Graphene Quantum Dots for Photocatalyzed Coupling Reactions

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N-Doped graphene quantum dots (N-GQDs) were synthesized through a mild and simple hydrothermal reaction. The structure of N-GQDs was fully identified using various spectroscopic and microscopic methods such as XPS, TEM and Raman spectroscopy. As-prepared N-GQDs exhibited very strong and tunable fluorescence with a high quantum yield in visible range of electromagnetic spectrum. N-GQDs showed excellent photocatalytic activity in the oxidative coupling reactions of various amines.