

## 2022 Annual Meeting

53rd Meeting of EuChemS-DAC

## Sunday, August 28, 2022

Time: 9.00 - 13.00

Venue: Room Alfama, Mercure Lisboa Hotel, Av. José Malhoa nº 23A, 1099-051 Lisbon, Portugal

#### **MINUTES**

## 1. Opening

## 1.1 Welcome by Slavica Ražić

Slavica Ražić (SR) welcomed Delegates, Guests and Observers and celebrated the 50<sup>th</sup> Anniversary of DAC-EuChemS, with an invitation for lunch and drink after the Annual Meeting. Individual short presentation regarding the name, affiliation and the respective society followed. SR informed the participants that Prof. Miguel Valcárcel, former DAC Chair (1999-2004) and the first recipient of the DAC Award (2015) has passed away in January 2022. The participants had a moment of silence *in memoriam* of his contributions to DAC.

## 1.2 Finalisation of the Agenda

No topic was added to the Agenda.

## 1.3 Changes in membership, attendance, apologies

The list of participants can be found as Attachment 1 of the Minutes. Delegates Martina Marchetti-Deschmann, Constantina Kapnissi-Christodoulou, Nikoline Nielsen, Günter Gauglitz, Elia Psillakis, Viola Horvath, Daniel Mandler, Lutgarde Buydens, Elin L. Gjengedal, Krystyna Pyrzynska, Sergey N. Shtykov, Lubomir Svorc, Natasa Gros, Jose Luis Perez Pavon, Charlotta Turner, Steve Lancaster and Guests/Observers Paul Francis, Duncan Burns, Federico Marini, Maciej Jarosz, Koos van Staden, Jan Labuda, Romà Tauler and Ioannis A. Katsoyiannis sent their apologies for not being present.

Marcela Segundo (MS) reported that new delegates have been nominated by the Association of Greek Chemists (Greece) - Prof. Elia Psillakis, by the Italian Chemical Society (Italy) - Prof. Luigi Mondello, and by the Catalan Chemical Society (Spain) - Prof. Anna de Juan.



SR acknowledged the presence of Joana Amaral and Ana Aguiar-Ricardo, which are the liason members for the Division of Food Chemistry and for the Division of Green and Sustainable Chemistry, respectively.

1.4 Approval of the Minutes of 52nd DAC Meeting, Sunday, September 12, 2021, online The minutes were approved.

# 2. Report of the Chair

## 2.1 Chair remarks and News from EuChemS (2021-2022)

SR informed that this was the last meeting she was chairing and acknowledged the support of Delegates through the challenging years we had with all restriction imposed by COVID. SR also mentioned that DAC was one of the most active divisions, maintaining activities online and with active cooperation with several other Professional Networks.

SR also indicated that, as Appointed Member (2021) and Elected Member (2022), she had the opportunity to attend to the Executive board meetings that took place on October 2021, February 2022, and August 2022. The minutes of these meetings (and also from the meeting in June 2022) can be found at <a href="https://www.dropbox.com/sh/r3aff7rd5fc8sma/AAC4qR7mwYn2t4-SLv6slruAa?dl=0">https://www.dropbox.com/sh/r3aff7rd5fc8sma/AAC4qR7mwYn2t4-SLv6slruAa?dl=0</a>.

SR also mentioned that the Professional Network meetings occurred as joint events of the General Assemblies. In 2021, the meeting was online (22 October 2021) with attendance of SR, MS and Jiri Barek (JB). One main topic discussed was the involvement of The European Young Chemists' Network (EYCN) in the Professional Networks, through the inclusion of Observer members from EYCN. The Guidelines for Divisions and Working Parties were updated <a href="https://www.euchems.eu/wp-content/uploads/2021/03/P-003-EuChemS-Divisions-Guidelines-ver.2021.pdf">https://www.euchems.eu/wp-content/uploads/2021/03/P-003-EuChemS-Divisions-Guidelines-ver.2021.pdf</a> with the following recommendations:

- (i) There shall be maximum one current and one former member of the EYCN in a certain Division/Working Party at the same time;
- (ii) Term of office is two years, not renewable; if someone starts as a current EYCN member, he/she can continue as a former EYCN member;
- (iii) Possibility of an EYCN (former) member joining at the same time more than one Division/WP is not allowed.



SR also referred to the support offered by EuChemS secretariat concerning the organization of online conferences and meetings (Zoom platform + professional support with no cost for organizers), indicating that DAC organized the EuChemOmetricS – Webinar of DAC Study Group Chemometrics in February 2022 and the joint e-conferences EuSP2022 and GSAC2022 of DAC Study Group Sample Preparation in March 2022, with their assistance.

Another two topics were discussed: the inclusion of participants from industry in conferences (as invited speakers, for instance) and the strategies to increase the visibility of EuChemS through social networks and naming of awards.

In 2022, the meeting with Professional Networks took place in Lisbon (27 August 2022), with attendance of SR and Martin Vogel (MV). SR informed that the report on annual DAC activities were sent timely and included in the General report of Professional Networks.

## 3. Elections, Appointments, Awards and Cooperation with other Divisions

3.1 Steering Committee membership for 2023, including election of Chair (2023-2025)

SR indicated that only one nomination was received regarding the Chair election from the Portuguese Chemical Society, indicating Marcela Segundo as candidate. According to the statutes, voting took place using secret ballot. MS was elected unanimously as Chair for the period 2023-2025 by the ten Delegates present in the Annual Meeting. Following the election, MS mentioned that, with her election, the place of Secretary would be vacant. Therefore, with full support from the Croatian Chemical Society, Snežana Miljanić will take this position from January 2023.

