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Few cycle Mid-IR OPCPA laser for generating isolated attosecond pulses JIE LI, YANCHUN YIN, XIAOMING REN, Univ of Central Florida, ZHAO KUN, Chinese Academy of Sciences, WU YI, ERIC CUNNINGHAM, ZENGHU CHANG, Univ of Central Florida, INSTITUTE FOR THE FRONTIER OF ATTOSECOND SCIENCE AND TECHNOLOGY TEAM — A Mid-IR OPCPA laser operating at 1 kHz is being developed for generating isolated attosecond pulses in the water window. Strong seed pulses with 500 nJ energy from 1.1 μm to 2.5 μm were produced by intro-pulse different frequency generation driven by white-light pulses from a gas filled hollow-core fiber, which is critical for suppressing superfluorescence in the optical parametric amplifiers. Broadband amplification was achieved by phase matching each signal frequency with its optimized pump frequency inside BIBO crystals.

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