

Division of Nuclear and Radiochemistry Annual Report 2014

2014 was the year of the 17th Radiochemical Conference (RadChem 2014) in Mariánské Lázně on 11-16 May, magnificently organised on behalf of the DNRC by the team lead by Jan John, Jan Kučera, and Miloslav Vobecký. The Division's other activities may be summarised by the following points:

- DNRC was actively involved in the preparation of ECC 5 – Istanbul 2014.
- The next NRC conference (NRC9) will be in Helsinki, 28 August – 2 September 2016.
- The most important components of regular business have been editing the DNRC Newsletter and maintaining the DNRC page on the EuCheMS website. The most recent issue of the NEWSLETTER, No. 51, will be downloadable from the EuCheMS website from February 2015

RadChem 2014 Report

As usual in its more recent history, the conference was co-organised by the Department of Nuclear Chemistry, Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University in Prague (DNC FNSPE CTU), Czech Chemical Society, and Ioannes Marcus Marci Spectroscopic Society. RadChem 2014 was organised in cooperation with the International Atomic Energy Agency (IAEA) and was sponsored by the International Union of Pure and Applied Chemistry (IUPAC). Over its 50+ years long tradition, the conference has gained a good reputation among the researchers in the field of nuclear- and radiochemistry as a platform for the presentations of research results and for the discussions about current issues.

The conference was attended by 320 participants from 43 countries from all parts of the world, from which the most represented countries were the Czech Republic, Russia, Germany, Poland, the USA, Japan and Korea. In total, 413 contributions were accepted for the presentations. The conference covered most of the topical issues in the field of nuclear- and radiochemistry in a total of nine sessions including, among others, radioecology, i.e. the behaviour of radioactive species in the environment, their diffusion, concentration, disposal or their impact on public health; and the radiochemistry application in medicine, especially the production of labelled compounds and radiopharmaceuticals. Other sessions were devoted to radioanalytical methods, radiochemical problems in nuclear fuel cycle, radionuclide production, ionising radiation applications, separation and speciation methods, and to the chemistry of the heaviest elements, i.e. actinides and transactinides. These sessions were complemented with the session focused on the education of new professionals in nuclear- and radiochemistry. Two of the sessions were dedicated to the memory of our colleagues who have recently passed away, and who had participated in the RadChem conference organisation for many years. The session "Radionuclides in the Environment and Radioecology" was dedicated to the memory of the late Prof. Petr Beneš and the session "Separation methods and speciation" to the memory of the late Prof. Věra Jedináková-Křížová.

The full conference programme is available at the conference web page (www.radchem.cz) together with freely accessible booklet of all accepted abstracts. Approximately 70 contributions that have been selected based on the results of a standard double-blind peer-review procedure are collected in a special issue of the Journal of Radioanalytical and Nuclear Chemistry.

Two prestigious scientific awards were presented during the conference – the international George Hevesy Medal Award, and the new Vladimir Majer Medal Award that was awarded for the first time here. Following sections are devoted to both the Medal Awards and their laureates.

George Hevesy Medal Award is a premier international award for excellence in radioanalytical and nuclear chemistry. It is awarded to an individual in recognition of excellence through outstanding, sustained career achievements in the fields of pure as well as applied nuclear and radiochemistry, particularly applications to nuclear analytical chemistry. Established in 1968 by the Journal of Radioanalytical and Nuclear Chemistry (JRNC), the George Hevesy Medal has been awarded to renowned scientists. At RadChem 2014 conference Prof. Heino Nitsche received the George Hevesy Medal Award in recognition of his international contributions to heavy element chemistry and actinide environmental chemistry.

Prof. Heino Nitsche (*24.7.1949, †15.7.2014) spent almost 30 years in Lawrence Berkeley National Laboratory, Berkeley, California, USA (LBNL) which he joined in 1980 after earning his Ph.D. in nuclear chemistry at Freie Universität Berlin, Germany. In 1993, he returned to Germany and took the lead at Forschungszentrum Dresden-Rossendorf. After 5 years he returned to Berkeley to become a director of newly founded Glenn T. Seaborg Centre at LBNL and a professor at the University of California, Department of Chemistry. Heino devoted the beginning of his scientific career to the chemical behaviour of actinides in the environment. Later on, he focused on the discovery of new transactinides; his team participated in the confirmation of elements 114 and 117. Recently, he joined projects focused on the application of nuclear forensic methods for the identification of nuclear material origin. Shortly after the end of the conference we received the sad news that Prof. Nitsche unexpectedly passed away on 15 July 2014, only one week before his 65th birthday anniversary.

Vladimir Majer Medal Award is presented by the Nuclear Chemistry section of the Czech Chemical Society to scientists who significantly contributed to the development of nuclear chemistry and/or played a decisive role in the development of the area. The first ever medal was awarded at RadChem 2014 in memoriam to the late Prof. Petr Beneš, former professor and head of the DNC CTU, for his lifelong contribution to the nuclear chemistry development in Czechoslovakia and the Czech Republic.

Prof. Dr. Petr Beneš (*13.7.1938, †7.6.2013) was one of the first graduates of FNSPE CTU. His lifelong scientific career was connected to the Department of Nuclear Chemistry which he led from 1986 to 2003. His research was devoted to the development of methods for speciation studies and to the behaviour of toxic elements and radionuclides in surface waters and other components of the biogeosphere. Towards the end of his career he became interested in the applications of spectroscopic methods in speciation analyses and initiated the introduction of Time resolved laser fluorescence spectroscopy (TRLFS) at FNSPE.

Chair:	Dr. Nick Evans (Royal Society of Chemistry), 2014
Secretary:	Prof. Jan John (Czech Chemical Society)
Members:	23 active members
Countries:	24 (Bulgaria, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Israel, Italy, Montenegro, The Netherlands, Norway, Poland, Portugal, Russia, Serbia, Slovak Republic, Spain, Sweden, Switzerland, Turkey, UK)