Applied Quantum Materials Inc.

Water Soluble D-Mannose terminated Silicon Quantum Dots

AQM D-Mannose terminated SiQDs

More info

Description

D-mannose terminated silicon quantum dots (QDs) soluble in water displaying blue photoluminescence under ultraviolet (UV) excitation. The application of these particles includes, but not limited to, bioimaging, tumor targeting and disease diagnosis.

Product Advantages

- Free of toxic heavy metals (Cd, Pb, In) or phosphines
- SiQDs are biocompatible and non-cytotoxic
- SiQDs have huge surface-to-volume ratios and surface tunability
- Photoluminescence is stable for months in fridge.

Product Specifications

Related Categories	Silicon quantum dots
Forms	Clear pale yellow to colorless solutions
Particle Size	2.6 ± 0.6 nm
Compatible Solvents	Water
Fluorescence	λ_{em} 415 ± 20 nm
FWHM	≤120 nm
PL Lifetime	2.7 ns
Absolute Quantum Yield	4%

Characterization Data

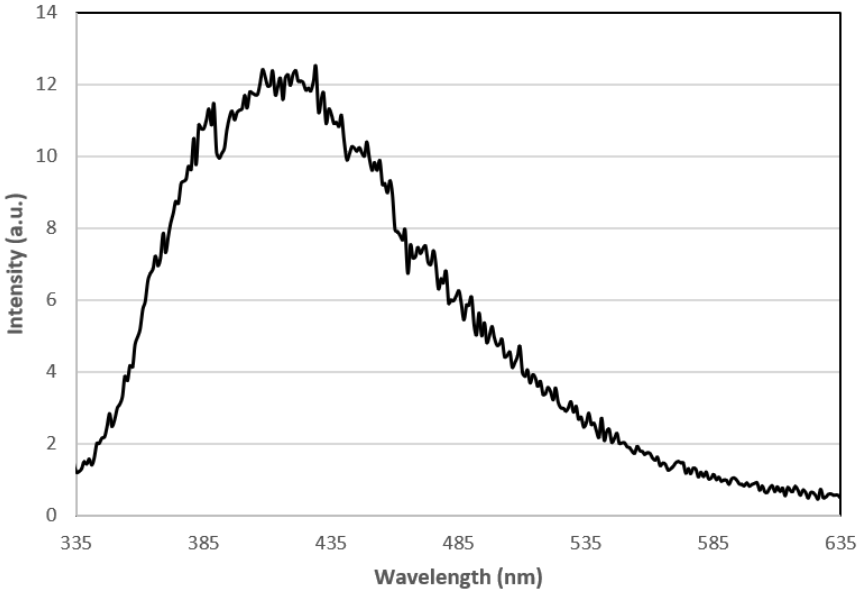

Figure 1: Photoluminescent emission spectra (λ_{exc} = 325 nm)

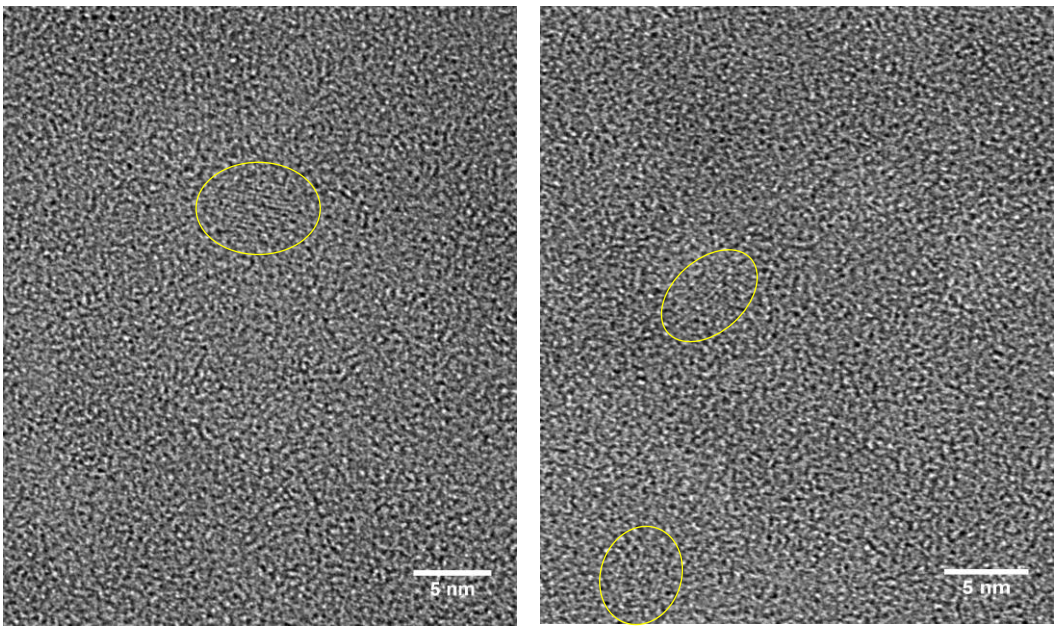

Figure 2: HRTEM Image.