

Theoretical Physics Division Seminar

Fundamental Research Department
NATIONAL CENTRE FOR NUCLEAR RESEARCH

25.10.2023 (Wednesday); Time: 11:15

The seminar will be held in room 207 @Pasteura 7

Dr. Tomasz Cap (NCBJ)

Challenges in the synthesis of new superheavy elements

ABSTRACT:

In 2017, the International Union of Pure and Applied Chemistry (IUPAC) and the International Union of Pure and Applied Physics (IUPAP) officially recognized the synthesis of four new elements with atomic numbers 113 (nihonium), 115 (moscovium), 117 (tennessine), and 118 (oganesson). These elements filled the seventh row of the periodic table. Despite several attempts made in recent years, there has still been no success in producing a single atom of elements from the next eighth row. The seminar will present the results of selected experiments, especially the latest ones, aimed at producing elements with atomic numbers 119 and 120. The presentation will also include calculations of cross sections for the synthesis of new superheavy elements.

Best regards,

T. Altinoluk, M. Kowal, P. Małkiewicz, E. Sessolo, P. Zin