



International Union of Pure and Applied Chemistry
Analytical Chemistry Division

TEAMWORK

Issue 18, August 2015

Welcome to Teamwork 2015

Teamwork is the periodically-published product of the Analytical Chemistry Division since 2002. Preparing this magazine, the Division informs its main activities and key products coming to the IUPAC General Assembly, and, at the same time, announces what the Analytical Chemists are doing and thinking about. Further information can be found on the IUPAC [Analytical Chemistry Division](#) website.

On behalf of the Division President *Brynn Hibbert*, I would like to express best wishes to the Division meeting at the 48th IUPAC General Assembly in Busan, Korea.

Jan Labuda,
Vice-President of Division V.

This issue of the Teamwork includes:

1. Message from David Brynn Hibbert, President of ACD
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11. International Workshop on Determining Antioxidants as Reactive Species Scavengers, Istanbul, 27 to 28 October, 2014
12. Membership of the ACD (2014 – 2015)

Message from David Brynn Hibbert, the President of ACD



May I add my welcome to that of the editor to this edition of Teamwork. The Analytical Division of IUPAC continues to be active in the fields of critically-evaluated data (through the energetic work of Clara Magalhães and the SSED), quality assurance and metrology in chemistry, pH (our newest subcommittee) and the on-going revision of the Orange Book. We have continued, during the changing of the guard (or some of them) at Headquarters, to support Analytical Chemistry and to contribute to the work of IUPAC through membership of the Bureau, ICTNS, CPCDS and other committees and bodies, internal and external to IUPAC. See later in this report for a full report of our representation.

Our involvement with the Joint Committee for Guides on Metrology and its working groups is perhaps seeing the end of an era,

with the recently announced retirement of René Dybkaer. His knowledge of metrology and terminology is legendary and his “An Ontology on Property for Physical, Chemical, and Biological Systems” (www.ontology.iupac.org) has provided the logical framework for many publications in this field. Reports from our representative Paul De Bièvre will be found elsewhere in this newsletter.

Officers and Division meeting in Pécs, Hungary, 27 and 28 March, 2014

Our off-year (between General Assemblies) Division meeting was held in March 2014 in Pécs in Hungary at the Hungarian Academy of Science. This amazingly embellished building in the Italian Renaissance style had been built by one of the wealthiest merchants in Pécs, György Vasváry in 1884 and provided a magnificent home for our meeting. I was honoured to stay in the President’s suite, which had furniture and décor very fitting to our endeavours. Most officers and TMs attended (Prof. D. Brynn Hibbert, Prof. Jan Labuda, Dr. Zoltán Mester, Prof. Maria F. Camões, Prof. Christo Balarew, Prof. Attila Felinger, Prof. M. Clara F. Magalhães, Prof. Yi Chen, Prof. Heli Sirén, Prof. Tatyana Maryutina) and the NR from Belgium Prof. Paul De Bièvre also was present. During our meeting we had visits from chemists from the local university.

The meeting discussed organisation of the Division, reviewed projects and received reports from our representatives on committees. There was a long discussion on the revision of the Orange Book, and a following seminar on

Analytical Separation methods at which the draft of Chapter 4 was discussed and planned.

At the 2013 General Assembly in Istanbul the Division became a sponsor of a project to consider the IUPAC position on the proposals for revision of the SI (A critical review of the proposed definitions of fundamental chemical quantities and their impact on chemical communities, # [2013-048-1](#)). Our representative Zoltan Mester gave a report on the initial work of the task group. Paul De Bièvre and Brynn Hibbert had been invited to give presentations to a CCQM workshop at the BIPM on the redefinition of the mole in April. The need for IUPAC to advise on the quantity amount of substance and its unit mole has been recognised by the CPGM. To what extent our voice will be heard remains to be seen.



