



EuChemS

European Chemical Society

—— Working Party on the History ——
of Chemistry

Annual Reports of Activities 2018-2019

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BELGIUM

Société Royale de Chimie, Division d'Histoire de la Chimie and Mémosciences Report 2018-2019

The non-profit Mémosciences cooperates with the Division for the History of Chemistry from the Société Royale de Chimie since the creation of that Division in 1999.

The main activity is the organization of conferences "Elément d'Histoire de la Chimie" usually on a Wednesday afternoon, except for the case of one day meetings. Chemists, historians but also science teachers are welcome to attend these conferences, which are offered for free, except in the case of one day events.

In 2009 the Division d'Histoire de la Chimie was merged with the Division d'Enseignement, however both groups have continued their own activities.

The Division collaborates from time to time with the Groupe d'Histoire de la Chimie from the Société chimique de France as well as other history of science, medicine and pharmacy organizations.

This year the topic of the Periodic System was very much in the spotlight.

For 2018 and 2019, the following conferences were organized by SRC Historical Division and Mémosciences:

Mémoires radiologiques de la Grande Guerre

Mercredi 14 mars 2018 – 14h00 – Musée belge de la Radiologie, 1120 Bruxelles

- *Marie et Irène Curie & la brave petite Belgique*

Roseline Debaille, guide touristique à Furnes

- *La radiologie monte au front*

Med. Col René Van Tiggelen (Musée de la Radiologie)

And visit of the new room of the Belgian Museum of Radiology,

Femmes et Tableau Périodique

Mercredi 6 mars 2019 – 14h à 16h30 - UCL, Salle Couvreur, 1200 Bruxelles

- *Ellen Gleditsch – une femme en radiochimie*

Prof. Annette Lykknes (NTNU, Trondheim, Norvège) (In English)

- *Les femmes derrière le tableau périodique*

Dr Brigitte Van Tiggelen (Mémosciences et Science History Institute, USA)

Ces éléments hors cadre : lanthanides et actinides

Mercredi 3 avril 2019 – 14 à 16h30 (UCL, Salle Couvreur, 1200 Bruxelles)

- *La place des terres rares dans le Tableau Périodique*

Dr Pieter Thyssen (KULeuven)

- *Glenn Seaborg et l'invention du groupe des actinides*

Dr Brigitte Van Tiggelen (Mémosciences et Science History Institute, USA)

Further conferences given in the frame of the IYPT by B. Van Tiggelen

Le Tableau Périodique. Éléments d'histoire d'un outil pour la chimie
Tuesday 26 February 2019, 18.30-20.00
Organized by the Centre National d'Histoire des Sciences

Tableaux d'une exploration: Mendeleïev et la classification des éléments chimiques
Saturday 2 March 2019, afternoon
Organized by the Musée Belge de la Radiologie

Women in their element. Their contributions to the periodic system
Thursday 10 October 2019, afternoon
Plenary at the Scientific Day "The periodic table: the toolbox of Chemists!", organized by the Société Royale de Chimie, in Namur, Belgium

A meeting between Dmitri Mendeleev and Pierre and Marie Curie. How radioactivity endangered and then saved the periodic system
Thursday 7 November 2019, afternoon
Plenary for the "Radiation Biology and Medicine day" of the SCK-CEN, the Belgian Nuclear Research Centre in Mol, Belgium

A work in progress: genesis and development of the Periodic System
Thursday 7 November, evening
Invited by the Royal Society of Chemistry, Belgian Branch, in Tervueren, Belgium

Un tableau vivant ? Genèse et développement du système périodique
Monday 18 November, noon
Seminar at the Institute of Condensed Matter and Nanosciences, UCLouvain, Louvain-la-neuve, Belgium

DENMARK

Report on activities in The Danish Society for the History of Chemistry 2018

At the annual meeting in August of the Danish Chemical Society the Historical Society hosted three lectures:

Laila Zwisler (Technical University of Denmark): "Flow Injection Analysis and Academic Mass Innovation".

Helge Kragh (Niels Bohr Institute): "Discovery (?) of the superheavy elements: A controversial history"

Asbjørn Petersen (Hvidovre Gymnasium): "The early Danish plastic industry".

Also at this annual meeting the Society had a stand selling books from the Society's production, now counting 23 volumes.

The annual field trip in August was a historical city-walk in Copenhagen with focus on chemically interesting places. Helge Kragh and Sven Harnung were guiding and published later an article about the places in "Dansk Kemi".

The General Assembly was in November. The lecture before this was:

Børge Riis Larsen (ex. Slagelse Gymnasium): "From Havrebjerg to Carlsberg. About S. P. L. Sørensen and pH".

2019

At the annual meeting of The Danish Chemical Society in June the Historical Society did not present any lectures this year. But the Society had a stand selling the line of books produces by the society.

The chair of the Society, Asbjørn Petersen, attended the 12th ICHC in Maastricht.

At the annual field trip in September we visited the limestone quarry in Fakse and the related museum. Prof. Ida Fabricius (Technical University of Denmark) was guide in the quarry.

Before the annual general assembly, 5th of November, we had a lecture: Alexander Senning told about his new book: "The Etymology of Chemical Names - Tradition and Convenience vs. Rationality in Chemical Nomenclature (De Gruyter, 2019).

During the year the Society's secretary, Ture Damhus, presented a line of articles in "Dansk Kemi" about the history of IUPAC and the Periodic Table.

During the year the Society's treasurer, Christian Knudsen, searched the old not-digitized volumes of "Dansk Kemi" for articles involving an often historical description of small experiments. This might be the basis for a new publication by the Society.

During the year the chair and secretary of the Society, Asbjørn Petersen and Ture Damhus, worked on the inventory of more than 600 chemical compounds made by S. M. Jørgensen (1837-1914). The collection is kept at the Technical University of Denmark and the registration is needed for the survival of this unique collection of complexes.

The major problems for the Society is still the lack of influx of younger members and slightly less serious is the low number of attendees at some of our activities.

FRANCE

Report of the French Group for the History of Chemistry in France, attached to the French Society of chemistry, member of EuCHEMS.

The *Groupe d'histoire de la chimie* is a French society for the history of chemistry and also a thematic group of the Société chimique de France, the French National chemical society. It organizes (or participates to) several national or international workshops or symposia per year.

It also publishes a periodical newsletter and each year a report on its annual activities. The documents concerning all our activities are available on line, see: <http://www.societechimiquedefrance.fr/Presentation-15.html> (notably in French, but international events co-organized by the GHC are in English).

Workshops and Symposia

Between the 11th ICHC in Trondheim and the 12th ICHC in Maastricht, we organized several meetings, see the details of their programmes and abstracts on the GHC website. Notably considering this following events:

GHC annual conference: *Chemistry and Industry (19th-20th C.)*, in French (Paris, 24 January 2018), see:

http://www.societechimiquedefrance.fr/IMG/pdf/ghc.se_ance_du_24janvier2018.programme.resume.pdf

Joint meetings with the Société d'histoire de la pharmacie (SHP), see:

- ***History of some pharmaceutical shops and industries*** (in French, Paris, 15 Nov. 2017). See:

http://www.societechimiquedefrance.fr/IMG/pdf/ghc.shp.2017.se_ance_15_novembre.programme.v3.pdf

- ***The tercentenary of Geoffroy's Table of affinities, 1718-2018*** (Paris, 21 Nov. 2018):

http://www.societechimiquedefrance.fr/IMG/pdf/ghc.shp.2018.programme_de_taille_21nov.pdf

See also the publication of the contributors in *L'Actualité chimique*, 444-445 (November 2019), pp. 99-105: <http://www.lactualitechimique.org/numero/444-445>

- ***Alcaloids*** (20 Nov. 2019):

http://www.societechimiquedefrance.fr/IMG/pdf/programme_resumes.pdf

Heritage of chemistry:

- A tour in Paris and *visit of Fremy's Laboratory at the Museum* with SHI members (28 March 2018).

