in serum and plasma by micellar liquid chromatography, <i>J. Liq. Chromatogr.</i> , 16(11), 2359-2386, 1993 .	0.836	15
A8*	Macka M. , Borák J., Seménková L., Kiss F., Decomposition of cisplatin in aqueous solutions containing chlorides by ultrasonic energy and light, <i>J. Pharm.Sci.</i> , 83(6), 815-818, 1994 Jun.	2.18	13
A9*	Macka M. , Mettler H.-P., Bokel M., Röder W., Analysis of silanised polyglycerols by supercritical fluid chromatography, <i>J.Chromatogr. A</i> , 675(1-2), 267-270, 1994 .	3.359	3

A10	Macka M. , Haddad P.R., Buchberger W., Separation of some metallochromic ligands by capillary zone electrophoresis and micellar electrokinetic capillary chromatography, <i>J. Chromatogr. A</i> , 706(1-2), 493-501, 1995 .	3.359	19
A11	Macka M. , Andersson P., Haddad P.R., Linearity evaluation in absorbance detection: The use of light emitting diodes for on-capillary detection in capillary electrophoresis, <i>Electrophoresis</i> , 17(12), 1898-1905, 1996 Dec.	4.	38
A12	Macka M. , Paull B., Andersson P., Haddad P.R., Determination of barium and strontium by capillary zone electrophoresis using an electrolyte containing sulfonazo III, <i>J. Chromatogr. A</i> , 767(1-2), 303-310, 1997 .	3.359	19
A13	Hilder E.F., Macka M. , Bogan D.P., Haddad P.R., Separation of metal bis(2-hydroxyethyl)-dithiocarbamate complexes by micellar electrokinetic capillary chromatography, <i>Anal. Commun.</i> , 34(2), 63-65, 1997 .	2.783	14
A14	Macka M. , Haddad P., Gebauer P., Bocek P., System peaks in CZE. 3. Practical rules for predicting the existence of system peaks in capillary zone electrophoresis of anions using indirect spectrophotometric detection, <i>Electrophoresis</i> , 18(11), 1998-2007, 1997 Oct.	4.	32
A15	Doble P., Macka M. , Andersson P., Haddad P.R., Buffered chromate electrolytes for separation and indirect absorbance detection of inorganic anions in capillary electrophoresis, <i>Anal. Commun.</i> , 34(11), 351-353, 1997 Nov.	2.783	28
A16	Paull B., Macka M. , Haddad P.R., Determination of calcium and magnesium in water samples by high performance liquid chromatography using a graphitic stationary phase and a mobile phase containing o-phthaleine complexone, <i>J. Chromatogr. A</i> , 789(1-2), 329-337, 1997 Nov 21.	3.359	19
A17	Macka M. , Paull B., Bogan D., Haddad P.R., The role of ligand purity upon separations of alkaline earth metals as complexes with arsenazo I by capillary electrophoresis, <i>J. Chromatogr. A</i> , 793(1), 177-185, 1998 Jan 9.	3.359	8
A18	Macka M. , Andersson P., Haddad P.R., Changes in electrolyte pH due to electrolysis during capillary zone electrophoresis, <i>Anal. Chem.</i> , 70(4), 743-749, 1998 Feb 15. Figures 4-7 are in colour. Fig.5 features on the front cover of the Feb 15 issue.	5.45	61
A19	Macka M. , Nesterenko P., Andersson P., Haddad P.R., Separation of uranium(IV) and lanthanides by capillary electrophoresis using on-capillary complexation with arsenazo III, <i>J. Chromatogr. A</i> , 803(1-2), 279-290, 1998 Apr 17.	3.359	42
A20	Doble P., Macka M. , Haddad P.R., Use of dyes as indirect detection probes for the high sensitivity determination of anions by CE, <i>J. Chromatogr. A</i> , 804(1-2), 327-336, 1998 Apr 24.	3.359	41
A21	Doble P., Macka M. , Haddad P.R., Factors influencing the choice of buffer in Background Electrolytes For Indirect Detection of Fast Anions by Capillary Electrophoresis, <i>Electrophoresis</i> , 19(12), 2257-2261, 1998 Sep.	4.	11
A22	Hilder E.F., Macka M. , Haddad P.R., Separation of dithiocarbamate metal complexes by micellar electrokinetic chromatography, <i>Analyst (London)</i> , 123(12), 2865-2870, 1998 Dec.	2.783	16
A23	Macka M. , Nesterenko P., Haddad P.R., Investigation of solute-wall interactions in separation of lanthanides and uranyl by capillary electrophoresis using on-capillary complexation with arsenazo III, <i>J. Microcolumn Separations</i> , 11(1), 1-9, 1999 .	1.918	12
A24	Breadmore M.C., Macka M. , Haddad P.R., Theoretical migration model for micellar electrokinetic capillary chromatography and its application to the separation of anionic metal complexes of HEDTC and CDTA, <i>Anal. Chem.</i> , 71(9), 1826-1833, 1999 May 1.	5.45	16

- A25 Vachirapatama N., **Macka M.**, Paull B., Münker C., Haddad P.R., 3.359 15
Determination of niobium(v) and tantalum (v) as 4-(2-pyridylazo)
resorcinol-citrate ternary complexes by ion-interaction reversed-phase high-
performance liquid chromatography, *J. Chromatogr. A*, 850(1-2), 257-268,
1999 Jul 30.
- A26 Breadmore M.C., **Macka M.**, Haddad P.R., Manipulation of Separation 4. 21
Selectivity for alkali metals and ammonium in ion-exchange capillary
electrochromatography using a suspension of cation-exchange particles in
the electrolyte as a pseudostationary phase, *Electrophoresis*, 20(10), 1987-1992,
1999 Jul.
- A27 Havel J., Breadmore M.C., **Macka M.**, Haddad P.R., Artificial neural 3.359 33
networks for computer –aided modelling and optimisation in capillary
micellar electrochromatography, *J. Chromatogr. A*, 850(1-2), 345-353, **1999** Jul
30.
- A28 Hilder E.F., **Macka M.**, Haddad P.R., Mixed Mode Capillary 2.783 29
Electrochromatographic Separation of Anionic Analytes, *Anal. Commun.*,
36(8), 299-304, **1999** Aug.
- A29 **Macka M.**, Gerhardt G., Andersson, P., Cassidy R., Haddad P.R., Capillary 4. 12
electrophoresis of anions with end-capillary potentiometric detection using a
copper electrode, *Electrophoresis*, 20(12), 2539-2546, **1999** Aug.
- A30 Hilder E.F., Klampfl C.W., **Macka M.**, Haddad P.R., Myers P., 2.783 15
Electroosmotic and pressure driven flow properties of frits for packed
column capillary electrochromatography prepared from functionalised and
bare silica packings, *Analyst*, 125(1), 1-4, **2000**.
- A31 Johns C., **Macka M.**, Haddad P.R., Indirect photometric detection of 4. 27
anions in CE using dyes as probes and electrolytes buffered with an
isoelectric ampholyte, *Electrophoresis*, 21(7), 1312-1319, **2000** Apr.
- A32 Breadmore M.C., Boyce M., **Macka M.**, Avdalovic N., Haddad P.R., On- 2.783 31
capillary ion-exchange preconcentration of inorganic anions using open-
tubular capillaries followed by elution with a transient isotachophoretic
gradient, *Analyst*, 125(5), 799-802, **2000**.
- A33* **Macka M.**, Haddad P.R., Elution mechanism in ion chromatography using 3.359 6
an isoelectric ampholytic mobile phase, *J. Chromatogr. A*, 884(1-2), 287-296,
2000 Jul 7.
- A34 Breadmore M.C., **Macka M.**, Avdalovic N., Haddad P.R., Open-Tubular 2.783 31
Ion-Exchange Capillary Electrochromatography of Inorganic Anions,
Analyst, 125(7), 1235-1241, **2000** (published on the web 20th June 2000).
- A35 Breadmore M.C., Boyce M., **Macka M.**, Avdalovic N., Haddad P.R., Peak 3.359 21
Shapes in Open-Tubular Ion-Exchange Capillary Electrochromatography of
Inorganic Anions, *J. Chromatogr. A*, 892(1-2), 303-313, **2000** Sep 15.
- A36 Zakaria P., **Macka M.**, Gerhardt G., Haddad P.R., Pulsed Potentiometric 2.783 17
Detection in Capillary Electrophoresis using Platinum Electrodes, *Analyst*,
125(9), 1519-1523, **2000** (published on the web in the Advance Articles 24th
August 2000).
- A37 Boyce M., Breadmore M.C., Doble P., **Macka M.**, Haddad P.R., Indirect 4. 16
Spectrophotometric Detection of Inorganic Anions in Ion-Exchange
Capillary Electrochromatography, *Electrophoresis*, 21(5), 3073-3080, **2000** Sep.
- A38 Breadmore M.C., **Macka M.**, Avdalovic N., Haddad P.R., On-capillary ion- 5.45 43
exchange preconcentration of inorganic anions in open-tubular capillary
electrochromatography with elution using transient-isotachophoretic
gradients. 2. Characterisation of the isotachophoretic gradient, *Anal. Chem.*,
73(4), 820-828, **2001** Feb 15 (published on the web in the ASAP articles
12th January 2001).

A39	Breadmore M.C., Hilder E.F., Macka M. , Haddad P.R., Modelling the Migration of Inorganic Anions in Ion-Exchange Capillary Electrochromatography, <i>Electrophoresis</i> , 22(3), 503-510, 2001 Feb.	4.	11
A40*	Macka M. , Johns C., Grosse A., Haddad P.R., New Isoelectric Buffers for Capillary Electrophoresis: N-Carboxymethylated Polyethyleneimine as a Macromolecular Isoelectric Buffer, <i>Analyst</i> , 126(4), 421-426, 2001 (published on the web in the Advance Articles 15th March 2001).	2.783	8
A41	Hilder E.F., Zemann A.J., Macka M. , Haddad P.R., Anion-Exchange Capillary Electrochromatography with Indirect UV and Direct Contactless Conductivity Detection, <i>Electrophoresis</i> , 22(7), 1273-1281, 2001 Apr.	4.	36
A42	Vachirapatama N., Doble P., Yu Z., Macka M. , Haddad P.R., Separation of ternary complexes of niobium(V) and tantalum(V) with metallochromic ligands and citrate using capillary electrophoresis, <i>Anal. Chim. Acta</i> , 434(2), 301-307, 2001 May 11.	2.588	11
A43	Johns C., Macka M. , Haddad P.R., King M., Paull B., Practical Method for Evaluation of Linearity and Effective Pathlength of On-Capillary Photometric Detectors in Capillary Electrophoresis, <i>J. Chromatogr. A</i> , 927(1-2), 237-241, 2001 Aug 24, (Available online on ChemWeb.com 22 August 2001).	3.359	12
A44	Yokoyama T., Macka M. , Haddad P.R., Determination of association constants of inorganic ions with C12- and C14-alkyldimethylammonio propane sulfonate zwitterionic surfactants using capillary electrochromatography, <i>Anal.Chim.Acta</i> , 442(2), 221-230, 2001 Sep 5.	2.588	15
A45	Yokoyama T., Macka M. , Haddad P.R., Modification of the Electroosmotic Flow and Separation Selectivity of Anions in Capillary Electrochromatography with Pseudo-Stationary Phases of C14-Alkyldimethylammonio propane Sulfonate Zwitterionic Surfactants by Addition of Salts to the Electrolyte, <i>Fresenius' J. Anal. Chem.</i> , 371(4), 502-506, 2001 Oct.	2.098	8
A46	Johns C., Macka M. , Haddad P.R., Optimization of Probe Concentration in Indirect Photometric Detection in Capillary Electrophoresis using Highly Absorbing Dyes, <i>Electrophoresis</i> , 23(1), 43-48, 2002 Jan.	4.325	13
A47	Ragonese R., Macka M. , Hughes J., P. Petocz, The use of the Box-Behnken experimental design in the optimisation and robustness testing of a capillary electrophoresis method for the analysis of ethambutol hydrochloride in a pharmaceutical formulation, <i>J. Pharm. Biomed. Anal.</i> , 27(6), 995-1007, 2002 Mar 1.	1.509	38
A48	Zakaria P., Macka M. , Haddad P.R., Electrokinetic chromatography utilizing two pseudostationary phases providing ion-exchange and hydrophobic interactions, <i>Anal. Chem.</i> , 74(6), 1241-1248, 2002 Mar 15.	5.45	6
A49	Breadmore M.C., Palmer A. S., Curran M., Macka M. , Avdalovic N., Haddad P.R., On-column Ion-Exchange Preconcentration of Inorganic Anions in Open-Tubular Capillary Electrochromatography with Elution using Transient-Isotachophoretic Gradients. III Implementation and Method Development, <i>Anal. Chem.</i> , 74 (9), 2112-2118, 2002 May 1.	5.45	44
A50	Unterholzner V., Macka M. , Haddad P. R., Zemann A., Simultaneous Separation of Inorganic Anions and Cations Using Capillary Electrophoresis with a Movable Contactless Conductivity Detector, <i>Analyst</i> , 127 (6), 715-718, 2002 Jun.	2.783	39
A51	Muzikář M., Havel J. Macka M. , Capillary Electrophoretic Study of interactions of metal ions with Crown Ethers, a Sulfated β -Cyclodextrin, and zwitterionic buffers present as additives within the background electrolyte, <i>Electrophoresis</i> , 23(12), 1796-1802, 2002 Jun.	4.325	16

