

Figure S1 Schematic diagram of GaN-based LED wafer with TiO₂ nanorods array

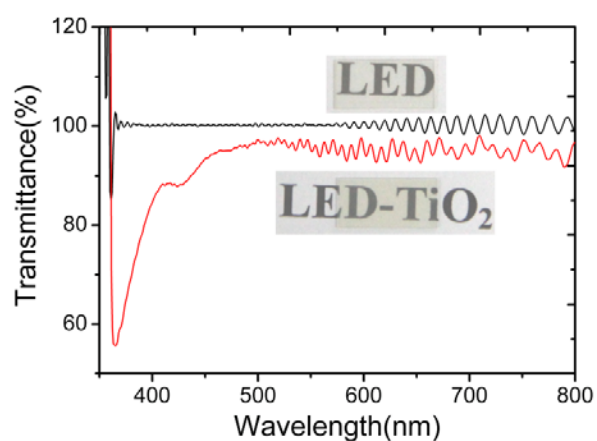


Figure S2 Transmission spectrums of bare GaN wafer (black) and GaN wafer with single-crystalline rutile TiO₂ nanorods array (red)

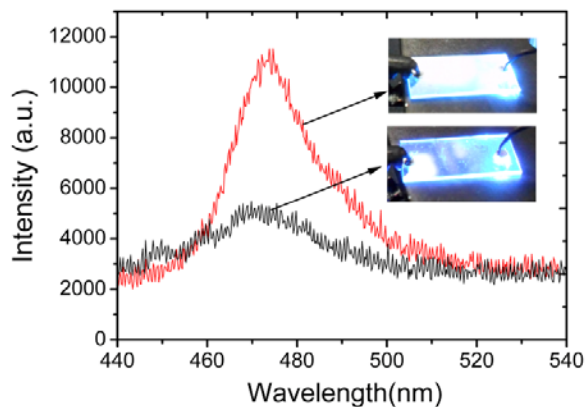


Figure S3 Comparison of EL intensity between bare GaN LEDs (black) and GaN LEDs covered with single-crystalline rutile TiO₂ nanorod array (red). Inset is the corresponding images of the illuminated LED wafers at 2 mA.

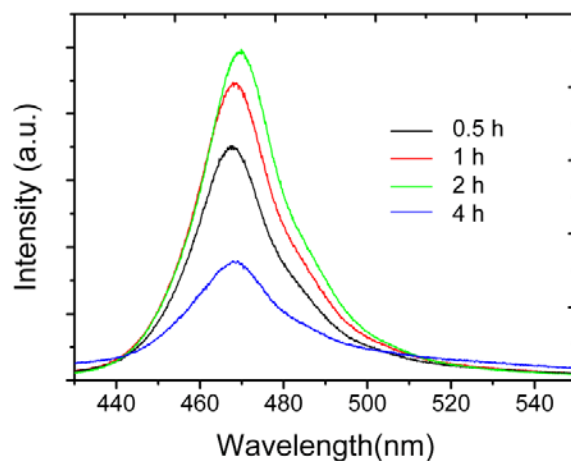


Figure S4-1 Comparison of room temperature PL intensity of LED wafers with TiO₂ nanorods array obtained by different hydrothermal time. (0.5h, 1h, 2h and 4h at 160 °C)

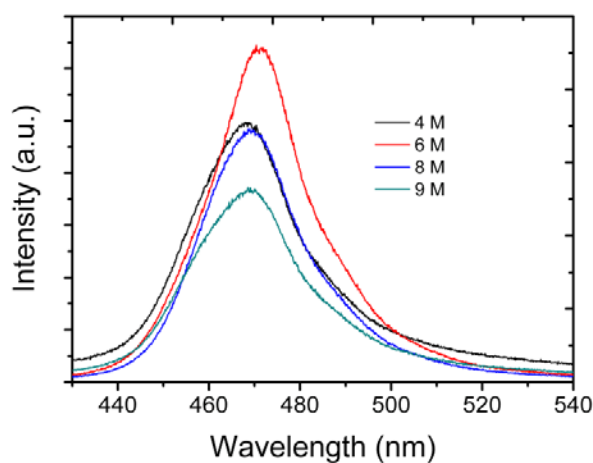


Figure S4-2 Comparison of room temperature PL intensity of LED wafers with TiO₂ nanorods array obtained by different hydrochloric acid concentration. (4, 6, 8 and 9M at 160 °C for 2h)