

Technical Specification of Quantum Dots with Carboxylic Acid Group

Description: QSH is a group of water soluble CdSe/ZnS quantum dot nanocrystals with amphiphilic polymer coating. Their surface functional group is carboxylic acid. The zeta potential of QSH is from -30mV to -50mV. Their organic layers consist of a monolayer of Octadecylamine and a monolayer of amphiphilic polymer. The thickness of the total organic layers is about 4 nm. The hydrodynamic size of the nanocrystals is about 8-10 nm larger than their inorganic core size measured by TEM.

QSH is very stable in most buffer solutions in the pH range of 3-14.

QSH can be conjugated to protein, peptide and DNA by following our Standard Conjugation Protocol. Ocean NanoTech also offers QSH-Protein Conjugation Kit which includes all the crosslinking agents and buffer solutions. If you need to perform QHP-protein conjugation, we recommend that you remove your original buffer solutions and use our Activation Buffer to disperse your protein for the conjugation. Otherwise, precipitation may occur. If it's your first time to perform this conjugation, you may use BSA as model protein to get familiar with the whole process.

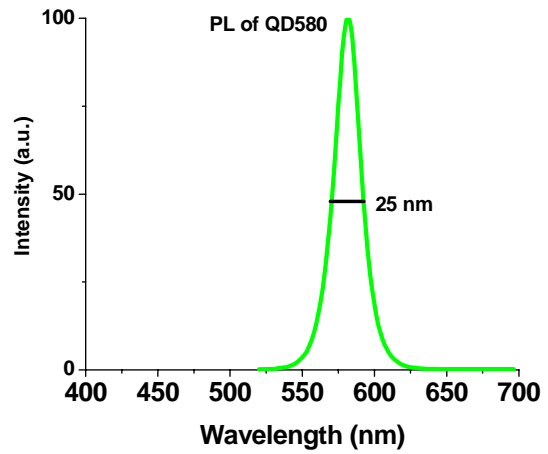
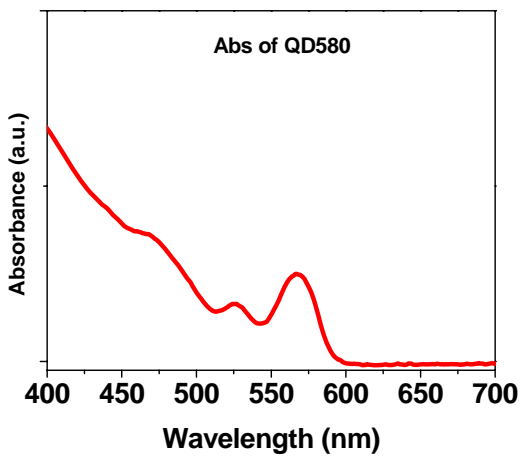
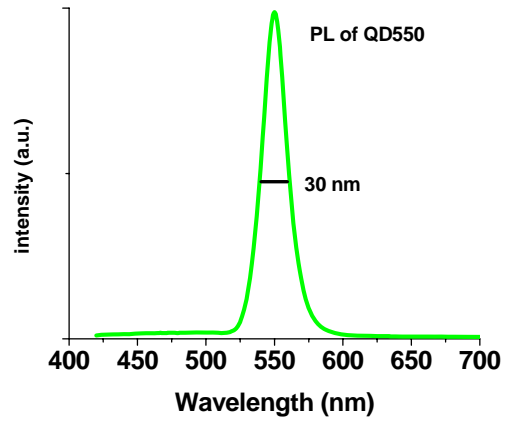
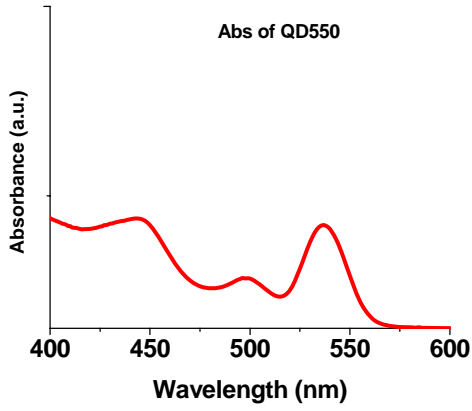
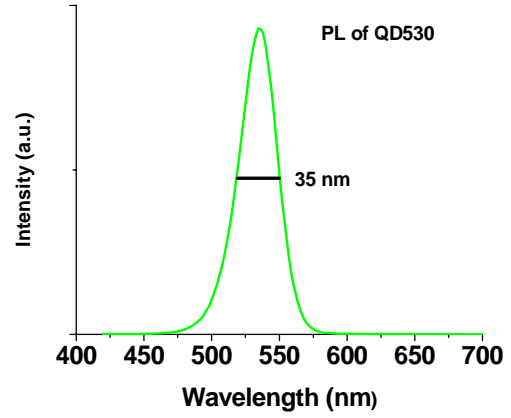
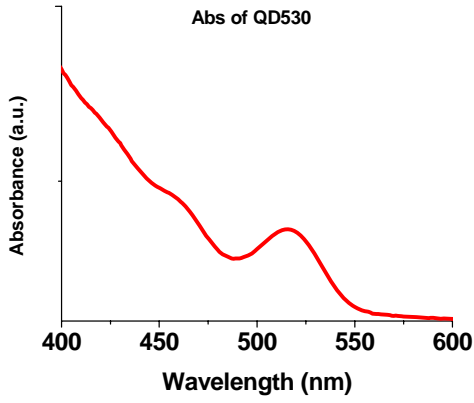
Catalog number:	QSH
Product name:	CdSe/ZnS core/shell QDs with carboxylic acid group.
Solvent:	Water
Surface group:	Carboxylic acid
Storage:	4°C; Do not freeze.
pH stability:	4-10
Buffer stability:	Borate, Tris, HEPES, PBS, MES, etc.
Shelf life:	12 months
Concentration:	8.0 uM