Therefore, the members of the Steering Committee for 2023 will be: Marcela Segundo (Chair), Slavica Ražić (Past-Chair), Snežana Mijianić (Secretary), Martin Vogel (Treasurer), Charlotta Turner, Sibel Ozkan, and Franka Kalman. SR and all Delegates present in the meeting acknowledged Jiri Barek for all his contributions along the years.

#### 4. Awards

#### 4.1 DAC Tributes

SR informed that the call for DAC Tribute is opened without a given deadline, nominations can be sent to SR and MS.

#### 4.2 Robert Kellner Lecture



## 4.3 DAC Award

Both topics were addressed together, and SR reminded the deadline for submission of applications as October 31, 2022. The jury of both awards have been updated with the following composition: Luisa Torsi (President), Christopher Brett, Boris Mizaikoff, Lutgarde Buydens, Charlotta Turner (members mentioned in the Annual Meeting), and Karen Faulds (with confirmation of acceptance obtained afterwards).

## 5. Cooperation with other EuChemS divisions

## 5.1 Cooperation with DCE and DFC

SR informed that she has integrated the Scientific Committee of EuroFoodChem conference (22-24 November 2021) as Chair of DAC. Concerning the Division of Green and Sustainable Chemistry (DGSC), SR and Ana Aguiar-Ricardo were co-chairs on GSAC2022 e-conference of DAC Study Group Sample Preparation in March 2022, with Nora Ventosa (DGSC) as a plenary speaker.

The exchange of speakers in future events to be hosted by DCE, DFC and DAC will occur, including ICCE - International Conference on Chemistry & the Environment (Venice, Italy, June 11-16, 2022), EuroFoodChem (Belgrade, Serbia, June 14-16, 2022), and EUROANALYSIS XXI.

Both Joana Amaral (Division of Food Chemistry) and Ana Aguiar-Ricardo (Division of Green and Sustainable Chemistry) expressed their willingness to continue to cooperate, particularly through exchange of speakers in the respective flagship events of each Division.

#### 5.2 Other initiatives

After successfully organizing the webinar in March, EuChemOmetricS, Federico Marini (Chair of Study Group Chemometrics) expressed the interest in organization the next edition in close future.

## 6. EUROANALYSIS Conferences

## 6.1 EUROANALYSIS XXI, Genève, Switzerland, 2023

Eric Bakker gave a presentation about the progress of organization, informing about the updates shown on the website, namely the list of plenary speakers. SR informed that the Steering Committee will visit the location soon. SR also informed, in the scope of budget



discussion for EUROANALYSIS XXII, that 5% of the income from the full registration fees shall be transferred to the following organizer of Euroanalysis conference to contribute to a balanced regional participation or to attract certain groups. Delegates were informed that this transference was done by the Turkish Chemical Society to the Royal Netherlands Chemical Society. As Euroanalysis in Nijmegen was cancelled, no transfer was made from the Royal Netherlands Chemical Society in favour of the Swiss Chemical Society. For cancellation of Euroanalysis in The Netherlands and according to the Conference Cooperation Agreement, the deficit was regularly paid to the Royal Netherlands Chemical Society by both parties, DAC and EuChemS.

## 6.2 EUROANALYSIS XXII, 2025

Following the call for applications to host EUROANALYSIS XXII in 2025, the Romanian Chemical Society and the Catalan Chemical Society, represented by Raluca-Ioana van Staden and by Anna de Juan, were invited to present their bid books. After each presentation, delegates asked questions that were answered by the presenters, namely about the inclusion of VAT in the values proposed by registration fees in the proposal from the Catalan Chemical Society. The election took place by secret ballot, with a total of 10 votes. The Romanian Chemical Society proposal received 4 votes and the Catalan Chemical Society proposal received 6 votes. This result attributed the organization of EUROANALYSIS XXII to the Catalan Chemical Society in 2025 in Barcelona.

## 7. Reports and Information

MS informed that the Study Groups' aims and activities will be revised as part of the strategy for 2024-2026, suggesting that the extension of activities should be granted for one year more. All delegates agreed with this proposal.

7.1 Study Group 'Education in Analytical Chemistry'; Head: M. Vogel (2020-2022)

The report for 2021/22 has been received and shared with delegates during the Annual Meeting (Attachment 2). The activities of this Study Group were extended for 2023.

7.2 Study Group 'Quality Assurance and Accreditation'; Head: E. Gjengedal (2021-2023)



Prior to the Annual Meeting, Elin Gjengedal informed the Steering Committee that she will step down as Delegate from the Norwegian Chemical Society and she will not be available to chair the Study Group from now on. As no other member reported interest on continuing with its activities, those will be suspended.

# 7.3 Study Group 'History'; Head: D.T. Burns (2021-2023)

The report for 2021/2022 has been received and has been sent out to the delegates (Attachment 3). Duncan T. Burns was not present, and delegates agreed that the content of the report translated the activity of the group.

## 7.4 Study Group 'Bioanalytics'; Head: R. van Staden (2022)

The report for 2021/22 has been received and shared with delegates during the Annual Meeting (Attachment 4). The activities of this Study Group were extended for 2023.

## 7.5 Study Group 'Chemometrics'; Head: F. Marini (2022)

The report for 2021/2022 has been received and has been sent out to the delegates (Attachment 5). Federico Marini was not present, and delegates agreed that the content of the report translated the activity of the group. The activities of this Study Group were extended for 2023.

