Abstract Submitted
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Kinetics of PdO reduction with hydrogen[1] J.I. AVILA, R.J. MATELON, U.G. VOLKMANN, A.L. CABRERA, Universidad Catolica, Departamento de Fisica-Santiago-Chile — Kinetics of the reduction of PdO films with hydrogen was studied by changes of resistance of the PdO film, changes in photoconductivity and changes in reflectivity to visible light. The PdO films are obtained by oxidizing 50 nm Pd film- e-beam evaporated -over glass substrates. The oxidation is obtained by exposing the Pd films in 50% O_2-50% Ar atmospheres at 700 °C for 48 hrs. The PdO films are place inside a chamber with a glass window where a controlled atmosphere is sustained and electrical feedthroughs are available. Electrical connections are made to the films in order to monitor its resistivity during reduction. A red LASER is used to measure p-reflectivity from the sample during reduction. The reduction takes place immediately when exposing the films to 4 Torr of hydrogen at room temperature.

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