A52	Zakaria P., Macka M. , Haddad P.R., Modelling, Optimisation and Control of Selectivity in the Separation of Aromatic Bases by Electrokinetic Chromatography using a Neutral Cyclodextrin as a Pseudo-Stationary Phase, <i>Electrophoresis</i> , 23(12), 1844-1852, 2002 Jun.	4.325	4
A53	Baoguo S., Macka M. , Haddad P.R., Separations of Organic and Inorganic Arsenic Species by Capillary Electrophoresis using Direct Spectrophotometric Detection, <i>Electrophoresis</i> , 23(15), 2430-2438, 2002 Jul.	4.325	17
A54	Zakaria P., Macka M. , Fritz J.S., Haddad P.R., Modelling and Optimisation of the Electrokinetic Chromatographic Separation of Mixtures of Organic Anions and Cations using Poly(diallyldimethylammonium chloride) and Hexanesulfonate as Mixed Pseudo-Stationary Phases, <i>Electrophoresis</i> , 23(17), 2821-2832, 2002 Sep.	4.325	7
A55	Vachirapatama N., Macka M., Haddad P.R., Separation and Determination of Vanadium in Fertilisers by Capillary Electrophoresis with a Light-Emitting Diode Detector, <i>Anal. Bioanal. Chem.</i> , 374(6), 1082-1085, 2002 Nov, DOI 10.1021/ac0708792.	2.098	17
A56*	King M., Paull B., Haddad P.R., Macka M. , Performance of a simple LED light source in the capillary electrophoresis of inorganic anions with indirect detection using a chromate background electrolyte, <i>Analyst</i> , 127(12), 1564-1567, 2002 Dec, DOI 10.1039/b210485g (published on the web in the Advance Articles 15th November 2002).	2.783	28
A57	Zakaria P., Macka M., Haddad P.R., Separation of opiate alkaloids by electrokinetic chromatography with sulfated-cyclodextrin as a pseudo-stationary phase, <i>J. Chromatogr. A</i> , 985, 493-501, 2003 Jan.	3.359	8
A58	Johns C., Shaw M.J., Macka M. , Haddad P.R., Sensitive Indirect Photometric Detection of Inorganic Anions by Capillary Electrophoresis Using Orange G as a Probe Ion, <i>Electrophoresis</i> , 24(1), 557-566, 2003 January. (In CA and other databases "Macka M" incorrectly given as "Macke M")	4.040	22
A59	Johns C., Macka M. , Haddad P.R., Highly Sensitive Indirect Photometric Detection of Cations by Capillary Electrophoresis with the Cationic Dye Chrysoidine, <i>J. Chromatogr. A</i> , 997(1-2), 87-94, 2003 May, DOI 10.1016/S0021-9673(03)00062-1.	3.359	14
A60	Zakaria P., Macka M. , Haddad P.R., Mixed-mode Electrokinetic Chromatography of Aromatic Bases with two Pseudo-stationary Phases and pH control, <i>J. Chromatogr. A</i> , 997(1-2), 207-218, 2003 May, DOI 10.1016/S0021-9673(03)00064-5 (accepted 4 December 2002).	3.359	5
A61*	Johns C., Macka M. , Haddad P.R., Measurement of Detection Linearity and Effective Pathlength in Capillary Electrophoresis, <i>LC-GC Europe</i> , 16(5), 290, 292, 294-295, 2003 May.	1.194	3
A62	Yang W.C., Macka M. , Haddad P.R., Biopolymer coatings of fused capillaries in capillary electrophoresis achieve high magnitude electroosmotic flow, <i>Chromatographia</i> , 57(Suppl.), S187-S193, 2003 June (accepted 4 February).	1.145	3
A63	Baoguo S., Macka M. , Haddad P.R., Trace determination of arsenic species by capillary electrophoresis with direct UV detection using sensitivity enhancement by counter- or co-electroosmotic flow stacking and high-sensitivity cell, <i>Electrophoresis</i> , 24(12-13), 2045-2053, 2003 June, DOI 10.1002/elps.200305447 (accepted 28 January).	4.040	15
A64*	Macka M. , Hutchinson J., Zhang S., Zemmann A., Haddad P.R., Miniaturised Contactless Conductivity Detector for Capillary Electrophoresis, <i>Electrophoresis</i> , 24(12-13), 2144-2149, 2003 June, DOI 10.1002/elps.200305475 (accepted 3 May).	4.040	21

- A65 Muzikář M., Havel J. **Macka M.**, Capillary Electrophoresis Determinations of Trace Concentrations of Inorganic Ions in Large Excess of Chloride: Soft Modelling Using Artificial Neural Networks for Optimisation of Electrolyte Composition, *Electrophoresis*, 24(12-13), 2252-2258, **2003** June, DOI 10.1002/elps.200305416 (accepted 26 March). 4.040 6
- A66 Zakaria P., **Macka M.**, Haddad P.R., Optimisation of Selectivity in the Separation of Aromatic Amino Acid Enantiomers using Sulfated β -cyclodextrin and Dextran Sulfate as Pseudostationary Phases, *Electrophoresis*, 25(2), 270-276, **2004** January, DOI 10.1002/elps.200305743. 3.743 7
- A67* Chovancek M., Choo P., **Macka M.**, Development of a New Fully Buffered Molybdate Electrolyte for Capillary Electrophoresis with Indirect Detection and its Use for Analysis of Anions in Bayer Liquor, *Electrophoresis*, 25(3), 437-443, **2004** February, DOI 10.1002/elps.200305705 (accepted 1 October **2003**). 3.743 14
- A68 Zakaria P., **Macka M.**, Haddad P.R., Selectivity Control in the Separation of Aromatic Amino Acid Enantiomers using Sulfated β -cyclodextrin, *J. Chromatogr. A*, 1031(1-2), 179-186, **2004** March 26, DOI 10.1016/j.chroma.2003.11.013 (accepted 08 October 2003). 3.359 6
- A69 Hutchinson J., **Macka M.**, Avdalovic N., Haddad P.R., Use of Coupled Open-Tubular Capillaries for In-Line Ion-Exchange Preconcentration of Anions by Capillary Electrochromatography with Elution by a Transient Isotachophoretic Gradient, *J. Chromatogr. A*, 1039(1-2), 187-192, **2004**, DOI 10.1016/j.chroma.2004.03.073 (accepted 25 February). 3.359 20
- A70* **Macka M.**, Yang W.C., Zakaria P., Shitangkoon A., Hilder E.F., Andersson P., Nesterenko P., Haddad P.R., Poly(tetrafluoroethylene) separation capillaries for capillary electrophoresis, Properties and applications, *J. Chromatogr. A*, 1039(1-2), 193-199, **2004**, DOI 10.1016/j.chroma.2004.03.074 (accepted 26 March). 3.359 11
- A71 Baoguo S., **Macka M.**, Haddad P.R., Speciation of Arsenic and Selenium by Capillary Electrophoresis, *J. Chromatogr. A*, 1039(1-2), 201-208, **2004**, DOI 10.1016/j.chroma.2004.03.045 (accepted 18 February). 3.359 17
- A72 Johns C., Yang W.C., **Macka M.**, Haddad P.R., Simultaneous Separation of Inorganic Anions and Cations by Capillary Electrophoresis using High Magnitude, Reversed Electroosmotic Flow, *J. Chromatogr. A*, 1050(2), 217-222, **2004**, DOI 10.1016/j.chroma.2004.08.048 (accepted 18 August). 3.359 11
- A73 Liu H., Song J., Zhang S., **Macka M.**, Haddad P.R., Investigation on mechanism for separation of alkali, alkaline metal and ammonium cations in nonaqueous capillary electrophoresis, *Sepu*, 22(4), 325-328, **2004**. 0.644 0
- A74 King M., **Macka M.**, Paull B., Rapid capillary electrophoretic method for trace chromium speciation using a zwitterionic isoelectric polymer coated capillary and photodiode array detection, *Analytical Letters*, 37(13), 2771-2787, **2004**, DOI 10.1081/AL-200032011 (accepted 29 March). 1.165 1
- A75* Johns C., **Macka M.**, Paul R. Haddad, Design and performance of a light-emitting diode detector compatible with a commercial capillary electrophoresis instrument, *Electrophoresis*, 25(18-19), 3145-3152, **2004**, DOI 10.1002/elps.200405913 (accepted 29 March). 3.743 24
- A76* Rodemann T., Yang W.C., Johns C., **Macka M.**, Haddad P.R., Isoelectric buffers for capillary electrophoresis II: Bis-morpholine-derivative of a carboxylic acid as a low-molecular weight isoelectric buffer, *Anal. Chem.*, 77(1), 120-125, **2005** Jan 1, DOI 10.1021/ac049237u (submitted 24 May 2004, accepted 12 October 2004, ACS ASAP Web Release Date 30 November 2004). 5.635 8

A77	Hutchinson J., Zakaria P., Bowie A.R., Macka M. , Avdalovic N., Haddad P.R., Latex-coated polymeric monolithic ion-exchange stationary phases. I. Anion-exchange capillary electrochromatography and in-line sample preconcentration in capillary electrophoresis, <i>Anal. Chem.</i> , 77(2), 407-416, 2005 Jan 15, DOI 10.1021/ac048748d (submitted September 2004, accepted 18 October 2004, ACS ASAP Web Release Date 07 December 2004).	5.635	54
A78	Yokoyama T., Zenki M., Macka M. , Haddad P.R., Enhancement of separation selectivity of inorganic ions by capillary electrochromatography, <i>Bunseki Kagaku</i> , 54(2), 107-120, 2005 (accepted 28 September 2004).	0.418	2
A79	Oudhoff K.A., Macka M. , Haddad P.R., Schoenmakers P.J., Kok W.Th., Contactless conductivity detection of synthetic polymers in non-aqueous size-exclusion electrokinetic chromatography, <i>J. Chromatogr. A</i> , 1068(1), 183-187, 2005 , DOI 10.1016/j.chroma.2004.11.081 (submitted 20 July 2004, accepted 23 November 2004).	3.359	5
A80*	Evenhuis C.J., Guijt R.M., Macka M. , Marriott P., Haddad P.R., Internal Electrolyte Temperatures for Polymer and Fused Silica Capillaries used in Capillary Electrophoresis, <i>Electrophoresis</i> , 26(22), 4333-4344, 2005 Nov, DOI 10.1002/elps.200406156 (submitted 5 May 2005, accepted 22 June).	3.850	9
A81	Hutchinson J., Macka M. , Avdalovic N., Haddad P.R., On-line preconcentration of organic anions in capillary electrophoresis by solid-phase extraction using latex-coated monolithic stationary phases, <i>J. Chromatogr. A</i> , 1106(1-2), 43-51, 2006 , DOI 10.1016/j.chroma.2005.08.032 (accepted 9 August).	3.359	25
A82*	Evenhuis C.J., Guijt R.M., Macka M. , Marriott P., Haddad P.R., Variation of Zeta-Potential with Temperature in Fused Silica Capillaries Used for Capillary Electrophoresis, <i>Electrophoresis</i> , 27(03), 672-676, 2006 , DOI 10.1002/elps.20050566 (submitted 3 Aug, accepted 27 Oct, published on-line 9 Jan 2006).	4.101	8
A83	Hutchinson J., Hilder E.F., Macka M. , Avdalovic N., Haddad P.R., Preparation and characterization of anion-exchange latex coated silica monoliths for capillary electrochromatography, <i>J. Chromatogr. A</i> , 1109(1), 10-18, 2006 , DOI 10.1016/j.chroma.2005.08.076 (submitted 6 May, accepted 18 Aug 2005).	3.359	19
A84	Zhang S.S., Macka M. , Haddad P.R., Preparation and characterisation of dual layer latex-coated columns for open-tubular capillary electrochromatographic preconcentration of cations combined in-line with their separation by capillary electrophoresis, <i>Electrophoresis</i> , 27(5-6), 1069-1077, 2006 Mar, DOI 10.1002/elps.200500674 (submitted 15 Sept 2005, accepted 5 Dec 2005).	4.101	16
A85*	Evenhuis C.J., Guijt R.M., Macka M. , Marriott P., Haddad P.R., Temperature Profiles and Heat Dissipation in Capillary Electrophoresis, <i>Anal. Chem.</i> , 78(8), 2684-2693, 2006 Apr 15, DOI 10.1021/ac052075x (submitted 24 Nov 2005, accepted 31 Jan 2006, ACS ASAP Web Release Date 31 Jan 2006).	5.646	11
A86	Kubáň P., Evenhuis C.J., Macka M. , Haddad P.R., Hauser P.C., Comparison of different contactless conductivity detectors for the determination of small inorganic ions by capillary electrophoresis, <i>Electroanalysis</i> , 18(13-14), 1289-1296, 2006 (submitted 13 Jan 2006, accepted 16 Mar 2006).	2.038	9

