

Photoinduced Doping in GaN Epilayers with Graphene Quantum Dots

T. N. Lin¹, M. R. Inciong¹, S. R. M. S. Santiago¹, T. W. Yeh¹, W. Y. Yang¹, C. T.
Yuan^{1*}, J. L. Shen^{1*}, H. C. Kuo² & C. H. Chiu³

¹Department of Physics and Center for Nanotechnology, Chung Yuan Christian University, Chung-Li, Taiwan

²Department of Photonic and Institute of Electro-Optical Engineering, National Chiao Tung University, Hsin-Chu, Taiwan

³ Department of Electronic Engineering, Chung Yuan Christian University, Chung-Li, Taiwan

*Corresponding author: ctyuan@cycu.edu.tw (Chi-Tsu Yuan), jlshen@cycu.edu.tw (Ji-Lin Shen)

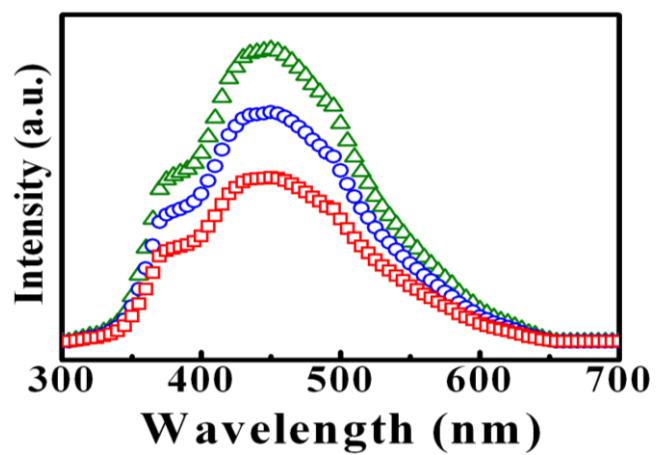


Figure S1. The photoluminescence spectra of graphene quantum dots (GQDs) with different GQD concentrations: 0.3 (open squares), 1.5 (open circles), and 2.4 mg/ml (open triangles).

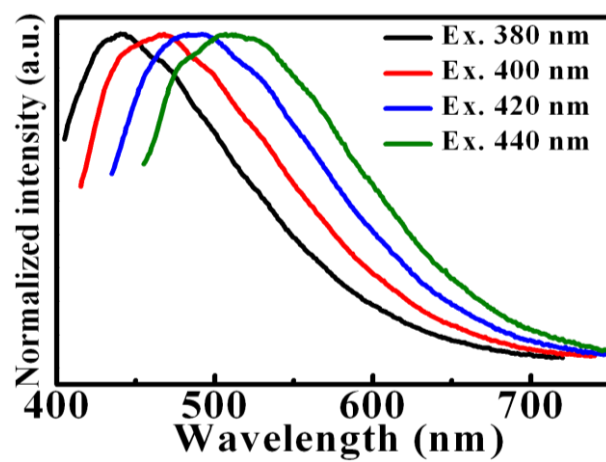


Figure S2. Photoluminescence spectra of GQDs with varying excitation wavelengths.

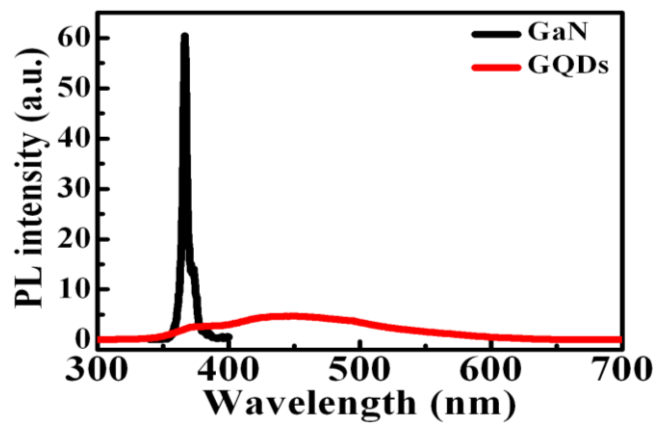


Figure S3. Photoluminescence spectra of GaN and GQDs when excited at a wavelength of 260 nm.

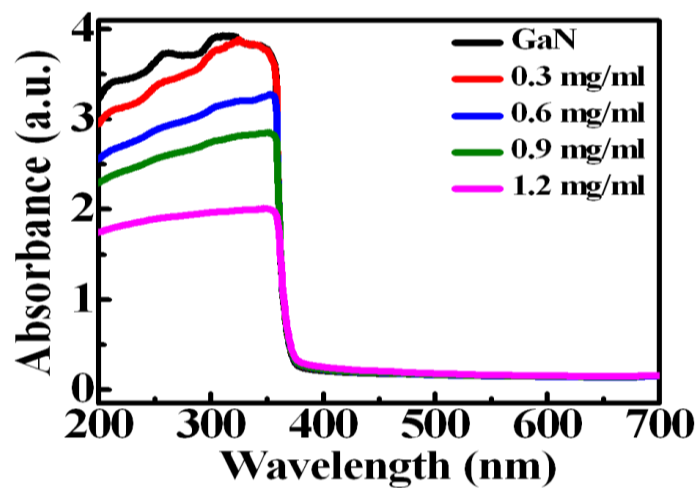


Figure S4. Absorption spectra of GaN with different GQD concentrations.