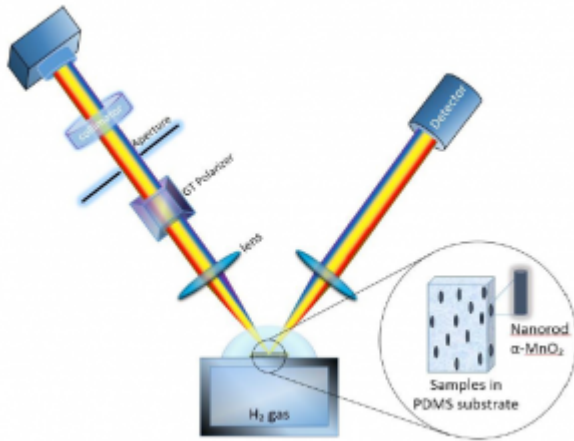


# Our new paper in Applied Physics A



Congratulations for the publication of paper "New generation of  $\alpha$ -MnO<sub>2</sub> Nanowires @PDMS composite as a Hydrogen gas sensor", in journal of Applied Physics A, by Seyedeh Mehri Hamidi<sup>1</sup>, Alireza Mosivand<sup>1</sup>, Mina Mahbobi<sup>1</sup>, Hadi Arabi, Narin Azad, Murtada Riyadh Jamal.

Abstract—New hydrogen gas sensor has been prepared by  $\alpha$ -MnO<sub>2</sub> nanowires in polydimethylsiloxane matrix. For this purpose, the high aspect ratio  $\alpha$ -MnO<sub>2</sub> nanowires has been prepared by the aid of Hydrothermal method and then dispersed into Polydimethyl siloxane polymer media. In order to gas sensing, the samples have been exposed under different gas concentrations from 0 to 5%. The sensor responses have been examined by normalized ellipsometric parameter with respect to the chamber fill with N<sub>2</sub> Gas. Our results indicate linear behavior of resonance wavelength in ellipsometric parameter as a function of gas concentrations which can open the new insight for the sample's capability to hydrogen gas sensing applications.