Two-Photon Fluorescence in N-Doped Graphene Quantum Dots

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Abstract : Nitrogen-doped graphene quantum dots (N-GQDs) were fabricated by microwave-assisted hydrothermal technique. The optical properties of the N-GQDs were studied. The luminescence of the N-GQDs can be tuned by varying the excitation wavelength. Furthermore, two-photon luminescence of the N-GQDs excited by near-infrared laser can be obtained. It is shown that N-doping play a key role on two-photon luminescence. The N-GQDs are expected to find application in biological applications including bioimaging and sensing.

Keywords : graphene quantum dots, nitrogen doping, photoluminescence, two-photon fluorescence

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