Journal of Radioanalytical and Nuclear Chemistry
https://doi.org/10.1007/s10967-024-09446-1

Laudation for Prof. Dr. Melissa A. DENECKE: 2023 Hevesy Medal Award recipient

A. Chatt[1]

Melissa Anne Denecke was born in Wisconsin, USA. In 1981 she got her BSc in Chemistry and Biology from Carroll College in Wisconsin. She received her Diplom in 1988 and Doctor Rerum Naturalium or PhD equivalent in 1994 in chemistry, both from the Universität Hamburg, Germany. She was a postdoctoral research fellow during 1995–1997 at the Institute for Radiochemistry, Forschungszentrum Rossendorf in Dresden, Germany. Dr. Denecke started her professional career in 1998 as an Assistant professor at the Department of Chemical Engineering, Offenburg University of Applied Sciences, Germany. During 1998–2013 she served the Institute for Nuclear Waste Disposal, Karlsruhe Institute of Technology (KIT) in various capacities including the Department Head for "Actinide Speciation". During 2013–2019 she was the Scientific Director of the Dalton Nuclear Institute, interim scientific lead at the Dalton Cumbrian Facility (2017–2019), and held a chair in the School of Chemistry at the University of Manchester, U.K. In 2019 Prof. Denecke joined the International Atomic Energy Agency (IAEA) as the Director of the Division of Physical and Chemical Sciences, Department of Nuclear Sciences and Applications in Vienna, Austria.

Over the years Prof. Denecke has advanced the understanding and application of radiochemistry in a broad range of areas. She is an internationally recognised expert in speciation of actinide elements on a molecular scale, having decades of experience in X-ray spectroscopy and responsible for a number of advances in this area. She is highly experienced in design, construction, commissioning, and operation of advanced X-ray instrumentation for radioactive studies at large scale accelerator facilities. She introduced and nurtured benchmarking of theoretical modelling against advanced spectroscopic data to understand structure–function relationships of 5f radioelements. She has extensive R&D experience in elucidating radiochemical processes related to the nuclear fuel cycle, notably deep geological disposal of radioactive waste, assessment of contamination legacies, nuclear waste streams separations, and also in studying radiopharmaceuticals.

In addition to her outstanding research track record, Prof. Denecke has made significant contributions to radiochemistry education and advancement. She has supervised many graduate students, PDFs and visiting scientists. She has published more than 130 papers in peer reviewed international journals. She has also been very active in supporting and engaging young people, particularly women, in radiochemistry. Prof. Denecke has received many prestigious awards including the 2016 Becquerel Medal Award of the Royal Society of Chemistry.

It is indeed a pleasure to honor Prof. Dr. Melissa Denecke with the 2023 Hevesy Medal Award (HMA-2023) in recognition of her significant and enduring contributions to radiochemical separations, actinides in environment, and pioneering X-ray spectroscopy studies of radioactive elements.

Prof. Melissa Denecke was nominated by Prof. Kattesh V. Katti (University of Missouri-Columbia, U.S.A.) and co-sponsored by Prof. Adriano Duatti (University of Ferrara, Italy) and Prof. Ademar B. Lugão (Institute for Energy and Nuclear Research, Brazil).

The Hevesy Medal Award Selection Panel 2023 (HMASP-2023) consisted of Prof. Amares Chatt (Canada, also Chair of JRNC Board of the Hevesy Award, and Chair of HMASP-2023), Dr. Heather H. Chen-Mayer (U.S.A.) Dr. Stephen P. Lamont (U.S.A.), Professor Bernd Neumaier (Germany), Dr. Stefaan Pommé (Belgium), Professor Pavel Povinec (Slovakia), Dr. Balázs Réffy (JRNC Board of the Hevesy Award), Dr. Nóra Vajda (Hungary), and Dr. Zsolt Révay (Germany, also JRNC Board of the Hevesy Award). In accordance with the rules of the Award, a secret vote was conducted.

✉ A. Chatt
chatt@dal.ca

[1] Trace Analysis Research Centre, Department of Chemistry, Dalhousie University, 6274 Coburg Road, Room 212, P.O. Box 15000, Halifax, NS B3H 4R2, Canada

Published online: 18 March 2024

Fig. 1 From left to right: Prof. Amares Chatt (Chair, HMASP-2023), Prof. Melissa Denecke (HMA-2023 Awardee)

Fig. 2 From left to right: Dr. Zsolt Révay (Editor-in-Chief JRNC; Member, HMASP-2023), Prof. Amares Chatt, Prof. Melissa Denecke, and Dr. Balázs Réffy (Member, HMASP-2023)

The Hevesy Medal and a certificate were presented to Prof. Denecke (Figs. 1, 2) at the Hevesy Medal Award 2023 Ceremony held at the Third International Conference on Radioanalytical and Nuclear Chemistry (RANC-2023) in Budapest, Hungary during 2023 May 07-12. Figure 3 shows Prof. Denecke delivering her Award lecture.

Fig. 3 Prof. Melissa Denecke delivering her Hevesy Award lecture

Fig. 4 Former Hevesy Medal Aawrd recipients (year): from left to right: Prof. Amares Chatt (2001), Prof. Pavel Povinec (2017), Prof. Melissa Denecke (2023), Prof. Jan Kučera (2006), Prof. Kattesh V. Katti (2015), and Prof. Xiaolin Hou (2019)

Several of the past Hevesy Medal Award laureates attended RANC-2023 and were present at the Hevesy Medal Award Ceremony session. Most of them are shown in Fig. 4 enjoying the gala dinner on a cruise. Prof. Susanta Lahiri also attended RANC-2023 and he is missing from this photo.

Photos are courtesy of RANC-2023.