Division meeting 27 and 28 March 2014, Villa Vasváry, Pécs, Hungary. Left to right: Prof. Attila Felinger, Prof. Maria F. Camões, Prof. Tatyana Maryutina, Prof. Heli Sirén, Prof. Yi Chen, Prof. D. Brynn Hibbert, Prof. Paul De

Bièvre, Dr. Zoltán Mester, Prof. M. Clara F. Magalhães, Prof. Christo Balarew, Prof. Jan Labuda.

The minutes of the Division meeting can be accessed at the [web page](#).

Christo Balarew (TM, ACD)

Professor Christo Balarew is a prominent Bulgarian scientist. During most of his professional career he has worked at the Institute of General and Inorganic Chemistry of the Bulgarian Academy of Sciences in Sofia.



Christo Balarew receiving the Order of Saints Cyril and Methodius 1st class from President Plevneliev

Prof. Balarew is an active IUPAC participant: he was National Representative (1979-2004) and Associated Member (1991-1997) of Commission V.8, National Representative (2004-2007), Associate Member (2008-2010) and Titular Member (2010-2015) of the Analytical Chemistry Division Committee. Since 1999 he is President of the National Committee of Chemistry of Bulgaria for IUPAC.

For his scientific and applied achievements Prof. Balarew was distinguished with several national and international awards. On May 25th this year he was awarded the Order of Saints Cyril and Methodius 1st class – the

highest award for scientific achievements conferred by the President of Bulgaria. (This is an abridged text of a report that will appear in Chemistry International in 2015).

Membership of committees

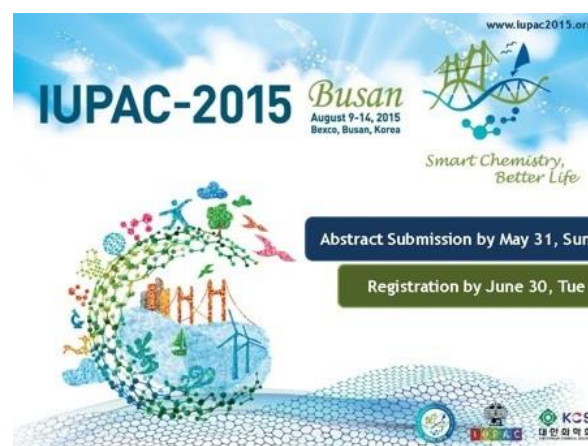
The Division has concerns about the organisational structure for the appointment of IUPAC representative to outside bodies. At present there is no clear process to approve and fund these very important roles. A list of ACD members on internal and external committees is given below.

<u>Body/ Committee/ Organisation</u>	<u>Membership</u>
Internal	
Interdivisional Committee on Terminology, Nomenclature and Symbols (ICTNS)	Brynn Hibbert
Committee on Chemical Education (CCE)	Yi Chen
Committee on Chemical Industry (COCI)	Christo Balarew
Committee on Publications and Cheminformatics Data Standards (CPCDS)	Brynn Hibbert
Pure and Applied Chemistry (PAC) Editorial Advisory Board	Nelson Torto
External	
International Committee on Weights and Measures/Consultative Committee on the Amount of Substance (CIPM/CCQM)	Aleš Fajgelj
ISO-Committee on Reference Materials (ISO/REMCO)	Aleš Fajgelj

Joint Committee for Guides in Metrology (JCGM)	Paul De Bièvre
Joint Committee for Guides in Metrology Working Group1 (JCGM WG1)	Brynn Hibbert
Joint Committee for Guides in Metrology Working Group 2 (JCGM WG2)	Paul De Bièvre
Inter-Agency Meeting (IAM)	Zoltán Mester
EUCHEMS	Filomena Camões and Jan Labuda
African analytical network	Nelson Torto
CITAC	Ilya Kuselman/ Aleš Fajgelj

I am looking forward to meeting as many of you as possible for the ACD meetings at the GA in Busan, Korea, on the 8th and 9th August.

