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**Growth and characterization of vertically aligned carbon nanotubes using PECVD** SUMAN NEUPANE, Department of Physics, Florida International University, WENZHI LI, Department of Physics, Florida International University — Vertically aligned carbon nanotubes (CNTs) have been grown by using plasma enhanced chemical vapor deposition technique (PECVD). The density of the CNTs is controlled by the density of the nickel catalyst nanoparticles on silicon (Si) surface. Photolithography and nanosphere lithography have been employed to form a catalyst nanoparticle pattern on Si to grow periodic array of CNTS with controllable size and distribution. The electron emission properties of the CNT array have also been investigated.

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