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【418】 High harmonic generation inside thin-disk laser oscillators

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High harmonic generation in a noble gas target is the most common method for table top generation of coherent XUV light. We discuss the recent progress and perspectives of high harmonic generation driven directly inside the cavity of an ultrafast thin-disk laser oscillator. Our laser system operates at a record high intracavity performance of any laser oscillator with > 1 GW of peak power, > 1 kW of average power and < 100 fs pulse duration at 17 MHz repetition rate. The XUV yield amounts to ~10 μW of average XUV power in a single harmonic order at 25 eV.

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