**DAVID BRYNN HIBBERT,
PRESIDENT**



HOT TOPICS

Revision of the Orange Book

Brynn Hibbert

The revision of the Orange Book is, hopefully, in its latter stages, with twelve chapters being worked on by task groups, some backed by projects.

The new edition will be titled “Compendium of Terminology in Analytical Chemistry” and will be a vocabulary of concepts with definitions of terms that are compatible with the Gold Book.

The present status of chapters of the OB is:

Chapter	Editor	Status [†]
Chapter 1: Fundamental concepts and terms (metrology), quality assurance.	Paul De Bièvre	***
Chapter 1a. Chemometrics terms	Brynn Hibbert	****
Chapter 2: Sampling and sample preparation	Janusz Pawliszyn	***
Chapter 3: Methods of analysis depending on measurements of mass and volume	Maria F. Camões, (TM)	()
Chapter 4: Separation	Tatyana Maryutina, (AM)/ Attila Felinger (TM)	***

Chapter 5: Spectroscopic methods of analysis	††	()
Chapter 6: Mass spectrometry	Zoltan Mester (TM)	**
Chapter 7: Electrochemical methods of analysis	José M. Pingarrón, (TM)	**
Chapter 8: Radioanalytical methods	Zhifang Chai, Peter Bode (AM) to consolidate	**
Chapter 9: Surface analysis	Jim McQuillan ^{†††}	()
Chapter 10: Thermal methods of analysis	Carlos Castro	()
Chapter 11: Immuno- and bio-analytical methods of analysis	Jan Labuda, (TM)	***

[†]**Status:** **** PAC Recommendations submitted; *** Final Draft; ** Draft under discussion; * Preliminary draft; () Nothing as yet.

^{††} Derek Craston (LGC), new TM, is looking at possibilities following the withdrawal of Yngvar Thomassen

^{†††} Jim is a late comer to this chapter and kindly stepped in after the untimely death of Luisa Abrantes.

It can be seen that about half the chapters are in a reasonably advanced state. The editor (DBH) will help prepare PAC Recommendations for new terms and definitions (not including ones unchanged from the present OB, JCGM and ISO Standards), and when these have gone through the PAC review process, will be reintegrated into the OB. Because of the

size of the draft chapters and two-paced nature of the appearance of drafts, we might contemplate publishing the OB in two volumes.

It is also expected that going through PAC Recommendations will facilitate uptake into the new electronic Gold Book, being worked on by project "IUPAC Color Book Data Management".

<http://www.iupac.org/project/2013-052-1-024>.

News from the revision of IUPAC Colour Books

Paul De Bièvre, the IUPAC Representative to the JCGM (Joint Committee on Guides for Metrology)

We (ORANGE BOOK, Chapter 1 editors) proceeded by borrowing from VIM all the concept definitions we deemed useful or necessary for Analytical Chemistry. We thereby observed – and followed the logic – that VIM and GUM are the ultimate base documents for all communication in science and technology, and unanimously approved after formal reviewing and voting procedures by eight international organizations: BIPM, IEC, IFCC, ILAC, ISO, IUPAC, IUPAP, OIML; that has made VIM and GUM into some sort of binding "documents" for all these organizations, and, in fact worldwide, for the fields concerned.

ISO Guides and Standards (including ISO International Standard ISO 10241-1 - as other Standards which chemists are simply unaware of (sic!) - are looked at by 2/3 of the world population as "lighthouses" or "references" for intercontinental understanding (as the name and membership of ISO implies), not just "international" i.e. Western world. We

do not expect that a small field (chemistry/IUPAC) could convince the other seven members of the approving "Club of Eight" to change the ground rules for defining concepts and the way to write them. That is particularly true for the SILVER BOOK 1 (1995), approved as an IFCC-IUPAC undertaking, and now being reviewed to be approved by IFCC and IUPAC as "SILVER BOOK 2". Further to the previous point: in view of the importance of having a formal reference document in heavily regulated Clinical Analysis and Laboratory Medicine, any change has the potential to cause big problems (changes in regulations are not that easy to perform).