- On the heritage of *scientific instruments*, a national symposium (GHC **Annual Conference**, Paris, 30 January 2018): *Regards sur le patrimoine français des instruments scientifiques*, see:

[http://www.societechimiquedefrance.fr/IMG/pdf/ghc.2019.journee_e_du_30_janvier.programme.pdf](http://www.societechimiquedefrance.fr/IMG/pdf/ghc.2019.journee_du_30_janvier.programme.pdf)

- Joint international meeting with the SHI (Philadelphia) and CNRS, CNC, IUPAC Congress Paris 2019, CILAC and GHDSO (Université Paris-Saclay), in Paris on 19 June 2018: *A cultural heritage to be revealed: heritage of chemistry*. See: http://www.societechimiquedefrance.fr/IMG/pdf/patrimoine_chimie_2018_19_june_programme.pdf

- *A tour in Paris* on heritage of chemistry and science (19 Dec. 2019): http://www.societechimiquedefrance.fr/IMG/pdf/balade_elements-2.pdf

Centenary of IUPAC with Brigitte Van Tiggelen

In Paris: *In the shadow of a centennial: writing the history of IUPAC (1919-2019)*: *First part*: International workshop on 15 November 2018, followed by a *second part*: an international Symposium, on 16 November. See:

http://www.societechimiquedefrance.fr/IMG/pdf/ghc.symposium.full_programme_5nov.pdf

In Trondheim, 11th ICHC, a symposium: *Chemists and the International Union for Pure and Applied Chemistry: Taking Responsibility and Taking Actions*. See, pp. 16-18:

<https://www.ntnu.edu/documents/1269966925/0/Book+Abstracts+UPDATE+WEBSITE+VERSION.pdf/9241097c-112a-4927-a511-587786c4c0e8>

In Maastricht, 12th ICHC, the symposium: *IUPAC and the other international organisations*, see pp. 27-29:

<https://www.dropbox.com/s/7rnmkolbl9td7r2/Book%20of%20Abstracts%20-%2012ICHC%20Maastricht%202019%20-%20WEBSITE%20version.pdf?dl=0>

- A symposium in three sessions at the International IUPAC Congress in Paris, 7-12th July 2019: Theme 6, *IUPAC and CHEMISTRY: A Century of Intertwined History, a Common Heritage for the Future (1919-2019)*: 6.1: *IUPAC's Legacy to Chemistry*; 6.2: *IUPAC and the heritage of chemistry*; 6.3: *The Periodic Table at 150*. See : <https://www.iupac2019.org/a-century-of-history>

A publication for this event: a special issue of *Chemistry International*, 40/3 (July 2019): <https://www.degruyter.com/view/j/ci.2019.41.issue-3/ci-2019-0300/ci-2019-0300.xml?format=INT>

Another events as the bicentenary of the discover of *Oxygen Peroxyd by Thenard (1818-2018)*, an *Exhibit* in La Louptière in October 2018, and at the headquarters of the Société d'Encouragement pour l'Industrie Nationale (SEIN), in Paris on the 1st December 2018. See G. Emptoz's paper on: <http://www.lactualitechimique.org/Il-y-a-200-ans-Louis-Jacques-Thenard-decouvrait-l-eau-oxygenee>

Some papers were given in "Varia" GHC workshops along each year. Notably a conference by Keiko Kawashima (Nagoya Institute of Technology), on 24 March 2019, *Correspondence between Toshiko Yuasa and Frédéric Joliot (1947-1949)*. See: http://www.societechimiquedefrance.fr/IMG/pdf/ghc.2019.27mars.varia_programme_a4.pdf This last paper will be published in *L'Actualité chimique*, 449, (March 2020).

Teacher Training in history of chemistry:

A training day on Lavoisier and means to use history of chemistry at school was held in Nancy on 25 March 2019, see:

http://www.societechimiquedefrance.fr/IMG/pdf/ghc_nancy_2019_programme.pdf

Several members of the Groupe d'histoire de la chimie published papers and/or gave papers in conferences or seminars. They are referenced in our newsletters, see our website: http://www.societechimiquedefrance.fr/spip.php?page=news-entite&id_rubrique=147

Danielle Fauque, chair of the GHC. Delegate of the SCF to the WPHC EuCHEMS.

GERMANY

GDCh and GDCh-Fachgruppe *Geschichte der Chemie* (German Chemical Society: History of Chemistry Division) Report 2019

The GDCh is represented in the EuChemS Working Party by two delegates: Gisela Boeck, University of Rostock, Chemistry Department (gisela.boeck@uni-rostock.de) and Christoph Meinel, University of Regensburg, History of Science (christoph.meinel@ur.de).

The German Chemical Society (GDCh) has a Division on History of Chemistry (Fachgruppe *Geschichte der Chemie*) with about 400 members including a high proportion of students and young chemists. There are biannual meetings. The subdivision *Industriekreis* dealt with the history of 20th-century chemical industries and corporations, and in particular from the actor's perspectives. This subdivision was founded in 1995 and closed in 2018.

In March 2019 the Division on History of Chemistry organized its conference in Halle with about 80 participants. Furthermore members of the division organized together with members of the Division of Nuclear Chemistry the special symposium: *History and new developments of the Periodic system*. This event was dedicated to the *International Year of the Periodic Table of Chemical Elements* and it was an integral part of the GDCh Wissenschaftsforum in Aachen in September 2019. Several special lectures of members of Division on History of Chemistry for young chemists (Jungchemikerforum), for teachers etc. were dealing with the history of the Periodic System.

German members of the division on History of Chemistry took part in the organization of sessions dedicated to the IYPT in Maastricht, in Prague, in Wilhelmshaven, in St. Petersburg and in Linz and published papers on the history of the PT in journals and in the book *Women in their Element* (ed. A. Lykknes und B. van Tiggelen).

Since 1988, the Division on History of Chemistry publishes the journal *Mitteilungen*, devoted to all aspects of the history of chemistry and chemical industry. All back issues have been digitalized and are now on open access. Future issues will appear in print and online simultaneously.

In addition, there is an annual calendar of historically memorable dates, compiled on behalf of the Division on History of Chemistry – after the death of Horst Remane – by Yvonne Remane and Wladimir Reschetilowski. It will be published in every January issue of the GDCh membership journal *Nachrichten aus der Chemie*. A special

calendar for the members of the Division on Chemical Education is published in the journal *Chemkon* by Gisela Boeck

Finally, the popular GDCh program *Historische Stätten der Chemie* (historical sites of chemistry) deserves particular mention. In October 2019 the *Alte Chemische Laboratorium* (Old Chemical Laboratory) in Göttingen was honored. There exist already two proposals for 2020: the 1846 erected chemical institute in Tübingen, where also Lothar Meyer was working, and the company Allessa (formerly Cassella) in Frankfurt-Fechenheim.

ITALY

XVIII Italian Conference on History and Foundations of Chemistry

According to a well-established tradition, the Italian Conference on History and Foundations of Chemistry was held in Rome from 8 to 10 October 2019. Last year's Conference was the eighteenth in a series that began in Turin in 1985, later followed by the foundation of the Italian Group of Foundations and History of Chemistry (1986). Since then, the appointment has been renewed regularly every two years and each edition has left a trace in scientific historiography with a volume of Proceedings, containing the full texts of the communications. The publication has been promoted by the National Academy of Sciences, called the "XL". Since 1988, Reports of the Academy (Rendiconti dell'Accademia Nazionale delle Scienze detta dei XL) include our Proceedings in the Memoirs of Physical and Natural Sciences. "Rendiconti", are now available online <https://www.accademixl.it/2-publications/reports/>. These are seventeen volumes whose index are available also in our site <http://www.gnpsc.it/page9/page13/page13.html>).

The conference venue was the Library of the Academy of Sciences which stands in the magnificent park of Villa Torlonia. The Villa and his park are a tourist attraction of Rome and were built by Giuseppe Valadier (Roma, 1762 – 1839), the famous architect who left his elegant mark in other areas of the city.

The year 2019 was, for chemists, a particularly dense year of anniversaries worthy of finding space in the conference program. Sessions and invited lectures were dedicated to the 150th anniversary of the Periodic Table of the Elements, to the centenary of the foundation of IUPAC and the centenary of the birth of Primo Levi, writer, chemist and Holocaust survivor (1919-1987). The century of life of the periodical "Chemistry and Industry", official organ of the Italian Chemical Society was also celebrated.

Russell G. Egdell's (University of Oxford) gave the inaugural lecture entitled "Henry Moseley, X-Ray Spectroscopy and the Periodic Table". A communication by Offi et al. (University Roma Tre) has remembered Moseley received the prestigious Matteucci Medal 1919 assigned by the Academy of Sciences (<https://www.accademixl.it/medaglia-matteucci/>). The session on the Periodic Table was also enriched by Giovanni Ferraris (University of Turin). He spoke on the theme: "Contribution of crystallography to the construction of the Periodic Table of the elements". Other interesting communications (Cervellati, Moretti and Zani) completed the session dedicated to Periodic Table.

