

Material Science Department, I3N/ CENIMAT

Transparent Oxide Material and Nanostructure

CENIMAT-I3N/ Microelectronic and Optoelectronics Group



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Objectives

- Transparent oxide material basically p -type TCO.
- Nano structure formation of oxide materials and study of morphological changes.
- Possible application in nanoscale size electronic devices and smart display.

Methodology

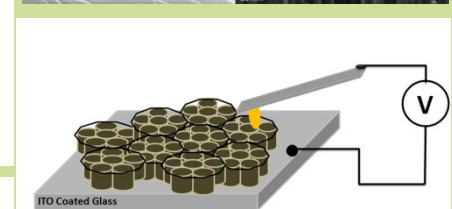
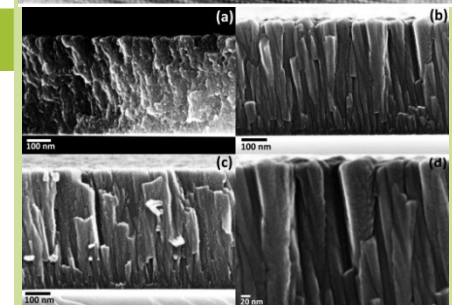
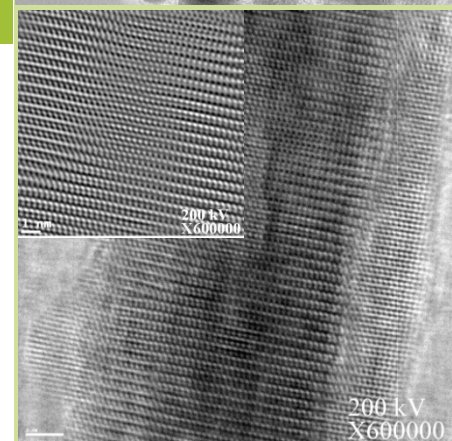
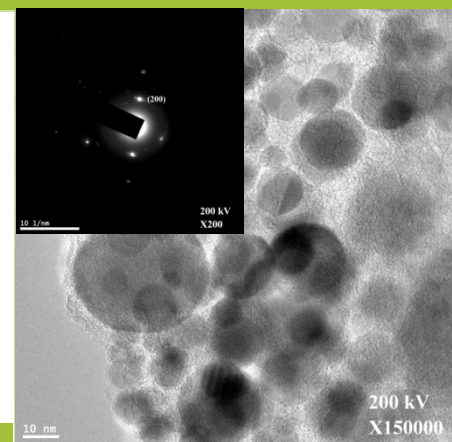
Realizing smart electronic device display, it require the possible developement in transparent oxide material basically in the regions of p -type electronics. New techniques are developing to synthesize highly aliened 1D structure of metal oxide thin films. It is also important to have low cost synthesis with large scale febrication for any future industrial application. Details opto-electronic behaviours are analyzing in nanoscale regions with the changes of morphology.

Expected Results

Development of new synthesis technique to grow p -type metal oxide nanostructure thin films.

Details investigation of localized opto-electrical behaviour with nanostructure morphological changes for possible application in nanoscale size electronic devices.

Details Investigation of some new co-doped metal oxide thin film materials and their applications in TFT.



Funding: