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## **INVESTIGATION OF THE LASER-ASSISTED HYDROTHERMAL NANOSTRUCTURED ZnO**

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**ABSTRACT-** ZnO nanostructures are synthesized and fabricated successfully on glass substrates using a chemical bath deposition (CBD) technique. Then new design of **continuous** flow process has used at 0.05 M of zinc acetate hexahydrate [Zn (CH<sub>3</sub>COO)<sub>2</sub>·2H<sub>2</sub>O], 1.4 g of Hexamethylenetetramine (CH<sub>2</sub>)<sub>6</sub>N<sub>4</sub>) and 250 mL of deionized water of the precursor solutions assisted by continuous wave laser irradiation at 532 nm laser wavelengths. The Ni and Pd, seed layers deposited and different growth time 20 and 25 min with same power. effects of different irradiation time 20 and 25 minutes. The x-ray diffraction (XRD) technique can exhibit well crystalline quality. Moreover, the FESEM images and energy dispersive x-ray spectra (EDX) shows uniformly distributed, dense ZnO nanostructures and the morphologies improved.

**Keywords:** Laser, Hydrothermal, Nanostructure, ZnO.