As far as we can perceive, in the International Vocabulary of Nominal Properties (VIN), now on its way, the same principles have been used as in VIM (and GUM).

Further: the substitution principle is a very logical and compulsory principle in the definitions we agree. Hence, this problem of "standardization" (a field of ISO "par excellence") does concern all of us and has the potential of wide ramifications, e.g., in the revision of other Colour Books such as the (badly needed) Gold Book.

We urge deep reflecting on the above and discourage any definition deviating from the above guiding principles before all of the consequences of choices have been carefully reviewed, and the "way out of chaos" in terminology has been carefully established.

JCGM report

Paul De Bièvre, the IUPAC Representative to the JCGM (Joint Committee on Guides for Metrology)

The 2014 JCGM meeting was held on 2014-12-03 at the location of BIPM, one of the JCGM members, currently chairing JCGM for the period 2014-2016, where it heard reports from its WG1 (on the GUM) and its WG2 (on the VIM).

It was decided to have a closer look at the re-written Chapters 1, 2 and 3 of the SI Brochure (in the light of the ongoing revision of the SI units) in the light of the March 2015 deadline to submit comments to the CCU.

A small WG on "Dimensionless Quantities" has been set up at the instruction of Prof. J. Ullrich (the new President CCU) headed by J. Stenger (PTB); meeting in Feb 2015.

We reported that there was no news on the IFCC - IUPAC joint VIN (presumably still in the IUPAC - IFCC evaluation stage). I have been asked to enquire about this.

A report was heard from ISO - REMCO on RMs for "qualitative analysis".

The current Secretary of the JCGM, Dr. C. Thomas, will resign from her office at BIPM (and of JCGM Secretariat) in June 2015. She will be succeeded by Dr. R. Sitton (BIPM).

The next JCGM meeting is on 2015-12-02. An increasing use of the GUM and VIM in the chemical community was reported.

Another discussion took place about the choice between "giving guidance to the lab floor" vs "inputting from the lab floor into the VIM".

A message was given to the ISO Delegate, Mrs. Mercè Ferrés, about ISO 5725 being in bad need of revision.

The revision of the IUPAC ORANGE BOOK was announced and the achievement of the revised SILVER BOOK 2 communicated to JCGM.

Examples of metrological traceability chains obtained for biological materials are

very much wanted (dixit IFCC President Beastall)!

Update on SI redefinition

Zoltan Mester

Presentations to CCQM (10th April, 2014) can be found on the [website](#). An announcement of recommendations of the IUPAC position will be made in Busan.

Cooperation with EuChEMs and ECTN

Maria Filomena Camões, EuroMaster Coordinator

The EuroMaster programme

“[Measurement Science in Chemistry](#)”

(MSC), is now at its 8th edition and is the result of an initiative of a consortium of 9 European universities, University of Lisbon- P, University Claude Bernard Lyon 1- F, University of Warsaw- PL, University Maria Curie-Skłodowska- PL, University Adam Mickiewicz- PL, University of Tartu- EE, University of Oulu- Fin, Free University of Brussels-B, University of Maribor- SI, and of the JRC-IRMM. It has been awarded the Eurolabel[®] by ECTN for the 2nd consecutive period, since 2007. The MSC EuroMaster is associated with the Master course in Analytical Chemistry at the students' home universities. Between the 1st and the 2nd year the students benefit from a two week intensive course, the famous Summer School where, in an international environment, real life challenges such as running a laboratory under the requirements of the ISO/EN 17025 add competences and skills that make the difference.

A meaningful employability rate of 95%, very different from the general picture of high unemployment, is the situation for the 280 students who have graduated since 2008. Celebrating success (see Photo), 46 students participated in the 3rd graduation ceremony, that took place recently (12th December 2014) in Brussels at the Royal Flemish Academy of Belgium for Science and the Arts. Profiting from this opportunity a workshop on “Employability of Chemistry Graduates” was organized. The various perspectives of both trainers and employers were presented and debated. The invited speakers were Professors Reiner Salzer (DAC-EuCheMS), David Cole-Hamilton, (EuCheMS), Francesco De Angelis (ECTN) and Dr. Sophie Wilmet (CEFIC).