The following session dealt with the memory of Primo Levi and his work. The topic was treated by Vincenzo Aquilanti (Università Roma-Sapienza) and Ferruccio Trifirò (University of Bologna).

The session dedicated to IUPAC saw the participation of a French speaker. Danielle Fauque (Groupe d'Histoire de la Chimie) spoke on the theme: "Reorganizing Chemistry After WWI: Birth of the International Union of Pure and Applied

Chemistry". The historical report was followed, for current affairs, by Maurizio Peruzzini, a representative of the NAO CNR-IUPAC. After Peruzzini it was Franco Calascibetta's turn to report on the contribution of Italian chemists in the first years of IUPAC activity.

The session "From Leonardo's inventiveness to Tuscan-Venetian entrepreneurship" opened with the report by Annibale Mottana (University Roma Tre) entitled "Leonardo forger: the swelling of pearls by chemical adulteration". The last session, entitled "Chemists at work between theories, laboratories and libraries", included a series of communication on different themes, offering a fairly complete panorama of the chemical history research currently conducted in Italy.

It can be concluded the conference was successful in terms of participants, communications presented (26) and papers quality.



LITHUANIA

The Lithuanian Chemical Society (LChS, 40 members) chaired by Assoc. Prof. Rimantas Vaitkus has two representatives WPHC EuChemS: Mudis Šalkauskas and Birute Railienė. The headquarters of the LChS is at Vilnius University.

In the period of 2018-2019 were organised (or participated in organizing) following events:

2018-11-29 a website, dedicated to a chemist Jędrzej Śniadecki (1768–1838) sponsored by Rimvydas Baranauskas was updated with new material (<https://andrewsniadecki.org/en/readings/>) ; event “Lectioes Andreae Sniadecki”, introducing translation of a book “Theory of Organic Beings” by Jędrzej Śniadecki in to Lithuanian[1] and English[2] languages was organised at Vilnius University. Translation and publishing was funded by Thermo Fisher Scientific and Vilnius University. Event was introduced in press and websites (<https://andrewsniadecki.org/en/books/>).

2019 03 21 commemorating a 120 birth anniversary of academician Juozas Matulis, a chemist (<http://www.lma.lt/news/575/38/Prisimintas-ilgametis-LMA-prezidentas-Juozas-Matulis>)

2019 07 30 at the 12ICHC a project to organise 13ICHC in Vilnius was presented (<http://mokslolietuva.lt/2019/12/chemijos-istorikai-rinksis-vilniuje/>)

2019 07 01 a website of the 13ICHC was launched <https://www.ichc2021vilnius.chgf.vu.lt/> and the logo of the conference was created.

2019 11 30 event “Lectioes Andreae Sniadecki”, introducing a philosophical satire of Jędrzej Śniadecki was organised at Vilnius University.

Plans for future

2020 spring – translate to English a book about Jędrzej Śniadecki[3].

During 2020 – 2021 to organise 13ICHC. Date of the conference: 18–22 May, 2021.

Other topics

The LChS plans to create a branch for the history of chemistry.

Birutė Railienė, a representative for Lithuania at WPHC EuChemS.

THE NETHERLANDS

Annual Report 2019 of the Chemie-Historische Groep of the KNCV (History of Chemistry of the Royal Dutch Chemical Society)

Activities

In 2019 the Chemie-Historische Groep (CHG) organized, alone or together with other parties, the following activities. More extensive reports and pictures can be found on our website (see below):

1. Symposium 'The Craft of the Historian and Modern Chemistry' (Historische ambacht en moderne chemie), Friday 26 April, Faculty of Arts and Social Sciences, Maastricht.

Speakers: (1) Harry Lintsen (TUE), 'Welkom bij het afscheid van Ernst Homburg' (Welcome at the Occasion of the Retirement of Ernst Homburg); (2) Geert Verbong (TUE), 'Van beroep "Chemiker". De professionalisering van de chemicus' ('Chemiker' by Occupation: The Professionalization of the Chemist); (3) Johan Schot (UU), 'De casus meekrap: van industrialisatie naar diepgaande transities' (The Madder Case: From Industrialization to Deep Transitions); (4) Dick van Lente (EUR), 'Ernst Homburg en de techniekgeschiedenis' (Ernst Homburg and the History of Technology).

The symposium was organized by colleagues of the Foundation on the History of Technology (Stichting Historie der Techniek), Eindhoven, at the occasion of the valedictory lecture by Ernst Homburg on 'Verhalen van de Oude Berg: wetenschap, techniek, industrie en politiek in de Euregio' (Tales on the Old Mountain: Science, Technology, Industry and Politics in the Euroregion). The symposium was very well attended, with more than 150 people, and the quality of the lectures was highly appreciated. Many CHG-members were present.

2. Industrial Heritage Excursion to Chemelot, Friday 14 June, Sittard-Geleen.

The excursion was organized by the CHG, together with the Working Party on Industrial Heritage Limburg (Werkgroep Industrieel Erfgoed Limburg), and DSM. After a welcome coffee presented by DSM, two lectures were presented: (1) Ernst Homburg (UM), 'Historie van de site (DSM-Chemelot), 1920-2000' (History of the DSM-Chemelot Industrial Site, 1920-2000); (2) Harry Horbach (DSM), 'Chemelot for Today's Future'.

After these lectures there was bus tour over the entire industrial site, the North Complex (ammonia, nitrogen fertilizers, caprolactam; OCI Nitrogen, etc.), the South Complex (petrochemicals; Sabic), and the former site of the Maurits mine. Two laboratories from the 1930s and 1940s were visited, and special attention was paid to the evolution of plant and factory architecture.

The excursion was a great success, and highly appreciated by all who took part. The number of participants was limited at 50, and the excursion was fully booked, with quite some CHG-members attending.

(3) Although strictly speaking not a CHG-activity, but organized by the KNCV-office, the CHG was involved in the National Chemical Landmarks initiative from the start. On Tuesday 18 June the so-called 'Large Office' (Grote Kantoor) of DSM Delft (former main office of the Gist- en Spiritusfabriek), constructed in 1905-1907, was awarded the distinction 'National Chemical Landmark', because of its great architecture and because of being a pioneering site of microbiology and biotechnology in The Netherlands.

Preceding the unveiling of the plaque there was a small symposium, with words of welcome by Fedde Sonnema (DSM Delft) and Jan-Willem Toering (KNCV), and with following lectures: (1) Ernst Homburg (CHG), 'Grote Kantoor als locatie Nationaal Chemisch Erfgoed' (The 'Large Office' as National Chemical Landmark); (2) Rob van Leen (DSM), 'Transitie van chemie naar biotechnologie' (The Transition from Chemistry to Biotechnology); (3) Thom van der Does (Centrient), 'Biotechnologische ontwikkelingen in Delft' (Biotechnological Developments at Delft). The many attendants enjoyed the splendid architecture of the office, and were impressed by the plans for the DSM-TUD biotech campus at Delft.

(4) The absolute highlight of the year for CHG was the co-organization of the 12th International Conference on History of Chemistry, that took place at Maastricht, from 29 July until 2 August. The Conference was co-organized together with the Working Party for History of Chemistry of EuChemS, with the KNCV, and with Maastricht University, that hosted the conference. Four Committee members of CHG were members of the Local Committee of 12ICHC: Thijs Hagendijk, Marieke Hendriksen, Ernst Homburg and Andreas Weber.

The conference was a great success. There were 17 sessions on a large diversity of topics within the history of chemistry, ranging from alchemy in the Renaissance to nanotechnology. Key-note lectures were given by Lissa Roberts (UT), Marco Beretta (Bologna), Carsten Reinhardt (Bielefeld), and Yasu Furukawa (Tokyo). In total 115 colleagues took part in the conference, coming from more than 20 nations in Europe, the Americas and Asia. For group pictures of all participants, see: <https://sites.google.com/view/ichc2019/>.

The last day there was a highly appreciated excursion to the zinc and brass industries at Liège (BE), Kelmis (BE), and Stolberg (GER), in which 50 people took part.

The conference was also a great opportunity for young people to network and to present their work: 17 young scholars came from 9 different countries, and they participated actively (papers, commentators, organizers) in 12 of the 17 sessions at the ICHC. One of them also acted as commentator in a plenary session on a future Handbook on the history of chemistry.

