XRP3-1: Frontend of Mid-Infrared OPCPA for Soft X-ray High Harmonic Generation

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The key objective of this project is to develop a laser system with signal wavelength at 3μm and above. Optical parametric chirped-pulse amplification (OPCPA) scheme is to be adopted to generate the high-power ultrafast laser pulses. A number of research issues are to be explored, including octave signal white light generation, pump laser synchronization, high-power ultrafast pump source generation, and chirp compensation. The project is in collaboration with SIMTech ASTAR.