

STRUCTURAL AND PHOTOLUMINESCENCE  
PROPERTIES OF ZnO NANOWIRES

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S u m m a r y

Arrays of ZnO nanowires are grown by the vapor-liquid-solid method on a silicon substrate. The results of XRD, SEM, and AFM studies show that the diameters of nanowires vary in the range (50–300) nm, and their length is up to 40  $\mu\text{m}$ . The wires exhibit bright photoluminescence: the band corresponding to the near band edge region and one or two (depending on the growth conditions) defect-related bands. The intensity ratio of the bands reflects the non-stoichiometry of the material and can be controlled by the zinc evaporation temperature and the temperature in the growing zone.