

ZnO Micro and Nanocrystals

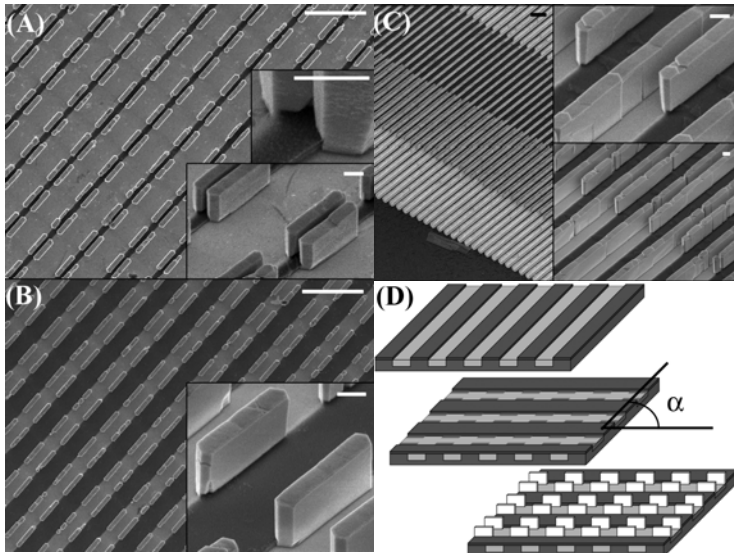
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NNIN Facilities utilized: Characterization Facility & Nanofabrication Center

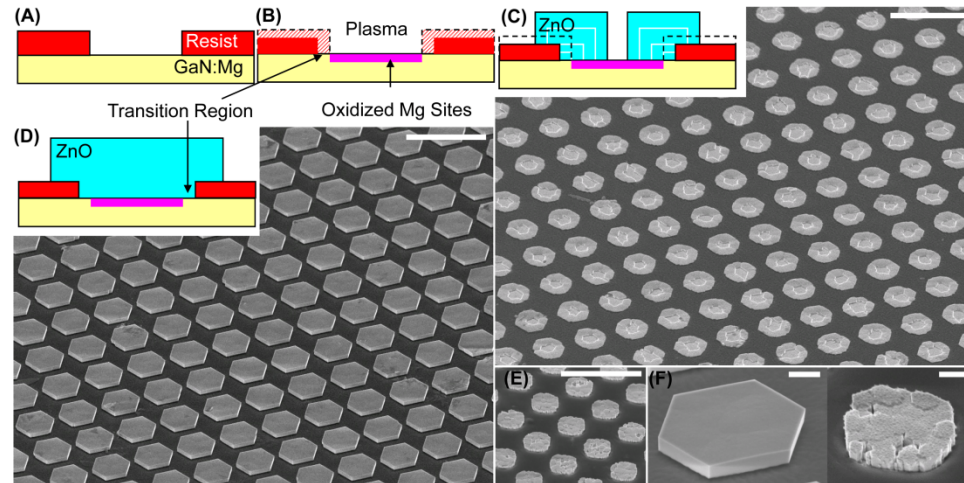
DESCRIPTION OF WORK

- ◆ Patterned, Grew and Transferred ZnO Micro and Nanocrystals with Size and Location Control
- ◆ Integrated ZnO Microcrystals with Tailored Dimensions Forming Light Emitting Diodes and UV Photovoltaic Cells



MAJOR OBSERVATIONS

- ◆ Reduced ZnO defects by oxygen plasma treatment
- ◆ Demonstrated functional microdevices specifically LEDs and photovoltaic cells using ZnO/GaN heterojunction



Publications

- ◆ Jesse J. Cole, Xinyu Wang, Robert J. Knuesel, and Heiko O. Jacobs, *Adv. Mat.*, 20, 1474-1478 (2008).
- ◆ Jesse J. Cole, Xinyu Wang, Robert J. Knuesel, and Heiko O. Jacobs, *Nano Lett.*, 8(5), 1477-1481 (2008).

