

## **Alkali suppression for pure Radioactive Ion Beam (RIB) production: development and operation of a new quartz line target prototype**

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The ISOLDE facility at CERN has constantly developed new ion beams with better purity and improved yields over the last decades. Chemical selectivity for the production of pure RIBs can be achieved by condensation of less volatile species in the transfer line between the target and the ion source and by selective ionisation schemes such as that provided by Resonance Ionization Laser Ion Source (RILIS). However, in this last case, significant isobaric contaminations can occur by ionisation of the species of low ionisation potentials in the RILIS cavity. As an illustration, the suppression of isobaric Rb, Cs and Ga contaminants is presented here for the production of pure and intense beams of short lived proton-rich Cd and Zn. More particularly the development of the corresponding target prototype with a quartz insert in the transfer line is presented in this article. Careful heat transfer simulations, main operation parameters, trapping factors and yields are presented.

We acknowledge the financial support of the EC under the FP6 "Research Infrastructure Action - Structuring the European Research Area" EURISOL DS Project; Contract No. 515768 RIDS.