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Reactive DC magnetron sputter deposition and characterization of ZrN thin films

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ZrN films were deposited on Si(100) substrates, Al and brass strips by DC magnetron sputtering under varying conditions of power, pressure, argon and nitrogen gas flow rates as well as temperature and characterized by SEM, AFM, RBS, resonant RBS, and XRD. The films are transparent and semiconducting. They tend to absorb oxygen. The films were found to adhere well to the substrates. The colour of the films varied depending on deposition conditions and have been expressed in the Lab* colour system. Potential uses of such films are as protective hard coatings as well as decorative layers.

Level (Hons, MSc, PhD, other)?

MSc

Consider for a student award (Yes / No)?

Yes

**Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?**

Yes

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