

Abstract Submitted
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Plasma Characterization in Magnetron Sputtering SPENCER LOVELADY, KENDAL MCDONALD, Georgia College and State University — Magnetron sputtering is a technique used for semiconductor thin film deposition. A plasma is generated during the sputtering process. Study of the plasma is important in order to understand the deposition process and to have a better reproducibility of thin film deposition. We used optical emission spectroscopy as the primary plasma diagnostic tool. Ocean Optics HR 4000 high resolution spectrometer was used within the wavelength range of 200 nm to 1100 nm. The intensity ratio of Argon 750 nm and Argon 751 nm lines were further investigated to determine the effects of different deposition parameters such as deposition pressure and deposition power. Trends in the excitation temperature corresponding to the deposition power and deposition pressure will also be discussed.

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