

## **[ZnO-13] 초청강연**

# **The characterization and application of ZnO nanowires**

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Synthesis, characterization, and application of ZnO nanowires are reviewed in this presentation. ZnO nanowires have been synthesized by various methods including thermal CVD and MOCVD. Structural properties of synthesized ZnO nanowires are investigated with XRD, SEM, TEM, and SEAD. Most ZnO nanowires are single-crystalline, but their morphologies and growth directions are different, depending on synthetic conditions. Optical properties of ZnO nanowires are characterized with PL and Raman scattering. In particular, PL provides the information on energy gap and doped impurities of these nanowires. Their optoelectrical properties are examined with photocurrent spectra. Photocurrent in the ZnO nanowires are significantly affected by atmosphere. These characterizations are of crucial importance in the application of ZnO nanowires in the fields of optoelectronics, sensor, and electronic devices. Recent applications of these nanowires are briefly reviewed.