

THE PHYSICS COLLOQUIUM

Thursday 23 November 2023, 4:00 p.m.
Linnaeusborg Room 5173.0055

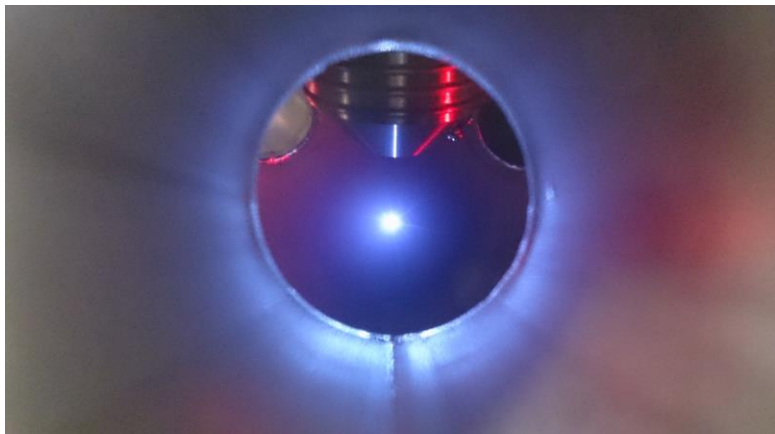
Generating EUV light from laser-produced plasma

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ARCNL

Highly charged tin ions in transient tin plasma produced from molten microdroplets are the source of extreme ultraviolet (EUV) light for state-of-the-art nanolithography.

Currently, CO₂ gas lasers are used to transfer the required energy to the plasma. In the future, solid-state lasers, with the promise of higher wall-plug efficiency, may instead be used to power the plasma.



This talk will present recent findings made at the Advanced Research Center for Nanolithography (ARCNL) on

using 1- and 2-micrometer-wavelength solid-state lasers for tin target preparation and for powering hot and dense plasma generated from such targets. ARCNL research ranges from advanced laser development, studies of the fluid dynamic response of droplets to laser-pulse impact, full-scale radiation-hydrodynamics simulations of the EUV-emitting plasma, generation and stopping of fast plasma ions, as well as the high-conversion efficiency operation of 2-um-laser driven plasma.

*Join us for coffee starting 3:30 p.m. Refreshments will be served after the lecture.
For more information contact the host: Ronnie Hoekstra (r.a.hoekstra@rug.nl)
Website: <http://www.rug.nl/research/vsi/colloquia/>*