Technical Data Sheet

ACS Material Carboxylated Graphene Quantum Dots

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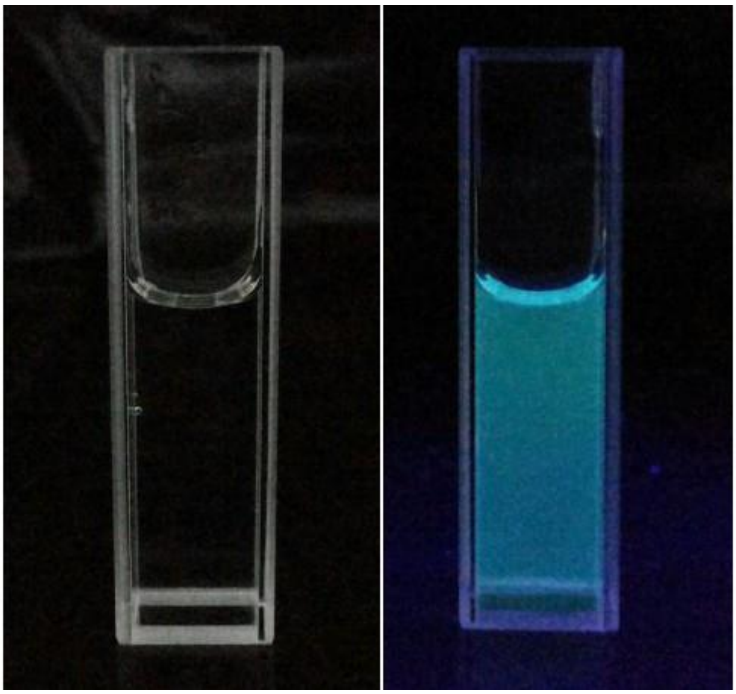
1. Preparation Method

Precursor Pyrolysis Method

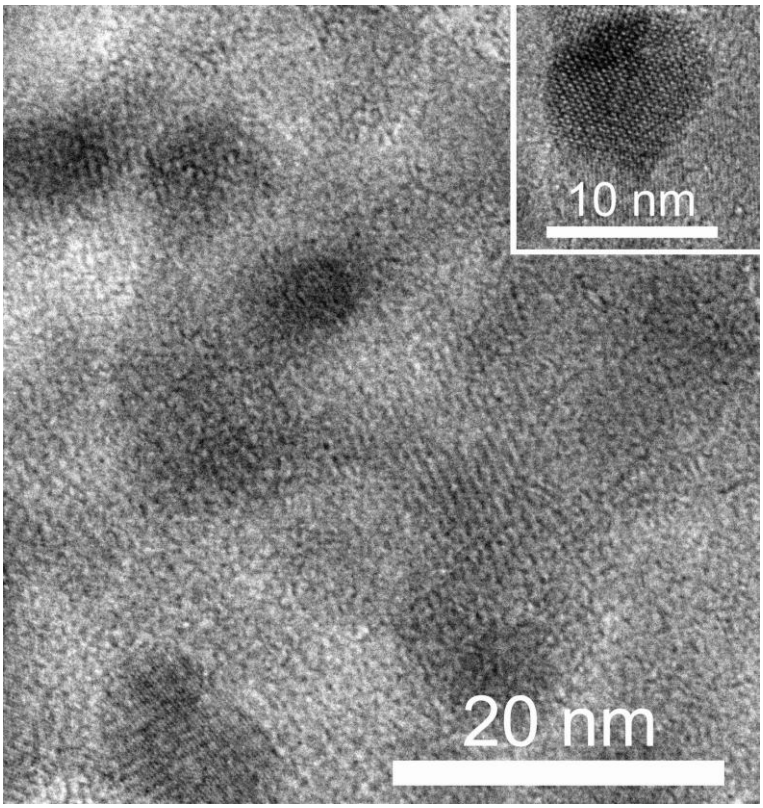
2. Characterizations

Composition:	Carboxylated Graphene Quantum Dots
Dots Appearance:	Colorless solution
PL peak:	487 nm (reference only, actual value may vary)
Particle Size:	<10 nm
Concentration:	1 mg/mL
Purity:	>80%
Solution:	Water

