

Blue Silicon Quantum Dots: Experimental Data

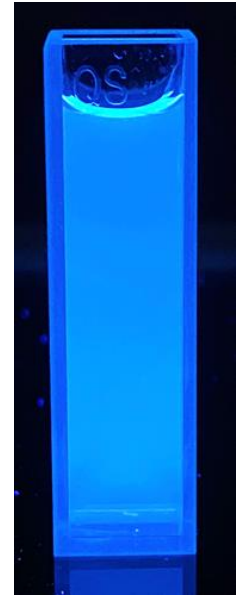
Silicon Quantum Dots dispersed in water or organic solvents

Description

Blue silicon quantum dots are readily dispersible in water and a wide variety of organic solvents including toluene, dichloromethane, and ethanol. These particles can be used in photovoltaic devices, light emitting diodes, sensors, and optical film applications.

Advantages Over Traditional QDs

- Free of toxic metals (e.g., Cd, Pb, In) or phosphines
- Bright photoluminescence



Product Specifications

	Size	PL _{max}	Catalog No.
Particle Sizes Available	Data being collected	488 ± 20 nm	
Material Composition	Silicon		
Forms	Clear colourless solution		
Photoluminescence	λ _{em} 488 nm		
FWHM	<110 nm		
Functionalization Method	QY	Shelf Life	
I	10-40% ± 5%	>6 months; TBD	

Uses & Handling Recommendations

- Shipped in solution. 1 mL, 5 mL, and 20 mL solution in glass vials
- Typical concentrations ~ 1 mg/mL
- Sonication can be used to help disperse the SiQDs in desired aqueous or organic solvents.

[Contact us](#) for purchasing/customization options. AQM can tailor the surface chemistry to provide SiQDs suitable for specific applications.

Characterization Data

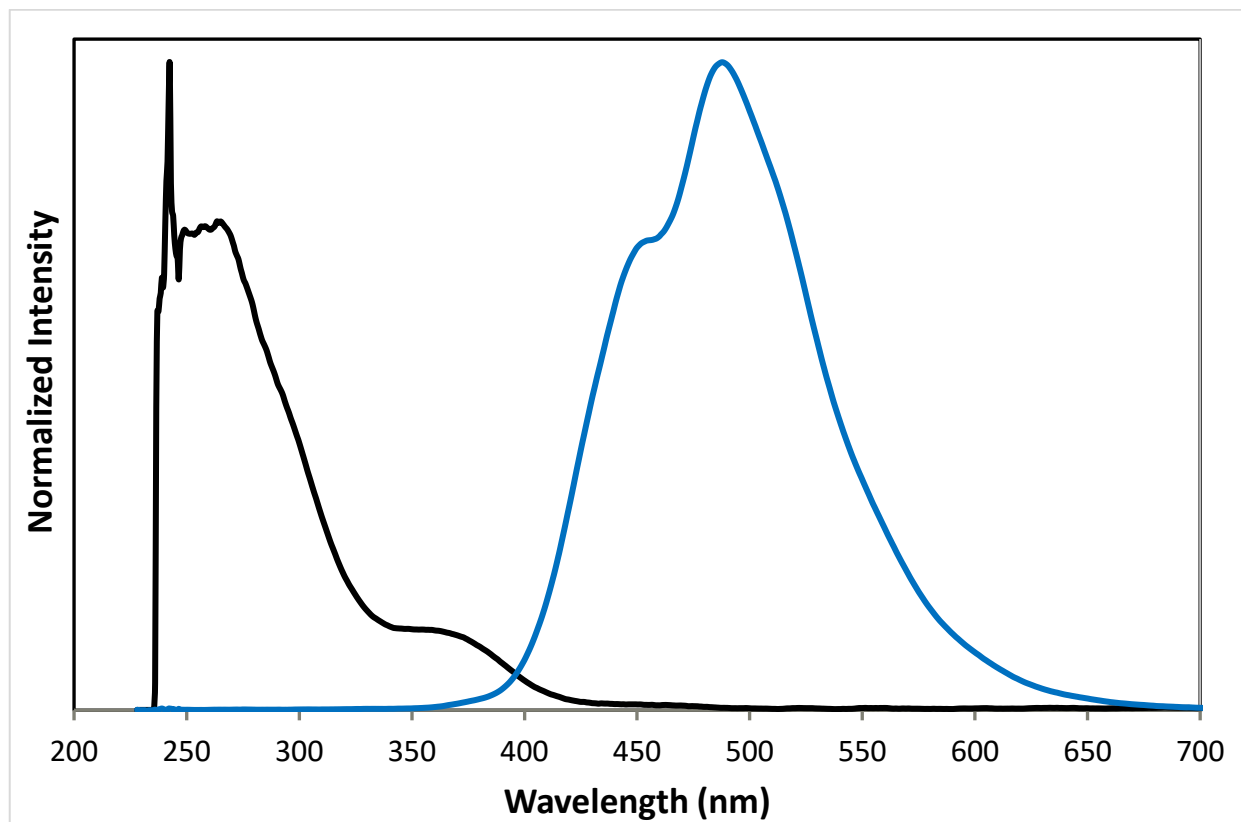


Figure 1: Photoluminescent absorbance (black trace) and emission (blue trace).