- A87 Momenbeik F., Johns C., Breadmore M.C., Hilder E.F., **Macka M.**, Haddad P.R., Sensitive Determination of Carbohydrates Labelled with p-Nitroaniline by Capillary Electrophoresis with Photometric Detection Using a 406 nm Light-Emitting Diode, *Electrophoresis*, 27(20), 4039-4046, **2006**, DOI 10.1002/elps.200500856 (submitted 21 Nov 2005, accepted 23 Mar 2006). 4.101 6
- A88 Wickramanayake P.U., Tran T.C., Hughes J.G., **Macka M.**, Simpson N., Marriott P.J., Simultaneous separation of nitrofurantoin antibiotics and their metabolites by using micellar electrokinetic capillary chromatography, *Electrophoresis*, 27(20), 4069-4077, **2006**, DOI 10.1002/elps.200600105 (accepted 24 May 2006). 4.101 6
- A89 Gillespie Eoin, Macka Miroslav, Connolly Damien, Paull Brett, Evaluation of capillary ion exchange stationary phase coating distribution and stability using radial capillary column contactless conductivity detection, *Analyst*, 131(8), 886-888, **2006** (submitted 23 May 2006, accepted 12 Jun 2006, published on-line 20 Jun 2006, DOI 10.1039/b606942h). **Featured on the cover of the issue** 3.20 16
- A90 Fakhari A.-R., Henderson, R., Breadmore M.C., **Macka M.**, Haddad P.R., Non-aqueous capillary electrophoresis with red light emitting diode absorbance detection for the analysis of basic dyes, *Anal.Chim.Acta*, 580(2), 188-193, **2006**, DOI 10.1016/j.aca.2006.07.066 (submitted 19 Jun 2006, accepted 26 Jul 2006). 2.588 13
- A91 Breadmore M.C., Henderson R., Fakhari A.-R., **Macka M.**, Haddad P.R., Separation of Nile Blue – labelled fatty acids by CE with absorbance detection using a red light-emitting diode, *Electrophoresis*, 28(8), 1252-1258, **2007**, DOI 10.1002/elps.200600580 (submitted 13. Sept 2006, accepted 30 Oct 2006). 4.101 3
- A92 Bones Jonathan, **Macka Miroslav**, Paull Brett, Evaluation of Monolithic and a Sub 2µm Particle Packed Columns for the Rapid Screening for Illicit Drugs – Application to the Determination of Drug Contamination on Irish Euro Banknotes, *Analyst*, 132, 208-217, **2007** (submitted 31. Oct 2006, accepted 7 Dec. 2006, DOI 10.1039/b615669j). **Chosen for promotion in the RSC supplement Chemical Technology.** 3.553 10
- A93 Nie F.-Q., Kent N., **Macka M.**, Paull B., Robust Monolithic Silica Based On-Chip Electro-Osmotic Micro-Pump, *Analyst*, 132(5), 417-424, **2007** (submitted 31. Oct 2006, accepted 16 Feb. 2007, DOI 10.1039/b618386g). 3.553 10
- A94 Balding Peter, Boyce Mary C., Breadmore Michael C., Macka Mirek, LED-compatible probes for indirect detection of anions in capillary electrophoresis, *Electrophoresis*, 28(19), 3453-3460, **2007**, DOI 10.1002/elps.200600809 (submitted 11 Dec **2006**, accepted 14 Mar 2007). **Featured on the cover of the issue** 4.101 2
- A95* Evenhuis C.J., Johns C., Yang W.C., Guijt R.M., **Macka M.**, Marriott P.J., Haddad P.R., The Potential of Fluorinated Ethylenepropylene Copolymer as a CE Capillary Material, *Electrophoresis*, 28(19), 3477-3484, **2007** (submitted 5 Mar **2007**, accepted 08 May 2007). 4.101 0
- A96 Kubáň P., Nguyen H.T.A., **Macka M.**, Haddad P.R., Hauser P.C., New fully portable instrument for the versatile determination of cations and anions by capillary electrophoresis with contactless conductivity detection, *Electroanalysis*, 19(19-20), 2059-2065, **2007**, DOI 10.1002/elan.200703908 (submitted 1 April 2007, accepted 21 May 2007). 2.038 4
- A97* Evenhuis C.J., Hruška V., Guijt R.M., **Macka M.**, Gaš B., Marriott P.J., Haddad P.R., Reliable Electrophoretic Mobilities Free from Joule Heating Effects Using Capillary Electrophoresis, *Electrophoresis*, 28(20), 3759-3766, **2007** (submitted 08 May, accepted 19 June 2007). 4.101 2

- A98 Nie F.-Q., **Macka M.**, Paull B., On-chip preconcentration using a miniaturized electroosmotic pump and silica monoliths, *Lab Chip*, 7, 1597-1599, **2007**, DOI 10.1039/b707773b submitted 22 May 2007, accepted 12 July 2007, published on-line 2 August 2007). 5.821 7
- A99 Hutchinson J.P., Evenhuis C.J., Johns C., Kazarian A.A., Breadmore M.C., **Macka M.**, Hilder E.F., Guijt R.M., Dicoski G.W., Haddad P.R., Identification of Inorganic Improvised Explosive Devices by Analysis of Postblast Residues Using Portable Capillary Electrophoresis Instrumentation and Indirect Photometric Detection with a Light-Emitting Diode, *Anal. Chem.*, 79(18), 7005-7013, **2007**, DOI 10.1021/ac0708792 submitted 30 April 2007, accepted 13 July 2007, published on-line 2 August 2007). 5.646 9
- A100 Eoin Gillespie, Connolly D., Nesterenko P., **Macka M.**, Paull B., Use of contactless conductivity detection for non-invasive characterisation of monolithic stationary phase coatings for application in capillary ion chromatography, *Analyst*, 132(12), 1238-1245, **2007**, DOI: 0.1039/b711350a (submitted August, accepted 11 September 2007, published on-line 2 October 2007). **Featured on the cover of the issue** 3.553 6
- A101 Josef Havel, Rong Li, **Mirek Macka**, Capillary electrophoretic study of neuroprotective Humanin peptide and its derivatives. Interaction with phosphate, sulfate, alkylsulfonate and sulfated- β -cyclodextrin anions, *Electrophoresis*, 29(3), 665-671, **2008** (submitted 5 March, accepted 3 September 2007). 4.101 0
- A102 Jonathan Bones, Cepta Duffy, **Mirek Macka**, Brett Paull, Using Coupled Monolithic Rods for Ultra-High Peak Capacity LC-MS under Normal LC Operating Pressures, *Analyst*, 133(2), 180-183, **2008**, DOI: 10.1039/b714807k (submitted 26 Sept 2007, accepted 6 Dec. 2007, published on-line 28 Jan 2008). 3.761 2
- A103 Stefan Schmid, **Mirek Macka**, Peter Hauser, UV-absorbance detector for HPLC based on a light-emitting diode, *Analyst*, 133, 465-469, **2008**, DOI: 10.1039/b715681b (submitted 11 Oct 2007, accepted 1 Feb 2008, published on-line 26 Feb 2008). 3.761 2
- A104 Silvija Abele, Fu-Qiang Nie, František Foret, Brett Paull, **Mirek Macka**, UV-LED photopolymerised monoliths, *Analyst*, 133, 864 - 866, **2008**, DOI:10.1039/B802693A (submitted 15 Feb 2008, accepted 8 Apr 2008, published on-line 18 Apr 2008). 3.761 2
Chosen for promotion in the RSC supplement Chemical Technology;
Featured on the cover of the issue . volume 133, pp. 864 – 866, 2008
Selected as an Analyst Hot Article:
<http://www.rsc.org/Publishing/Journals/an/HotArticles.asp> (27.6.2008),
Top ten accessed articles:
<http://www.rsc.org:80/Publishing/Journals/an/top10.asp> (11.9.2008)
- A105 Eoin Gillespie, Damien Connolly, Peter Hauser, Brett Paull, **Mirek Macka**, Development of a Contactless Conductivity Detector Cell for 1.6 mm O.D. (1/16th inch) HPLC Tubing and Micro-Bore Columns with On-Column Detection, *Analyst*, 133(8), 1104-1110, **2008**, DOI: 10.1039/b803038c (submitted 21 Feb 2008, accepted 21 May 2008, published on-line 21 Jul 2008). 3.761 1

A106	Silvia Scarmagnani, Zarah Walsh, Conor Slater, Nameer Alhashimy, Brett Paull, Mirek Macka , Dermot Diamond, Polystyrene Bead-Based System for Optical Sensing using Spiropyran Photoswitches, <i>J. Mater. Chem.</i> , <i>18(42)</i> , 5063-5071, 2008 , DOI: 10.1039/b810080b (submitted 13 June 2008, accepted 13 August 2008, published on-line as an advance article 23 September 2008).	4.339	2
A107	Zarah Walsh, Silvija Abele, Brian Lawless, Dominik Heger, Petr Klán, Michael C. Breadmore, Brett Paull, Mirek Macka , Photo-initiated Polymerisation of Monolithic Stationary Phases Using Visible Region LEDs, <i>Chem. Commun.</i> , (48), 6504 – 6506, 2008 , DOI: 10.1039/B816958F (submitted 27 Sept., accepted 15 Oct. 2008, published on-line as an advance article 7 November 2008). Featured on the cover of the issue.	5.14	0
A108	Hruška V., Evenhuis C.J., Macka M., Gaš B., Marriott P.J., Haddad P.R., Determination of heat transfer coefficient in capillary electrophoresis, <i>Electrophoresis</i> , <i>30(5)</i> , 910-920, 2009 , DOI: 10.1002/elps.200800647 (accepted 13 Dec. 2008, published March 2009).	4.1	0
A109	Fernando Benito-Lopez, Silvia Scarmagnani, Zarah Walsh, Brett Paull, Mirek Macka and Dermot Diamond, Spiropyran Modified Micro-fluidic Chip Channels as Photonically Controlled Self-Indicating System for Metal Ion Accumulation and Release, <i>Sensors Actuators B</i> , <i>140(1)</i> , 295-303, 2009 , DOI doi:10.1016/j.snb.2009.03.080 (accepted 30 March, published 18 June 2009).	2.9	0
A110	Silvia Scarmagnani, Zarah Walsh, Conor Slater, Fernando Benito-Lopez, Brett Paull, Mirek Macka, Dermot Diamond, Photoreversible Ion-Binding using Spiropyran Modified Silica Microbeads, <i>Int. J. Nanomanufacturing</i> , 2009 , in print.	0	0
A111	Mark Goldberg, Roger Lo, Silvija Abele, Mirek Macka, Frank Gomez, Development of Microfluidic Chips for Heterogeneous Receptor-Ligand Interaction Studies, <i>Anal. Chem.</i> , <i>81(12)</i> , 5095-5098, 2009 , DOI: 10.1021/ac9006649 (accepted 29 April, published 15 June 2009).	5.6	0
A112	Lenka Krcmova, Anna Stjernlof, Sebastien Mehlen, Peter Hauser, Silvija Abele, Brett Paull, Mirek Macka, Deep-UV LEDs in photometric detection: A 255 nm LED on-capillary detector in capillary electrophoresis, <i>Analyst</i> , in print 2009 DOI DOI:10.1039/B916081G (submitted 25 June, accepted 15 Sept 2009).	3.76	0
	TOTAL IF, Cit.: original research papers	383.364	1598
	TOTAL IF, Cit.: reviews (from 8.1)	39.208	432
	TOTAL IF, Cit.: original research papers + Reviews	422.572	2030

8.4 Conference Publications: Refereed full written papers

Underlined is denoted the presenter.

- F 1* Macka M., Haddad P.R., Use of light-emitting diodes as light sources for photometric on-capillary detection in capillary zone electrophoresis. *Proceedings of 13th Australian Symposium on Analytical Chemistry*, Darwin, 10-14 July **1995** (ISBN 0 909589 84 4), pp. AS31-1 to AS31-4.
- F 2* Potter O.G., Guijt R.M., Corney S, Haddad P.R., Macka M., Conductivity Gradient Focusing, in Laurell T., Nilsson J., Jensen K., Harrison J.D., Kutter J.P. (Eds.), *Micro Total Analytical Systems 2004*, Proc. μ TAS 2004 8th Internat. Conference on Miniaturized Systems in Chemistry and Life Sciences September 26 -30, Malmö, Sweden, RSC, Cambridge, Vol.1, pp. 81-83.
- F 3* Nie F.-Q., Macka M., Brett Paull, Integrating independent silica monolith electroosmotic pumps for reagent delivery and sample preconcentration in a μ -TAS device, in Viovy J.-L., Tabeling P., Decroix

S., Malaquin L. (Eds.), *Micro Total Analytical Systems 2007*, Proc. μ TAS 2007 11th Internat. Conference on Miniaturized Systems in Chemistry and Life Sciences October 7-11, Paris, France, The Chemical and Biological Microsystems Society, San Diego, Vol.1, pp. 829-831, (ISBN: 978-0-9798064-0-7 (2 Volume Set)).

- F 4* Silvia Scarmagnani, Zarah Walsh, N. Alhashmi, Silvija Abele, Damien Connolly, Brett Paull, **Mirek Macka**, Dermot Diamond, Beads-based system for optical sensing using spiropyran photoswitches, Proc. 29th Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society, Lyon, France, 22-26 August 2007, VOLS 1-16 Book Series: Proceedings of Annual International Conference of the IEEE Engineering in Medicine and Biology Society, **2007**, IEEE, New York, USA, pp. 4096-4097.

8.5 Conference Publications:

Refereed oral presentations at international conferences

* Denotes invited/plenary/keynote talks.

Underlined is denoted the presenter.

- O 1 Macka M., Paul B., Andersson P., Haddad P.R., The application of capillary electrophoresis using metallochromic ligands to the determination of barium and strontium in mineral waters, Presentation at International Ion Chromatography Symposium IICS '96, Reading, England, 16 - 19 September **1996**, oral presentation No. 33.
- O 2 Macka M., Doble P., Johns, C., Haddad P.R., Making Buffering of Background Electrolytes Compatible with Indirect Detection in Capillary Electrophoresis – Why and How?, International Ion Chromatography Symposium IICS '98, Osaka, Japan, 28 September - 1 October **1998**, oral presentation No. 14.
- O 3 Breadmore M.C., **Macka M.**, Haddad P.R., Migration behaviour of anionic metal complexes in capillary micellar electrochromatography, International Ion Chromatography Symposium IICS '98, Osaka, Japan, 28 September – 1 October **1998**, oral presentation No. 40.
- O 4 Macka M., Gerhardt, G., Cassidy R., Haddad P.R., Capillary electrophoresis of anions with end-capillary potentiometric detection using a copper electrode, 12th International Symposium on High Performance Capillary Electrophoresis & related Microscale Techniques (HPCE'99), Palm Springs, CA, USA, 23 - 28 January **1999**, oral presentation No. L067.
- O 5 Macka M., Doble P., Johns, C., Grosse A., Haddad P.R., New ampholytic isoelectric buffers for CE, 23rd International Symposium on High Performance Liquid Phase Separations and Related Techniques (HPLC'99), Granada, Spain, 30 May – 4 June **1999**, oral presentation No. 121.
- O 6 Macka M., Gerhardt, G., Cassidy R., Haddad P.R., Potentiometric end-capillary detection in capillary electrophoresis, Australian International Symposium on Analytical Science (AISAS'99) incorporating 15th AC & Chromatography 99, Melbourne, Australia, 4 - 9 July **1999**, oral presentation No. B2.3.
- O 7 Hilder E.F., Breadmore M.C., **Macka M.**, Haddad P.R., Australian International Symposium on Analytical Science (AISAS'99) incorporating 15th AC & Chromatography 99, Melbourne, Australia, 4 - 9 July **1999**, oral presentation No. D4.3.
- O 8 Breadmore M.C., **Macka M.**, Haddad P.R., Influencing the Separation Selectivity of Inorganic Ions in CE by Introducing Ion-Exchange Interactions, International Ion Chromatography Symposium IICS '99, San Jose, CA, USA, 12 - 15 September **1999**, oral presentation.
- O 9 Hilder E.F., **Macka M.**, Haddad P.R., Anion Separations Using Capillary Ion-Exchange Electrochromatography with Packed Columns, International Ion Chromatography Symposium IICS '99, San Jose, CA, USA, 12 - 15 September **1999**, oral presentation.
- O10 Macka M., Johns, C., Grosse A., Haddad P.R., Carboxymethylated Polyethyleneimine - a New Macromolecular Isoelectric Buffer for Capillary Electrophoresis, 6th Annual Conference of the Australian Electrophoresis Society AES'99, Melbourne, Victoria, Australia, 20 - 21 October **1999**, oral presentation.
- O11 Zakaria P., **Macka M.**, Gerhardt G., Haddad P.R., Pulsed Potentiometric Detection Using Inert Metallic Electrodes in Capillary Electrophoresis, Euroanalysis IX, Lisbon, Portugal, 3 - 9 September **2000**, oral presentation No. OC 91.

