

The project: Cold spray process to produce CuO thin film for gas sensor.

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Abstract

Copper oxide (CuO) thin films were prepared by a cold spray process using inert atmosphere (helium gas) without employing any catalyst. CuO dry powder was sprayed onto a microscope glass slide by heating carrier gas at 100, 200, 300, and 400 °C, with 25 bar gas pressure onto substrates of $200 \pm 5^{\circ}\text{C}$, then study the effect of these parameters on the structural, and optical properties of the resulted thin film.