

Nuclear Science and Transmutation Research Division Superheavy Element Research Group

1. Abstract

The heavy elements with atomic numbers exceeding 103 are called superheavy elements (SHEs). In Superheavy Element Research Group, Superheavy Element Production Team and Superheavy Element Device Development Team work together to investigate synthesis of SHEs, nuclear properties of SHE nuclei, and chemical properties of SHEs. We also develop and maintain SHE production and separation devices, detectors, and chemistry apparatuses.

2. Major Research Subjects

- (1) Search for new superheavy elements
- (2) Decay spectroscopy of the heaviest nuclei
- (3) Study of reaction mechanisms for production of the heaviest nuclei
- (4) Study of chemical properties of the heaviest elements
- (5) Development, maintenance, and operation of GARIS, GARIS-II, and GARIS-III
- (6) Development and maintenance of detector and DAQ system of GARIS, GARIS-II, and GARIS-III
- (7) Development and maintenance of target system of GARIS, GARIS-II, and GARIS-III

3. Summary of Research Activity

See the subsections of Superheavy Element Production Team and Superheavy Element Device Development Team.

Members

Director

Kosuke MORITA

List of Publications & Presentations

See the subsections of Superheavy Element Production Team and Superheavy Element Device Development Team.