A protocol was signed by MSC, ECTN and EuCheMS stressing the active cooperation observed along the past years and strengthening new forms of future collaboration.



3rd graduation ceremony of MSC, 12th December 2014 in Brussels at the Royal Flemish Academy of Belgium for Science and the Arts.

Reports from Subcommittees

Subcommittee on Solubility and Equilibrium Data

Clara M. Magalhães, Chair of SSED and TM of Division V

The year of 2014 was very special for the members of the SSED. The first part of the Volume 100 of the IUPAC-NIST Solubility Data Series – Rare Earth Metal Fluorides in Water and Aqueous Systems, Part 1. Scandium group (Sc, Y, La), by Tomasz Mioduski, Cezary Gumiński and Dewen Zeng was published in March 2014 in the volume 43 (number 1) of the Journal of Physical and Chemical Reference Data. The Part 2, Rare Earth Metal Fluorides in Water and Aqueous Systems, Light Lanthanides (Ce-Eu), is just being published in volume 44 (number 1) by the same authors.

Once the publication of one hundred volumes inside a very specialized scientific subject is a very rare achievement, it was considered important to celebrate it in a special way. During the 47th IUPAC General Assembly in 2013, David Martinsen and René Deplanque suggested that SSED members should celebrate this important achievement, which is one of the long range IUPAC goals: the international standardization of physical constants. It was suggested that SSED members participate in the National Fall meeting of the American Chemical Society in 2014, once this is a meeting with a large participation of chemists, not only from the United States of America but also from all around the world. The project “One hundred volumes of Plenitude –

Celebrating the IUPAC-NIST Solubility Data Series” (project number 2014-012-2-500) was submitted and approved.

248th ACS National Meeting, San Francisco, CA – Session: The IUPAC Solubility Data Series: 100 volumes of Solubility Data Online – Wednesday, 13 August, 2014

The members of SSED were responsible for the half day session “The IUPAC Solubility Data Series: 100 volumes of Solubility Data Online” that occurred on the 13th August 2014 in San Francisco, California. This participation was very fruitful and two publishers – Springer and De Gruyter – showed their interest in using the published data in their on line databases.

The following lectures were presented in the session:

- Mark Salomon (SSED member and IUPAC Editor-in-Chief of the Solubility Data Series): Objectives of the Solubility Data Series
- Allan H. Harvey and Donald R. Burgess (Co-Editors-in-Chief of the Journal of Physical and Chemical Reference Data): NIST Standard Reference Data and the Solubility Data Series
- Stuart Chalk (University of North Florida): REST API for the IUPAC Solubility Data Series: A "Skunkworks" project
- Zdeněk Wagner, Johan Jacquemin and Magdalena Bendová (SSED and members of the IUPAC project “Database on solubility and liquid-liquid equilibria of binary mixtures of ionic liquids and molecular solvents”): Database on ionic liquids solubilities in molecular solvents: Progress and prospects

- Glenn Hefter (SSED member and Chair of the Stability Constants subcommittee): Critical Evaluation of Stability Constant Data by IUPAC
- William E. Acree Jr. (SSED member): Models to evaluate experimental solubility data for crystalline nonelectrolyte solutes in organic mono-solvents and solvent mixtures
- Earle Waghorne (Secretary of SSED): Thermodynamics of electrolyte solubility in mixed solvents: Silver halides
- M. Clara F. Magalhães and Justin Salminen (Chair and members of SSED): Possible contributions from the Solubility Data Project for arsenic and carbon dioxide environmental impacts mitigation

A full report by Clara Magalhães can be found in the [ACS Chemical Information Bulletin \(2014\) 66\(4\), pp. 47-50](#)



