

Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Enhancement light-emission of GaN via surface-nanopatterning

MANSIK PARK, BONGSEOK KIM, SOOHWAN HWANG, MINSIK CHO, KYUSOON SHIN, Seoul National University — In this presentation, we are going to suggest a method to improve the light-extraction efficiency of an inorganic substrate by simple surface-patterning. We fabricated a nanoporous pattern via blockcopolymer lithography on the light emitting GaN semiconductor. Tuning of refractive index of thin films on GaN was available by choosing block copolymer with a suitable composition. We believe the light-extraction efficiency was able to be enhanced due to insertion of the nanoporous film that changes the refractive indices from GaN substrate to air in the middle of the path of light. Detailed method will be introduced in the presentation.

Kyusoon Shin
Seoul National University

Date submitted: 20 Nov 2009

Electronic form version 1.4