

# Electrochromic displays

M.Triantafillou

Material science and technology, University of Crete, Heraklion, Vasilika Vouton, Greece

## Abstract

Electrochromism can be defined as the property of a material to undergo color change upon oxidation or reduction.

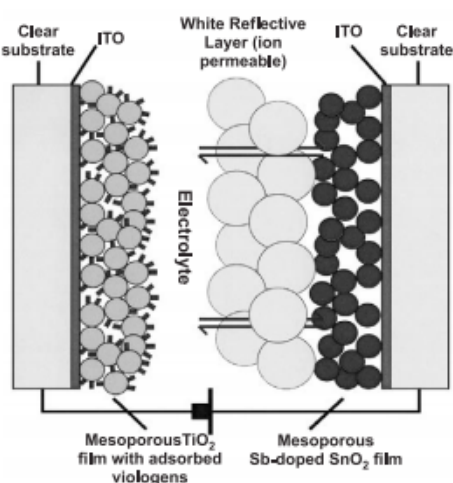


Fig. 1. Device cross-section of a NanoChromics™ display device.

There is a significant development on electrochromic displays based on nanostructured films, that have comparable optical qualities to paper-like displays. This is due to their excellent ink-on-paper optical qualities, fast response time, and low power consumption. The nanostructured films are composed of nanoparticles of a semiconductor, for example  $\text{TiO}_2$  as shown in Fig. 1 and the extremely high surface area that is formed induces the amplification of the color change.

## References

- [1] P. Bonho<sup>^</sup>te\*, E. Gogniat, F. Campus, L. Walder<sup>1</sup>, M. Gra<sup>^</sup>ttzel. 20 January 1999. Nanocrystalline electrochromic displays. *Displays* 20 (1999) 137–144.