

# Structure and Optical properties of HfO<sub>2</sub> nano films grown by PLD for optoelectronic device

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**Abstract.** The high purity and good transparent conductive nano and micro hafnium oxide (HfO<sub>2</sub>) films were deposited successfully using the pulsed laser deposition (PLD) method. The optical result shows a high transparency reached to (93) %. The value of the optical band gap of the deposited films at the optimum preparation condition is about 5.3eV, the surface morphology give a uniform structure with the average roughness of (0.3 nm).