(5) The 'Woudschoten Chemie Conferentie' (Woudschoten Chemistry Conference), 1-2 November, Woudschoten, Zeist.

The Woudschoten Chemistry Conferences are annual conferences for chemistry school teachers. This year the focus was on the Periodic Table, under the title 'Als Docent in je Element' (Being in Your Element as a School Teacher). Since a few years the main organizer Gjalt Prins (UU; NVON) and the CHG try to put a historical session on the agenda. This time a masterclass was given by Albert Philipse (UU; CHG) and Daan Wegener (UU), under the title 'Sublieme chemie en onzichtbare velden: Davy en Faraday in hun element' (Sublime Chemistry and Invisible Fields: Davy and Faraday in their Element).

(6) Symposium '100 jaar chemische industrieën in de Lage Landen' (100 Years of Chemical Industries in the Low Countries), Friday 8 November, Leuven.

This symposium was a continuation of the symposia that we co-organize annually with the Historical Section of the KVCV (Royal Flanders Chemical Society). The topic of this year was chosen because of the fact that both the Dutch and the Belgian Societies of the Chemical Industry recently celebrated their 100 years anniversaries.

Speakers: (1) Geerd Magiels (Essenscia), '100 jaar Chemie en Farma in België' (100 years of Chemistry and Pharma in Belgium); (2) Ernst Homburg (UM), 'Historiografie van de chemische industrie' (Historiography of the Chemical Industry); (3) Geert Vanpaemel (KU Leuven), 'Wetenschap, Industrie en Big Science: Bouwen aan het Atoomtijdperk in België' (Science, Industry and Big Science: Constructing the Atomic Age in Belgium); (4) Hendrik Deelstra (UA), 'Janssen Pharmaceutica van oprichting tot heden en de Belgische Farmaceutische industrie' (Janssen Pharmaceuticals from its Foundation to the Present and the Belgian Pharmaceutical Industry); (5) Joost Jonker (UvA), 'Een logische diversificatie? De Koninklijke Shell-groep en de petrochemie 1925-1965' (A Logical Diversification? The Royal Dutch/ Shell Group and Petrochemicals, 1925-1965); (6) Eelco Vogt (Albemarle; UU), 'Van zwavelzuur tot katalysatoren: Ketjen, Akzo (Nobel) en Albemarle in Amsterdam-Noord van 1901 – 2019' (From Sulphuric Acid to Catalysts: Ketjen, Akzo (Nobel) and Albemarle in North-Amsterdam from 1901 to 2019).

It was a unique symposium on both the Belgian and the Dutch industries, that was received with much enthusiasm by the participants. New working contacts were established.

Halfway the Conference past-CHG-chairman Rob van Veen gave a short *laudatio* at the occasion of the recent retirement of Ernst Homburg as professor at Maastricht University, and he thanked him for his efforts for the CHG.

Website

More detailed information on the activities mentioned above can be found on the CHG-website: www.kncv.nl/chg. CHG is occasionally also present on Twitter: @CHG_NL.

Webmaster Eric Wils is willing to continue his activities for the website also after having stepped down as Treasurer and Committee member.

Last year he has continued to add biographical notes on prominent Dutch chemists. The journal of the KNCV since 1903, the *Chemisch Weekblad* (Chemical Weekly) has been digitalized, and will soon be widely available due to the efforts of the University Library of Groningen University. The years 1903-1956 can already be accessed on <https://ugp.rug.nl/cw>.

Membership

At the end of 2018 the CHG had 69 members; 39 of which were also KNCV-members, and 30 only CHG-members. At the end of 2017 the total number of members had been 72.

Committee

In 2019 several Committee Members stepped down, after years of service. At 1 January 2019 Rob van Veen stepped down as Committee Member and Chairman. We thanks him for many years of excellent service. He was replaced as Chairman by Ernst Homburg.

During the 16 October meeting we said farewell to Eric Wils, Ton van Helvoort and Andreas Weber, who all served the CHG during several years. Eric Wils stayed in charge as treasurer until the end of 2019, when Jacob van Dijk took over that task on a temporary basis.

Three new members entered the Committee in October 2019: Pierre del Castillo (Groningen), Rob van den Berg (Leiden), and Veronique Fehmers (Amsterdam); the last one only for a short time.

The Committee met at 14 March, 25 June and 16 October 2019.

The initiative on National Chemical Landmarks (Nationaal Chemisch Erfgoed (NCE)) went into its second year in 2019. As mentioned above, on 18 June the so-called 'Large Office' of DSM Delft was awarded the distinction 'National Chemical Landmark'. Two CHG Committee members, Jacob van Dijk and Ernst Homburg, are also on the NCE Steering Committee.

Just like in previous years the Committee had contacts with sister organizations such as the Sectie Historiek of the KVCV (Flanders), Jong KNCV, some Chemische Kringen (local chemistry sections), and especially with the Working Party on the History of Chemistry of EuChemS, in relation to 12ICHC, mentioned above.

CHG-KNCV (Dutch Chemical Historical Group) Year report 2018

Activities

In 2018, CHG organized the following activities – on its own or with partners. Extended reports can be found on the website www.kncv.nl/chg:

1. Mini Symposium Cabinets of Natural History and Collections of Simples, Thursday 15 March, Teylers Museum, Haarlem.
Speakers: (i) Ernst Homburg (U Maastricht/CHG-board member), *Trading Paint Materials, the Hafkenscheid firm and the function of the Hafkenscheid Collection*, (ii) Raymond van der Ham (Museum Naturalis, Leiden), *Dutch collections of simples: past and present*, and (iii) Judith van der Brugge-Mulder (Rijksmuseum, Amsterdam), *The collector's cabinet with miniature apothecary at the Rijksmuseum*
This mini symposium preceded the presentation of the book *Een kabinet vol kleur: De collectie schildersmaterialen van de Amsterdamse verhandelaar Michiel Hafkenscheid (1772 – 1846)* (A cabinet full of color: the collection painter's materials of the Amsterdam paint trader Michiel Hafkenscheid (1772 – 1846)) by Ineke Pey & Ernst Homburg, published by Vantilt. This part was coordinated by the publisher. The combination of book presentation and symposium made for a good turnout with about 60 attendees. Ineke Pey talked about the making of the book, Mariël Polman (National Cultural Heritage Bureau, Amersfoort), gave a presentation on the importance of the Hafkenscheid collection for research into colors on monuments.
2. Visit to Rijksmuseum Boerhaave storage facility, Thursday 7 June, Leiden.
With 11 participants, this was a small but fascinating tour of the enormous array of objects in storage, led by curator Ad Maas. Questions were answered by Ad during drinks in the museum after the tour.
3. Although strictly speaking not a CHG activity, the following meeting resulted from a CHG initiative and was taken over by mother organization KNCV. On Wednesday 4 July, the Oval Room at Teylers Museum in Haarlem was elected National Chemical Heritage in a ceremony at the museum. KNCV president Floris Rutjes revealed the specially designed plaque, and a newspaper article on the election, an interview with head curator Trienke van der Spek, appeared in *Haarlems Dagblad*.
4. Mini symposium Alchemy in and around Amsterdam in the 17th and 18th century, Friday 14 September, Embassy of the Free Mind in the House with the Heads, Amsterdam. Speakers: (i) Ernst Homburg (Maastricht/CHG-board

member), *Short introduction*, (ii) Henk Vermande (Soest), *Currents in 17th-century (al)chemy and some examples of (al)chemical gable stones in Amsterdam from the 17th and 18th centuries* (iii) Ad Minderhoud (Amsterdam), *Johann Rudolf Glauber (1604-1670), a chemist and alchemist in Amsterdam and his international reputation* (iv) Ruud Lambour (Amsterdam), *Galenus Abrahamsz (1622-1706), Baptist teacher/preacher, medical man and alchemist* (v) Joppe van Driel (Amsterdam), *City and country 'housekeeping'. The role of apothecaries and chemists in the supply of industry crops and fertilizers*.

The afternoon was finished with a general tour of the Bibliotheca Philosophia Hermetica/The Ritman Library, where books related to the talks were put on display. About 45 participants were welcomed; a good turnout. This meeting was made possible by a generous donation by one of our members!

