

Four wave mixing in multimode hollow core waveguides with a two-color pump for the thorium nuclear clock

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We show an approach to effectively generate tunable vacuum and extreme ultra-violet light with both short (femtosecond) and long (nanosecond) pulses using four wave mixing of the fundamental and its second harmonic in hollow gas-filled capillaries. The particularly important application includes nuclear thorium clock with signal at 160 nm.

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