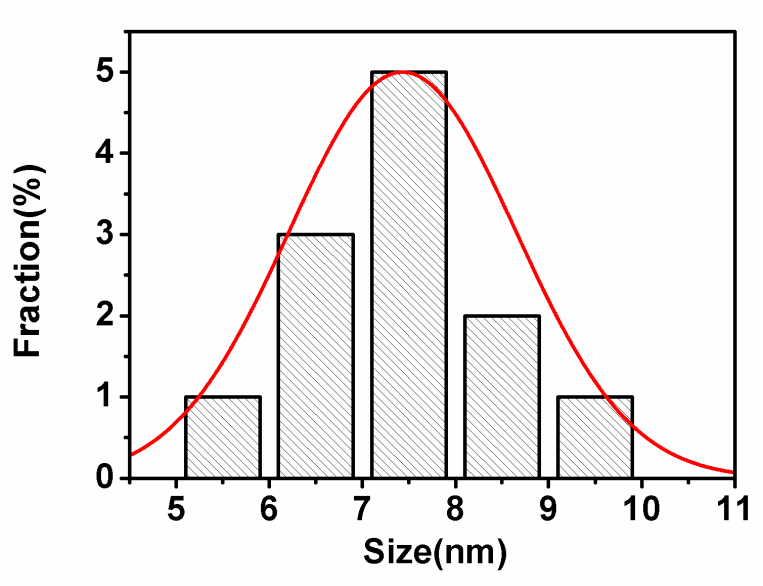


Emission Photos of ACS Material Carboxylated Graphene Quantum

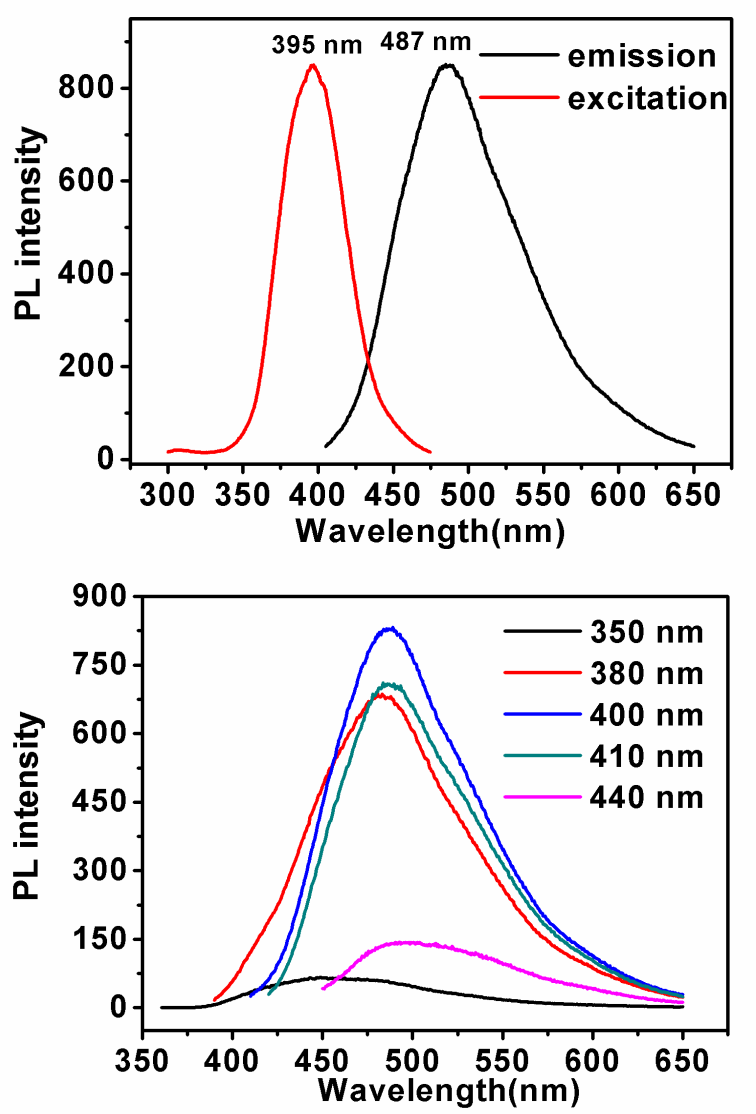
Dots Excited by Natural Light (left) and UV Light (right)



