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Rapid Changeover of Target Element in Resonance Ionization Mass Spectrometry by switching fundamental/SHG Operation of Ti:Sapphire Laser

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In the analysis of samples containing fission products, nuclear fuel materials, actinide nuclides, it is necessary to combine the fundamental and second harmonic generation (SHG) of Ti:Sapphire laser to achieve efficient resonant ionization for the target elements. We developed a modified grating-type Ti:Sapphire laser that can instantly switch between fundamental and SHG operation mode, named mode switching Ti:Sapphire laser. Rapid changeover of Cs/Sr resonant ionization using two set of the mode switching Ti:Sapphire laser was demonstrated.

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Workshop Themes

Laser design/performance

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