## 7.6 Study Group 'Nanoanalytics'; Head: S. Shtykov (2022)

The report for 2021/2022 has been received and has been sent out to the delegates (Attachment 6). The Head of the group Sergey Shtykov could not attend the meeting but communicated to MS his intentions to keep the SG active with new proposals. The activities of this Study Group were extended for 2023.

## 7.7 Study Group 'Electroanalytical Chemistry'; Head: J. Barek (2020-2022)

The report for 2021/22 has been received and shared with delegates during the Annual Meeting (Attachment 7). The activities of this Study Group were extended for 2023.

# 7.8 Study Group 'Sample Preparation'; Head: E. Psillakis (2021-2023)



The report for 2021/2022 has been received and has been sent out to the delegates (Attachment 8). Elia Psillakis was not present, and delegates agreed that the content of the report translated the activity of the group.

#### 7.9 DAC website

SR informed that DAC-EuChemS has been reformulated, along with other pages of EuChemS and invited attendees of the Annual Meeting to exploit it (https://www.euchems.eu/divisions/analyticalchemistry/). SR reinforced the effort made on maintaining all documentation and information updated and asked for collaboration from delegates to report any missing/incorrect information. EuChemS strongly encourages increasing the visibility and recognition of umbrella association and PNs. The LinkedIn DAC page is active since 2020 (https://www.linkedin.com/groups/8945596/), currently with more than 137 followers. The creation of a LinkedIn Event page for EUROANALYSIS XXI was suggested.

## 8. Events organized in cooperation with DAC-EuChemS

The following events were organized:

17th International Students Conference "Modern Analytical Chemistry", 16-17 September 2021, Prague, Czech Republic

12th International Conference on "Instrumental Methods of Analysis", 20-23 September 2021, virtual event organized by the Aristotle University of Thessaloniki and the National Technical University of Athens

EuroFAST2022.eu, 19-22 April 2022, Nijmegen, The Netherlands, https://www.eurofast2022.eu/

Flow Analysis XV, 26 June – 1 July 2022, Krakow, Poland, <a href="https://flowanalysis2022.confer.uj.edu.pl/">https://flowanalysis2022.confer.uj.edu.pl/</a>

Additionally, the 2nd European Sample Preparation e-Conference (EuSP2022) and the 1st Green and Sustainable Analytical Chemistry e-Conference (GSAC2022) were organized simultaneously (March 14-16, 2022) in cooperation with Study Group Sample Preparation. The following event will take place:

18th International Students Conference "Modern Analytical Chemistry", 15-16 September 2022, Prague, Czech Republic, <a href="https://web.natur.cuni.cz/analchem/isc-mac/">https://web.natur.cuni.cz/analchem/isc-mac/</a>



# 9. Any other business

9.1 Date and venue of the 2023 DAC Annual Meeting

The Annual Meeting 2023 will take place in Geneve on Sunday 27<sup>th</sup> August 2023, 9:00, prior to Euroanalysis XXI (tentative schedule).

Marcela Segundo (Secretary)

Slavica Ražić (Chair)

-			CIONATURE
	MEMBER SOCIETY	DELEGATE	SIGNATURE
ľ	Oesterreichische Gesellschaft fur Analytische Chemie	Prof. Dr. Rudolf Krska	
	Gesellschaft Oesterreichischer Chemiker	Prof. Dr. Martina Marchetti-Deschmann	
L	Société Royale de Chimie	Prof. Claudine Buess-Herman	
	Koninklijke Vlaamse Chemische Vereniging		
	Union of Chemists in Bulgaria	· · · · · · · · · · · · · · · · · · ·	
6	Croatian Chemical Society	Prof. Dr. Snezana Miljanic	1 hly
	Pancyprian Union of Chemists	Dr. Constantina P. Kapnissi-Christodoulou	1
•	Czech Chemical Society	Prof. Jiri Barek	Kon
	Danish Chemical Society	Dr. Nikoline Juul Nielsen	
	Estonian Chemical Society		
	Association of Finnish Chem Socs	Prof. Johan Bobacka	Johan Tobadie
	Société Chimique de France	Dr. Christian Rolando	10.1
,	Gesellschaft Deutscher Chemiker	Dr. Martin Vogel	illates Upl
	Deutsche Bunsen-Gesellschaft fur Phys. Chemie	Prof. Dr. Günter Gauglitz	, ,
	Association of Greek Chemists	Prof. Elia Psillakis	
	Hungarian Chemical Society	Prof. Viola Horvath	
	Institute of Chemistry of Ireland	Prof. Jeremy D. Glennon	
	Israel Chemical Society	Prof. Daniel Mandler	
	Consiglio Nazionale dei Chimici		
		Prof. Luigi Mondello represented by Prof.	1/20 00 to of 000
•	Societa Chimica Italiana	Maria Chiara Sportelli	loto dioro Epotell
	Association des Chimistes Luxemb.	/	,
	Chemical Society of Montenegro		
	Royal Netherlands Chemical Soc	Prof. Dr. Lutgarde Buydens	
	Society of Chemists & Technologists of Macedonia		
	Norwegian Chemical Society	Prof. Elin L. Gjengedal	
	Polish Chemical Society	Prof. Krystyna Pyrzynska	
•	Sociedade Portuguesa de Quimica	Prof. Marcela Segundo	Marcelo Degundo
	Portuguese Electrochemical Society		( )
	Romanian Chemical Society	Prof. Raluca-loana van Staden	Pray Stat
٠	Mendeleev Russian Chemical Soc	Prof. Sergey N. Shtykov	
	Russian Scientific Council on Analytical Chemistry	Prof. Gennady Evtugyn	
•	Serbian Chemical Society	Prof. Dr. Slavica Razic	Shotte
	Slovak Chemical Society	Dr. Lubomir Svorc	
	Slovenian Chemical Society	Prof. Dr. Natasa Gros	
	Real Sociedad Espanola de Quim	Prof. Jose M. Pingarron	
	Spanish Society for Analytical Chem	Prof. Jose Luis Perez Pavon	
	Asoc Nacional de Quimicos de Esp	Tion dose Edio Forest Favori	
		Prof. Anna de Juan	Muan
•	Catalan Chemical Society	Prof. Charlotta Turner	1 Juan
	Swedish Chemical Society	Prof. Chanotta Turner Prof. Dr. Franka Kalman	Y 1/2
	Swiss Chemical Society		7. 11
	Turkish Chemical Society	Prof. Sibel Ozkan	
	Royal Society of Chemistry	Dr. Steve Lancaster	
	Heads of Study Groups and Task Forces		
	DAC Steering Committee		1
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	Education	Dr. Martin Vogel	Mary US
	Quality Assurance	Prof. Elin L. Gjengedal	1
	History	Prof. Duncan Burns	+ A ()
	Bioanalytics	Prof. Raluca van Staden	PNau Stal
	Chemometrics (representation)	Prof. Federico Marini	
	Nanoanalytics	Prof. Sergey N. Shtykov	
	Electroanalytical Chemistry	Prof. Jiri Barek	os au
	Sample Preparation	Prof. Elia Psillakis	*

