

Abstract Submitted
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Demonstration of an all-diode-pumped soft x-ray laser¹ FED-ERICO FURCH, BRENDAN REAGAN, BRADLEY LUTHER, ALDEN CURTIS, SHAUN MEEHAN, JORGE ROCCA, NSF ERC for Extreme Ultraviolet Science and Technology, Colorado State University — We have demonstrated an 18.9 nm, Ni-like molybdenum, transient collisional soft x-ray laser, pumped by a compact, all-diode pumped chirped pulse amplification system. The solid state pump laser is based on cryo-cooled Yb:YAG and produces 8.5 ps pulses with up to 1 J energy at 10 Hz repetition rate. This diode-pumped laser has the potential to greatly increase the repetition rate and average power of soft x-ray lasers on a significantly smaller footprint.

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