

Complex impedance analysis of SnO₂ thick-films under oxygen and CO exposure.

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Abstract

Thick, porous film of SnO₂ were studied with frequency response and showed that impedance is highly dependent on the gaseous environment and temperature. The film conductivity is affected by CO adsorption and reaction with previously adsorbed oxygen. Possible mechanisms are proposed for found responses under different atmospheres. The conduction process is analyzed considering the existence of Schottky potential barriers at the grain boundaries.