



Contribution ID: 146

Type: **Poster Session**

## Present Status of Laser Ion Source Development at the RAON ISOL facility

*Monday, 3 October 2022 23:10 (8 minutes)*

The Resonance Ionization Laser Ion Source (RILIS) system based on Ti:Sapphire lasers pumped by a Nd:YAG laser has been developed for the on-line laser ion source for a new heavy ion accelerator, RAON, in Korea. As a milestone of extraction of rare isotopes produced through uranium fission, double magic nucleus of  $^{132}\text{Sn}$  is our first target. Thus, by employing a three-step resonance excitation scheme, the ionized stable isotopes of Sn have been successfully extracted and separated via a mass-separator magnetic system to test the performance of the RILIS setup at the off-line test facility [1] and the RAON ISOL facility. In the commissioning phase, the hot-cavity laser ion source in the ISOL facility will be tested and used to produce RI beams, e.g. Al isotopes using a SiC target with a 70 MeV proton beam.

[1] Sung Jong Park, Jung Bog Kim, Hyperfine Interaction (2020) 241:39.

**Primary author:** Dr PARK, Sung Jong (Rare Isotope Science Project, Institute for Basic Science)

**Co-authors:** LEE, Jinho (Rare Isotope Science Project, Institute for Basic Science); KIM, Jaehong (Rare Isotope Science Project, Institute for Basic Science); JEONG, Jae-Won (Rare Isotope Science Project, Institute for Basic Science); HWANG, Wonjoo (Rare Isotope Science Project, Institute for Basic Science); HASHIMOTO, Takashi (Rare Isotope Science Project, Institute for Basic Science); YIM, Hee-Joong (Rare Isotope Science Project, Institute for Basic Science); PARK, Dong-Joon (Rare Isotope Science Project, Institute for Basic Science)

**Presenter:** Dr PARK, Sung Jong (Rare Isotope Science Project, Institute for Basic Science)

**Session Classification:** Poster Session