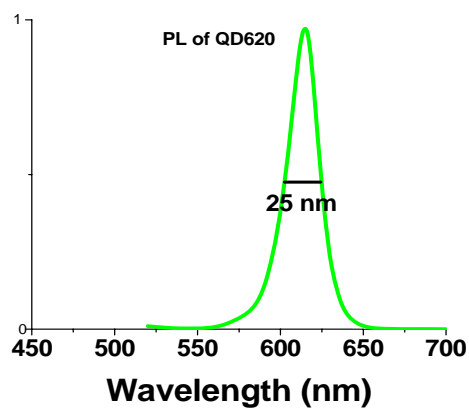
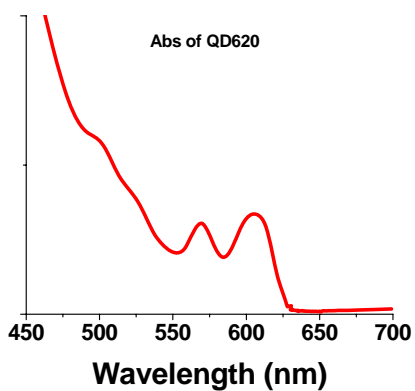
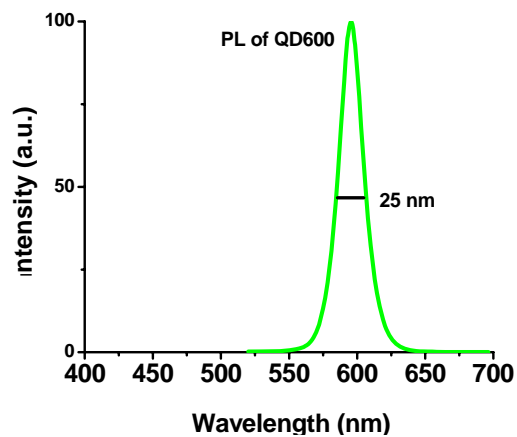
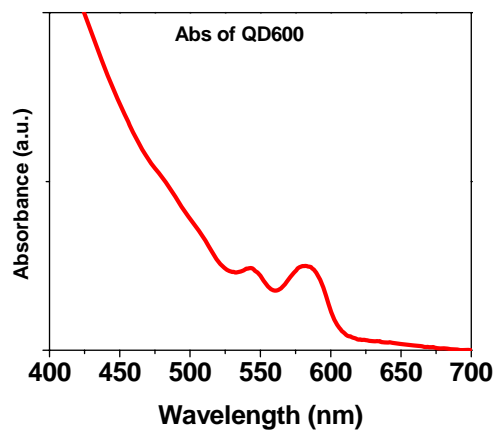
	QSH530	QSH550	QSH580	QSH600	QSH620
Emission Peak (nm)	530	550	580	600	620
Peak Tolerance (nm)	10	10	10	10	10
FWHM* (nm)	<35	<35	<25	<25	<25
Emission Efficiency**	>50%	>50%	>50%	>50%	>50%
Surface Coating	Polymer	Polymer	Polymer	Polymer	Polymer

*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.