

Status of large area disk target development for ISOL facility of RAON

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The compound of uranium carbide (UC_x-C) target will be used for ISOL facility of RAON. However, Lanthanum de-carbide (LaC₂) was used to carry out advanced research for optimal condition of fabrication instead of UC_x-C because the uranium is radio-active material and lanthanum carbide has a similar properties to uranium carbide. A compound disk of lanthanum carbide (LaC₂-C) of 50 mm in diameter, which lanthanum de-carbide with Multi-Wall Carbon Nano-Tube (MWCNT) was fabricated and tested. The long-term high temperature test was carried out at 1600°C, 1800°C and 2000°C. Test duration was 20 hrs and 48 hrs respectively. The disks were analyzed in terms of weight, diameter, micro-structure, composition and density. Research and development for UC_x-C based on the result of LaC₂-C test is carrying out, the status will be introduced with the TIS (Target and Ion Source) system in this presentation.

Primary author: Ms JOUNG, MIJOUNG (IBS)

Co-authors: KANG, B.H. (IBS); JEONG, J.W. (IBS); Dr KIM, Jang Youl (Institute for basic science); HONG, S.G. (IBS); NA, S.H. (KAERI); HWANG, W. (IBS)

Presenter: Ms JOUNG, MIJOUNG (IBS)

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