Technical Data Sheet

ACS Material Blue Luminescent Graphene Quantum Dots

Table of Contents

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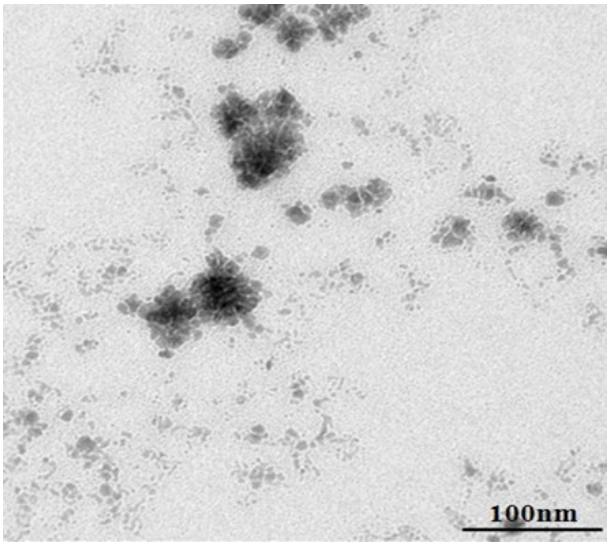
1. Preparation Method

Precursor pyrolysis, Bottom-up method

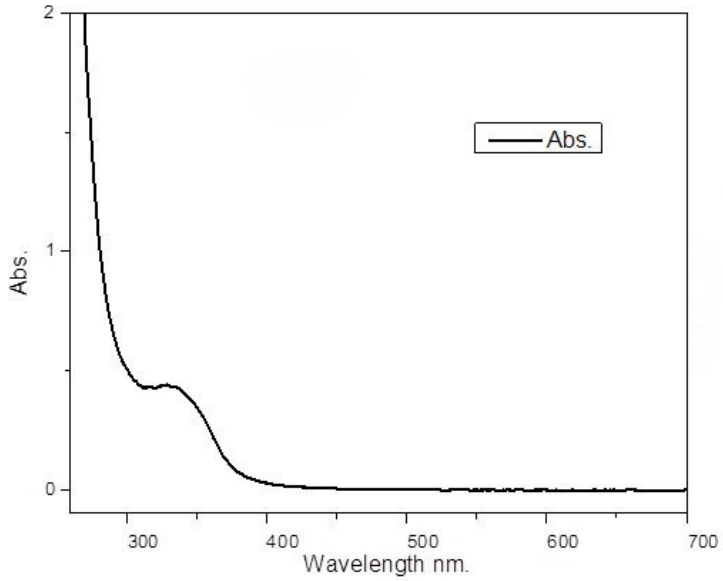
2. Characterizations

Composition:	Blue Luminescent Graphene
Quantum Dots Apperance:	Colorless solution
PL peak:	464 nm (reference only, actual value may vary)
Particle Size:	< 15 nm
Concentration:	1 mg/mL
Purity:	>80%
Solution:	Water

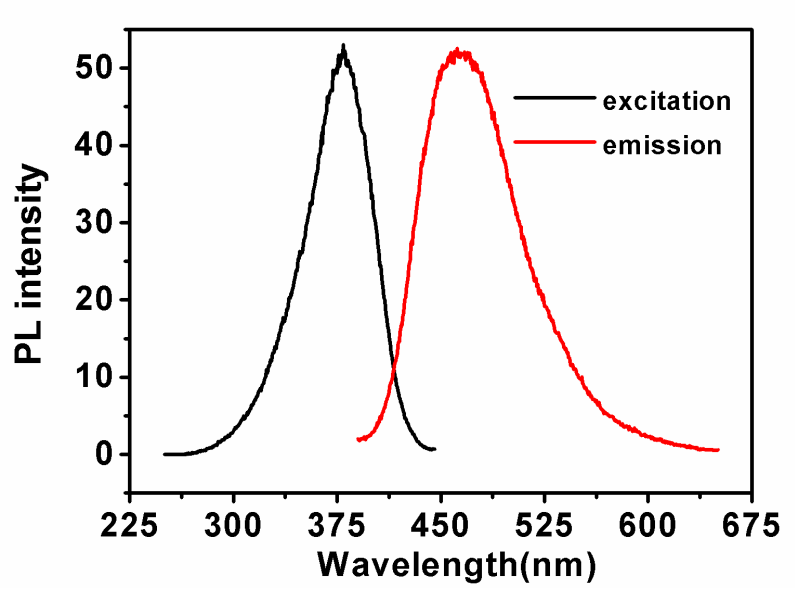
Emission photos (1) of ACS Material Blue Luminescent Graphene Quantum Dots excited by Natural light(left) and UV light(right)

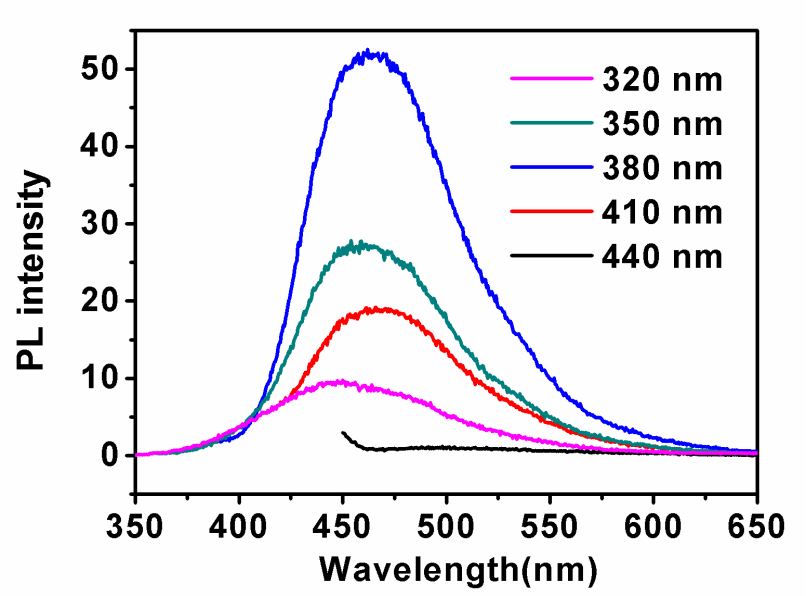


TEM Image (2) of ACS Material Blue Luminescent Graphene Quantum Dots



Absorption spectra (3) of ACS Material Blue Luminescent Graphene Quantum Dots





PL spectra (4) of ACS Material Blue Luminescent Graphene Quantum Dots

3. Application Fields

Graphene quantum dots exhibit unique optical and electronic properties due to their quantum confinement and edge effects, and have a variety of novel applications, such as low-toxicity and photostable fluorescence probes for cell imaging and biosensing, low-cost acceptors for organic photovoltaic cells and light emitting diodes, a metal-free platform for surface-enhanced Raman scattering, and an upconverted sensitizer for modifying rutile TiO_2 nanocrystals as a composite visible-light photocatatalyst.