



## Technical Data Sheet

# ACS Material Blue Luminescent Graphene Quantum Dots

### Table of Contents

---

[1 – Preparation Method](#)

[2 – Characterizations](#)

[3 – Application Fields](#)

---

#### **Contact Information:**

Manufacturer: ACS Material, LLC.

Address: 959 E Walnut St. Suite 100, Pasadena, CA 91106

Phone: (866) 227-0656

Fax: (781) 518-0284

E-Mail: [contact@acsmaterial.com](mailto:contact@acsmaterial.com)

Revision: 070617

## 1. Preparation Method

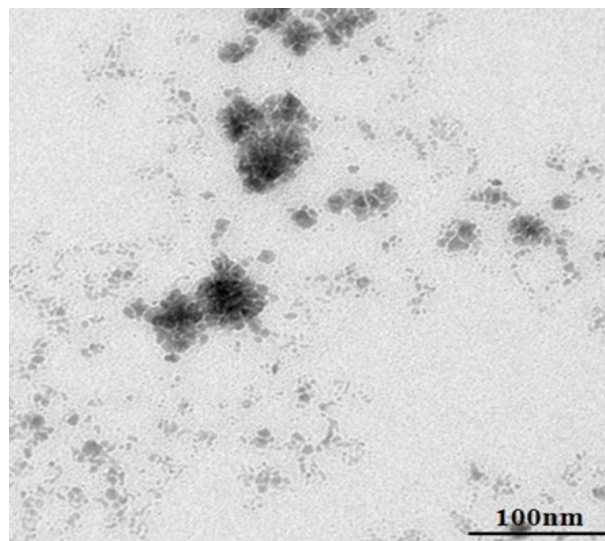
Precursor pyrolysis, Bottom-up method

## 2. Characterizations

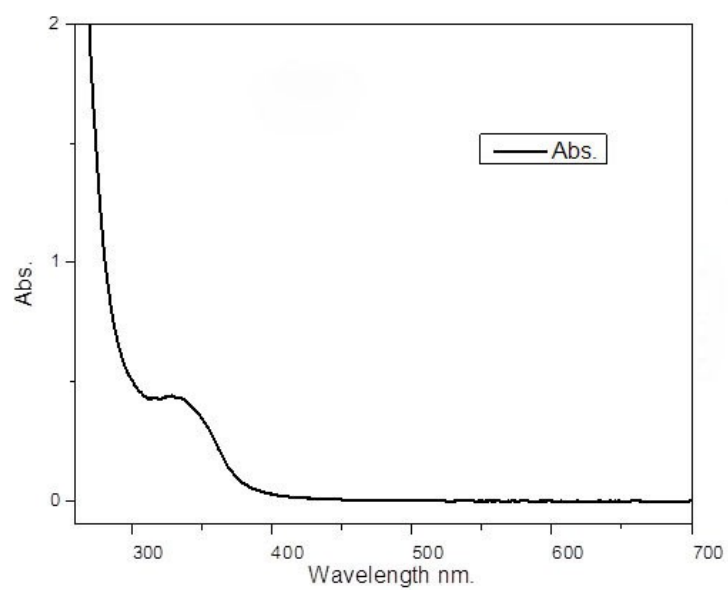
<b>Composition:</b>	Blue Luminescent Graphene
<b>Quantum Dots Appearance:</b>	Colorless solution
<b>PL peak:</b>	464 nm (reference only, actual value may vary)
<b>Particle Size:</b>	< 15 nm
<b>Concentration:</b>	1 mg/mL
<b>Purity:</b>	>80%
<b>Solution:</b>	Water



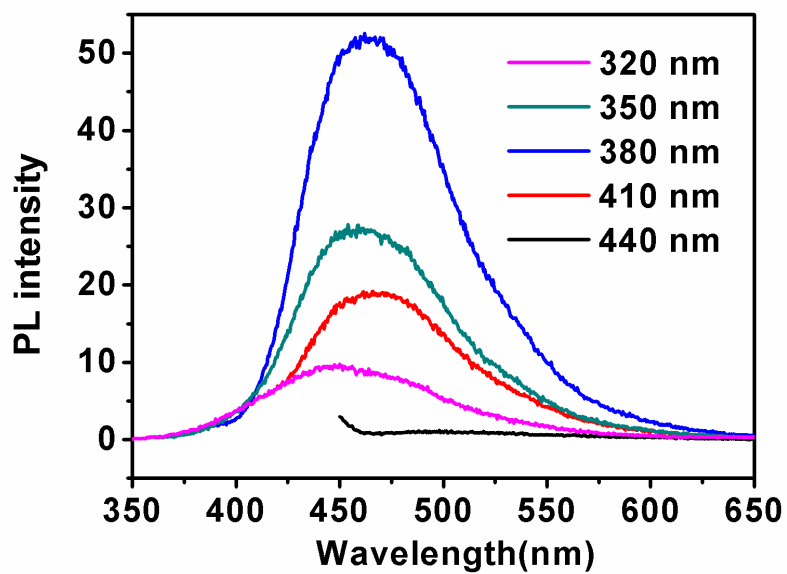
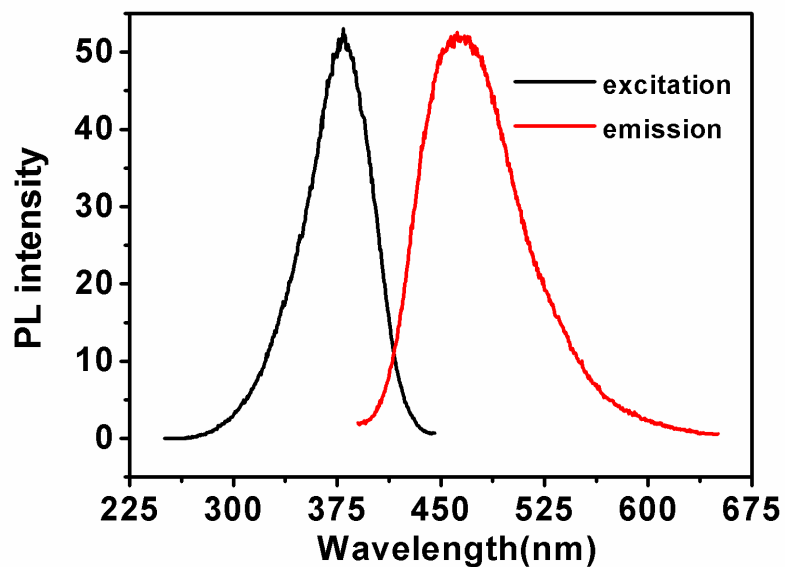
Emission photos (1) of ACS Material Blue Luminescent Graphene Quantum Dots excited by Natural light(left) and UV light(right)



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<sub>2</sub> nanocrystals as a composite visible-light photocatalyst.

**Disclaimer:** ACS Material, LLC believes that the information in this Technical Data Sheet is accurate and represents the best and most current information available to us. ACS Material makes no representations or warranties either express or implied, regarding the suitability of the material for any purpose or the accuracy of the information contained within this document. Accordingly, ACS Material will not be responsible for damages resulting from use of or reliance upon this information.