Presenters of the oral communications in The IUPAC Solubility Data Series: 100 volumes of Solubility Data Online. Back row from left to right: William Acree, Mark Salomon, Stuart Chalk, Allan Harvey; Front row from left to the right Glenn Hefter, Clara Magalhães, Johan Jacquemin, and Earle Waghorne

16th International Symposium on Solubility Phenomena and Related Equilibrium Processes, Karlsruhe, Germany, 21 to 26 July, 2014

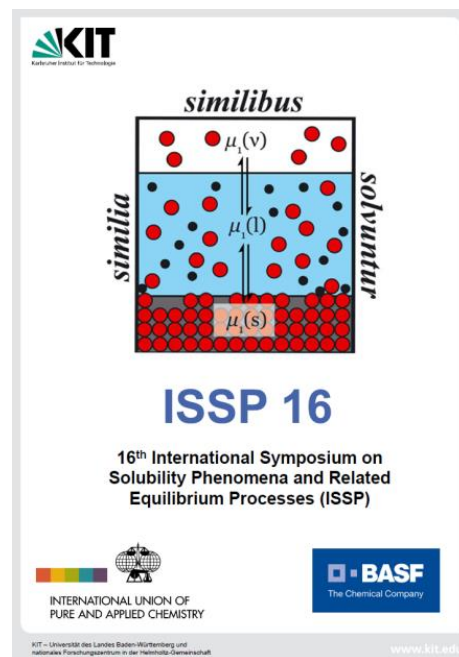
The 16th International Symposium on Solubility Phenomena and Related Equilibrium Processes was organized by the Karlsruhe Institute of Technology, Institute for Nuclear Waste Disposal (KIT-INE), Karlsruhe Germany. This IUPAC-sponsored symposium included a workshop entitled “Solubility and Speciation in Nuclear Waste Disposal”. The 13th Annual meeting of the Subcommittee on Solubility & Equilibrium Data (SSED) of the IUPAC Analytical Chemistry Division met on the 20th July 2014, chaired by TM Clara Magalhães from Portugal.

More than one hundred participants from 24 countries (Australia, Austria, Bulgaria, Canada, China, Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Israel, Italy, Japan, Poland, Portugal, Russia, Serbia, South Korea, Spain, Sweden, Switzerland and USA) representing four continents attended the meeting and the workshop. Five plenary and two invited lectures focused on the seven specific topics related to solubility:

1. Investigation and analytics of aqueous solutions;
2. Aqueous solutions at high ionic strength;
3. Kinetics of phase transformations;
4. Molten salts and ionic liquids;
5. Effects of solute-solvent interactions on solubility phenomena;
6. Solubility phenomena in technical and industrial applications;
7. Computer assisted equilibrium calculations and related thermodynamic databases.

Forty short communications and fifty posters

were also presented during afternoon and morning sessions.



Franzosini Award: Magdalena Bendová, Institute of Chemical Process Fundamentals Prague, Czech Republic, and S. Gadzuric, University Novi Sad, Serbia were the recipients of the 2014 Franzosini Award.

Three poster prizes were also given.

Sponsorship was provided by IUPAC, the NUSAFE program of HGF (Germany), and the BASF company.

During the conference banquet was celebrated the 80th birthday of Christo Balarew. Clara Magalhães chaired the session and Stefka Tepavitcharova introduced the curriculum vitae of Christo Balarew focusing his achievements in IUPAC and his research in the field of solubility. The book “The Experimental Determination of Solubilities” edited by G. T. Hefter and R. P. T. Tomkins was offered him as a birthday gift.



