

Characterization and Enhanced Carbon Dioxide Sensing Performance of Spin-Coated Na- and Li-Doped and co-doped Cobalt Oxide Thin Films

Rana Saad^{1*}, Khaled Abdelkarem^{1**}, Adel M. El Sayed², Mohamed Shaban^{3***}, M. T. Tammam¹, Hany Hamdy¹

¹ Nanophotonics and Applications (NPA) Lab, Department of Physics, Faculty of Science, Beni-Suef University, BeniSuef 62514, Egypt; ranasaad811@gmail.com (R.S.); oldfighter.khaled123@gmail.com (K.A.); mtaha19@yahoo.com (M.T.T); hshamdy@hotmail.com (H.H.)

² Department of Physics, Faculty of Science, Fayoum University, El-Fayoum 63514, Egypt; ams06@fayoum.edu.eg (A.M.)

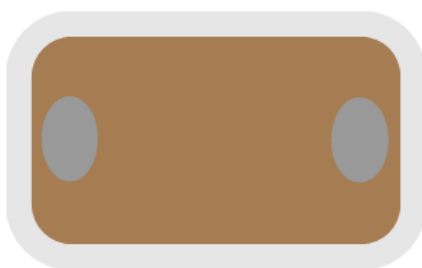
³ Department of Physics, Faculty of Science, Islamic University of Madinah, P. O. Box: 170, AlMadinah Almonawara 42351, Saudi Arabia; mssfadel@aucegypt.edu (M.S.)




*Correspondence1: Rana Saad; ranasaad811@gmail.com (R.S.)

**Correspondence2: Khaled Abdelkarem; oldfighter.khaled123@gmail.com (K.A.)

***Correspondence3: Mohamed Shaban; mssfadel@aucegypt.edu (M.S.)

Supplementary Data



-  Glass Substrate
-  Sensing material
-  Ag Electrode

A physical photograph and a schematic diagram of our sensor