Hexagonal ZnO nanocolumns (NC’s) were synthesized by chemical bath deposition (CBD) on previously ZnO nanoseeds deposited on corning glass with substrate temperature from 300 to 550 °C in steps of 50 °C by spray pyrolysis technique. Before spray pyrolysis process, the nanoseeds were dissolved in water and dispersed with ultrasound. Morphological study was carried out by Scanning Electron Microscope (SEM); hexagonal ZnO nanocolumns were observed, the lowest diameters were obtained at substrate temperature between 400 and 450 °C (seeds deposition). The best vertical alignment was observed on nanocolumns grown over ultrasound-dispersed nanoseeds. Raman spectroscopy was used to evaluate the vibrational modes, crystal quality and the verticality of the ZnO nanocolumns. A relationship between the shift of $E_{2H}$ mode, the deposition temperature ZnO seeds and the nanocolumns diameters was found.

**Keywords:** ZnO Nanocolumns, Raman Spectroscopy, Chemical Bath Deposition

**Acknowledgment:**

Authors wants thanks to Daniel de Jesús Araujo Perez, Adriana Tejeda Cruz, Omar Novelo Peralta y Rebeca Rodríguez for their technical suports.

**Presenting author’s email:** luiszamora@uv.m