

Abstract Submitted
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Optical Limiting in Capillary Waveguides at 1300nm¹ RYAN FORD, JAMES BUTLER, Pacific University — Optical limiting at 1300nm, a commonly used telecommunications wavelength, was observed in glass capillaries filled with a solution of (polyridyl) osmium (porphinato) zinc II, or OsPZnOs, in dimethyl sulfoxide. The refractive index of the solution was such that incident light was guided through the cores of the capillaries. This allowed for an increase of the interaction length between the light and the solution, thereby enhancing the optical limiting relative to a bulk sample. The nonlinear transmissions of the capillaries were determined using measurements of the entering and exiting optical energies. The data collected will be compared to previous data taken at shorter wavelengths. Possible models of the mechanism responsible for the observed optical limiting will be discussed.

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