Abstract Submitted
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Growth and properties of amorphous Ge_xSe_{1-x} films prepared by pulsed laser deposition[1] W.C. LIU, W. ZHOU, G. HOFFMAN, R. REANO, R. SOORYAKUMAR, The Ohio State University, P. BOOLCHAND, University of Cinncinati — Chalcogenide glasses such as Ge_xSe_{1-x} are interesting materials for their light induced effects. These phenomena include photdarkening, photofluidity, anisotropic optomechanical response and giant reversible photosoftening. Some of these effects have stimulated device applications that have led to mature technologies. In order to further investigate these systems, we report on the growth of thin films of Ge_xSe_{1-x} (x $\sim$0.2) chalcogenide glass by pulsed laser deposition. The films were prepared using rotating targets of chalcogenide glasses that were prepared by conventional direct synthesis from elements in evacuated silica ampoules followed by melt quenching. Deposition was carried out in a vacuum chamber at room temperature on thermally oxidized silicon substrates. We will present results on the homogeneity, composition, and loss properties of these films, as well as their response to electron beams.

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