- O12 Breadmore M.C., Hilder E.F., Boyce M.C., **Macka M.**, Haddad P.R., Ion-exchange chromatographic preconcentration of inorganic anions followed by elution using a transient-isotachophoretic gradient, International Ion Chromatography Symposium IICS 2000, Nice, France, 11 - 14 September **2000**, oral presentation No. 40.
- O13 Zakaria P., **Macka M.**, Gerhardt G., Haddad P.R., Potentiometric Detection Using Inert Metallic Electrodes in Capillary Electrophoresis, International Ion Chromatography Symposium IICS 2000, Nice, France, 11 - 14 September **2000**, poster presentation No. 59.
- O14 Zakaria P., **Macka M.**, Gerhardt G., Haddad P.R., Pulsed Potentiometric Detection in Capillary Electrophoresis, International Ion Chromatography Symposium IICS 2000, Nice, France, 11 - 14 September **2000**, oral presentation No. 60.
- O15 Baoguo S., **Macka M.**, Haddad P.R., Speciations of Arsenic compounds by Capillary Electrophoresis and Their Applications, ASIANALYSIS VI, Tokyo, Japan, 7 - 10 August **2001**, oral presentation No. 1DY-5.
- O16 **Macka M.**, Haddad P.R., Ion-Exchange Preconcentration for Capillary Electrophoresis with Elution Using a Transient Isotachophoretic Gradient: Concept and Application, International Ion Chromatography Symposium IICS 2001, Chicago, IL, USA, 9 - 12 September **2001**, oral presentation No. 23.
- O17 Johns C., **Macka M.**, Haddad P.R., What Are the Benefits of Optimising the Probe Concentration in Electrolytes for Indirect Photometric Detection in Capillary Electrophoresis?, International Ion Chromatography Symposium IICS 2001, Chicago, IL, USA, 9 - 12 September **2001**, oral presentation No. 25.
- O18 Zakaria P., **Macka M.**, Haddad P.R., Mixed-Mode Separation in Pseudo-Phase Capillary Electrochromatography, International Ion Chromatography Symposium IICS 2001, Chicago, IL, USA, 9 - 12 September **2001**, oral presentation No. 63.
- O19* **Macka M.**, Yang W.C., Zakaria P., Haddad P.R., CE separations using Poly(tetrafluoroethylene) Capillaries, 25th International Symposium on Capillary Chromatography, Riva del Garda, Italy, 13 - 17 May **2002**, oral keynote presentation No. KNL.12.
- O20 Zakaria P., **Macka M.**, Haddad P.R., Modelling the Separation of Six Opiate Compounds in Electrokinetic Chromatography using a Sulfated-Cyclodextrin as a Pseudo-Stationary Phase, *Proc. Interact 2002*, Sydney, Australia, 21 - 25 July **2002**, oral presentation, p. 97.
- O21 **Macka M.**, Tulumovic S., Dick A., Haddad P.R., Photometry performed on Optically opaque Samples Using a portable Light-Emitting Diode Photometer, *Proc. Interact 2002*, Sydney, Australia, 21 - 25 July **2002**, oral presentation, p. 118.
- O22 Hutchinson J., **Macka M.**, Avdalovic N., Paul R. Haddad, Studies on Reproducibility and Recovery in Preconcentration of UV-Transparent Anions Using On-Capillary Open-Tubular Ion-Exchange Preconcentration and Elution with a Transient Isotachophoretic Gradient, *Proc. Interact 2002*, Sydney, Australia, 21 - 25 July **2002**, oral presentation, p. 129.
- O23 Baoguo S., **Macka M.**, Haddad P.R., Trace Speciation of Arsenic Compounds by Capillary Electrophoresis Using Large Volume Sample Stacking and a High Sensitivity Detection Cell, International Ion Chromatography Symposium IICS 2002, Baltimore, Maryland, USA, 29 September - 2 October **2002**, oral presentation No. 34.
- O24 Haddad P.R., Hutchinson J., **Macka M.**, Avdalovic N., On-Line Trace Enrichment in Capillary Electrophoresis Using Wall-Coated and Monolithic Concentrators, 26th International Symposium on Capillary Chromatography and Electrophoresis, Las Vegas, Nevada, USA, 18 - 22 May **2003**, oral keynote presentation, accepted.
- O25* Haddad P.R., **Macka M.**, Zakaria P., Hutchinson J., Breadmore M.C., Avdalovic N., Use of Packed and Pseudo Ion-Exchange Stationary Phases for Control of Selectivity and Enhancement of Sensitivity in Capillary Electrochromatography of Small Ions, 27th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2003, Nice, France, 15-19 June, **2003**, plenary oral presentation, section 'SELECTIVITY', Program & Abstract p.35.
- O26 **Macka M.**, Johns C., Haddad P.R., New Developments in Indirect Photometric Detection in Capillary Electrophoresis, 27th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2003, Nice, France, 15-19 June, **2003**, oral presentation No. 398, section 'CE', Program & Abstract p.43.

- O27 Zakaria P., Hutchinson J., **Macka M.**, Haddad P.R., Avdalovic N., Capillary Ion-Chromatography Using Silica Based Monolithic Columns, 16th Sixteenth Annual International Ion Chromatography Symposium (IICS 2003), San Diego, California, USA, 21 - 24 September, **2003**, oral presentation L-11 (SESSION 5 – Column Selectivity).
- O28 Zakaria P., **Macka M.**, Haddad P.R., Optimisation of Selectivity in the Separation of Aromatic Amino Acid Enantiomers Using a Sufated β -Cyclodextrin and Temperature as Selectivity Modifiers, 16th Sixteenth Annual International Ion Chromatography Symposium (IICS 2003), San Diego, California, USA, 21 – 24 September, **2003**, oral presentation L-54 (SESSION 17 – CE Methodologies for Ion Analysis).
- O29 Hutchinson J., **Macka M.**, Haddad P.R., Avdalovic N., Latex Coated Ion-Exchange Monolithic Columns for Capillary Electrochromatography (CEC) and Preconcentration in Capillary Electrophoresis (CE), 16th Sixteenth Annual International Ion Chromatography Symposium (IICS 2003), San Diego, California, USA, 21 – 24 September, **2003**, oral presentation L-55 (SESSION 17 – CE Methodologies for Ion Analysis).
- O30 **Macka M.**, Johns C., Haddad P.R., Can Capillary Electrophoresis (CE) and Capillary Electrochromatography (CEC) be competitive with Ion Chromatography in Ion Analysis?, 16th Sixteenth Annual International Ion Chromatography Symposium (IICS 2003), San Diego, California, USA, 21 – 24 September, **2003**, oral presentation L-64 (SESSION 20 – Chromatography and CE Applications).
- O31* Haddad P.R., **Macka M.**, Zakaria P., Hutchinson J., Breadmore M., Avdalovic N., Use of packed and pseudo ion-exchange stationary phases for control of selectivity and enhancement of sensitivity in capillary electrochromatography of small anions, Invited lecture at 100 Years of Chromatography, Ermelo, The Netherlands, **2003**.
- O32* Evenhuis C, Johns C, Yang WC, Guijt RM, Schuman P, Haddad PR, **Macka M.**, New Approaches to Simultaneous Separations of Inorganic Anions and Cations by Capillary Electrophoresis: Use of High-Magnitude EOF Capillaries and UV-transparent Fluoropolymer Capillary, 25th International Symposium on Capillary Chromatography, Riva del Garda, Italy, 31 May – 4 June **2004**, oral keynote presentation No. KNL.10.
- O33 P. Zakaria, J. Hutchinson, **M. Macka**, P.R. Haddad, N. Avdalovic. Capillary ion chromatography using methacrylate based monolithic columns. *Proc. Interact 2004*, Gold Coast, Australia, 4 - 8 July **2004**, oral presentation M3A, p. 39.
- O34 J.P. Hutchinson, A.R. Bowie, **M. Macka**, P.R. Haddad, N. Avdalovic. Use of an anion-exchange monolithic capillary column for the preconcentration of iodide in seawater. *Proc. Interact 2004*, Gold Coast, Australia, 4 - 8 July **2004**, oral presentation M4A, p. 39.
- O35 Potter O., Guijt RM, Paull B., Paul R. Haddad, **Macka M.**, μ TAS at UTas, *Proc. Interact 2004*, Gold Coast, Australia, 4 - 8 July **2004**, oral presentation M6A, p. 40.
Awarded Prize for the Best Seminar Title.
- O36* Haddad P.R., Zakaria P., Hutchinson J., **Macka M.**, Avdalovic N., Fast, selective and sensitive separations of inorganic ions using chromatographic and electrospearation methods, Invited lecture, *Proc. 7th Asian Conference on Analytical Sciences*, Hong Kong, July **2004**, H008-K.
- O37 Zakaria P., Hutchinson J., **Macka M.**, Liu Y., Haddad P.R., Avdalovic N., Micro-IC: Towards a Miniaturised Ion Chromatography System, 17th Annual International Ion Chromatography Symposium (IICS 2004), Trier, Germany, 20 – 23 September, **2004**, oral presentation L-18 (SESSION 7 – Advances in Ion Chromatography).
- O38 Hutchinson J., Zakaria P., **Macka M.**, Haddad P.R., Avdalovic N., Latex-Coated Monolithic Stationary Phases Prepared in Small Moulds for Ion-Exchange Capillary Electrochromatography, 17th Annual International Ion Chromatography Symposium (IICS 2004), Trier, Germany, 20 – 23 September, **2004**, oral presentation L-56 (SESSION 16 – CE Methodologies and Applications).
- O39* Haddad P.R., Hutchinson J., Zakaria P., **Macka M.**, Avdalovic N, Anion-exchange chromatography and capillary electrochromatography using latex-coated silica and polymeric monolithic stationary phases, invited oral presentation, Abstracts of Papers, 229th ACS National Meeting, San Diego, CA, USA, 13 - 17 March, **2005**.
- O40 Haddad P.R., Hutchinson J.P., Zakaria P., **Macka M.**, Avdalovic N. Latex-coated silica and polymeric monolithic anion-exchangers for capillary chromatography and capillary electrochromatography. 29th International Symposium on High Performance Liquid Phase Separations & Related Techniques -

- HPLC-2005, Stockholm, Sweden, 25-30 June, **2005**, oral presentation No. TuL5:1, Abstract Book p. 63.
- O41 Dicinoski G.W., Breadmore M.C., Hilder E.F., O'Reilly J.W., Potter O.G., Kazarian T., Haddad P.R., **Macka M.** Chromatographic and electrophoretic analysis of explosive residues. 29th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2005, Stockholm, Sweden, 25-30 June, **2005**, oral presentation No. ThL3:1, Abstract Book p. 112.
- O42* Evenhuis C.J., Guijt R.M., **Macka M.**, Marriott P., Haddad P.R., At what temperatures do electro-driven separations really run?, invited oral presentation, 11th International Symposium on Separation Science - ISSS-2005 & International Symposium Vitamins 2005, Pardubice, Czech Republic, September 12-15, **2005**, oral presentation No. L33, p. 43.
- O43* Momenbeik F., Johns C., Breadmore M.C., Zakaria P., Hilder E.F., **Macka M.**, Haddad P.R. Sensitive determination of sugars derivatised with p-nitro-aniline by capillary electrophoresis with photometric detection using a spectrally matching 406 nm light emitting diode, invited oral presentation, 11th International Symposium on Separation Science - ISSS-2005 & International Symposium Vitamins 2005, Pardubice, Czech Republic, September 12-15, **2005**, oral presentation No. L06, p. 21.
- O44* Haddad P.R., Hutchinson J., Zakaria P., Shellie R., **Macka M.**, Avdalovic N, Latex-coated monolithic scaffold stationary phases for separation of inorganic ions, Abstracts of Papers, Pacificchem 2005, Honolulu, USA, 16 – 20 December, **2005**.
- O45* Fakhari A.-R., Henderson R., Breadmore M.C., Guijt R.M., Doble P., **Macka M.**, Haddad P.R., Potential of Cationic Fluorescent Blue Dyes for Electrophoretic Separations in the Capillary and on the Chip, 27th International Symposium on Capillary Chromatography, Riva del Garda, Italy, 29 May – 2 June **2006**, Plenary lecture No. PL15.
- O46* Fakhari A.-R., Henderson R., Breadmore M.C., Guijt R.M., Doble P., **Macka M.**, Haddad P.R., Potential of Cationic Fluorescent Blue Dyes for Separations of Fatty Acids by Capillary Electrophoresis, invited oral presentation, International Symposium Vitamins 2006, Pardubice, Czech Republic, 11-13 September, **2006**, invited oral presentation No. L10, p.32.
- O47* Breadmore M.C., Fakhari A.-R., Henderson R., Kazarian A., **Macka M.**, Haddad P.R., Improving the sensitivity of capillary electrophoresis: Applications of light emitting diodes, invited oral presentation, 6th Asia-Pacific International Symposium on Microscale Separations and Analysis (APCE 2006), Kyoto, Japan, 12-14 November, **2006**, invited oral presentation No. AP-K10.
- O48 Havel J., Li R., **Macka M.**, Peptides, Proc. 10th Bioactive Peptides, Praha, Czech Republic, ??-?? April, **2007**, oral presentation No. ??, p.??.
- O49 Kelly T., Loane M., Abele S., Barron L., Nie F.-Q., Kent N., Henderson R., Breadmore M., Lawles B., Paull B., **Macka M.**, LEDs as light sources for photometric detection on-capillary and on microfluidic chip, Proc. 31st International Symposium on High Performance Liquid Phase Separations and Related Techniques – HPLC 2007, Gent, Belgium, 17 - 21 June **2007**, oral presentation No. 08.03, p.19.
- O50 Scarmagnani S., Walsh Z., Alhashimy N., Radu A., **Macka M.**, Paull B., Diamond D., Beads-Based System for Optical Sensing Using Spiropyran Photoswitches, Proc. 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Lyon, France, 23-26 August 2007, oral presentation No. FrD13.5, pp. 4096-7.
- O51* **Mirek Macka**, Exotic monoliths: New unusual chromatographic stationary phases and their potential for analysis of biological compounds, Proc. Vitamins 2007, Prague, 19-21 September 2007, invited oral presentation No. L08.
- O52* Silvijia Abele, František Foret, **Mirek Macka**, Photopolymerised monoliths prepared using low UV light emitting diodes as a light source, Proc. CECE 2007, Brno, Czech Republic, 14-16 November **2007**, invited oral presentation.
- O53 Silvijia Abele, František Foret, **Mirek Macka**, Surface photopolymerisation using evanescent wave and total reflection waveguiding, Proc. ISCCE 2007, Albuquerque, NM, USA, 28-30 November **2007**, oral presentation, p.36.
- O54* Zarah Walsh, Silvijia Abele, Brett Paull, **Macka M.**, UV, Visible and NIR-LEDs for photopolymerisations and photografting of monoliths, 32nd International Symposium on Capillary Chromatography, Riva del Garda, Italy, 27 May – 2 June **2008**, invited oral presentation No. __.
- O55 Gillespie Eoin, **Miroslav Macka**, Damian Connolly, Brett Paull, Use of contactless conductivity detection for the characterisation of stationary phase chemistry on surface modified monolithic

