

## Technical Specification of Quantum Dots with Amine Group

**Description:** QSQ is a group of water soluble CdSe/ZnS quantum dots with amphiphilic polymer and polydiallyldimethylammonium chloride (PDDA) coating. There is no linkable functional group on the surface of the quantum dots. The zeta potential of QSQ is more than +50mV. Their organic layers consist of a monolayer of oleic acid, a monolayer of amphiphilic polymer and a monolayer of PDDA. The thickness of the total organic layers is about 8 nm. The hydrodynamic size of the nanocrystals is about 14-16 nm larger than their inorganic core size measured by TEM.

QSQ is very stable in tris buffer solutions in the pH range of 3-14. Its stability in other buffer solutions has not been fully tested yet. Please contact us if you have any question.

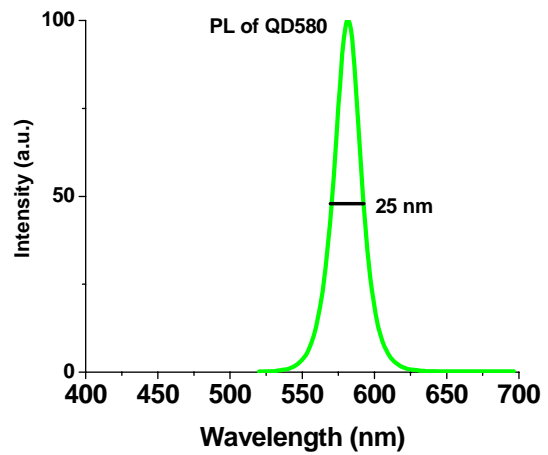
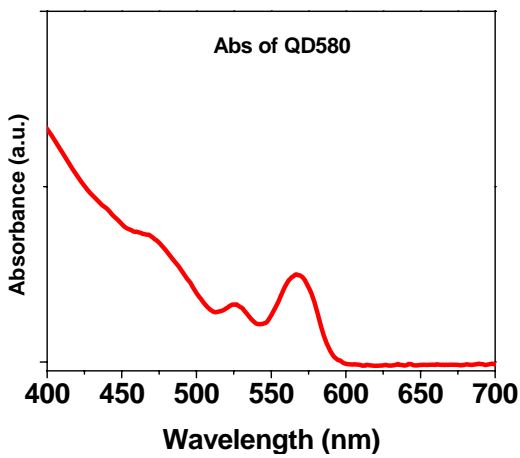
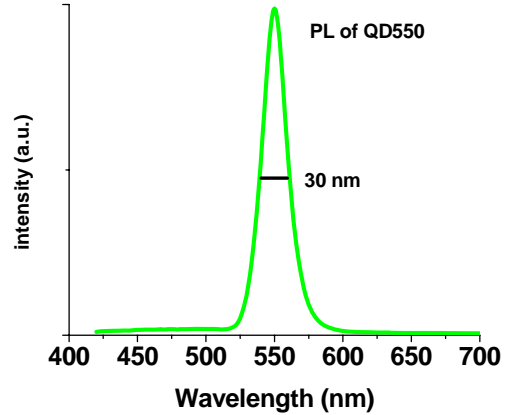
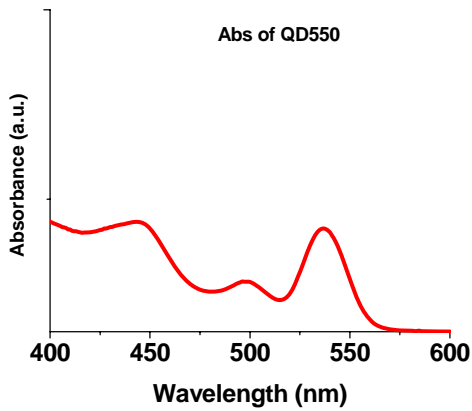
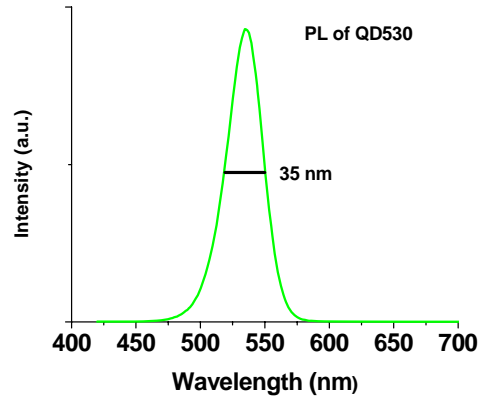
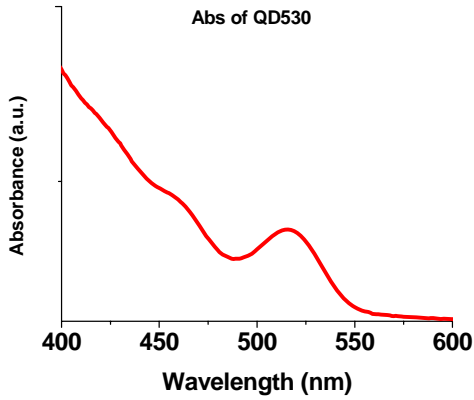
<b>Catalog number:</b>	QSQ
<b>Product name:</b>	CdSe/ZnS core/shell QDs in water with positively charged surface. Unpurified with free PDDA
<b>Solvent:</b>	20 mM tris buffer solution
<b>Surface group:</b>	N/A
<b>Storage:</b>	4°C; Do not freeze.
<b>pH stability:</b>	5-10
<b>Buffer stability:</b>	Tris
<b>Shelf life:</b>	12 months
<b>Concentration:</b>	2 uM