Guests and Observers		
Australia	Prof. Paul Francis	
Austria	Prof. Dr. Wolfgang Buchberger	***
Brazil	Prof. Solange Cadore	
France	Prof. Philippe Garrigues	
Germany	Dr. Heiner Korte	
	Prof. Dr. Reiner Salzer	
Greece	Prof. Miltiades Karayannis	
Ireland	Prof. Duncan Burns	
Italy	Prof. Federico Marini	
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Poland	Prof. Adam Hulanicki	
roland	Prof. Boguslaw Buszewski	
	Prof. Maciej Jarosz	
	1 Total Madely Galless	
Portugal	Prof. Maria Filomena Camoes	
Russia	Prof. Yuri A. Zolotov	
	Prof. Oleg A. Shpigun	
Romania	Prof. Koos van Staden	
Slovakia	Prof. Jan Labuda	
South Africa	Prof. Mathew Nindi	
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Spain	Prof. Romà Tauler	
	Prof. Gemma Rauret Dalmau	
Sweden	Prof. Bo Karlberg	
O TOGOLI	Prof. Jonas Bergquist	
Switzerland	Prof. Eric Bakker	157
UK / RSC	Prof. Paul Worsfold	
Ukrainian Chemical Society	Prof. Vladimir Zaitsev	
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Division of Environmental Chemistry	Prof. Ioannis A. Katsoyiannis	
	Dr. Willem de Lange	
Division of Food Chemistry	Prof. Joana Amaral	None Award: mean
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Division of Green and Sustainable Chemistry	Prof. Ana Aguiar Ricardo	mesent, 1st part of meeting

Study Group / Task Force Name: SG Education

Study Group / Task Force Head and Affiliation: Dr. Martin Vogel, University of Muenster, Germany

Study Group / Task Force Members and Affiliations:

Prof. Dr. Reiner Salzer, Dresden University of Technology, Germany

Prof. Dr. Ivo Leito, University Tartu, Estonia

Prof. Dr. Miltiades Karayannis, University of Ioannina, Greece

Dr. Martin Vogel, University of Muenster, Germany

Objectives:

Teaching analytical chemistry at the beginning of the 21st Century

Evaluation of curricula in analytical chemistry at the current stage of the Bologna process

European employment survey for chemists and chemical engineers

Electronic media in teaching and assessing analytical chemistry

Activities and Outputs in 2021-2022 (e.g. reports, publications, seminars, meetings):

- Completion of the evaluation of responses to the ACS/EuChemS Joint Employment Survey for Chemists and Chemical Engineers in March 2020. Support by several organisations including DAC is again gratefully acknowledged (R. Salzer).
- Book: Reiner Salzer, Technische Universität Dresden, Duncan Thorburn Burns, The Queen's University of Belfast Lothar Beyer, Universität Leipzig, **Chemistry as a University Degree Development and impact.** European laboratories University Dorpat The naturalist Alexander Petzholdt Universitätsverlag Leipzig, 244 pages, 24,00 €, ISBN 978-3-96023-416-6, published in December 2021
- Publication of the results of the ACS/EuChemS Joint Employment Survey for Chemists and Chemical Engineers (R. Salzer).
- How to Navigate to your Dreamjob? Summerschool of the Erasmus+ programme "Excellence in Analytical Chemistry"; Tartu; 2021, November 24 December 1 (R. Salzer, I. Leito)
- Co-editor of the educational column in "Analytical and Bioanalytical Chemistry", focus on article series on teaching of analytical chemistry during the pandemic (M. Vogel).

