Synthesis of Ag₂O Films using RF Magnetron Sputtering  
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Silver oxide (Ag₂O) thin films were successfully grown using reactive RF magnetron sputtering onto  
SiO₂ and Al₂O₃ substrates at room temperature. Synthesis of these films was achieved in a gaseous  
mixture of oxygen and argon which was 40% oxygen. X-Ray diffraction tests yielded numerous  
peak intensities at angles correlating directly to Ag₂O. Deposition rates were shown to be a  
significantly greater on Al₂O₃ in comparison to SiO₂. Understanding this difference is a point of  
future investigations. ASTM D3359 adhesion tests as well as four terminal conductivity tests were  
also performed on the films and will be reported.

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