- capillary columns, 32nd International Symposium on Capillary Chromatography, Riva del Garda, Italy, 27 May – 2 June **2008**, Key-note lecture No. PL__.
- O56 Damian Connolly, Gillespie Eoin, **Miroslav Macka**, Brett Paull, Non-invasive conductivity based techniques for the characterisation of stationary phase chemistry and biochemistry on polymer monoliths, 2008 Monolith Summer School and Symposium, Portorož, Slovenia, 30 May – 4 June **2008**, oral presentation No. __.
- O57* Markéta Ryvolová, Tomasz Piasecki, Jan Preisler, Pavel Krásenský, František Foret, Peter C. Hauser, Dermot Brabazon, Brett Paull, S. Abele, **Macka M.**, New Approaches in Detection for Capillary Separation Techniques using LEDs, Proc. International Ion Chromatography Conference IICS 2008, Portland, OR, USA, 21-24 September **2008**, invited oral presentation.
- O58* Markéta Ryvolová, Tomasz Piasecki, Jan Preisler, Pavel Krásenský, František Foret, Peter C. Hauser, Dermot Brabazon, Brett Paull, S. Abele, **Macka M.**, New Options in Light Emitting Diode-Based Photometric and Fluorimetric Detection Systems for Capillary Electrophoresis and Microfluidic Chips, Proc. Vitamins 2008, Zlín, 9-11 September **2008**, invited oral presentation.
- O59* Walsh Z., Abele S., Ryvolová M., Piasecki T., Preisler J., Krásenský P., Foret F., Hauser P. C., Paull B., Lawless B., Brabazon D., Oelgemoeller M., **Macka M.**, Shedding LED light on synergies between analytical science, miniaturisation, photochemistry, and photonics, Proc. CECE 2008, Brno, Czech Republic, 24-25 November **2008**, invited oral presentation.
- O60 Brett Paull, Damian Connolly, Eoin Gillespie, **Mirek Macka**, Pavel N. Nesterenko, The physical characterisation of monolithic (and packed) capillary columns, covalently modified with ionic species, using on-capillary contactless conductivity detection, 33rd International Symposium on High Performance Liquid Phase Separations and Related Techniques – HPLC2008, Kyoto, Japan, 2-5 December **2008**, oral presentation.
- O61* Walsh Z., Abele S., Ryvolová M., Piasecki T., Preisler J., Krásenský P., Foret F., Hauser P. C., Paull B., Lawless B., Brabazon D., Oelgemoeller M., **Macka M.**, Shedding LED light on the synergies between Separation science, miniaturisation, photochemistry and photonics, Proc. ASASS 2008, Hobart, 8-10 December **2008**, invited oral presentation.
- O62 Silvia Scarmagnani, Zarah Walsh, Fernando Benito Lopez, Conor Slater, **Mirek Macka**, Brett Paull, Dermot Diamond, Spiropyran functionalised microbeads for photodynamic separation science, oral presentation, ISSS-5, International Symposium on Surface Science and Nanotechnology, November 9-13, **2008**, Tokyo, Japan.
- O63* Zarah Walsh, Uģis Daņilēvičs, Tomasz Piasecki, Silvija Abele, Brett Paull, **Mirek Macka**, Monoliths in Capillary and Microfluidic Chip Formats for Bioseparations: Examples of Fabrication and Modifications, ICTBSB-2009 - International Conference on Trends in Bioanalytical Sciences and Biosensors, Dublin, Ireland, 26-27th January **2009**, invited oral presentation.
- O64 Silvija Abele, Frantisek Foret, Janusz Pawliszyn, **Mirek Macka**, Photopolymerised Monoliths for Separation Science Obtained Using UV-LEDs as Light Sources, ICTBSB-2009 - International Conference on Trends in Bioanalytical Sciences and Biosensors, Dublin, Ireland, 26-27th January **2009**, oral presentation.
- O65 Walsh Z., Abele S., Levkin P., Paull B., Svec F., **Macka M.**, Visible Light Initiated Polymerisation of Monolithic Stationary Phases using Light Emitting Diodes, ISCCE 2009 - 33rd International Symposium on Capillary Chromatography & Electrophoresis, Portland, OR, USA, 18-21 May **2009**, oral presentation.
- O66* Silvija Abele, Zarah Walsh; Oksana Yavorska, **Mirek Macka**, New Formats of Photoinitiated Polymerisations Utilising LEDs as Light Sources, ISCCE 2009 - 33rd International Symposium on Capillary Chromatography & Electrophoresis, Portland, OR, USA, 18-21 May **2009**, invited oral presentation.
- O67* M. Oelgemoeller, S. Gallagher, S.-B. Tan, F. Chen, **M. Macka**, Microphotochemistry - Photochemistry in Microstructured Reactors, AIChE 2009 Spring Meeting, Session 'Applications of Microreaction Technology', Tampa, USA, 26-30 April **2009**, invited oral presentation.
- O68 Silvia Scarmagnani, Zarah Walsh, Fernando Benito Lopez, Silvija Abele, **Mirek Macka**, Brett Paull, Dermot Diamond, Incorporation of Spiropyran Photochromic Compounds and Spiropyran Modified Substrates in Flow Systems, RSC ARF, Canterbury, UK, 13 – 15 July **2009**, oral presentation.

- O69* Zarah Walsh, Pavel A. Levkin, Dominik Heger, Michael Norton, Silvija Abele, Frantisek Svec, Petr Klán, Brett Paull, **Mirek Macka**, Making monoliths with visible LED light sources, Proc. Vitamins 2009, Brno, 31 August - 2 September **2009**, invited oral presentation.
- O70* Uğis Daņilēvičs, Zarah Walsh, Silvija Abele, Brett Paull, **Mirek Macka**, Exotic monolith: gold-coated silica and polymer monoliths, Proc. IICS 2009, Dublin, 21 - 24 September **2009**, session "New Monolithic Column Technologies" Wed 23 Sept, invited oral presentation.
- O71 Zarah Walsh; Silvia Scarmagnani; Michael Norton; Fernando Benito-Lopez; Fu-Qiang Nie; Silvija Abele; Frantisek Svec; Dermot Diamond; Brett Paull, **Mirek Macka**, Dye Based and Dye Functionalized Monolithic Materials for Chromatography and Electroosmotic Pumps, Proc. IICS 2009, Dublin, 21 - 24 September **2009**, session "Capillary, Miniaturized and Chip-Based Systems I" Tue 22 Sept, oral presentation.
- O72* Silvija Abele, Oksana Yavorska; Petr Smejkal; Frantisek Foret, **Mirek Macka**, Monolithic Porous Layer Open Tubular (PLOT) Columns Obtained by Evanescent Wave Initiated Photopolymerisation and Their use for On-line Protein Digestions, Proc. IICS 2009, Dublin, 21 - 24 September **2009**, session "Bio-Analytical Separations" Thu 24 Sept, invited oral presentation.
- O73* Ryvoloová M., Krčmová L., Akhter M., Preisler J., Foret F., Hauser P., Maaskant P., **Macka M.**, Micro-separations need micro-light sources: LEDs and micro-LEDs as light sources of miniaturization, Proc. CECE 2009, Pecs, 6 - 74 November **2009**, invited oral presentation.

8.6 Conference Publications:

Refereed posters at international conferences

Underlined is denoted the presenter.

- P 1 **Macka M.**, Sprta V., Borák J., Salamoun J., Size-exclusion chromatography of a new on daunomycin based targeted drug. Proc. 14th International Congress of Biochemistry, Prague, **1988**, We 140.
- P 2 Sládek T., Ruzicka D., **Macka M.**, Blechová R., Bohuminská M., Hájek E., Borák J., Kiss F., Comparative pharmacokinetics of two oral dosage forms of diltiazem in dogs. **Ibid.**, Tu 538.
- P 3 Sprta V., **Macka M.**, Salamoun J., Preparation of 7-hydroxy- methotrexate and its HPLC determination in biological fluids. **Ibid.**, Tu 540.
- P 4 Hájek E., Vorlíček J., Sládek T., **Macka M.**, Kiss F., Proc. 12th International Symposium on Clinical Pharmacology, Wroclaw, Poland, **1988**, poster No. 34.
- P 5 Salamoun J., **Macka M.**, Nechvátal M., Matousek M., Fluorescence detection of tamoxifen in column liquid chromatography. Proc. 8th International Symposium "Advances and Application of Chromatography in Industry", Bratislava, **1989**, C21.
- P 6 **Macka M.**, Determination of azidothymidine in plasma by HPLC. Proc. 7th Danube Symposium on Chromatography, Leipzig, Germany, **1989**, Mo 136.
- P 7 **Macka M.**, Kiss F., Borák J., Seménková L., Ionic-strength gradient in solvent generated ion-exchange chromatography. Proc. Forum Analytik 90, Vienna, January **1990**.
- P 8 Malecek M., Borák J., **Macka M.**, Liquid chromatography of daunomycin bound to a polymeric carrier. Proc. International Symposium on Polymer Analysis and Characterization, Brno, July **1990**, P-A-28.
- P 9 **Macka M.**, Seménková L., Kiss F., Malecek M., Borák J., Chromatographic, spectrophotometric and spectrofluorimetric properties of daunomycin bound to a polymeric carrier. Euroanalysis VII, Vienna, August 26-31, **1990**, B11-128.
- P 10 **Macka M.**, Seménková L., Kralovianska M., Malecek M., Knesel L., Metrological characteristics of a diode array spectrophotometer. Proc. Chemometrics II, Brno, September 3-6, **1990**, A18.
- P 11 **Macka M.**, Malecek M., Kralovianska M., Seménková L., Optimization of detection bandwidth in diode array spectrophotometry. **Ibid.**, A19.
- P 12 **Macka M.**, Borák J., Chromatographic behaviour of some platinum(II) complexes on octadecylsilica dynamically modified with a mixture of a cationic and an anionic amphiphilic modifier. 17th International Symposium on Column Liquid Chromatography HPLC'93, Hamburg, May 9-14, **1993**, Last-Minute Poster.

