ZnO Nanowire FET

Prof. R. A. Kiehl (PI), M. A. Hollister, J. D. Le, G. Xiao, X. Lu

Electrical & Computer Engineering, University of Minnesota

● DESCRIPTION OF WORK

◆ Nanowire FETs with:
  ◆ ZnO channel
  ◆ SiO₂ gate-dielectric
  ◆ ITO source-drain contacts

● MAJOR OBSERVATIONS

◆ The 55 mS/mm transconductance and other performance parameters are the best reported for any ZnO-based FET.

◆ The results demonstrate that high-performance ZnO NW FETs can be fabricated by conventional processes without special gate dielectrics or surface layers.

● Publications