

Abstract Submitted  
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**Synthesis and Characterization of Thin Films**<sup>1</sup> ALBERT CHUNG,  
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— In this study, we investigated the properties of gold thin films. We synthesized  
samples thinner than 50 nm by sputtering gold onto glass substrates. We subse-  
quently characterized the electrical properties of the thin films between room tem-  
perature and 10 K. The optical properties were determined through spectroscopy  
measurements between 300 to 1,000 nm by recording transmission and reflection data  
and extracting the absorption coefficient of our samples. We consider a method of  
using the absorption coefficient to determine the thickness of thin films.

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