13th Annual meeting of the Subcommittee on Solubility and Equilibrium Data on the 20th July 2014, in Karlsruhe, Germany

Publications

Articles in Chemistry

International

D. Brynn Hibbert, Twitter in Chemical Education, and IUPAC
2015, Vol. 37, Issue 3, p. 10–11

Marcus Altmaier, Solubility Phenomena and Related Equilibrium Processes
2015, Vol. 37, Issue 2, pp. 30-31

David Shaw, 100 volumes of IUPAC's Solubility Data Series
2015, Vol. 37, Issue 1, p. 30

Kipton J. Powell, Paul L. Brown, Robert H. Byrne, Tamás Gajda, Glenn Hefter, Ann-Kathrin Leuz, Staffan Sjöberg and Hans Wanner, Chemical Speciation of Environmentally Significant Metals, 2015, Vol.37, Issue 1, pp. 15-19

William E. Acree, Solubility of Nonsteroidal Anti-inflammatory Drugs (NSAIDs) in Neat Organic Solvents and Organic Solvent Mixtures
2014, Vol. 36, Issue 5, p. 21

Tomasz Mioduski, Cezary Gumiński and Dewen Zeng, Rare Earth Metal Fluorides in Water and Aqueous Systems, 2014, Vol. 36, Issue 4, p. 20

Marian Góral, David G. Shaw, Andrzej Maczyński, Barbara Wiśniewska-Gocłowska, and Pawel Oracz, Alcohols + hydrocarbons + water, 2014, Vol. 36, Issue 4, p. 18

Paul De Bièvre, Metrological Traceability of Measurement Results in Chemistry: basic concepts required for intercontinental communication of results,
2014, Vol. 36, Issue 4, pp. 16–17

Paul De Bièvre, Chemistry Conference for Young Scientists
2014, Vol. 36, Issue 4, p. 32

Analytical Chemistry (13-15 January 2015, Tel Aviv, Israel)
2014, Vol. 36, Issue 4, p. 34

Maria F. Camões, pH Measurement in Seawater
2014, Vol. 36, Issue 3, p. 13

Solubility Phenomena, 2014, Vol.36, Issue 2, p. 33

Roberto Marquardt et al., On the New Definition of the Mole
2013, Vol. 35, Issue 6, p. 29

Dewen Zeng, Solubility Phenomena, 2013, Vol. 35, Issue 3, pp.32-33

IUPAC Recommendations and Technical Reports published in Pure and Applied Chemistry

Kipton J. Powell, Paul L. Brown, Robert H. Byrne, Tamás Gajda, Glenn Hefter,

Ann-Kathrin Leuz, Staffan Sjöberg and Hans Wanner
Chemical speciation of environmentally significant metals with inorganic ligands
Part 5: The $Zn^{2+} + OH^{-}$, Cl^{-} , CO_3^{2-} , SO_4^{2-} , and PO_4^{3-} systems (IUPAC Technical Report)
2013, Vol. 85, Issue 12, pp. 2249-2311

Ute Resch-Genger and Knut Rurack
Determination of the photoluminescence quantum yield of dilute dye solutions (IUPAC Technical Report)
2013, Vol. 85, Issue 10, pp. 2005-2013

Kermit K. Murray, Robert K. Boyd, Marcos N. Eberlin, G. John Langley, Liang Li and Yasuhide Naito
Definitions of terms relating to mass spectrometry (IUPAC Recommendations 2013)
2013, Vol. 85, Issue 7, pp. 1515-1609

Jörg Enderlein
Fluorescence correlation spectroscopy (IUPAC Technical Report)
2013, Vol. 85, Issue 5, pp. 999-1016

Reşat Apak, Shela Gorinstein, Volker Böhm, Karen M. Schaich, Mustafa Özyürek and Kubilay Güçlü
Methods of measurement and evaluation of natural antioxidant capacity/activity (IUPAC Technical Report)
2013, Vol. 85, Issue 5, pp. 957-998

Antonio Doménech-Carbó, Jan Labuda and Fritz Scholz
Electroanalytical chemistry for the analysis of solids: Characterization and classification (IUPAC Technical Report)
2013, Vol. 85, Issue 3, pp. 609-631

