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Production of High Intensity Ruthenium Ion Beams with High Isotope Purity Using Metal Ions from Volatile Compound (MIVOC) Method at iThemba LABS

The paper presents measurements on the production of ruthenium ion beams from high isotope purity using MIVOC method. The measurement was carried out at iThemba LABS using one of the two ECR ion source which is the copy of the Grenoble Test Source (GTS). Due to many existing isotopes with similar abundances of Ruthenium (96Ru abundance 5.5%, 98Ru abundance 1.9%, 99Ru abundance 12.7%, 100Ru abundance 12.6%, 101Ru abundance 17%, 102Ru abundance 31.6%, 104Ru abundance 18.7%) the mass separation and identification is difficult. The synthesis of the enriched ruthenocene is performed in the target laboratory at iThemba LABS. The in-house synthesis of ruthenocene from enriched materials allows for new ion beams with intensities not possible so far to be developed.

Funding Agency

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