5. The year 2018 also had an absolute low. Traditionally the historical Section of the KVCV (Flanders) and CHG jointly organize an annual symposium. This year's theme was The History of the Development of Computer Chips, to be held in Eindhoven. An excellent line-up of speakers had been arranged, but we had to cancel due to a lack of interest. We suspect that CHG members found the topic not chemical enough, while apparently other potentially interested groups did not find the topic appealing either. This was the first time we had to cancel a symposium due to a lack of interest, and of course we hope it was also the last time.
6. CHG contribution to the Woudschoten Chemistry Conference On Lavoisier's Shoulders: G.J. Mulder as discoverer of protein chemistry and J.H. van 't Hoff as founder of physical chemistry, Friday 2 November, Woudschoten conference venue, Zeist.
The room was packed with enthusiastic attendees for talks by Daan Wegener (UU) on Lavoisier, Ernst Homburg (U Maastricht/CHG board member) on Mulder, and Albert Philipse (UU/CHG board member) on Van 't Hoff.
We plan to make such a contribution an annual feature – organizer Gjalt Prins (NVON – Dutch Society of Physics and Chemistry Teachers) is enthusiastic. This would improve our interactions with teachers in secondary education.
7. Evening lecture, Thursday 22 November, Utrecht University (co-organized with CKMN – chemical historical circle central Netherlands). Speaker: Marieke Hendriksen (CHG board member), Tested or Ridiculed? On the transformation of alchemy to chemistry in the Low Countries. Again a hugely successful turnout (about twice as many people as usual) and an enthusiastic crowd.

8. Focus session Chemistry of Cultural Heritage in a Historical Perspective, Tuesday 4 December, Koningshof, Veldhoven (part of CHAINS 2018)
This session was organized by Sven Dupré (UU) and had three excellent speakers: (i) Mariana Pinto (UU), *Chemists in the Field of Archaeology in the Nineteenth Century*, (ii) Maartje Stols-Witlox (UvA), *Recipes for Change: the Chemistry of Historical Restauration Recipes*, and (iii) Maarten van Bommel (UvA), *Discoloration of Cultural Heritage: Towards a Chemical Understanding of Fading of Artworks*.
This drew more than 90 people – more than there were chairs in the room – and they provided us with a lively discussion.

Website

As mentioned before, more information on past meetings can be found on the website www.kncv.nl/chg. You can also follow us on Twitter: @CHG_NL
We have added new biographical material on prominent Dutch chemists. The project of adding biographies of all professors mentioned in *Geschiedenis van de scheikunde in Nederland* parts 1 and 2, and of the (K)NCV presidents to the website has almost been completed.

To provide easier access to the digital edition of *Chemisch Weekblad*, a collaboration has been established with Groningen University Library. Uploading everything and making it searchable is a big job, but at least it is a work in progress now.

Membership

CHG had 72 members on December 31, the same number as at the beginning of the year.

Board

Over the course of the year we welcomed a new board member, Marieke Hendriksen, postdoctoral researcher at Utrecht University. President Rob van Veen retired after ten years of service at the end of the year. Ernst Homburg succeeded him.

The board met on 1 March, 15 May, 8 September, and 27 November.

To our delight the National Chemical Heritage program has started, overseen by KNCV. Two CHG board members are part of the committee.

As in previous years, the board has been in touch with sister organizations such as NPT, the Historical Section of KVCV, Young KNCV, and local chemical circles on a regular basis.

NORWAY

The history of chemistry group of the Norwegian Chemical Society usually organizes one meeting per year, the annual meeting in October or November.

In 2018, the meeting was held as a part of the triennial Norwegian Chemistry Congress (Landsmøtet i Kjemi) at Lillestrøm. Presentations were related to the centenary of the birth of the Norwegian chemist Otto Bastiansen and the 50th anniversary (in 2019) of the Nobel prize in chemistry given to the Norwegian chemist Odd Hassel.

In 2019, again the main theme for the annual meeting was Odd Hassel. The chair, Bjørn Pedersen, and the deputy chair, Ragnar Bye, gave talks about Hassel's training and titration method, respectively. The meeting was held at the University of Oslo.

As of 29 October 2019, the board consists of Annette Lykknes (chair), Bjørn Pedersen (deputy chair) and board members Leiv Sydnæs and Ragnar Bye.

Annette Lykknes has co-coordinated initiatives related to the International Year of the Periodic System together with colleagues at NTNU in Trondheim. Initiatives include *Stjernestøv* ("Stardust") – a "chemistry van" which has been equipped with chemical elements in order to reach out to schools in the provinces of Trøndelag, a periodic table app (still in the making), a popular science book, popular articles and lectures, numerous press coverages, a web site, and two exhibitions at the Natural Science Library at NTNU (on in the making).

Overall, the aim of the activities has been to disseminate chemistry in general, to make sense of the periodic system and its elements in particular, and to use the history of the periodic system to show that science is multifaceted, complex and collaborative, and to a lesser extent results from the work of the individual genius. Web site for the International Year of the Periodic Table at NTNU: <https://www.ntnu.no/periodiske-system>

Annette Lykknes

POLAND

History of chemistry. Events and publications 2018 – 2019.

(Prepared by Prof. Halina Lichocka, Institute for the History of Science, Polish Academy of Sciences, Warsaw, Poland)

The Polish Chemical Society has in its structure the Didactics and History of Chemistry Section. However, three other institutions mainly deal with the history of chemistry. These are:

- Institute for the History of Science. Polish Academy of Sciences. Warsaw;
- Commission for the History of Science. Polish Academy of Arts and Sciences. Krakow;
- Cabinet of the History of Chemistry. Faculty of Chemistry, University of Wrocław.

2018

The Krakow Branch of the Polish Chemical Society organized the **61st Annual Scientific Meeting of the Polish Chemical Society**. The meeting took place in Krakow on September 17-21. The historical session was dedicated to the 250th anniversary of the birth of Jędrzej Śniadecki - a doctor and chemist, the creator of the Polish chemical nomenclature. The main lecture was given by Halina Lichocka (Institute for the History of Science PAS): *Chemia Jędrzeja Śniadeckiego [Chemistry of Jędrzej Śniadecki]*. Other lectures: Ryszard Gryglewski (Department of the History of Medicine, Collegium Medicum, Jagiellonian University): *Teoria i praktyka lekarska w ujęciu Jędrzeja Śniadeckiego [Medical theory and practice in terms of Jędrzej Śniadecki]*; Monika Urbanik (Museum of Pharmacy, Collegium Medicum, Jagiellonian University): *Związki Jędrzeja Śniadeckiego z farmacją [Jędrzej Śniadecki and pharmacy]*; Zenon Roskal (Faculty of Philosophy of the Catholic University of Lublin): *Czy Jędrzej Śniadecki był materialistą? [Was Jędrzej Śniadecki a materialist?]*; Ewa Wyka (Jagiellonian University Museum) and Emilia Iwaszkiewicz (Faculty of Chemistry at Vilnius University, Lithuania): *Towarzystwo Szubrawców w Wilnie i Jędrzej Śniadecki [The Szubrawców Society in Vilnius and Jędrzej Śniadecki]*; Ewa Wyka (Jagiellonian University Museum): *Krakowskie pamiątki po Jędrzeju Śniadeckim [Cracow remains of Jędrzej Śniadecki]*.

University of Technology and Nature. The Regional Innovation Center in Bydgoszcz organized the **3rd International Symposium**: „Where Jędrzej Śniadecki met Jan Czochralski. From innovative high-tech to patents and business incubators”. The symposium took place on December 10-11. Plenary lecture: *Vestium and Ruthenium in the Context of the History of Chemistry*, was given by Halina Lichocka. Paweł Tomaszewski (Institute of Low Temperature and Structural Research PAS) talked about Jan Czochralski's discoveries: *From Czochralski's radiomicroscope to Nobel Price for STM (scanning tunneling microscopy)*.

A seminar organized by the Commission on the History of Science of the Polish Academy of Arts and Sciences dedicated to the memory of Ignacy Mościcki. The seminar took place on January 24 in Krakow. Halina Lichocka presented the paper entitled *Inventions of Ignacy Mościcki*. Ignacy Mościcki was a chemical engineer and one of the creators of the chemical industry in Switzerland and Poland. In the years 1926–1939 he was the President of the Republic of Poland.