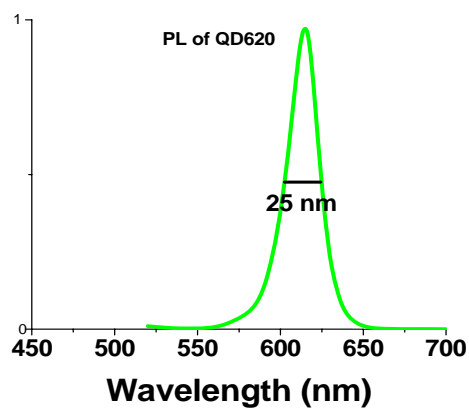
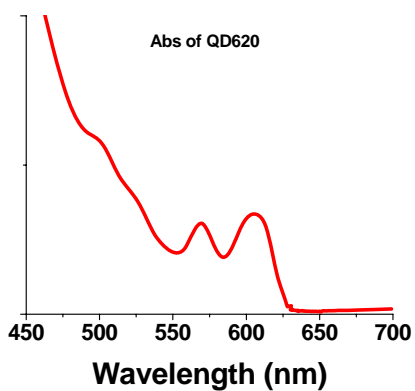
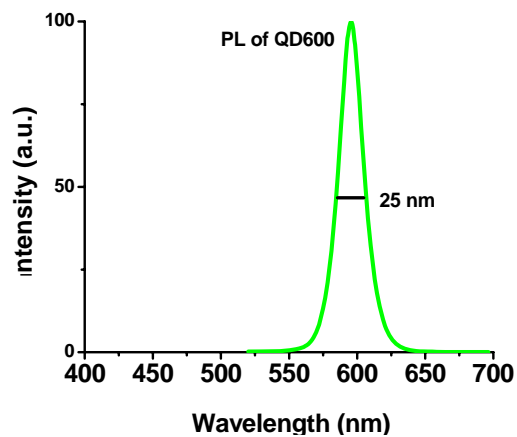
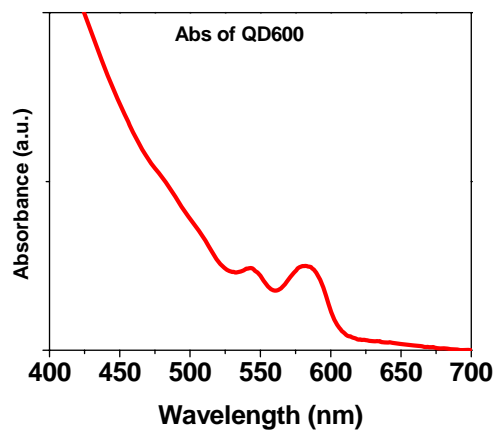
	QSQ530	QSQ550	QSQ580	QSQ600	QSQ620
Emission Peak (nm)	530	550	580	600	620
Peak Tolerance (nm)	10	10	10	10	10
FWHM* (nm)	<35	<35	<25	<25	<25
Emission Efficiency**	>50%	>50%	>50%	>50%	>50%
Surface Coating	Polymer	Polymer	Polymer	Polymer	Polymer

\*FWHM: Full Width of Half Maximum

\*\*Emission efficiency was measured by integrating sphere.

Spectra:





**For R&D only. Not intended for food, drug, household, agricultural, or cosmetic use.**

**Ocean NanoTech, LLC shall not be held liable for any damage resulting from handling or contact with the above product.**