- P 13 **Macka M.**, Meichtry A., Bokel M. and Röder W., Some new industrial applications of capillary SFC. **Ibid.**, Last-Minute Poster.
- P 14 **Macka M.**, Haddad P.R., Buchberger W., Separation of some metallochromic ligands by capillary zone electrophoresis and micellar electrokinetic capillary chromatography, Proc. RACI R&D Topics, Canberra, 5-6. December **1994**.
Awarded 1st Prize for an Outstanding Poster Presentation.
- P 15 **Macka M.**, Haddad P.R., Light-emitting Diodes for Photometric On-capillary Detection in Capillary Electrophoresis, Proc 13th Australian Symposium on Analytical Chemistry, Darwin, 9-14 July **1995**, pp. AS31-1 to 3.
- P 16 **Macka M.**, Andersson P., Haddad P.R., Application of polytetrafluoroethylene capillaries for capillary electrophoresis, Proc. International Ion Chromatography Symposium IICS '95, Dallas, Texas, 1-5 October **1995**, poster No. 94.
- P 17 **Macka M.**, Andersson P., Haddad P.R., Determination of pH Changes Induced by Electrode reactions in Capillary Electrophoresis, The analytical days 1996, 10-14 June **1996**, Stockholm, Sweden.
- P 18 **Macka M.**, Nesterenko P., Haddad P.R., The role of solute - wall interactions in separations of metal complexes by capillary electrophoresis: The separation of rare earth metals as complexes with arsenazo III, Proc. Chromatography '96, Sydney, Australia, 9-11 July **1996**, poster P47.
- P 19 **Macka M.**, Nesterenko P., Andersson P., Haddad P.R., Separation of lanthanides and uranyl by capillary electrophoresis using on-capillary complexation with arsenazo III, Proc. International Ion Chromatography Symposium IICS '96, Reading, England, 16.-19. September **1996**, poster No. 101.
- P 20 **Macka M.**, Andersson P., Haddad P.R., Changes in electrolyte pH due to electrolysis during CE: The role of electrode position and buffering, Proc. International Ion Chromatography Symposium IICS '96, Reading, England, 16.-19. September **1996**, poster No. 116
Awarded 1st Prize for a Poster Presentation.
- P 21 **Doble P., Macka M.**, Andersson P., Haddad P.R., pH buffered electrolytes for indirect absorbance detection in CE: A study of separations of anions using a new buffered chromate electrolyte, Proc. International Ion Chromatography Symposium IICS '96, Reading, England, 16.-19. September **1996**, poster No. 115.
- P 22 **Macka M.**, Paul B., Andersson P., Haddad P.R., The use of a metallochromic ligands in determination of metals by capillary electrophoresis: the determination of barium and strontium in mineral waters as complexes with sulfonazo III, Proc HPCE '97, Anaheim, 26.-30.1.1997, poster No. P428.
- P 23 **Hilder E.F., Macka M.**, Bogan D.P., Haddad P.R., Separation of metal bis(2-hydroxyethyl)dithiocarbamate complexes by micellar electrokinetic capillary chromatography, Proc. Ninth International Symposium on High Performance Capillary Electrophoresis and Related Microscale Techniques (HPCE '97), Anaheim, California, January 26-30, **1997**, poster No. P360.
- P 24 **Macka M.**, Doble P., Haddad P.R., Indirect Detection in CE: The Importance of Correctly Buffering Background Electrolytes, Proc. International Ion Chromatography Symposium IICS '97, Santa Clara, CA, USA, 14.-17. September **1997**, poster No. 105.
- P 25 **Macka M.**, Haddad P.R., Separation of Metal Ions by Capillary Electrophoresis Using Complexation with Metallochromic Ligands, Proc. International Ion Chromatography Symposium IICS '97, Santa Clara, CA, USA, 14.-17. September **1997**, poster No. 106.
- P 26 **Macka M.**, Paull B., Bogan D.P., Haddad P.R., Separation of Alkaline Earth Metal Complexes of Arsenazo I Using Capillary Zone Electrophoresis: Effects of Ligand Purity on the Separation, Proc. International Ion Chromatography Symposium IICS '97, Santa Clara, CA, USA, 14.-17. September **1997**, poster No. 107.
- P 27 **Doble P., Macka M.**, Haddad P.R., Increased Sensitivity of Indirect Photometric Detection of Anions in CE Using Highly Absorbing Dyes, Proc. International Ion Chromatography Symposium IICS '97, Santa Clara, CA, USA, 14.-17. September **1997**, poster No. 108.
- P 28 **Doble P., Macka M.**, Haddad P.R., Factors Influencing the Use of a Slow Co-Ion as an Electrolyte Buffer For Indirect Detection of Fast Anions by Capillary Electrophoresis, International Ion Chromatography Symposium IICS '98, Osaka, Japan, 28. September - 1. October **1998**, poster No. 27.
- P 29 **Hilder E.F., Macka M.**, Haddad P.R., Packed Capillary Ion-Exchange Electrochromatography of Small Ions, International Ion Chromatography Symposium IICS '98, Osaka, Japan, 28. September - 1. October **1998**, poster No. 49.

- P 30 **Macka M.**, Haddad P.R., Elution Mechanism in ion Chromatography using an Isoelectric ampholytic Mobile Phase, International Ion Chromatography Symposium IICS '98, Osaka, Japan, 28. September - 1. October **1998**, poster No. 65.
- P 31 **Macka M.**, Zakaria P., Hilder E.F., Nesterenko P., Haddad P.R., Investigation of Properties of a PTFE Capillary Used as The Separation Capillary in Capillary Electrophoresis, International Ion Chromatography Symposium IICS '98, Osaka, Japan, 28. September - 1. October **1998**, poster No. 66.
- P 32 **Macka M.**, Haddad P.R., Capillary Electrophoresis of anions with End-Capillary Potentiometric Detection using a Copper Electrode, International Ion Chromatography Symposium IICS '98, Osaka, Japan, 28. September - 1. October **1998**, poster No. 67.
- P 33 **Vachirapatama N.**, Paull B., **Macka M.**, Nesterenko P., Haddad P.R., Separation and Determination of Niobium(V) and Tantalum (V) as Ternary Complexes with 4-(2-Pyridylazo) resorcinol and Citrate by Ion-Pair Reversed-Phase High-Performance Liquid Chromatography, International Ion Chromatography Symposium IICS '98, Osaka, Japan, 28. September - 1. October **1998**, poster No. 91.
- P 34 Johns C., **Macka M.**, Haddad P.R., Indirect photometric detection of anions in CE using dyes as probes and electrolyte buffered with isoelectric buffers, 12th International Symposium on High Performance Capillary Electrophoresis & related Microscale Techniques (HPCE'99), Palm Springs, CA, USA, 23.-28. January **1999**, poster No. P110.
- P 35 Hilder E.F., **Macka M.**, Haddad P.R., Mixed-mode capillary ion-exchange electrochromatography, 12th International Symposium on High Performance Capillary Electrophoresis & related Microscale Techniques (HPCE'99), Palm Springs, CA, USA, 23.-28. January **1999**, poster No. P218.
- P 36 **Havel J.**, Breadmore M., **Macka M.**, Haddad P.R., Computer aided optimisation and modelling in capillary micellar electrochromatography using artificial neural networks, 12th International Symposium on High Performance Capillary Electrophoresis & related Microscale Techniques (HPCE'99), Palm Springs, CA, USA, 23.-28. January **1999**, poster No. P259.
- P 37 **Billiet H.A.H.**, **Macka M.**, Haddad P.R., Fowler P., Frank J., van Dedem G.W.K., Fintschenko Y., van de Berg A., Development of an Analytical System for Real Time Monitoring of fermentation and Cell Culture processes Based on micro-Chip and Conventional Capillary Electrophoresis and Capillary Electrochromatography, 12th International Symposium on High Performance Capillary Electrophoresis & related Microscale Techniques (HPCE'99), Palm Springs, CA, USA, 23.-28. January **1999**, poster No. P482.
- P 38 **Johns C.**, **Macka M.**, Haddad P.R., Indirect photometric detection of small cations in capillary electrophoresis using cationic dyes as probes, Australian International Symposium on Analytical Science (AISAS'99) incorporating 15th AC & Chromatography 99, Melbourne, Australia, 4.-9. July **1999**, poster presentation No. PS1.13.
- P 39 **Breadmore M.C.**, **Macka M.**, Haddad P.R., Open-tubular ion-exchange electrochromatography of Inorganic Anions, Australian International Symposium on Analytical Science (AISAS'99) incorporating 15th AC & Chromatography 99, Melbourne, Australia, 4.-9. July **1999**, poster presentation No. PS2.36.
- P 40 **Havel J.**, Breadmore M., **Macka M.**, Haddad P.R., Artificial Neural Network Optimisation and Modeling in Capillary Micellar Electrochromatography, Chemometrics V, Brno, Czech republic, 29. August - 2. September **1999**, poster presentation.
- P 41 **Macka M.**, Doble P., Johns, C., Grosse A., Haddad P.R., New Isoelectric Ampholytic Buffers, International Ion Chromatography Symposium IICS '99, San Jose, CA, USA, 12.-15. September **1999**, poster presentation.
- P 42 **Breadmore M.C.**, **Macka M.**, Haddad P.R., Selectivity Manipulation of Alkali Metals and Ammonium using Anionic Particles as a Pseudo-Stationary Phase, International Ion Chromatography Symposium IICS '99, San Jose, CA, USA, 12.-15. September **1999**, poster presentation No. 65.
Awarded 1st + 2nd Prize for a Poster Presentation.
- P 43 **Macka M.**, Johns, C., Grosse A., Haddad P.R., New Macromolecular Isoelectric Ampholytic Buffers, 6th Annual Conference of the Australian Electrophoresis Society AES'99, Melbourne, Victoria, Australia, 20-21 October **1999**, poster presentation No. 66.
- P 44 **Boyce M.**, Breadmore M.C., **Macka M.**, Haddad P.R., Indirect Spectrophotometric Detection of Inorganic Ions in Ion-Exchange Capillary Electrochromatography, 23rd International Symposium on Capillary Chromatography, Riva del Garda, 5-10 June **2000**, poster presentation No. H05.

- P 45 Hilder E.F., Klampfl C.W., **Macka M.**, Haddad P.R., Electroosmotic and Pressure Driven Properties of Frits for Packed Column Capillary Electrochromatography, 23rd International Symposium on Capillary Chromatography, Riva del Garda, 5-10 June **2000**, poster presentation No. H14.
- P 46 Ragonese R., **Macka M.**, Hughes J., Optimization of a CZE Analysis of Ethambutol Hydrochloride and its Impurities in a Pharmaceutical Tablet, Using a Central Composite Experimental Design, 24th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2000, Seattle, WA, USA, June 24-30, **2000**, poster presentation P 1317.
- P 47 Unterholzer V., Zemann A., **Macka M.**, Haddad P.R., Simultaneous Determination of Cations and Anions by Capillary Electrophoresis using Contactless Conductivity Detection, International Ion Chromatography Symposium IICS 2000, Nice, France, 11-14 September **2000**, poster presentation No. 94.
- P 48 Johns C., **Macka M.** Haddad P.R., What is the Optimal Probe Concentration in Electrolytes for Indirect Photometric Detection in Capillary Electrophoresis?, International Ion Chromatography Symposium IICS 2000, Nice, France, 11-14 September **2000**, poster presentation No. 98.
- P 49 Vachirapatama N., Doble P., Yu Z., Macka M., Haddad P.R., Separation of ternary complexes of niobium(V) and tantalum(V) with metallochromic ligands and citrate using capillary electrophoresis, International Ion Chromatography Symposium IICS 2000, Nice, France, 11-14 September **2000**, poster presentation No. 99.
- P 50 Breadmore M., Palmer A.S., Macka M., Curran M., Avdalovic N., Haddad P.R., A novel In-Line Preconcentration Method for Capillary Electrophoresis, 25th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2001, Maastricht, Holland, June 14-22, **2001**, poster presentation No. P0423.
Awarded 1st Prize for a Poster Presentation (among ca. 500 posters, 3 prizes given).
- P 51 Johns C., Macka M., King M., Paull B., Haddad P.R., Detection Linearity and Effective Pathlength in On-Capillary Photometric Detection: Evaluation of Five Commercial Detectors, 25th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2000, Maastricht, Holland, June 14-22, **2001**, poster presentation No. P0424.
- P 52 Hutchinson J., Macka M., Haddad P.R., Ion-exchange chromatographic preconcentration of inorganic anions followed by elution using a transient-isotachophoretic gradient: Can the method work for transparent ions?, International Ion Chromatography Symposium IICS 2001, Chicago, IL, USA, 9-12 September **2001**, poster presentation No. 101.
- P 53 Baoguo S., Macka M., Haddad P.R., Speciations of Arsenic compounds by Capillary Electrophoresis, International Ion Chromatography Symposium IICS 2001, Chicago, IL, USA, 9-12 September **2001**, poster presentation No. 89.
- P 54 Zakaria P., **Macka M.**, Haddad P.R., Modelling the CEC Separation of Aromatic Bases Using a Neutral Cyclodextrin Using an New Equation Based on Physical Principles, International Ion Chromatography Symposium IICS 2001, Chicago, IL, USA, 9-12 September **2001**, poster presentation No. 83.
- P 55 Muzikar M., Havel J., **Macka M.**, Capillary Electrophoretic Determination of Stability Constants of Alkali and Alkaline Earth Metal Cations with a Crown Ether, a Sulfated Beta-Cyclodextrine, and a Zwitterionic Buffer, 7^o Simposio Latinoamericano LACE 2001, Santiago, Chile, 1.-4. December **2001**, poster presentation.
- P 56 Breadmore M., **Macka M.**, Avdalovic N., Haddad P.R., On-line Ion-Exchange Preconcentration in Capillary Electrophoresis with Elution Using a Transient Isotachophoretic Gradient, 25th International Symposium on Capillary Chromatography, Riva del Garda, Italy, 13.-17. May **2002**, poster presentation No. H.17.
- P 57 Zakaria P., **Macka M.**, Fritz J.S., Haddad P.R., Modelling and Optimization of the Electrokinetic Chromatographic Separation of Mixtures of Organic Anions and Cations using Poly(diallyldimethylammonium chloride) and Hexanesulfonate as Mixed Pseudo-Stationary Phases, 25th International Symposium on Capillary Chromatography, Riva del Garda, Italy, 13.-17. May **2002**, poster presentation No. H.18.
- P 58 Hutchinson J., Macka M., Zemann A., Avdalovic N., Paul R. Haddad, Contactless Conductivity Detection In On-Capillary Open-Tubular Ion-Exchange Preconcentration of UV Transparent Anions Using Elution With A Transient Isotachophoretic Gradient, 25th International Symposium on Capillary Chromatography, Riva del Garda, Italy, 13.-17. May **2002**, poster presentation H.19.

