



Outline Curriculum Vitae P.D.W. Bottomley

Paul David W. Bottomley was Head of Sector in the Safety of Irradiated Nuclear Materials unit at the Joint Research Centre – Institute for Transuranium Elements (JRC-ITU) at Karlsruhe, Germany.

He received his first degree (Natural Sciences) at Queens' College, Cambridge in 1974. He went on to the University of Manchester Institute of Science & Technology (UMIST) to obtain his MSc and PhD (Electrochemistry of Turbine alloys) in 1977-80.

Thereafter he went to INP Toulouse, Ecole de Chemie (ENSCT) to continue working as a CNRS researcher on high temperature corrosion resistance in 1980-81.

In 1984-85, he worked as a Research Fellow at the JRC –Institute for Advanced materials, Petten, Netherlands, working on High Temperature Gaseous Corrosion of High Alloy Steels.

Then he returned to UMIST, Manchester and worked for 4 years in their Corrosion consultancy service (CAPCIS) in various fields.

Finally in 1987 he took up his current post as Scientific Officer at the JRC - Transuranium Institute (JRC-ITU) in Karlsruhe, Germany working in the Hot Cells Technology unit. He has written about 60 papers in various aspects from fuel degradation/ melting to fission product chemistry, deposition and revaporisation as well as fuel under waste repository conditions.

Much time has been spent in severe accident studies: firstly examination of TMI-2 debris samples under the OECD –NEA programme from 1988 to 1991, then principal researcher for JRC-Karlsruhe for the joint IRSN-EC Phébus PF project, where he was investigating irradiated fuel bundle degradation and the subsequent fission product deposition behaviour under severe accident conditions. The project involved 5 main test and continued over a 20 years period (1991 to 2012).

He has also been involved in recent international projects concerned with vessel steel corrosion & failure by molten corium (eg. ISTC METCOR project). High temperature properties of the UO₂-ZrO₂/Zr and FeO-UO₂-ZrO₂ systems have been investigated as prototypic corium; currently working with KIT, IRSN, CEA, UJV Rez and others in corium properties projects for improved safety (eg. SAFEST Project) improved understanding of fuel degradation mechanisms in severe accidents. In October 2016, received (together with Manara - JRC-Karlsruhe & collaborators from CEA) the 2016 American Ceramic Society Spriggs Award.

Having retired from JRC-Karlsruhe in March 2017, he is currently consulting and is a research fellow at JAEA.