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Making low vapour pressure targets: organometallic and metallocenes as the precursors.

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Low vapour pressure target materials are a challenge to manufacture, irrespective of whether they are thin or thick. This challenge gets enhanced when target materials with thickness below 500 μ g/cm2 are required as they are limitations in methods available to prepare them. For example, some materials are not malleable enough to work on (roll), like B, Be, W, Si etc. In this contribution, a method will be described in details where an organometallic approach is used to synthesise high vapour pressure targets in their enriched isotopic form. This production method also is relevant for other applications such as exotic beam production at iThemba LABS.

Keywords: organometallic, metallocene, cyclopentadiene, sandwich structures.

Primary author: Mrs KHESWA, ntombizonke (iThemba LABS)

Co-authors: Prof. ORCE, Nico (Department of Physics, university of the Western Cape); Dr THOMAE, Rainer (iThemba LABS)

Presenter: Mrs KHESWA, ntombizonke (iThemba LABS)

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