



 **Jean-Pierre DOGNON**

From France to Finland 

Project: **Develop novel research projects in heavy element chemistry and physics**

Research topic: **Chemistry**

Finnish Institution: **Department of Chemistry, University of Helsinki**

French Institution: **CEA/Saclay**

Dates of mobility: **12/09/2022 to 17/09/2022**

Program: **Maupertuis Programme**



PRESENTATION

[Jean-Pierre Dognon](#) received his PhD at the [University of Pau](#), in France in 1983. From 1986, he has been a permanent staff researcher at the [French Alternative Energies and Atomic Energy Commission](#) (CEA) and has been at the head of two research laboratories in theoretical chemistry and f-element chemistry. From the end of 2005 to the end of 2006 Jean-Pierre Dognon moved to the [University of Helsinki](#). His research interests encompass relativistic quantum chemistry as well as the combination of first principle methods with classical simulation techniques (polarizable force field). The applications are focused on the computational design of novel materials, molecular systems for energy-related challenges and biosensors for molecular medical imaging. Special focus is devoted to spectroscopy in molecular systems and analysis of bonding in lanthanide and actinide chemistry. He has over 62 publications, among which 30 deal with heavy elements theoretical chemistry.

ACTIVITIES IN FINLAND

During two years, the calculations have been done at CEA Paris-Saclay and a draft of an article has been written before the mobility. During his stay in Helsinki and in collaboration with [Pekka Pyykkö](#), Jean-Pierre Dognon discussed the results obtained and understood the origin of the observed differences between the different calculated values and proposed new reference values of Q for bismuth and antimony. They also finalized the article describing this work which was submitted for publication at the end of his stay. Different topics of study have been defined for the continuation of this collaboration. The goal is also to develop collaboration in the field of quadrupole moments and the search for new chemically stable molecules, but also, to set up a new axis of collaboration, with another member of the laboratory in Helsinki, [Dage Sundholm](#).

