Supplemental material for abstract #4449, Colvin et al.:

“The role of surface oxides for the optoelectronic performance of III-V semiconductor nanowires”

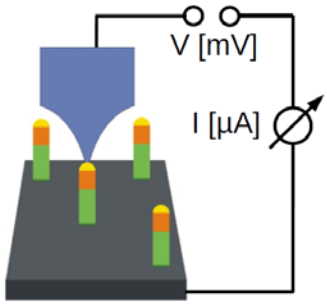
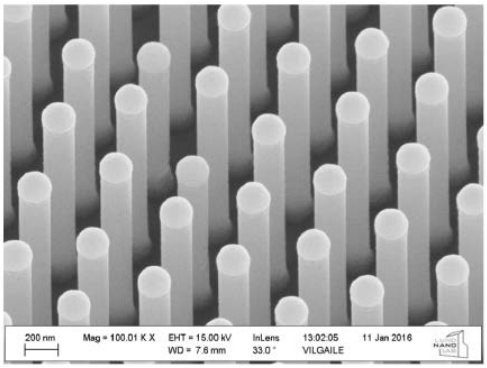


Figure 1: Sketch of the STM tip used as nanoprobe for measuring I-V properties of upright-standing nanowires with an axial heterostructures.



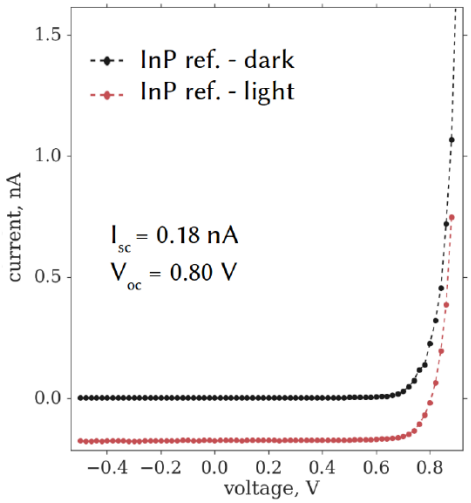
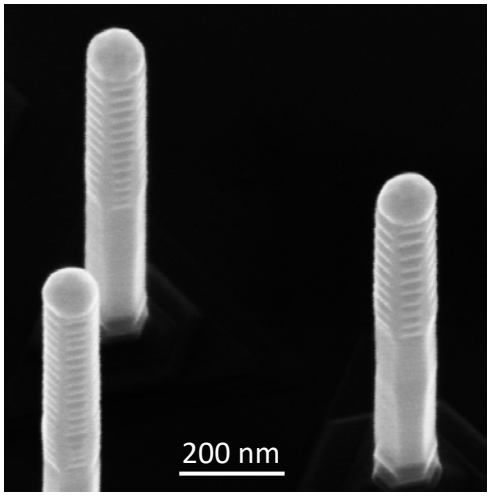


Figure 2: SEM image of the studied GaInP pin-junction nanowires (left), and I-V curves from a single pin-junction InP nanowire with and without illumination, obtained by the STM tip as nanoprobe.



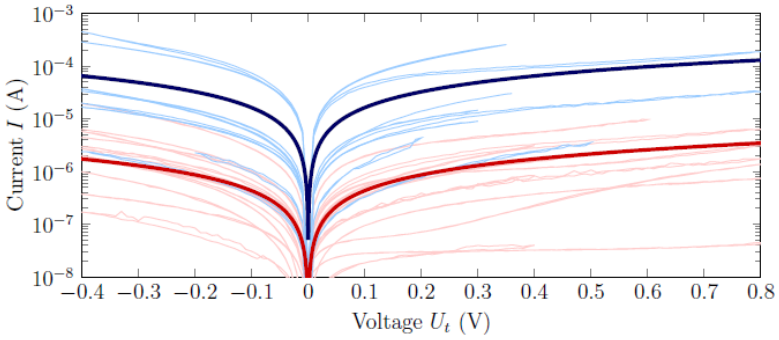


Figure 3: SEM image of the studied InAs nanowires containing a bottom wurtzite segment and a top segment of zincblende crystal phase (left). I-V curves from several individual of these InAs nanowires before (red) and after (blue) surface oxide removal (right). Thick lines show averaged curves.