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Characterization of Zinc Oxynitride Thin Films MEAGAN PARKER, CHARLES SMITH, NICHOLAS ALLEN, COLIN INGLEFIELD, KRISTIN RABOSKY, Weber State University — Liquid crystal displays (LCDs) and organic light emitting diodes (OLEDs) use oxide based thin film transistors. Zinc oxynitride (ZnON) is a candidate for next generation electronics in LCDs and OLEDs. Here we investigate the correlations between the composition of ZnON and its calculated band gap energy. The composition of our samples is found using energy dispersive x-ray spectroscopy. For the band gap measurements, we have designed and built our own ultraviolet-visible spectrophotometer (UV-VIS). Using the transmission data from the UV-VIS we calculated the band gap energy of the material. We will discuss the experimental methods used to achieve our results.

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