## Activities planned for 2022-2023:

- Conclusions from student's responses to the ACS/EuChemS Joint Employment Survey for Chemists and Chemical Engineers (R. Salzer)
- Publication of the results of the ACS/EuChemS Joint Employment Survey for Chemists and Chemical Engineers (R. Salzer).
- How to Navigate to your Dreamjob? Summerschool of the Erasmus+ programme "Excellence in Analytical Chemistry"; Tartu; 2022/23 (R. Salzer, I. Leito)
- Organization of educational session for Euroanalysis 2023 in Geneva (M. Vogel, SG Education)
- Renewal of SG Education with further members

Report submitted by: Martin Vogel

Date submitted: 25/08/2022

# Study Group History

Study Group Members and Affiliations:

- D. Thorburn Burns (chair), The Queen's University of Belfast.
- R. Salzer, The Technical University of Dresden.
- M. J. Walker, The Laboratory of the Government Chemist and The Queen's University of Belfast.

# Objectives:

To study and publish reports on the history of analytical chemistry with particular reference European contributions and support their inclusion by lecture sessions in EUROANLYSIS.

Activities and Outputs in 2021-2022 (e.g. reports, publications, seminars, meetings):

- a) R. I. Stefan van Staden, V, David and D. Thorburn Burns, Some people and places important in the history of analytical chemistry. Revista, 72, 147-155, (2021).
- b) R. Salzer, D. Thorburn Burns and L. Beyer, *Chemistry as a University Degree*—

  Development and Impact: European Laboratories—University of Dorpat—The

  Naturalist Alexander Petzholdt. Leipziger Universitätsverlag, (2021). ISBN 9783-96023-416-6.

Activities planned for 2022-2023

a) We await suggestions from DAC members as to new topics such as future sites of EUROANALYSIS conferences or to revisit previous publications on which new material has been discovered.

Report submitted by: D. Thorburn Burns

Date submitted: 2/VIII/20

Study Group / Task Force Name: Bioanalytics Study Group

Study Group / Task Force Members and Affiliations:

Head of Study Group: Raluca-Ioana van Staden - Romanian Chemical Society

**Guenter Gauglitz** – Gesellschaft Deutscher Chemiker (GDCh)

Jan Labuda – Slovak Chemical Society

Jacobus Frederick van Staden - South African Chemical Institute

Marcela Alves Segundo – ex officio

Coral Barbas Arribas - UCEU San Pablo, Spain

Ryszard Lobinski – UPAU, France

Ede Bodoki – UMedicine and Pharmacy Iuliu Hatieganu, Cluj Napoca, Romania

Mehmet Gumustas – AnkaraU, Turkey

Jose M. Pingarron – Spanish Royal Society of Chemistry

Viola Horvath – Hungarian Chemical Society

## **Objectives:**

The aim of the Bioanalytics study group is to search ways for bringing closer the analytical and bioanalytical chemistry community.

Main purpose of this group is besides "listing" of methods and "applications" a help for deciding which to use for what and warn about pitfalls. It might be a help for those using analytics in fields like life science, environment and food analysis and not being a really well-trained Analyzer.

# Activities and Outputs in 2021-2022 (e.g. reports, publications, seminars, meetings):

A workshop on Bioanalysis was organized on the national level in Romania.

# Sessions at Analytica 2022

Trends in Analytical & Bioanalytical Chemistry: Make, Measure, and Smart Machines (Panne, Riedel, Gauglitz)

Trends in Analytical & Bioanalytical Chemistry: Nanoplastics (Ivleva, Gauglitz)

Trends in Analytical & Bioanalytical Chemistry: Biosensors (Baeumner, Steiner, Gauglitz)

Reports will be published in Mitteilungsblatt GDCh

TC of ABC on Trends in Analytical and Bioanalytical Chemistry

There are 3 manuscripts in preparation related to the Concept attached to this document.

Significant numbers of papers regarding bioanalysis were published in different ISI journals, e.g.

K. Nemčeková, J. Labuda, Advanced materials-integrated electrochemical sensors as promising medical diagnostics tools: A review, Mater Sci Eng C. 2021;120, 111751.

K. Nemčeková, V. Svitková, J. Sochr, P. Gemeiner, J. Labuda, Gallic acid-coated silver nanoparticles as perspective anticancer drug nanocarriers: Mechanism of action, stability, and toxicity, Anal. Bioanal. Chem. 2022, 414: 5493–5505. https://doi.org/10.1007/s00216-022-03955-2

J. Blaškovičová, J. Labuda, Effect of triclosan and silver nanoparticles on DNA damage investigated with DNA-based biosensor, Sensors 2022, 22(12), 4332. https://doi.org/10.3390/s22124332

# Activities planned for 2022-2023:

Planning for special session on Bioanalysis in the coming conference.

Preparing reviews related to bioanalysis (topics: sensors, -omics, HPLC, RAMAN), and their publication as open access for increasing the visibility of the study group.

Organizing a workshop on bioanalytics in Bucharest, Romania with the main scope of improving the concept on Bioanalytics, and also publish the presented papers in a special issue.

