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# Radioactive Molecular Ion Beams at CERN-ISOLDE

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The ISOLDE facility at CERN provides ion beams of nuclides produced in reactions between 1.4-GeV protons and thick targets. Molecules have been studied as a method to deliver beams of release-limited refractory elements by forming volatile molecules [1-5]. Molecular sideband extraction is also used as a technique to improve beam purity. Molecular beams additionally provide opportunities for fundamental physics studies [6-11].

We present our work on molecular ion beam development at ISOLDE and beam composition studies using: the ISOLTRAP Multi-Reflection Time-of-Flight Mass Spectrometer (MR-ToF MS) [12] for identification by ToF mass measurements, online gamma-ray spectroscopy at the ISOLDE tape station [13,14], and off-line alpha- and gamma-ray spectrometry of ion-implanted samples.

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## Funding Agency

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Yes

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