Selected publications

1. Zbigniew Wójcik: *Ignacy Łukasiewicz*. Radom 2018, 382 s.
2. Wojciech Kroszczyński: *Krótką historia niektórych wzorów związków organicznych* [A brief history of some organic compound formulas]. Kraków 2017, 94 s.
3. Bogumiła Umińska (ed.) Prezydentowi prof. Ignacemu Mościckiemu – w 150. rocznicę urodzin. Stulecie odzyskania niepodległości 1918-2018. Pokłosie konferencji naukowej i wystawy – uroczystości, które odbyły się pod patronatem honorowym Prezydenta Rzeczypospolitej Polskiej Andrzeja Dudy. [President prof. Ignacy Mościcki - on the 150th anniversary of his birth. Centenary of regaining independence 1918-2018. Aftermath of a scientific conference and exhibition - celebrations that took place under the honorary patronage of the President of the Republic of Poland Andrzej Duda]. Ciechanów 2018, 399 s. Some chapters in this book relate to the history of chemistry:
 - Krzysztof Schmidt-Szałowski: Dla Ojczyzny i dla nauki – wspomnienie o Ignacym Mościckim w 150 rocznicę urodzin [For the Fatherland and for science - a memory of Ignacy Mościcki on the 150th anniversary of his birth] s. 119-126.
 - Jerzy Hickiewicz: Działalność Ignacego Mościckiego (1867 – 1946) w elektrotechnice [Activities of Ignacy Mościcki (1867 - 1946) in electrical engineering] s. 127-139.
 - Halina Lichocka: Szwajcaria – przybrana ojczyzna Ignacego Mościckiego [Switzerland - the adopted homeland of Ignacy Mościcki] s. 141-156.
 - Teresa Kaczorowska: Związki Prezydenta Ignacego Mościckiego z jego rówieśniczką Marią Skłodowską-Curie [Relationships between President Ignacy Mościcki and his contemporary Maria Skłodowska-Curie] s. 269-280.
4. Alicja Adamczak (ed.) 100 lat ochrony własności przemysłowej w Polsce. Księga jubileuszowa Urzędu Patentowego Rzeczypospolitej Polskiej. [100 years of industrial property protection in Poland. Jubilee book of the Patent Office of the Republic of Poland.]. Warsaw 2018, 1680 s. Chapters on the history of chemistry:
 - Marian Marek Drozdowski: Czego nauczyć się możemy od Eugeniusza Kwiatkowskiego? [What can we learn from Eugeniusz Kwiatkowski?] s. 84-97.

- Julita Maciejewicz-Ryś: Powojenne lata Eugeniusza Kwiatkowskiego we wspomnieniach wnuczki [Post-war years of Eugeniusz Kwiatkowski in his granddaughter's memories] s. 210-216.
- Halina Lichocka: Ignacy Mościcki – wynalazca i polityk [Ignacy Mościcki - inventor and politician] s. 167-193.

2019

61st Annual Scientific Meeting of the Polish Chemical Society took place in Warsaw on September 2-6. This meeting began with the solemn celebration of the 100th anniversary of the Polish Chemical Society. An occasional paper entitled "100 years have already passed" was presented by Bogusław Buszewski and Zbigniew Galus. The guest of these celebrations was the Nobel Prize winner in chemistry 1981, Roald Hoffmann, Cornell University, Dept. of Chemistry and Chemical Biology, Baker Laboratory, Ithaca, NY 14853-1301, USA. Prof. Roald Hoffmann gave a lecture "Chemistry in Art, Art in Chemistry, and the Spiritual Ground They Share".

Selected publications

1. Tomasz Pospieszny: Radowa księżniczka. Historia Ireny Joliot-Curie [Radium princess. The story of Irena Joliot-Curie] Warszawa 2019;
2. Włodzimierz Bonusiak: Ignacy Łukasiewicz Szejk z Galicji [Ignacy Łukasiewicz, king of oil from Galicia], Libra Pl 2019;
3. Małgorzata Sobieszczak-Marciniak: Maria Skłodowska-Curie. RM 2019;
4. Halina Lichocka: Vestium i Ruthenium na tle historii chemii [Vestium and Ruthenium on the background of the history of chemistry] "Studia Historiae Scientiarum" R. 18, 2019, s. 295-313.

Current works and future plans

A group of chemistry historians led by Halina Lichocka began developing a biographical dictionary of Polish chemists. Work on this dictionary will take several years. The dictionary will contain over 1,500 biographical entries. An electronic and paper book edition is planned.

PORTUGAL

Portuguese History of Chemistry Group – Portuguese Chemical Society (SPQ) Report of Activities 2017-2019

During 2017-2019, a few activities had the collaboration/participation of members of the SPQ group on history of chemistry. In particular, some conferences:

- “História Biográfica e Intelectual da Ciência, Tecnologia e Inovação - Perspectivas Filosóficas e Visões de Política” | International Conference Biographical and Intellectual History of Science – Philosophical Perspectives and Political Visions, held at the University of Évora, on 23-24 November 2017.
- 2018 ENHCT – 6º Encontro Nacional de História das Ciências e Tecnologia | 6th National Meeting of History of Science and Technology, held at NOVA New University of Lisbon, on 9-11 July 2018 - Isabel Malaquias participated with a paper associated to the IYPT2019 commemoration.
- 12ICHC, Isabel Malaquias participated in and co-organized the panel “150 years of the Periodic System” at the 12th International Conference on the History of Chemistry, held in Maastricht, on 29 July-2 August 2019, also attended by other colleagues from the Portuguese HC Group.
- Isabel Malaquias participated in and co-organized the Symposium «Celebrating D-I. Mendeleev's Periodic System. The Historical Perspective», which took place in St Petersburg (9-13 September), where also another colleague from the Group participated.

ii. Exhibitions

- "Plasticidade - Uma História dos Plásticos em Portugal" | Plasticity - A History of Plastics in Portugal, developed by Maria Elvira Callapez, at the Leiria Museum with the collaboration of Leiria City Council and CIUHCT, April 2019-2020. The exhibition was awarded the Dibner Prize last October.
- Commemorating the International Year of the Periodic Table, it was held at the Aveiro City Museum, the exhibition “E se Mendeleev estivesse aqui?” (What if Mendeleev were here?), developed by Isabel Malaquias, João A. B. P. de Oliveira and Isabel P. Martins, with the support of the University of Aveiro, American Corner and FÁBRICA - Ciência Viva de Aveiro, from 16 September to 16 October 2019.
- The exhibition moved to Lisbon, where it is in display from 19 November to 12 January 2020 at Pavilhão do Conhecimento | Knowledge Pavilion.

iii. Publications

- *Perspectives on Chemical Biography in the 21st Century* was published, book co-edited by Isabel Malaquias and Peter J. T. Morris, at Cambridge Scholars Publishing (Jan-Feb 2019).

By Raquel Gonçalves-Maia, 6 new volumes have been published at Edições Colibri:

- Wallace Carothers, edition /reprint February 2019
- Leo Baekeland, edition /reprint February 2019
- Max Perutz, *edition /reprint July 2018*
- Francis Crick, *edition /reprint July 2018*
- Linus Pauling, *edition /reprint August 2017*
- Desmond Bernal, edition /reprint August 2017

Meeting of the Portuguese History of Chemistry Group

The Group met on 20 September 2019 in Aveiro. The activity report was presented and approved and the coordinator of the next biennium was chosen along with a vice-coordinator. Isabel Malaquias will chair the Group assisted by João A. B. P. de Oliveira.

Isabel Malaquias

RUSSIAN FEDERATION

Report on activities of the Russian Chemical Society (RCS) in the field of History of Chemistry.

The RCS has been involved –either participating or funding- in the following recent activities in the years 2017-2019.

For the year 2017.

Organization of scientific meetings (conferences):

20-21 November 2017. International Conference «On the history of laboratories: theory, practice, educational activities» (Chemical Faculty, Moscow State University).

The corresponding book based on the materials of part of the speeches is being prepared for publication (a joint project with the Museum of Science (or Polytechnic Museum)).

For the year 2018.

Organization of scientific meetings (conferences):

September 14-16, 2018, Moscow. The organization, in cooperation with the Russian Society of the History and Philosophy of Science (the society was created in 2016), within the framework of the International Congress ("History and Philosophy of Science in an Age of Change") of two sections: "Alchemy in Science and Culture" and "History and Philosophy of Natural History." Proceedings of the Congress: <http://rshps.org/>

For the year 2019.

