RIMS Workshop



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Development of Practical Resonance Laser SNMS System for Decommissioning of Fukushima Daiichi Nuclear Power Plant

Friday 29 March 2024 14:00 (30 minutes)

For taking out nuclear fuel debris safely, there is a strong need for analysis methods of debris precisely. The most important thing in the debris analysis is isotope ratio of a certain elements, because the ratio is closely related to both the accident progress and the state of debris. Secondary ion mass spectrometry (SIMS) is a candidate for the analysis. However, isobaric interferences often make it difficult to analyze precise isotope ratio analysis. We has been developed a resonance laser sputtered neutral mass spectrometer (R-SNMS) for element-selective ionization and detection by using a set of newly developed tunable Ti:Sapphire lasers. In R-SNMS, synchronization (alignment) between the SIMS device and the Ti:Sapphire laser requires specialist skill. By automation and remote, the R-SNMS improved to a practical and safe device.

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Workshop Themes

Sample analysis and standards

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