Report submitted by: Prof Dr habil Raluca-Ioana van Staden

Date submitted:25/07/2022

Study Group Name: Chemometrics

Study Group Head and Affiliation: Federico Marini, Dept. of Chemistry, University of Rome La Sapienza

Study Group / Task Force Members and Affiliations:

Richard Brereton, University of Bristol, England

Lutgarde Buydens / Jeroen Jansen, Radboud University of Nijmegen, Netherlands

Jan H Christensen, University of Copenhagen, Denmark

Joao Lopes, Universidade de Lisboa, Lisbon, Portugal

Alexey Pomerantsev/Oxana Radionova, Institute of Chemical Physics RAS, Moscow, Russia,

Jean Michel Roger, INRAE, Montpellier, France

Douglas Rutledge, AgroParisTech, Paris, France

Romà Tauler, IDAEA-CSIC, Spain

Johan Trygg, University of Umeå, Sweden

Beata Walczak, University of Silesia, Katowice, Poland

Claudia Beleites, Chemometrics GmbH

## Objectives:

- 1) Promote Chemometrics in Europe
- 2) Organize Chemometrics sessions in EuChemS related conferences
- 3) Organize European Schools/Workshops on Chemometrics

Activities and Outputs in 2021-2022 (e.g., reports, publications, seminars, meetings):

- 1) Organization of a half day highly attended webinar "EuChemOmetricS", with about 250 participants.
- 2) Participation of study group members to the EuroFAST2022 conference, where prof. Tauler was also plenary invited speaker
- 3) Organization of a meeting of StG members to discuss future activities and enlargement of the team, during the next CAC2022 conference (where many of the members will be present) in Rome (august 29-september 2).
- 4) Participation of study group members to the next SciX2022 conference, where the possibility of organizing a completely DAC-chemometrics related session in SciX2023 will be discussed.

## Activities planned for 2022-2023:

- 1) Repeating the experience of organizing one or two half-day e-Workshops/short course on chemometric tools for analytical chemists with a thematic characterization (e.g., metabolomics, spectroscopy, sampling).
- 2) Extending the participation of European chemometricians to the StG (see also 2021 activities, point 3).
- 3) Organizing a Chemometric Session at the next Euroanalysis 2023 conference in Switzerland and offering pre-conference Chemometric short courses.
- 4) Planning of one or two tutorial papers on hot topics in applied chemometrics, which can be of interest for the analytical chemists.
- 5) Organizing a presential 2-3 days European Chemometric School to disseminate basic and more-advanced concepts in chemometrics applied to specific analytical chemistry domains.
- 6) Organizing a DAC-chemometrics study group thematic session within the FACSS conference SciX2023.

Report submitted by: Federico Marini

Date submitted: 22/08/2022

Study Group / Task Force Name: Nanoanalytics

**Study Group** / Task Force **Head and Affiliation**:

Prof. Dr. Sergei Shtykov (Head), Saratov State Univ., Russia

**Study Group** / Task Force Members and Affiliations:

Prof. Dr. Pavel Nesterenko, Moscow State Univ., Russia

Prof. Dr. Nikolay Khlebtsov, IBPPM, Russian Acad. of Sci., Russia

Prof. Joao Luis Machado Santos, Univ. Porto, Portugal

Prof. Raluca-Ioana Stefan-van Staden, Nat. Inst. of Res. Electrochem. and Condensed Matter, Romania

## **Objectives:**

The aim of the Nanoanalytics Task Force is to start a dialog within the analytical chemistry community on the concept of Nanoanalytics. There is however a need to explain in a clear way what Nanoanalytics does, what the outputs of Nanoanalytics are and what the terminology means.

- A concept and definition of Nanoanalytics.
- -The most important types and classifications of nanotechnologies used in the chemical analysis.
- The scope of applications of Nanoanalytics in Chemical Analysis.
- Preparation of a textbook and/or manuals for students.

Activities and Outputs in 2021-2022 (e.g. reports, publications, seminars, meetings):

**Shtykov S.N.** develops fundamental and applied aspects of nanoanalytics. IUPAC project completed and publication to be released:

- Labuda J., Johnston L.J., Mester Z., Gajdosechova Z., Goenaga-Infante H., Barek J., and **Shtykov S**. Analytical chemistry of engineered nanomaterials: Part 1. Scope, regulation, legislation, and metrology (IUPAC Technical Report) // Pure Appl. Chem. 2022. Vol. 94. Sept-Oct.
- **Shtykov S.N.** Coordination compounds (chelates) in analytical chemistry: solutions sorbents nanoplatforms. J. Coord. Chem. 2022. V. 48(10). P. 620-628.

**Khlebtsov N.G.** Head of a scientific group that develops the theory and practice of using various types of gold and silver plasmonic nanoparticles in bioanalysis.

- Bucharskaya A.B., **Khlebtsov N.G.** Khlebtsov B.N. et. al Photothermal and Photodynamic Therapy of Tumors with Plasmonic Nanoparticles: Challenges and Prospects. Molecules. 2022. 21.15(4).1606.
- Genin V.D.... **Khlebtsov N.G.** et. al Changes in Optical Properties of Model Cholangiocarcinoma after Plasmon-Resonant Photothermal Treatment. Photonics. 2022. 9, 199.

Raluca-Ioanna Stefan-van Staden develops the application of carbon nanoparticles in electroanalysis.

**R-I. Stefan-van Staden et. al** Stochastic Microsensors Based on Carbon Nanotubes for Molecular Recognition of the Isocitrate Dehydrogenases 1 and 2. Nanomaterials (Basel). 2022. 12(3). 460.

Nesterenko P.N. develops the use of carbon nanoparticles in chromatographic analysis.

- Koreshkova A.N., GuptaV., Peristyy A., Paull B., **Nesterenko P.N**. Chromatographic properties of hydrogenated microdiamond synthesized by high pressure and high temperature. J. Chromatogr. A 2022. V.1673. 463127. **Santos J.L.M.** is developing applications in the analysis of quantum dots.
- Castro, Rafael C.; Ribeiro, David S.M.; **Santos, João L.M.** "Visual detection using quantum dots sensing platforms". Coord. Chem. Rev. 429 (2021): 213637.