- P 59 Zakaria P., **Macka M.**, Fritz J.S., Haddad P.R., Use of Ion-Exchange and Hydrophobic Pseudo-Stationary Phases for Mixed-Mode Separations in Capillary Electrochromatography, 25th International Symposium on Capillary Chromatography – ISCC-2002, Riva del Garda, Italy, 13.-17. May **2002**, poster presentation No. H.20.
- P 60 Zhang S., **Macka M.**, Haddad P.R., Comparison of Separation of Alkali Metal and Ammonium Cations by Capillary Electrophoresis and Open-tubular Capillary Electrochromatography with Double Layers Coating, *Proc. Interact 2002*, Sydney, Australia, 21-25 July **2002**, poster presentation, p. 285.
- P 61 Zhang S., **Macka M.**, Haddad P.R., Separation of Alkali, Alkaline Metal and Ammonium Cations by Non-Aqueous Capillary Electrophoresis under Weakly Basic Conditions, *Proc. Interact 2002*, Sydney, Australia, 21-25 July **2002**, poster presentation, p. 285.
- P 62 Zakaria P., **Macka M.**, Haddad P.R., Modelling the Separation of Six Opiate Compounds in Electrokinetic Chromatography Using a Sulfonated-Cyclodextrin as a Pseudo-Stationary Phase, International Ion Chromatography Symposium IICS 2002, Baltimore, Maryland, USA, 29 September – 2 October **2002**, poster presentation No. 71.
- P 63 Baoguo S., **Macka M.**, Haddad P.R., Simultaneous Separation of Arsenic and Selenium Compounds by Capillary Electrophoresis Using a Coated Capillary and a High Sensitivity Detection Cell, International Ion Chromatography Symposium IICS 2002, Baltimore, Maryland, USA, 29 September – 2 October **2002**, poster presentation No. 77.
- P 64 Hutchinson J., **Macka M.**, Haddad P.R., Avdalovic N., Effects of a Water Plug Injection in Preconcentration of UV-Visible Anions Using On-Capillary Open-Tubular Ion-Exchange Preconcentration and Elution with a Transient Isotachophoretic Gradient, International Ion Chromatography Symposium IICS 2002, Baltimore, Maryland, USA, 29 September – 2 October **2002**, poster presentation No. 99.
- P 65 Unterholzner V., Zemann A.J., Hauser P. C., **Macka M.**, Haddad P. R., Capillary Electrophoretic and Contactless Conductivity Detection Using Very Small Inner Diameter Capillaries, Conference on Ion Analysis CIA - 2003, Berlin, 24.-26. February **2003**, poster presentation No. P3
Awarded 1st Prize for a Poster Presentation (7 prizes given).
- P 66 Marion King, **Macka M.**, Brett Paull, Paul R. Haddad, A 370-nm UV LED for Detection in Capillary Electrophoresis: Performance with Indirect Detection Using a Chromate Background Electrolyte, 27th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2003, Nice, France, June 15-19, **2003**, poster presentation No. 399 / CAPILLARY ELECTROPHORESIS 20.
- P 67 Johns C., **Macka M.**, Wen-Chu Yang, Paul R. Haddad, LED-Based Photometric Detector Compatible with Commercial CE Instrumentation: Design, Performance, 27th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2003, Nice, France, June 15-19, **2003**, poster presentation No. 400 / CAPILLARY ELECTROPHORESIS 21.
- P 68 **Macka M.**, Wen-Chu Yang, Cameron Johns, Paul Schuman, Paul R. Haddad, A New-Generation UV-Transparent Fluorinated Polymer Capillary as Separation Capillary in Capillary Electrophoresis, 27th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2003, Nice, France, June 15-19, **2003**, poster presentation No. 401 / CAPILLARY ELECTROPHORESIS 22.
- P 69 **Macka M.**, Wen-Chu Yang, Paul R. Haddad, Simultaneous Separations of Inorganic Anions and Cations With High-Magnitude EOF Capillaries, 27th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2003, Nice, France, June 15-19, **2003**, poster presentation No. 402 / CAPILLARY ELECTROPHORESIS 23.
- P 70 **Macka M.**, Thomas Rhodemann, Wen-Chu Yang, Cameron Johns, Paul R. Haddad, A New Low-MW Isoelectric Buffer for Capillary Electrophoresis: Design, Synthesis, Purification and Utilisation, 27th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2003, Nice, France, June 15-19, **2003**, poster presentation No. 403 / CAPILLARY ELECTROPHORESIS 24.
- P 71 King M., Paull B., **Macka M.**, Improved Method for the Fast Speciation of Chromium Using Capillary Zone Electrophoresis and Photodiode Array Detection, 16th Sixteenth Annual International Ion Chromatography Symposium (IICS 2003), San Diego, California, USA, 21 - 24 September, **2003**, poster presentation B-8.

- P 72 Baoguo S., **Macka M.**, Haddad P.R., Microemulsion Electrokinetic Chromatography with Extended pH Range and Its Application to Separations of Charged Species, 16th Annual International Ion Chromatography Symposium (IICS 2003), San Diego, California, USA, 21 – 24 September, 2003, poster presentation B-10.
- P 73 Chovancek M., **Macka M.**, A New Fully Buffered Molybdate Electrolyte for Capillary Electrophoresis with Indirect Detection and its Use for Analysis of Anions in Bayer Liquor, 16th Annual International Ion Chromatography Symposium (IICS 2003), San Diego, California, USA, 21 – 24 September, 2003, poster presentation B-13.
- P 74 **Macka M.**, Hutchinson J., Zemann A., Zhang S., Haddad P.R., Miniaturised Movable Contactless Conductivity Detection Cell for Capillary Electrophoresis, 16th Annual International Ion Chromatography Symposium (IICS 2003), San Diego, California, USA, 21 – 24 September, 2003, poster presentation B-12.
- P 75 Hutchinson J., **Macka M.**, Zemann A., Avdalovic N., Haddad P.R., Ion-Exchange Polymeric Monolithic Capillary Columns for Preconcentration of Anions in Sea Water and Separation by CEC, 27th International Symposium on Capillary Chromatography – ISCC-2004, Riva del Garda, Italy, 31. May -4. June 2004, poster presentation B.06., p.27.
- P 76 Potter O.G., Guijt R.M., Corney S, Haddad P.R., **Macka M.**, Conductivity Gradient Focusing, μ TAS 2004, Malmö, Sweden, 26. -30. September 2004, poster presentation M-13-A, Final Program p.16.
- P 77 Evenhuis C.J., Guijt R.M., **Macka M.**, Marriott P., Haddad P.R., **Measuring Temperatures in Capillaries Used for Capillary Electrophoresis**, 28th International Symposium on Capillary Chromatography - ISCC-2005, Las Vegas, Nevada, USA, May 22-25, 2005, poster presentation No. 59.
- P 78 Evenhuis C.J., Guijt R.M., **Macka M.**, Marriott P., Haddad P.R., Quantifying temperature increases due to Joule heating in electro-driven separations, 29th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2005, Stockholm, Sweden, June 26-30, 2005, poster presentation No. P7:25, Abstract Book p.318.
- P 79 Momenbeik F., Johns C., Breadmore M.C., Zakaria P., Hilder E.F., **Macka M.**, Haddad P.R., Sensitive determination of sugars by capillary electrophoresis: detection after labelling with p-nitro-aniline and using a spectrally matching 406 nm light emitting diode as light source, 29th International Symposium on High Performance Liquid Phase Separations & Related Techniques - HPLC-2005, Stockholm, Sweden, June 26-30, 2005, poster presentation No. P25:13, Abstract Book p.741.
- P 80 Breadmore M.C., **Macka M.**, 1 W Luxeon white light emitting diode as a new continuous light source for spectrophotometric detection, International Symposium on Chromatography – ISC 2006, Copenhagen, Denmark, 21 – 25 August, 2006, poster presentation Pb01.
- P 81 Evenhuis C.J., Guijt R.M., **Macka M.**, Marriott P., Haddad P.R., How cool is my CE? - Measuring the heat transfer coefficient in CE, International Symposium on Chromatography – ISC 2006, Copenhagen, Denmark, 21 – 25 August, 2006, poster presentation Pe01.
- P 82 Evenhuis C.J., Guijt R.M., **Macka M.**, Marriott P., Haddad P.R., It's rather warm in here! - Joule heating and temperature profiles in CE, International Symposium on Chromatography – ISC 2006, Copenhagen, Denmark, 21 – 25 August, 2006, poster presentation Pe02.
- P 83 Evenhuis C.J., Guijt R.M., **Macka M.**, Marriott P., Haddad P.R., Get it right! - Measuring electrophoretic mobilities free of temperature-induced distortion by Joule heating, International Symposium on Chromatography – ISC 2006, Copenhagen, Denmark, 21 – 25 August, 2006, poster presentation Pe03.
- P 84 Evenhuis C.J., Guijt R.M., **Macka M.**, Marriott P., Haddad P.R., Variation of Zeta-Potential with Temperature in Fused Silica Capillaries Used for Capillary, Electrophoresis International Symposium on Chromatography – ISC 2006, Copenhagen, Denmark, 21 – 25 August, 2006, poster presentation Pe05.
- P 85 Evenhuis C.J., Guijt R.M., **Macka M.**, Marriott P., Haddad P.R., Post blast explosive residues analysis by portable capillary electrophoresis with indirect detection using an LED-based photometric detector, International Symposium on Chromatography – ISC 2006, Copenhagen, Denmark, 21 – 25 August, 2006, poster presentation Pe04,
Awarded 1st Prize for a Poster Presentation.
- P 86 Balding P., Boyce M., Breadmore M.C., **Macka M.**, Determination of an alternative probe to chromate for the indirect detection of inorganic anions using light emitting diode detection, *Proc. RACI Interact 2006*, Perth, Australia, 24 - 28 September 2006, poster presentation.

- P 87 Nie F.-Q., **Macka M.**, Brett Paull, Miniaturized electroosmotic pump using silica monoliths, *Proc. NanoTech 2006*, Montreux, Switzerland, 13 - 16 November **2006**, poster presentation.
- P 88 Nie F.-Q., **Macka M.**, Brett Paull, Miniaturization and integration of the injecting and dispensing silica monolithic electroosmotic pumps on a microfluidic chip, *Proc. NanoTech 2006*, Montreux, Switzerland, 13 - 16 November **2006**, poster presentation.
- P 89 Henderson R.D., Breadmore M.C., Guijt R.M., Hilder F.E., **Macka M.**, Laser Induced Fluorescence Detection on a Budget: Light Emitting Diode versus Diode Laser, *Proc. 30th International Symposium on Capillary Chromatography – ISCC 2007*, Dalian, China, June 5 - 7 **2007**, poster presentation.
- P 90 Nie F.-Q., **Macka M.**, Brett Paull, On-Chip Micro-Flow Injection Analysis with Integrated Dual Monolithic Silica Based Electro-Osmotic Pumps and Ion-Exchange Concentrator Column for the Analysis of Trace Cations, *Proc. NSTI Nanotech 2007*, Santa Clara, CA, USA, 20 - 24 May **2007**, poster presentation, section ‘Sensors & MEMS’.
- P 91 Walsh Z., Connolly D., Abele S., Alhashimi N., Scarmagnani S., Paull B., Diamond D., **Macka M.**, Elution with light: Photochromic monolithic stationary phase with light switchable retention, *Proc. 31st International Symposium on High Performance Liquid Phase Separations and Related Techniques – HPLC 2007*, Gent, Belgium, 17 - 21 June **2007**, poster presentation P01.19 in session Fundamental Aspects/Retention Mechanisms.
- P 92 Gilespie E., **Macka M.**, Connolly D., Paull B., Use of contactless conductivity detection for the characterisation of stationary phase chemistry in surface modified monolithic capillary columns and capillary within capillary ion chromatography, *Proc. 31st International Symposium on High Performance Liquid Phase Separations and Related Techniques – HPLC 2007*, Gent, Belgium, 17 - 21 June **2007**, poster presentation P04.32 in session Advances in Technology/Stationary phases.
- P 93 Walsh Z., Grundmann M., Connolly D., Abele S., Nie F.-Q., Paull B., **Macka M.**, Exotic monoliths for separation science and beyond, *Proc. 31st International Symposium on High Performance Liquid Phase Separations and Related Techniques – HPLC 2007*, Gent, Belgium, 17 - 21 June **2007**, poster presentation P04.38 in session Advances In Technology/Stationary Phases.
- P 94 Bones J., Duffy C., **Macka M.**, Paull B., Pushing the boundaries in LC – high efficiency separations using meter long coupled monolithic silica columns in LC-ESI-MS, *Proc. 31st International Symposium on High Performance Liquid Phase Separations and Related Techniques – HPLC 2007*, Gent, Belgium, 17 - 21 June **2007**, poster presentation P03.23 in session Advances In Technology/Column Technology.
Chosen by a jury among the top 15 out of totally close to 900 posters.
- P 95 Paull B., **Macka M.**, Gilespie E., Connolly D., New possibilities for capillary ion chromatography of inorganic and small organic ions using monolithic silica based ion exchangers with on-column contactless conductivity detection, *Proc. 31st International Symposium on High Performance Liquid Phase Separations and Related Techniques – HPLC 2007*, Gent, Belgium, 17 - 21 June **2007**, poster presentation P03.37 in session Advances In Technology/Column Technology.
Chosen by a jury among the top 50 out of totally close to 900 posters.
- P 96 Walsh Z., Connolly D., Abele S., Alhashimi N., Diamond D., Paull B., **Macka M.**, Monolithic photochromic stationary phase with light switchable retention, *RSC ARF*, Glasgow, UK, 16 – 18 July 2007, poster presentation.
- P 97 Loan M., Mendel E., Abele S., Paull B., **Macka M.**, The potential of capillary electrophoresis for the analysis of yeast extracts, *RSC ARF*, Glasgow, UK, 16 – 18 July 2007, poster presentation.
- P 98 Harvey E., Abele S., Walsh Z., E., Connolly D., Nie F.-Q., Paull B., **Macka M.**, Porous monoliths for separation science and beyond, *RSC ARF*, Glasgow, UK, 16 – 18 July 2007, poster presentation.
- P 99 Abele S., Stjernlof A., Mehlen S., Loane M., Walsh Z., Kelly T., Nie F.-Q., Barron L., Kent N., Lawless B., Paull B. **Macka M.**, Light emitting diodes and Diode Lasers in Analytical and Separation Science, *Photonics Ireland 2007*, Galway, 23-26 September 2007, poster presentation No. 82.
- P100 Fu-Qiang Nie, **Mirek Macka**, Brett Paull, Integrating independent silica monolith electroosmotic pumps for reagent delivery and sample preconcentration in a μ -TAS device, *Proc. Micro-TAS 2007*, Paris, 7-11 October 2007.
- P101 Fu-Qiang Nie, **Mirek Macka**, Brett Paull, Electrokinetically driven μ -TAS device for protein digestion and peptide fractionation with a pre-ESI-MS 280 nm light emitting diode photometric detector, *Proc. NanoTech 2007*, Montreux, 14-16 November 2007.

