Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Epitaxial GaN Nanorod Array Formation on (111) Si by MBE
H. W. SEO, Q. Y. CHEN, X. M. WANG, Texas Center for Superconductivity at University of Houston, L. W. TU, C. L. HSIAO, M. CHEN, Department of Physics, National Sun-Yat-Sen University, Taiwan, Republic of China, M. N. ILIEV, WEI-KAN CHU, Texas Center for Superconductivity at University of Houston — We have studied the nanorod and nanotrench formation of GaN by molecular beam epitaxy (MBE) on (111)-Si substrates. The chemical makeup of the substrate surface is crucial to the creation or diminishing of the nanostructure. We have used ion implantations to tailor the surface chemistry or surface structure on which the nanorods are formed. We will discuss the growth mechanism and its implications for large scale nano array fabrications.

Q. Y. Chen
University of Houston

Date submitted: 01 Dec 2004 Electronic form version 1.4