

Abstract Submitted
for the SES10 Meeting of
The American Physical Society

Characterization of a Grazing-Incidence Dye laser R. SETH SMITH, Francis Marion University — The grazing-incidence dye laser remains a versatile device for generating tunable laser radiation for a variety of scientific applications. A homebuilt grazing incidence dye laser was constructed at Francis Marion University. This laser is pumped by the second harmonic output from a Continuum Surelite I YAG laser. A small percentage of the pump radiation is coupled into the dye laser. A cylinder lens brings this light to a tight focus on the laser dye. The resulting fluorescence is dispersed by a diffraction grating that is held at grazing-incidence. A portion of this light is reflected by a tuning mirror and is directed back into the active medium for amplification. The output wavelength is controlled by scanning the tuning mirror. The performance of this dye laser was analyzed. The results will be presented and discussed.

R. Seth Smith
Francis Marion University

Date submitted: 11 Aug 2010

Electronic form version 1.4