



Laudation for Dr. Stefaan Pommé: 2020 Hevesy Medal Award recipient

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Stefaan Pommé was born in Roeselare, Belgium. He received all of his postgraduate degrees from the Ghent University in Belgium: M.Sc. in 1987, Ph.D. in Physics in 1992 and Ph.D. in Chemistry in 1999. In between the two Ph.D. degrees he did a Bachelor of Political and Social Sciences at the University of Antwerp. During 1994–2001 he was at SCK·CEN, Belgian Nuclear Research Centre working on neutron activation analysis and gamma-ray spectrometry. Since 2001 he is the Scientific Officer responsible for primary standardisation of activity at the Joint Research Centre (JRC) of the European Commission.

Dr. Stefaan Pommé has devoted his professional career to radionuclide metrology at the highest level of accuracy and has improved international equivalence and traceability of activity by providing absolute standards, accurate decay data, and innovative methods. His major strengths as a scientist include competence for efficient and meticulous radioanalytical metrology and rigorous mathematical skills. The radioanalytical work of Dr. Pommé has impacted a wide range of scientific and policy issues through new insights in the dynamics of nuclear fission, further exploration of the k_0 -NAA method as an analytical tool, establishing traceability to the SI unit becquerel, advancing and applying state-of-the-art radioanalytical methods impacting nuclear safety, security, safeguards, forensics, medicine, decommissioning, waste management, chronometry, geochemistry, geochronology, and health physics. Details of the research projects carried out by Dr. Pommé are described in the paper published in this issue: Pommé, S. Radionuclide metrology: confidence in radioactivity measurements. *J Radioanal Nucl Chem* (2022). <https://doi.org/10.1007/s10967-022-08494-9>.

A shining recent example of his passion for accuracy is his response to the suggestion that the rate of radioactive decay is influenced by solar neutrinos. Several people have

debunked this theory with a few measurements, but Dr. Pommé collected and analyzed 70 decay data sets for 23 nuclides from 14 laboratories and showed conclusively (in detailed publications with up to 44 coauthors) that no such effect exists. For this work, in 2017 he received the JRC Award for Scientific Excellence by the European Commission for "Safeguarding the becquerel".

Dr. Pommé has published more than 160 peer-reviewed papers in international journals, 34 additional papers in conference proceedings, 60 technical reports, and 6 chapters in 3 books. He is the main author in more than 50% of his scientific output. Many of his scientific papers reached the top 10 of most downloaded papers of respected journals in the field. In December 2016, Dr. Pommé occupied the numbers 1, 2, 4, 5, and 10 in the list of top 10 most downloaded papers of *Metrologia*, the journal for metrology issued by the Bureau International des Poids et Mesures (BIPM)—the home institute for the SI units. In September 2014, two of his papers were the 1st and 2nd most downloaded of *Applied Radiation and Isotopes*. On many occasions, he had multiple top-25 papers in various nuclear journals. He is clearly one of the most influential authors in the field of radionuclide metrology. He has received the Institute for Reference Materials and Measurements (IRMM) awards for the "Best Peer-Reviewed Scientific Paper" on ^{125}I and on ^{233}U in 2005 and 2009, respectively. In 2015, a paper entitled "Uncertainty propagation in nuclear forensics" was awarded the Rutherford prize for the best paper by the National Physical Laboratory (NPL).

Although Dr. Pommé has mostly worked outside a purely academic environment, he has always paid attention to teaching and organizing scientific events to disseminate the knowledge and experimental skills he acquired during his career. He supervised 10 Master and Ph.D. Theses, mostly dealing with nuclear fission and radionuclide metrology, taught a number of courses on various aspects of radioactivity and radionuclide measurements at universities and targeted seminars, training courses, etc., and he also trained numerous technicians and visiting scientists. He is the Chair,

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Fig. 1 From left to right: Dr. Stephen LaMont (General Chair, MARC-XII), Prof. Amares Chatt (Chair, HMASP-2020), Dr. Stefaan Pommé (HMA-2020 Awardee), and Dr. Samuel E. Glover (Program Chair, MARC-XII)

Co-Chair and member of numerous high-profile scientific committees in metrology.

It is indeed a pleasure to honor Dr. Stefaan Pommé with the 2020 Hevesy Medal Award (HMA-2020) in recognition of his worldwide leadership in radioactivity measurements at the highest level of accuracy providing absolute standards, accurate decay data, and innovative methods.

Dr. Pommé was nominated by Dr. Richard M. Lindstrom (National Institute of Standards and Technology, U.S.A.),

and co-sponsored by Prof. Dr. Jan Kucera (Nuclear Physics Institute, Czech Republic) and Dr. Gregory Kennedy (Polytechnique Montréal, Canada).

The 2020 Hevesy Medal Award Selection Panel (HMASP-2020) consisted of Professor Amares Chatt (Canada, also Chair of JRNC Board of the Hevesy Award, and Chair of HMASP-2020), Professor Tibor Braun (JRNC Board of the Hevesy Award), Professor Zhifang Chai (China), Professor Sue B. Clark (U.S.A.), Dr. Samuel E. Glover (U.S.A, also representing MARC-XII), Professor Xiaolin Hou (Denmark), Professor Tomoko M. Nakaniishi (Japan), Dr. Zsolt Révay (Germany, also JRNC Board of the Hevesy Award), and Professor Georg Steinhauser (Germany).

In accordance with the rules of the Award, a secret vote was conducted. The Hevesy Medal and a certificate were presented to Dr. Pommé (Fig. 1) at the Twelfth International Conference on Methods and Applications of Radioanalytical Chemistry (MARC-XII) held in Kailua-Kona, Hawai'i, U.S.A., during 2022 April 03–08.

The photo is courtesy of Dr. Samuel E. Glover (Program Chair, MARC-XII).

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