Organization of scientific meetings (conferences):

9-13 September 2019: «Celebrating D.I. Mendeleev's Periodic System. A Historical Perspective». Satellite symposium to XXI Mendeleev Congress 2019 in St. Petersburg. Symposium website: <https://hystsymposium.wordpress.com/>

As part of this symposium, important and necessary innovations were formulated for the progress of research and education in Russia in the field of the history of chemistry, which were transferred to the relevant state bodies for their consideration.

Organization of interview set with leading Russian scientists to the international year of the periodic table of chemical elements ("Chemist on the Periodic Table: a Professional Tool, a Scientific Icon, or an Open Book" published in the Russian journal "Nature", 2019, №2, <http://www.ras.ru/publishing/nature.aspx>)

Publication: The public status of Russian Chemistry : Russian Chemical Society : the history and traditions / editors: E.A. Baum, T.V.Bogatova ; Moscow:

M.V.Lomonosov Moscow State University, Department of Chemistry. - Janus-K, 2019. - 352 P. ISBN 978-5-8037-0769-1

In 2019, Russian chemists celebrated two major anniversaries. The first, which is marked by the entire world chemical community, is the 150th anniversary of the Periodic Law and the Periodic Table of Chemical Elements. The second and less noticeable is the jubilee of publication in 1869 of the first full-fledged Russian periodical in chemistry - the *Journal of the Russian Chemical Society* as its communication and information exchange organ. The Russian Chemical Society that was created a year before this event (the RKhO; since 1878 – the RFKhO) was the first scientific society in Russia to unite professional chemists. Very soon after its foundation, the Society became the decisive information-coordinating and expert institution in the field of chemical science and production in Russia. Since then the Russian Chemical Society represented the vanguard of Russian chemistry, and its journal became the mouthpiece of the achievements of domestic chemical science. This edition is devoted to these significant dates for Russian science. The authors and compilers of the book hope that the materials offered to readers will be interesting not only in the anniversary year.

Annual activities.

Lectures. Annually the members of the RCS give lectures on the history of chemistry at the Faculty of Chemistry of Moscow State University (fall semester, 36 h., auditorium: about 200-215 students) and at subsidiary of Moscow University in Baku (Azerbaijan) (spring semester, 26 h., auditorium: 20-25 students).

Participation of the members of the RCS in the conferences on the history of sciences. Members regularly take a part at the annual conferences of the Institute of the History of Natural Sciences and Technology of the Russian Academy of Sciences (spring) and conferences of the Polytechnic museum (winter), etc..

The involvement of young people into the historical -scientific research.

Organization of a special scientific meetings (conferences):

Annually young Russian researchers and students from various higher education institutions present their papers at student's conference of the Moscow University ("Lomonosov conference") as part of the chemistry history section. F.i. in year 2019 around 20 participants attended to this section.

Collaboration with the museums of the history of science.

Some students of the Faculty of Chemistry of Moscow State University in the process of fulfilment additional tasks according to the course of the history of chemistry carry out research on the attribution of chemical artifacts of the Polytechnic Museum (research supervisors- Dr. Elena Baum (MSU) and curators from the Polytechnic Museum: Nudel' A.I., Kuzmina E.I.). In 2018 and 2019, scientific - practical conferences («To the history of chemical tools and chemical-technological processes») were organized for them in the exhibition space of the museum.

Students presented their historical works showing off at the same time their exhibits (see f.i. <http://talant.msu.ru/blog/2018/12/29>). The results of the best student works are published in Russian professional journals.

Elena Baum, Russian Representative at the WP-HC

Serbian Chemical Society (SCS) Biennial Report to the EuChemS Working Party on the History of Chemistry for 2017-2019

Abstract:

The activities of the SCS Working Party on the History of Chemistry during the period from September 2017 to November 2019 have been associated with: (i) organization of the scientific meetings; (ii) organization of the activities dedicated to the International Year of the Periodic Table; (iii) publication of the *Chemical Review* and the *Journal of the Serbian Chemical Society*.

1. Organization of the scientific meetings which contain section for the history of chemistry

The April days about chemistry teaching - the 29th and 30th national meetings of chemistry teachers, as well as the 2nd and 3rd conferences of chemistry didactics (University of Belgrade - Faculty of Chemistry, 26/27 April 2018 and 24/25 April 2019)

The April days about chemistry teaching have been organized by the University of Belgrade -Faculty of Chemistry and the Serbian Chemical Society. These conferences have been attended by chemistry teachers from primary and secondary schools in Serbia and students and staff from universities where chemistry teachers are educated. One of the conferences' topics was History of chemistry in chemistry teaching.

2. Organization of the activities dedicated to the International Year of the Periodic Table

During the 2019, SCS has being organized activities dedicated to the International Year of the Periodic Table. Chemistry students performed experiments related to the particular elements in the framework of the April days about chemistry teaching. Primary school "Mladost" from Belgrade organized educational performance called "A tea party with Mendeleev". Also, during October 2019, five plenary lectures associated with this anniversary were organized:

Dr Aleksandar Dekanski, Institute of Chemistry, Technology and Metallurgy Belgrade, *Seaborgium, Lawrencium, Berkelium, Californium, Americium*;

Dr Wesley Browne, University of Groningen, *A brief history of magnesia, life and dishwashers*;

Dr Aleksandra Mitrović, University of Belgrade – Faculty of Chemistry, *The wondrous world of 2D materials*;

Dr Vladimir Beškoski, University of Belgrade – Faculty of Chemistry, *The elements of the Periodic table - the hidden secret of life on our planet*

Dr Tamara Todorović, University of Belgrade – Faculty of Chemistry, *The periodic table of the elements - from a sketch to a masterpiece*

3. Publications

The Serbian Chemical Society publishes six issues of the journal *Chemical Review* per year. Every year, the cover page of this journal is dedicated to one person from the national or international history of chemistry or to some important historical events related to chemistry. The cover page of *Chemical Review* in 2018 had been dedicated to Derek Harold Richard Barton (one hundred years from his birth), and the cover page in 2019 has been dedicated to the International Year of the Periodic Table.

The Serbian Chemical Society publishes twelve issues of the Journal of the Serbian Chemical Society per year. This journal contains a section dedicated to the History of chemistry and chemistry education. The Impact Factor of this journal was 0.797 in 2017 and 0.828 in 2018.

Dr Vesna Milanovic

University of Belgrade - Faculty of Chemistry Delegate from the Serbian Chemical Society

SPAIN

Spanish Royal Society of Chemistry (RSEQ) - History of Science Division Annual Report of to the EuChemS Working Party on History of Chemistry for 2018-2019

The specialised division on History of Science (GEHCi) of the Spanish Royal Society of Chemistry (RSEQ) currently has 101 members, and it is directed by Inés Pellón-González (professor of the University of the Basque Country, UPV/EHU). In the period 2018-2019, the GEHCi has been involved –either participating or funding- in the following activities:

-Organisation of the 7th Summer School on History of Chemistry “VII Escuela de Verano sobre Historia de la Química (VI EVHQ)” jointly with the University of La Rioja (July 2018). The topic was “El Centenario de la IUPAC” (!IUPAC’s Anniversary!). Web page:

<https://www.unirioja.es/apnoticias/servlet/Noticias?codnot=5610&accion=detno t>

-Members of GEHCi have participated in the “International Symposium on "Setting their Table: Women and the Periodic Table of Elements"" celebrated in February 2019 in Murcia (Spain) <https://rseq.org/contribuciones-de-la-mujer-en-la-tabla-periodica/>

-The GEHCi has collaborated in the organisation of the Symposium titled “S9. Enseñanza, Historia y Divulgación de la Química” (“S9. Teaching, History and Diffusion of Chemistry”), celebrated in the “XXXVII Reunión Bial de la RSEQ” (“XXXVII Bial Meeting of the RSEQ”) in May 2019 in San Sebastián (Spain) <http://bial2019.com/simposios.php>

-Organisation of the Summer School titled “Ilustración y educación STEAM: Bergara, la Bascongada y el Año Internacional de la Tabla Periódica de los Elementos Químicos, 2019” (“Illustration and education STEAM: Bergara, the Bascongada and the International Year of the Periodic Table of Chemical Elements, 2019”), celebrated in July 2019 in Bergara (Spain), jointly with the University of Basque Country (UPV/EHU) <https://bit.ly/2Ur7al2>

-The GEHCi has collaborated in the coordination of the monographic number of the magazine “Anales de Química de la Real Sociedad Española de Química (RSEQ)” (“Annals of Chemistry of the Royal Spanish Society of Chemistry”) dedicated to the 150th anniversary of the Periodic Table, titled “International Year of the Periodic Table of Chemical Elements” (Vol. 115, n. 2, April-June 2019) www.rseq.org/anales

