

Abstract Submitted  
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**The optical and electrical properties of Non-tapered InN nanorods grown by plasma-assisted MOCVD** HYE-WON SEO, DEVER NORMAN, Dept. of Physics and Astronomy, University of Arkansas at Little Rock, LI-WEI TU, SHU-YU CHIANG, Dept. of Physics and Center for Nanoscience and Nanotechnology, National Sun Yat-Sen University, Taiwan, IN-GANN CHEN, KUO-HAO LEE, Dept. of Materials Science and Engineering, National Cheng-Kung University, Taiwan, JUNG-HWAN KIM, Dept. of System Engineering, University of Arkansas at Little Rock, NEW-JIN HO, Dept. of Materials and Optoelectronic Engineering and Center for Nanoscience and Nanotechnology, National Sun Yat-Sen University, Taiwan — We report the non-tapered InN nanorods grown by plasma assisted metal-organic vapour deposition (MOCVD) methods. By carefully using RF plasma techniques, we were able to grow InN nanorods without NH<sub>3</sub> at below decomposition temperature. The optical and structural qualities were evaluated by temperature dependent photoluminescence (PL) and current-voltage measurement. The PL revealed the low intrinsic carrier concentration and high structural quality of the InN nanorods. The conductance measurement, via nanoprobe system, agreed with the observed PL behaviors. The detail experimental results and their analysis will be discussed in the presentation.

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