## **Activities planned for 2022-2023:**

- in accordance with the proposal of the organizing committee of Euroanalysis 21 in Geneva on 27-31 August, 2023, the organization of a scientific session and a training course on nanoanalytics.
- in accordance with the proposal of the organizing committee of the IV Congress of Russian Analysts on Sept. 26-30, 2022, the organization of a scientific session on nanoanalytics.
- continued preparation of papers and reviews on the use of nano-objects and nanotechnology in chemical analysis.
- continued preparation of a textbook and/or manuals for master and post graduate students.

Report submitted by: Sergei Shtykov

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Date submitted: 18.08.2022

Study Group / Task Force Name: Electroanalytical chemistry

Study Group / Task Force Head and Affiliation: Barek Jiri Charles University

# Study Group / Task Force Members and Affiliations:

Barek Jiri Charles University Prague, Ozkan Sibel University of Ankara, Labuda Jan Slovak University of Technology Bratislava, Matysik F.M. University of Regensburg, Korotkova E.K. Tomsk Polytechnik University, Vyskocil Vlastimil Charles University Prague, Economou Tasos National and Kapodistrian University of Athens, Ignjatovic Ljubisa University of Belgrade, Mandler Daniel Hebrew University of Jerusalem, Moreira Josino FIOCRUX, Rio de Janeiro, Bret Christopher University of Coimbra, Pingarron Jose Complutense University of Madrid, Nesmerak Karel Charles University Prague, Tomas Krizek Charles University Prague

#### Objectives:

The main aim of the study group is to promote possibilities of modern electroanalytical methods and their benefits for society via organizing special sessions on electroanalytical chemistry in broad spectrum analytical and chemical conferences, student's competitions in electroanalytical chemistry, competitions of the best papers on electroanalytical chemistry for young electroanalytical chemists, international seminars for young electroanalytical chemist, exchange of students in electroanalytical chemistry, and network of electroanalytical laboratories. Attention will be also paid to closer cooperation between electroanalytical laboratories in Europe and in Americas, Asia, Africa and Australia using the support of producers of electroanalytical instrumentation and international programs of the Erasmus+ type an cooperation via European society on electroanalytical chemistry (ESEAC), division V of IUPAC and European chemistry thematic network association (ECTNA). Moreover, the study group will prepare and publish papers for generally oriented analytical journals promoting electroanalytical chemistry.

Activities and Outputs in 2021-2022 (e.g. reports, publications, seminars, meetings):

- 1. The 4th Cross-Border Seminar on Electroanalytical Chemistry (CBSEC 2022), Prague, 11. 13. April 2022, Venue Brdička lecture hall, J. Heyrovský Institute of Physical Chemistry,
- Czech Academy of Sciences, Dolejškova 2155/3, Prague 8.For details see https://web.natur.cuni.cz/~krizek/4th CBSEC/.
- 2. 18th International Students Conference 'Modern Analytical Chemistry' 2022 will be held on September 15–16, 2022 at Charles University. See 18th International Students Conference 'Modern Analytical Chemistry' 2022 Přírodovědecká fakulta UK (cuni.cz) 3.Metrohm CZ Prize for best papers of young researchers from CZ and SK (3 prices were
- awarded in 2022) Prague 18.5.22 see <a href="https://osanal.csch.cz/wp-content/uploads/2022/05/Program-Metrohm-2022-final.pdf">https://osanal.csch.cz/wp-content/uploads/2022/05/Program-Metrohm-2022-final.pdf</a>. Three prices were awarded.
- 4. Karel Stulik Price for the best work of undergraduate students of analytical chemistry from Czech and Slovak republic was held at Mendel University in Brno on 9. a 10. 2. 2022. Special edition of selected presentation will be published in Czech chemical society symposium series in autumn 2022.
- 5. Heyrovsky-Ilkovic-Nernst lecture organized jointly by Czech and German society was held on 31.1.2022. Lecture was delivered by prof. Beinrohr from Slovakia.
- On all International students conferences the prize for bets presentation in electroanalytical chemistry supported by Metrohm CZ was awarded.
- 6. Joint on line electroanalytical seminars Charles University Prague-Macquarie university Sydney and Hebrew University of Jerusalem were held in spring 2022.
- 7. Electroanalytical chemistry and DAC were promoted on IUPAC meetings, ESEAC meetings and ECTNA meetings especially in cooperation with prof. Labuda, Slovak Technical University Bratislava.
- 8. 100 years anniversary of the invention of polarography was regularly remembered by Working party members on many analytical and general chemistry conferences.

Activities planned for 2022-2023

- 1. The 5th Cross-Border Seminar on Electroanalytical Chemistry (CBSEC 2023) will be held in Germany in spring 2022.
- 2. 19th International Students Conference 'Modern Analytical Chemistry' 2023 will be held in September 2023 in Prague.
- 3.Metrohm CZ Prize for best papers of young researchers from CZ and SK (3 prices) will be held in spring 2023 at Charles University in Prague.
- 4. Karel Stulik Price for the best work of undergraduated students of analytical chemistry will be held in Ostrava, Czech republic, in spring 2023.
- On all International students conferences the prize for bets presentation in electroanalytical chemistry supported by Metrohm CZ will be awarded.
- 5. Joint on line electroanalytical seminars Charles University Prague-Macquarie university Sydney and Hebrew University of Jerusalem will be organized in 2023.
- 5. Electroanalytical chemistry and DAC will be promoted on IUPAC meetings, ESEAC meetings and ECTNA meetings especially in cooperation with prof. Labuda, Slovak Technical University Bratislava
- 6. Heyrovsky-Ilkovic-Nernst lecture organized jointly by Czech and German society will be held in Prague in december 2022.