-The GEHCi has collaborated in the organisation of the popularisation course titled “Los Avances de la Química y su Impacto en la Sociedad” (the advancement of chemistry and their social impact) organised by the GEHCi member Bernardo Herradón (CSIC) in Madrid. This course topic is “Alrededor de la Tabla Periódica y los Elementos Químicos” (About the Periodic Table and the Chemical Elements). Web page: <https://bit.ly/2mo2ixl>

-Some members of the GEHCi and the RSEQ were fully involved in the 12th ICHC (Maastricht, 2019). For instance, José Ramón Bertomeu Sánchez and Silvia Pérez Criado presented the paper “DDT and the making of the Spanish pesticide industry during the early years of the Francoist dictatorship (1944-1950”. Luis Moreno Martínez co-organised the panel “150 years of the Periodic System”. Ximo Guillem-Llobat organised the panel “Creating and Regulating New Technologies for Sanitary Fumigation in the 19th and 20th Centuries”, with included the papers “Fumigating Spain. Consensus and silence on the medical uses of mineral acids for the treatment and preventions of epidemics in Spain, 1770-1850” by Antonio Garcia Belmar, and “Innovation and risk regulation in cyanide fumigation in València in the early twentieth century” by Ximo Guillem-Llobat and Ignacio Suay-Matallana. The last also served as co-chair of the Scientific Committee of the Conference, and was re-elected as secretary of the EuChemS WP for the History of Chemistry.

-Some members of the GEHCi and the RSEQ, like José Ramón Bertomeu Sánchez and Luis Moreno (IILP-UV) organised (jointly with Carlos Agudelo, UB) a hands-on seminar on the periodic table titled “V Matinal d’Història de la Ciència” to foster integration between chemistry education and history of chemistry ([https://esdeveniments.uv.es/30744/detail/v-matinal-dhistoria-de-la-ciencia -v-jornada-dractualitzacio-cientifica-per-a-professorat-de-secund.html](https://esdeveniments.uv.es/30744/detail/v-matinal-dhistoria-de-la-ciencia-v-jornada-dractualitzacio-cientifica-per-a-professorat-de-secund.html)).

-Members of GEHCi organized an exhibition to show the risks of some chemical products and their impact on past and present titled “Tòxics (In)visibles” (<https://www.uv.es/idocie/novetats/FOLLETO-TOXICOS-final.pdf>). The exhibition also included a seminar series with invited speakers like Sabine Clarke (University of York), Alexandre Elsig (Université de Lausanne), and Florencia Arancibia (cenit-Universidad Nacional de San Martín). They will explain their research about the invisibilization of the risks of some toxics, and the connections between expert knowledge and agnotology.

-Members of GEHCi organized a new online Open Course MOOC on history of science (Spanish). The course covers different periods (introduction, protagonists, sites, material culture, conclusions), and includes several chapters on alchemy, early-modern chemistry and chemical revolution, periodic system, etc.: Web page: <https://www.youtube.com/watch?v=sEr5n5tT8gE&list=PLiPJNI1xCP1tKuI4208kgvWeQFYHHYP75>

-Members of GEHCi of the Valencian region organize every year a master and doctoral online program on History of Science and Communication, including several lectures on history of chemistry. Web page: <http://www.historia-ciencia-comunicacion.org/joomla/>

-Members of GEHCi of Catalonia organize every year a master and doctoral program on History of Science and Communication, including several lectures on history of chemistry. Web page: <https://www.uab.cat/web/estudiar/official-master-s-degrees/general-information-1096480962610.html?param1=1096480155338>

-The GEHCi has an active communication activity, by sending updates and relevant news by email to all its members. It has also created a Facebook group titled “Historia de la Ciencia (GE de la RSEQ)” to inform about the activities of the group. Web page: <https://www.facebook.com/groups/HistoriaCiencia/>

Catalan Society of Chemistry

Annual Report to the EuChemS Working Party on the History of Chemistry (2018-2019)

The following report covers the period between from November 2017 to November 2019. During this period the activities of the Catalan Society of Chemistry have been focused mainly in the commemoration of the 150th anniversary of Dmitri Mendeleev's table of the chemical elements in the context of the International Year of the Periodic Table of the Chemical Elements.

The second volume of the collection "Classics of Chemistry", first published in 2005, has been reedited in an updated issue in July 2019. This is the Catalan translation of Mendeleev's landmark paper of 1869 (The relation between the properties of the elements and their atomic weight).

The ninth volume of that same collection has been also published in September 2019. This is the Catalan translation Stanislao Cannizzaro's milestone paper *Sunto di un corso di filosofia chimica* (Sketch of a Course of Chemical Philosophy).

Throughout the year 2019 members of the Catalan Society of Chemistry have given a number of lectures in relation to the historical context of Mendeleev's table.

On 24-26 October 2019 the Catalan Society of Chemistry organized along with another local educational institutions the "7th Workshop on the Teaching of Physics and Chemistry in the Secondary Education". One of the two keynotes of the workshop was given by José Ramón Bertomeu-Sánchez (Universitat de València) on the 150th Anniversary of the Periodic System. Collective Creativity of Science Classrooms.

Our partner society (the Catalan Society for the History of Science and Technology) in the Institute of Catalan Studies organizes a yearly workshop to deal with the relations between the history of science and teaching. On 15-16 November 2019 this society held the 17th edition of that workshop and scheduled, in collaboration with the Catalan Society of Chemistry, a thematic session to bring together history and teaching in regards with the periodic table.

Finally, the monographic issue No. 25 (November – 2019) of our journal *Educació Química: EduQu* was devoted to the periodic table and included two papers dealing with the historical context of the table: José Ramón Bertomeu-Sánchez on the The Periodic System and 19th-Century Chemical Pedagogy: The Collective Creativity of Science Classrooms and Pascual Román –Polo (Universidad

del País Vasco) on The Evolution of the Periodic Table of the Chemical Elements from 1869 until Today.

Pere Grapí

Delegate of the Catalan Society of Chemistry in the Working Party of History of Chemistry

SWEDEN

Swedish Chemical Society.

There are single lectures in the history of chemistry given too teachers in chemistry, and the Swedish chemical journal Svensk kemisk tidskrift, regularly has small articles on the history of chemistry (so far mostly written by me).

The most remarkable thing might be a workshop on "Critical Metals in History and Today", on the 17th of October 2019. Arranged by me and Hanna Vikström, and by Jernkontoret (Swedish Ironmaster's Association). We brought together historians (of all kind), sociologist and scientists for a fruitful (at least according to what I have heard) one-day meeting.

Webpage for the workshop:

<https://kemisamfundet.se/event/workshop-kritiska-metaller/>

Anders Lundgren

UNITED KINGDOM

ROYAL SOCIETY OF CHEMISTRY HISTORICAL GROUP NEWS

Secretary's Annual Report for 2019

The following is a brief report on the activities of the Group.

On 14 March 2019 we held a one-day meeting at Burlington House, London, on the History of IUPAC. This was organised by Gerry Moss and covered the emergence of international cooperation in chemistry dating back to the famous Karlsruhe Conference in 1860, and coming right up to date with the current, very varied work of IUPAC.

Our next meeting was a joint one with the UK Institute of Physics (IOP) History of Physics Group, held in Manchester on 8 June 2019. It was led by the IOP and on the subject of Transmutation. It was held to mark the centenary of the publication of the famous paper "Collision of α -particles with light atoms: I, II, III, IV" by Ernest Rutherford, in which he reported results of colliding alpha particles with nitrogen atoms. Although there is doubt that he recognised its significance, this is widely acknowledged as the discovery of artificial mutation. The day included several talks and also a tour of the old laboratories where Rutherford carried out the work.

Then, on 19 October 2019, we held a join meeting with the Society for the History of Alchemy and Chemistry at the Royal Institution, London, organised by Frank James on the life and work of Sir William Crookes. As usual, it was a well-attended meeting and attracted much interest from all those who could be there.

I am also happy to report that we published two editions of the Group Newsletter during the year. These are very high standard publications, to which the term "newsletter" does less than justice. Thanks go to Anna Simmons, who as editor does an excellent job of persuading or cajoling a large number of individuals to contribute, and making it the high-quality publication that we all enjoy.

John Nicholson