

# SMI-2023: 14th International Conference on Stopping and Manipulation of Ions and Related Topics



Contribution ID: 39

Type: **contributed talk**

## Current status on the development of the low-energy RI-beam production system by laser ionization (PALIS) at RIKEN-BigRIPS

*Monday, 8 May 2023 15:10 (20 minutes)*

The low-energy RI-beam production system by laser ionization, PALIS [1,2], is being developed at the RIKEN Radioactive Isotope Beam Factory (RIBF) SLOWRI facility. The small gas catcher cell was implemented in front of the second focal plane in the Superconducting Radioactive Isotope Beam Separator (BigRIPS). The ion extraction is based on the techniques of the Ion Guide Isotope Separator On-Line (IGISOL) and In-Gas laser ionization and Spectroscopy (IGLIS). PALIS is designed to enable low-energy RI-beam experiments by parasitic operation during the BigRIPS experiments. The presentation will consist of the current status of the development, commissioning results for off/on-line experiments and also introduce some peripheral equipment, such as the gas circulation system [3], optical components for long laser beam flight path[4].

### References:

- [1] T. Sonoda et al. Prog. Theor. Exp. Phys. 113 (2019) D02.
- [2] T. Sonoda et. al. Nucl. Inst. And Meth. B295(2013)1.
- [3] T. Sonoda et. al. Rev. Sci. Instrum. 87 (065104) (2016).
- [4] T. Sonoda et. al. Nucl. Inst. and Meth. A877(2018)118.

**Primary author:** SONODA, Tetsu (Nishina Center for Accelerator Based Science RIKEN)

**Co-authors:** Dr KATAYAMA, Ichiro (RIKEN); Dr IIMURA, Hideki (Japan Atomic Energy Agency); Dr SONNENSCHEIN, Volker (Nagoya University); Dr HIRAYAMA, Yoshikazu (Wako Nuclear Science Center, IPNS, KEK); Dr HOU, Dongsheng (Department of Physics, The University of Hong Kong); Dr IIMURA, Shun (RIKEN); Dr ISHIYAMA, Hironobu (RIKEN); Dr KOJIMA, Takao (RIKEN); Dr NISHIMURA, Shunji (RIKEN); Dr ROSENBUSCH, Marco (RIKEN / KEK); Dr SCHURY, Peter (KEK); Dr TAKAMINE, Aiko (RIKEN); Dr TOMITA, Hideki (Nagoya University); Prof. WADA, Michiharu (KEK); Dr WATANABE, Yutaka (KEK); Dr XIAN, Wendou (The University of Hong Kong); Dr YAP, Jinn Ming (The University of Hong Kong)

**Presenter:** SONODA, Tetsu (Nishina Center for Accelerator Based Science RIKEN)

**Session Classification:** Plenary Session 1