Marcel Ameloot, Martin vandeVen, A. Ulises Acuña and Bernard Valeur

Fluorescence anisotropy measurements in solution: Methods and reference materials (IUPAC Technical Report)
2013, Vol. 85, Issue 3, pp. 589-608

Projects

Recently completed projects

Within the last two years, the following projects have recently been completed:

1. 2008-002-1-500, B. Hibbert chair
2. 2014-006-1-500, W. E. Acree chair

Running projects

The Division has about 35 running projects, including those that belong to the Subcommittee on Solubility and Equilibrium Data, the Interdivisional Working Party for Harmonization of Quality Assurance and interdivisional projects. At present, the division focuses its human and financial resources on the updating of the Orange Book. The division feels that the projects are running reasonably well.

New projects

The following projects have recently been approved:

1. 2014-012-2-500, C. Magalhaes chair
2. 2014-027-1-500, I. Kuselman chair

Meeting Reports

International Workshop on Determining Antioxidants as Reactive Species Scavengers, Istanbul, 27 to 28 October, 2014

The workshop was organized jointly by the Istanbul University and the Analytical Chemistry Division of IUPAC with Prof. Dr. Reşat APAK (Istanbul University), the workshop chairman, and Assist. Prof. S. Esin ÇELİK (Istanbul University), the workshop secretary. Altogether 95 participants attended the workshop. The Book of Abstracts is published online in the workshop [website](#):

Plenary speakers were:

- Prof. Dr. Antony Calokerinos (National and Kapodistrian University of Athens): “Luminescent methods for the evaluation of antioxidant activity of olive oil and other natural products”

- Prof. Dr. Sheal Gorinstein (The Hebrew University – Hadassah Medical School): “Nutritional and Pharmaceutical

Applications of Bioactive Compounds of Some Edible Berries and Tropical Fruits”

- Prof. Dr. Marcela Segundo (University of Porto): “Automatic flow based methods to evaluate the scavenging activity of antioxidants against ROS and RNS”

- Prof. Dr. İlhami Gülçin (Atatürk University) “Antioxidant compounds: Structure-carbonic anhydrase isoenzymes inhibition studies”

- Prof. Dr. Reşat Apak (Istanbul University): “Comparative evaluation of selected antioxidant capacity/activity assays with special reference to CUPRAC, CERAC and ferricyanide methods”

Keynote Speakers and Lectures were given by:

- Prof. Dr. Vural Gökmen (Hacettepe University): “Antioxidants Bound to Insoluble Food Matrix: Their

Measurement, Regeneration Behavior, and Nutritional Relevance”

- Prof. Dr. Cevdet Demir (Uludağ University): “CHROMAC Antioxidant Capacity Method: Principles and Applications”

- Assoc. Prof. Esra Çapanoğlu Güven (Istanbul Technical University): “Evaluating the in vitro bioaccessibility of phenolics and antioxidant activity during consumption of dried fruits with nuts”.



Family photo of the International Workshop on Determining Antioxidants as Reactive Species Scavengers in Istanbul University Congress & Cultural Centre



Prof. Apak, Workshop chairman, presented copper plates to the plenary speakers at gala dinner held in Istanbul University Baltalimanı Social Facility.

Membership of the ACD (2014 - 2015)

Officers	
President of the Division	Brynn Hibbert
Vice President	Jan Labuda
Secretary	Zoltán Mester
Past President	Filomena Camões
Titular Members	
	Christo Balarew
	Yi Chen
	Attila Felinger
	Kim, Hasuck
	M. Clara Magalhães
	Heli Sirén
Associate Members	
	Resat Apak
	Peter Bode
	Derek Craston,
	Yook Heng Lee,
	Tatyana Maryutina,
	Nelson Torto
National Representatives	
	Othman Othman Chande
	Laurence Charles
	Paul De Bièvre
	Marcos Eberlin
	Ales Fajgelj
	Kate Grudpan
	Javed Hanif
	Daniel Mandler
	Predrag Novak
	David Shaw