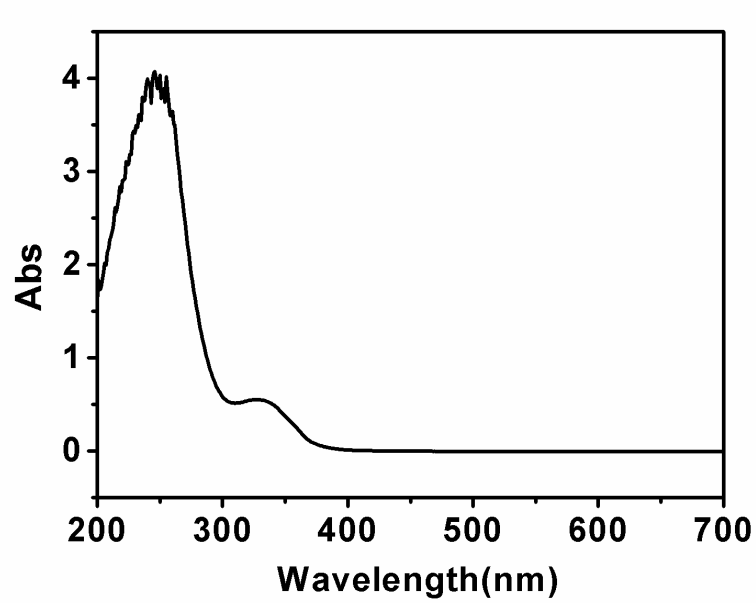
TEM Image of ACS Material Carboxylated Graphene Quantum Dots



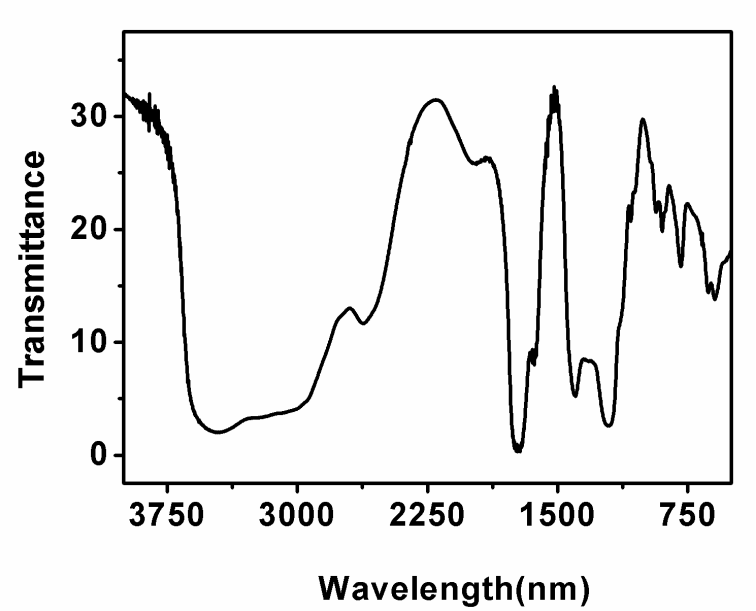
Size Distribution of ACS Material Carboxylated Graphene Quantum Dots



PL Spectra of ACS Material Carboxylated Graphene Quantum Dots



Absorption Spectra of ACS Material Carboxylated Graphene Quantum Dots



IR Spectra of ACS Material Carboxylated 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 photocatalyst.

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