

676th ASRC Seminar

Date: 13:30 ~ Thursday, April 13

Location: 302 Meeting Room, ASRC Bldg.

Speaker: Dr. Nadine M. Chiera
(Japan Atomic Energy Agency)

Title: Towards the selenides of the Superheavy elements Cn and Fl

•**Abstract:** All the physical and chemical properties of an atom depend on the energies and spatial distribution of its electrons. For light elements, these properties can be reliably determined, leading to well-defined periodic trends in the Periodic Table. However, with increasing nuclear charges, the influence of relativistic effects on the electron structure causes deviations from the periodicity of chemical properties. The strong pronunciation of the relativistic effects on the chemical behavior of the Superheavy elements (SHEs), i.e., elements with $Z \geq 104$, renders these elements limiting benchmark cases. In this talk, an overview on the recent studies of the chemical behavior of copernicium ($Z = 112$) and flerovium ($Z = 114$) in comparative gas chromatographic experiments using sulfur and selenium surfaces will be presented.

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