- P102 Silvija Abele, Frantisek Foret, Brett Paull, **Mirek Macka**, UV–Light emitting diodes as light sources for photopolymerisation using total reflection, wave guiding and evanescent field, Proc. ISCCE, Albuquerque, USA, 28-30 November **2007**, poster presentation No. ____.
- P103 Zarah Walsh, Silvia Scarmagnani, Silvija Abele, N. Alhashmi, Dermot Diamond, Brett Paull, **Mirek Macka**, Monolithic photochromic stationary phase with light switchable retention: Study of covalent linkage to the underlying monolithic scaffold, Pittcon, New Orleans USA, 2 – 7 March **2008**, poster presentation, section Separation Science Advances, poster presentation No. 1660-8P.
- P104 Silvia Scarmagnani, Zarah Walsh, N. Alhashmi, Silvija Abele, Damien Connolly, Brett Paull, **Mirek Macka**, Dermot Diamond, Beads-based system for optical sensing using molecular photoswitches, Pittcon, New Orleans USA, 2 – 7 March **2008**, section Materials Science: UV, IR, NMR, X-ray/AES and MS, poster presentation No. 2350-1P.
- P105 Silvia Scarmagnani, Zarah Walsh, N. Alhashmi, Silvija Abele, Damien Connolly, Brett Paull, **Mirek Macka**, Dermot Diamond, Beads-based system for optical sensing using spiropyran photoswitches, Proc. 29th Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society, Lyon, France, 22-26 August 2007, VOLS 1-16 Book Series: Proceedings of Annual International Conference of the IEEE Engineering in Medicine and Biology Society, **2007**, IEEE, New York, USA, pp. 4096-4097.
- P106 Fernando Benito-Lopez, Silvia Scarmagnani, Zarah Walsh, Brett Paull, **Mirek Macka**, Dermot Diamond, Spiropyran Modified Microfluidic Chip Channels for Photonically Controlled Sensor Array Detection of Metal Ions, Proc. CIMTEC'08, 3rd International Conference on Smart Materials, Structures And Systems, Acireale, Sicily, June 9-13, **2008**, poster presentation A: HP01.
- P107 Eoin Gillespie, Damian Connolly, Miroslav Macka, Peter Hauser, Brett Paull, Development of a Contactless Conductivity Detector Cell for 1.6 mm O.D. (1/16th inch) HPLC Tubing and Micro-Bore Columns with On-Column Detection, 5th Biennial Conference of Analytical Sciences, Waterford, Ireland, 7 May **2008**, poster presentation No. ____.
- P108 Silvija Abele, Aine Moyna, Leon Barron, Frantisek Foret, Brett Paull, **Mirek Macka**, UV-LED Photopolymerised monoliths: From short monolithic columns to open tubular capillary columns and functional surfaces, 32nd International Symposium on Capillary Chromatography, Riva del Garda, Italy, 27 May – 2 June **2008**, poster presentation No. ____.
- P109 Zarah Walsh, Silvija Abele, Brett Paull, **Mirek Macka**, Photo-Initiated Polymerisation of Monolithic Stationary Phases using Visible Light Emitting LEDs, 32nd International Symposium on Capillary Chromatography, Riva del Garda, Italy, 27 May – 2 June **2008**, poster presentation No. ____.
- P110 Uģis Daniļevičs, Zarah Walsh, Silvija Abele, Sebastien Cuffe, Barry S. O'Connell, Brett Paull, **Mirek Macka**, Preparation and Characterisation of a Gold Nano-layer Coated Silica 'Exotic' Monolith, 32nd International Symposium on Capillary Chromatography, Riva del Garda, Italy, 27 May – 2 June **2008**, poster presentation No. ____.
- P111 Uģis Daniļevičs, Zarah Walsh, Petr Smejkal, Jana Křenková, Silvija Abele, František Foret, **Mirek Macka**, Approaches to creating gold nano-layer modified monoliths by deposition of Au-nanoparticles from solutions, 32nd International Symposium on Capillary Chromatography, Riva del Garda, Italy, 27 May – 2 June **2008**, poster presentation No. ____.
- P112 Marketa Ryvolová, Tomasz Piasecki, Jan Preisler, Pavel Krásensky, František Foret, Peter C. Hauser, Brett Paull, **Mirek Macka**, Combining photometry, fluorimetry and contactless conductometry in on-capillary detection for capillary electrophoresis and nano-liquid chromatography, 32nd International Symposium on Capillary Chromatography, Riva del Garda, Italy, 27 May – 2 June **2008**, poster presentation No. I10.
- P113 Lenka Krčmová, Hana Kalábová, Marketa Ryvolová, Tomasz Piasecki, Silvija Abele, Jan Preisler, Brett Paull, Peter Hauser, Petr Solich, **Mirek Macka**, A simple MECK method for the rapid determination of neopterin and creatinine in urine for clinical monitoring in anticancer therapy using UV-LED-photometric and fluorimetric detection, 32nd International Symposium on Capillary Chromatography, Riva del Garda, Italy, 27 May – 2 June **2008**, poster presentation No. ____.
- P114 Tomasz Piasecki, Silvija Abele, Michael Oelgemoeller, **Mirek Macka**, Light propagation in capillaries filled with polymerisation mixture to form monoliths: Theoretical models based on optics and photochemistry, 32nd International Symposium on Capillary Chromatography, Riva del Garda, Italy, 27 May – 2 June **2008**, poster presentation No. ____.

- P115 Amy Smith, Marketa Ryvolova, Tomasz Piasecki, Eva Mendel, Silvija Abele, Brett Paull, **Mirek Macka**, Capillary electrophoresis with in-line derivatization of amino acids and peptides for the analysis of yeastolates, 32nd International Symposium on Capillary Chromatography, Riva del Garda, Italy, 27 May – 2 June **2008**, poster presentation No. ____.
- P116 Marketa Ryvolová, Jan Preisler, Pavel Krásensky, František Foret, Peter C. Hauser, Brett Paull, **Mirek Macka**, Combined detector for on-capillary photometric, fluorimetric and contactless conductometric detection in microcolumn separations, Proc. International Ion Chromatography Conference IICS 2008, Portland, OR, USA, 21-24 September **2008**, poster presentation.
- P117 Z. Walsh, S. Abele, B. Lawless, D. Heger, P. Klan, S. Scarmagnani, M. C. Breadmore, D. Diamond, B. Paull, **M. Macka**, Visible Light Initiated Polymerisation of Monolithic Stationary Phases in Polyimide Coated Capillaries using Light Emitting Diodes, Proc. International Ion Chromatography Conference IICS 2008, Portland, OR, USA, 21-24 September **2008**, poster presentation.
- P118 Marketa Ryvolová, Jan Preisler, Pavel Krásensky, František Foret, Peter C. Hauser, Brett Paull, **Mirek Macka**, Combined '3-in-1' photometric, fluorimetric and contactless conductometric on-capillary detector for capillary separations: Applicability for simultaneous detection in CE, Proc. CECE 2008, Brno, Czech Republic, 24-25 November **2008**, poster presentation.
- P119 Vlastimil Hruska, Christopher J. Evenhuis, Rosanne M. Guijt, **Miroslav Macka**, Bohuslav Gas, Philip J. Marriott, Paul R. Haddad, Determination of the surface heat transfer coefficient, h , in capillary electrophoresis, Proc. ASASS 2008, Hobart, 8-10 December **2008**, poster presentation.
- P120 Tomasz Piasecki, Silvija Abele, Michael Oelgemoeller, **Mirek Macka**, Photoinitiated polymerisation of monolithic stationary phases: modelling of light propagation in capillaries and light attenuation inside the photopolymerisation mixture filling the capillary bore, ICTBSB-2009 - International Conference on Trends in Bioanalytical Sciences and Biosensors, Dublin, Ireland, 26-27th January **2009**, poster presentation.
- P121 Uģis Danilēvičs, Silvija Abele, Zarah Walsh, Brett Paull, **Mirek Macka**, Layer-By-Layer (LbL) Method – New Approach In Creating Gold Nano-Particle Modified Monolithic Columns, ICTBSB-2009 - International Conference on Trends in Bioanalytical Sciences and Biosensors, Dublin, Ireland, 26-27th January **2009**, poster presentation.
- P122 Tomasz Piasecki, Michael Oelgemoeller, Silvija Abele, **Mirek Macka**, Photoinitiated polymerisation of monoliths: How far does the light penetrate into the polymerisation mixture?, 60th Pittsburg Conference on Analytical Chemistry and Applied Spectroscopy – Pittcon 2009, Chicago, USA, 8-13 March **2009**, poster presentation, 2740-14P.
- P123 Z. Walsh, S. Abele, B. Lawless, D. Heger, P. Klan, S. Scarmagnani, M. C. Breadmore, D. Diamond, B. Paull, **M. Macka**, Use of light emitting diodes in the visible region to initiate polymerisation leading to monolithic stationary phases, Proc. ISCCE – 33rd International Symposium on Capillary Chromatography and Electrophoresis, Portland, OR, USA, 18-21 May **2009**, poster presentation.
- P124 Zarah Walsh, Silvia Scarmagnani, Fernando Benito-Lopez, Silvija Abele, Dermot Diamond, Brett Paull, **Mirek Macka**, Photo-controllable electroosmotic pumps based on spiropyran polymeric monoliths for micro-fluidic devices, HPLC 2009, Dresden, Germany, 28 June – 2 July **2009**, poster presentation.
- P125 Zarah Walsh, Pavel Levkin, Brett Paull, Frantisek Svec, **Mirek Macka**, Preparation of styrenic monoliths using initiation with visible light emitting diodes at 470 nm, HPLC 2009, Dresden, Germany, 28 June – 2 July **2009**, poster presentation.
- P126 Walsh Z., Silvia Scarmagnani, Fernando Benito-Lopez, Silvija Abele, Dermot Diamond, Brett Paull, **Macka M.**, Photo-controllable electroosmotic pumps based on spiropyran polymeric monoliths for micro-fluidic devices, RSC ARF 2009, Canterbury, UK, 13-15 July **2009**, poster presentation.
- P127 Áine Moyna, Damian Connolly, Eoin Gillespie, Leon Barron, **Mirek Macka**, Brett Paull, Development of a capillary ion chromatography system for the separation of inorganic anions on a methacrylate based polymer monolith grafted with [2(methacryloyloxy)ethyl] trimethylammonium chloride, RSC ARF 2009, Canterbury, UK, 13-15 July **2009**, poster presentation.
- P128 Ugis Danilevics, Silvija Abele, Zarah Walsh, Brett Paull, **Mirek Macka**, Layer-by-Layer (LbL) method as an approach for creating gold nano-particle modified polymer monolithic columns, Euroanalysis 2009, Innsbruck, Austria, 6-10 September **2009**, poster presentation.

- P129 Áine Moyna, Damian Connolly, Eoin Gillespie, Leon Barron, **Mirek Macka**, Brett Paull, Development of a capillary ion chromatography system for the separation of ions on ion exchange polymer monoliths, Euroanalysis 2009, Innsbruck, Austria, 6-10 September 2009, poster presentation.
- P130 Ugis Danilevics, Silvija Abele, Zarah Walsh, Brett Paull, **Mirek Macka**, Lenka Krčmová, Gold nanoparticle modified monolithic silica columns: preparation and characterisation, Proc. IICS 2009, Dublin, 21 - 24 September **2009**, poster presentation.
- P131 Petr Smejkal, Marketa Ryzolová, Fritz Bek, Gerard Rozing, **Mirek Macka**, Frantisek Foret, Broadening the analytical platform of Agilent Bioanalyzer 2100 to a general chip based capillary electrophoresis analyzer, Proc. IICS 2009, Dublin, 21 - 24 September **2009**, poster presentation.
- P132 Silvia Scarmagnani, Zarah Walsh, Fernando Benito Lopez, **Mirek Macka**, Brett Paull, Dermot Diamond, Immobilisation and incorporation of photochromic spiropyran dyes in polymeric substrates for metal ion sensing and micro-fluidics, Proc. IICS 2009, Dublin, 21 - 24 September **2009**, poster presentation.
- P133 Tomasz Piasecki, Cornelius F. Ivory, **Mirek Macka**, Computer Modelling of Electrohydrodynamic Focusing in 2-D Planar Microfluidic Devices for Preconcentration of low-Abundance Analytes, Proc. IICS 2009, Dublin, 21 - 24 September **2009**, poster presentation.

8.7 Patents

- T 1 Novotný J., Dalecký V., Závodná I., Kiss F., Mikusková A., Jonás P., **Macka M.**, Marčíková L., Kožíšek R., Process for preparing disodium and dipotassium salt of 1,1-cyclobutanedicarboxylic acid, Czechoslovakia 1992, application CS 1989-3382, number CS 277196, published **1992/12/16**, 9 pp.
- T 2 Závodná I., Novotný J., Kiss F., Seménková L., **Macka M.**: Preparation of 1-p(carbamoylmethylphenoxy)-3-isopropylammino-2-propanol, Czech Republic 1994, application CZ 1992-1888 1992/06/19, published **1994/01/19**.
- T 3 Kiss F., Sládek T., Novotný J., Závodná I., Hájek E., **Macka M.**, Bohumínská M., Uhrová Z., Kudláček A., Kubácková M., Antitumour drug cisplatin and the process for its preparation, Czech Republic 1994, application CZ 1991-1022 1991/04/11, number CZ 278891, published **1994/08/17**, 7 pp.
- T 4 **Macka M.**, Haddad P.R., Dick A., Tulumovic S., Transmittance Photometry Performed on Optically Opaque Samples Using a portable Light-Emitting Diode Photometer, Provisional Patent Application, US PTO Application No.60/397,779, filing date 24/07/**2002**.
- T 5 **Macka M.**, Paull B., Grundmann M., Walsh Z., Abele S., Method for metal coated porous scaffold material, PCT application No. PCT/EP2008/056388 filed 23May, 2008 claiming priority from US Provisional Patent Application No. 60/943,896 filed 14June, **2007**.
- T 6 **Macka M.**, Foret F., Abele S., Evanescent wave photopolymerisation, Provisional Application number 60/950,218, filing date 17 July **2007** (discontinued).
- T 7 **Macka M.**, Presisler J., Foret F., Krásenský P., Hauser P., Ryzolová M., Detection Assembly, Provisional Application, GB 0809364.3, filing date 23 May **2008**.

8.8 Non refereed articles in scholarly journals

- N 1 Vorlíček F., Vítovec J., Hájek E., Sládek T., Růžička D., Bohumínská M., Borák J., **Macka M.**, Kiss F., Clinical Comparative Pharmacokinetic Study of Diltiazem, Respharma, **1988**, December, 63-72.
- N 2 Hilder E.F., **Macka M.**, Haddad P.R., CEC – A new alternative in ion separations, Chemistry in Australia, 66(6), 15-18, **1999** July.
- N 3 Stefan Schmid, **Mirek Macka**, Peter C. Hauser, Deep-UV Detector for HPLC with Light-Emitting Diode, *CHIMIA*, 62(10), 860, **2008**, DOI: 10.2533/chimia.2008.860
<http://www.chimia.ch> .