

## Author's Accepted Manuscript

Microstructures and optoelectronic properties of nickel oxide films deposited by reactive magnetron sputtering at various working pressures of pure oxygen environment

Hui Sun, Sheng-Chi Chen, Shih-Wen Hsu, Chao-Kuang Wen, Tung-Han Chuang, Xin Wang



[www.elsevier.com/locate/ceri](http://www.elsevier.com/locate/ceri)

PII: S0272-8842(17)31063-5

DOI: <http://dx.doi.org/10.1016/j.ceramint.2017.05.242>

Reference: CER115402

To appear in: *Ceramics International*

Cite this article as: Hui Sun, Sheng-Chi Chen, Shih-Wen Hsu, Chao-Kuang Wen, Tung-Han Chuang and Xin Wang, Microstructures and optoelectronic properties of nickel oxide films deposited by reactive magnetron sputtering at various working pressures of pure oxygen environment, *Ceramics International*, <http://dx.doi.org/10.1016/j.ceramint.2017.05.242>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**Structures, optical and electrical properties of NiO films by reactive magnetron sputtering at various working pressures of pure oxygen environment**

**Title:** Microstructures and optoelectronic properties of nickel oxide films deposited by reactive magnetron sputtering at various working pressures of pure oxygen environment

**Author names and affiliations:**

Hui Sun <sup>a</sup>, Sheng-Chi Chen <sup>b, c, \*</sup>, Shih-Wen Hsu <sup>b</sup>, Chao-Kuang Wen <sup>d</sup>, Tung-Han Chuang <sup>d</sup>, Xin Wang <sup>a</sup>

<sup>a</sup> Institute of Materials Science and Engineering, Ocean University of China, 238 Songling Road, Qingdao 266100, P. R. China

<sup>b</sup> Department of Materials Engineering and Center for Thin Film Technologies and Applications, Ming Chi University of Technology, Taipei 243, Taiwan

<sup>c</sup> Department of Electronic Engineering, Chang Gung University, Taoyuan 333, Taiwan

<sup>d</sup> Institute of Materials Science and Engineering, National Taiwan University, Taipei, 106, Taiwan

**E-mail address:**

H. Sun: sunhuichn@hotmail.com; S.C. Chen \*: chensc@mail.mcut.edu.tw; C.K. Wen: d04527007@ntu.edu.tw; S.W. Hsu: shinwen1023@gmail.com; T.H. Chuang: tunghan@ntu.edu.tw; X. Wang: wangxinhd@ouc.edu.cn

**Corresponding author:** Sheng-Chi Chen

**Postal address:** Department of Materials Engineering and Center for Thin Film Technologies and Applications, Ming Chi University of Technology, Taipei 243, Taiwan; Telephone number: +886-2-29089899#4679

**Abstract**

Thanks to the intrinsic p-type conductivity, NiO films show great potential for applications in various domains. In this work, NiO<sub>x</sub> films were deposited in three dimensional physical vapor deposition (3D-PVD) system from metallic nickel target in pure oxygen conditions. Optical emission spectroscopy (OES) was employed to analyze the plasma state during the deposition. The variation of the film's structural

Download English Version:

<https://daneshyari.com/en/article/5438852>

Download Persian Version:

<https://daneshyari.com/article/5438852>

[Daneshyari.com](https://daneshyari.com)