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Greenhouse Gas Sensing Properties of ZnO Nanorods[1] BJOERN SEIPEL, KACIE GRANICO, JEFFREY JERNSTROM, Portland State University, PORTLAND STATE UNIVERSITY TEAM — We report on the sensing properties of electrochemically deposited zinc oxide (ZnO) nanorod films. The interaction between methane and the ZnO nanorods causes a drop in the resistivity depending on the methane concentration. We will present our first results for ZnO nanorods grown on different substrates and operated between 150 °C and 300 °C. Our first measurement indicate a sensitivity for methan of better than 0.1%. The ZnO nanosensor characterization was carried out by using bulk X-ray diffraction (XRD) and by scanning electron microscopy (SEM).

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