Report submitted by: Jiri Barek

Date submitted:28.07.22

Study Group / Task Force Name: Sample Preparation

Study Group / Task Force Head and Affiliation: Elia Psillakis, TUCrete, Greece

Study Group / Task Force Members and Affiliations: Manuel Miró, UBalearic Islands, Spain; Stig Pedersen-Bjergaard, UOslo, Norway; Slavica Ražić, UBelgrade, Serbia; Marcela Segundo, UPorto, Portugal; Sibel A. Ozkan, UAnkara, Turkey; Charlotta Turner, LundUni, Sweden; Barbara Bojko, NicolausCopernicusUni, Poland; Ezel Boyacı, METU, Turkey. International members: Janusz Pawliszyn, UWaterloo, Canada; Gangfeng Ouyang, SYSU, China

Objectives: The objectives of the Sample Preparation Study Group are the promotion of Sample Preparation through the organization of events, facilitation of communication, information exchange and networking, and the promotion of fundamental studies and cross-disciplinary collaboration. To further benefit the area, efforts were placed on promoting innovation and entrepreneurship next to promote early stage researchers' involvement

Activities and Outputs in 2021-2022: The Sample Preparation Network working under the umbrella of this Study Group now counts 734 members from 54 countries around the world. The network has four working groups (WG: WG1. Science and Fundamentals; WG2. Automation, Innovation and Entrepreneurship; WG3. Information Exchange and Networking) including the newly formed WG4. Green Sample Preparation that represent the most important directions in the field. Three new publicity managers and one new Communication Manager were added last year in WG3 to help with the dissemination of the information. All new managers are younger members of our scientific community. We have a very strong presence in the social media and regularly post news on our LinkedIn Page (500 followers), LinkedIn Group (346 members) and Twitter (418 followers) accounts. Last year, new accounts were also created on Facebook (158 followers) and Instagram (252 followers). In ResearchGate we also have (115 followers). Since August 2021 our Study Group has been acknowledged in 39 scientific papers published by our members in ISI Journals. We continued supporting the new journal connected to our Study Group, "Advances in Sample Preparation", Elsevier. The 2022 annual theme for our Study Group and Network was "Interdisciplinary Sample Preparation" and a number of activities were organized aiming to transfer knowledge from other disciplines into Sample Preparation. Following the success of the 1st European Sample Preparation e-Conference we organized the second edition of the event. Furthermore, a new series of conferences focusing on Green and Sustainable Analytical Chemistry. The <a href="2nd European Sample Preparation">2nd European Sample Preparation</a> e-Conference (EuSP2022) and the 1st Green and Sustainable Analytical Chemistry e-Conference (GSAC2022) were fully virtual and occurred simultaneously from 14-16 March, 2022. The events were supported by the European Chemical Society and the theme of EuSP2022 was "Interdisciplinary Sample Preparation". Participation was free for all our members and the events attracted 477 participants form 45 countries around the word. EuSP2022 in numbers: 4 plenary lectures, 69 oral presentations, 86 poster presentations, 1 tutorial on green metric tool common with GSAC2022 and one round table discussion on our IUPAC project on the greenness of standard official methods. GSAC2022 in numbers: 3 plenary lectures, 47 oral presentations, 23 poster presentations. A special session was dedicated to Green Chemistry, chaired by Ana Aguiar Ricardo and Slavica Razic and the plenary speaker was Nora Ventosa (ICMAB, Spain). This session acted as a bridge to EuChemS Division of Green and Sustainable Chemistry. EuSP2022 and GSAC2022 attracted sponsorships from major companies that were deposited in the DAC-EuChemS bank account and will be used for supporting PhD students members of our Network. During EuSP2022 and GSAC2022 five awards were given to best presentations from PhD students. Our Study Group supported the participation of 1 student in CLAQ2021 (hybrid event October 11-15, 2021), two PhD students in 6th Green and Sustainable Chemistry Conference (virtual event 26-18 November 2021) and one student in HPLC2022 (San Diego, USA 18-23 2022). Our IUPAC project entitled "Greenness of official standard sample preparation methods" was accepted and aims to evaluate current status of the greenness of the sample preparation methods used in official standard methods. The project proceeds as planned. The Elsevier Journal (SAMPRE) linked to our network met the task to apply for an IF. The 2021-Sample Preparation Summer Course (Sample Preparation for MS Bioanalysis: Theory, Practice and Applications), 28 September-1 October 2021, Bydgoszcz, Poland, was successfully completed. This course belongs to a series of courses organized by our Study Group and Network. Finally, one article appeared in The Analytical Scientist from a member of our network.

Activities planned for 2022-2023: We will organize sessions in Euroanalysis 2023 and Extech 2023. We will announce awards for funding the participation of PhD students and members of our network in major Conferences related to Sample Preparation. We will continue supporting the 2022-Sample Preparation Summer Course, 13 – 15 September 2022, Hradec Králové, Czech Republic (Automation and miniaturization in sample preparation. We will continue our efforts on creating further policy actions for the benefit of sample preparation and our members as well as increase the visibility of Sample Preparation worldwide.

Report submitted by: Professor Elia Psillakis (Head), TUCrete, Greece

Date submitted: 26 July 2022