

AclaF™ Quantum Dots with Carboxylic Acid Group ([Catalog # QVH](#))

Description: QVH is a group of **autoclaved** water soluble alloy CdSSe/ZnS or CdSe/ZnS core/shell quantum dots with amphiphilic polymer coating. QVH has been autoclaved at 121°C for 30 min, which is suitable for experiments that require enzyme-free conditions.

Their reactive group of QVH is carboxylic acid. The zeta potential of QVH is from -30mV to -50mV. Their organic layers consist of a monolayer of oleic acid/octadecylamine and a monolayer of amphiphilic polymer. The thickness of the total organic layers is about 4 nm. The hydrodynamic size of the QDs is about 8-10 nm larger than their inorganic core size measured by TEM.

QVH is very stable in most buffer solutions in the pH range of 5-10.

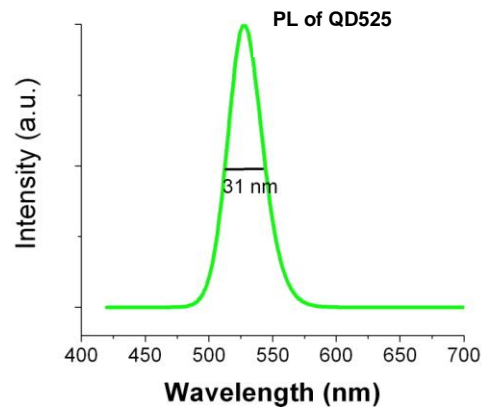
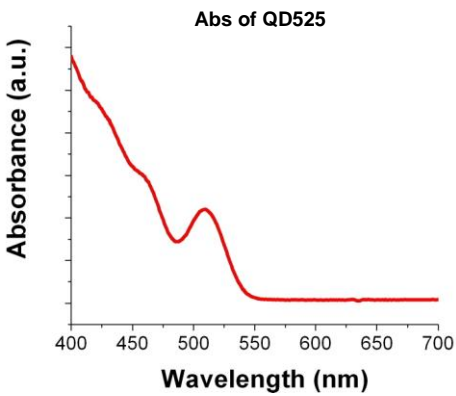
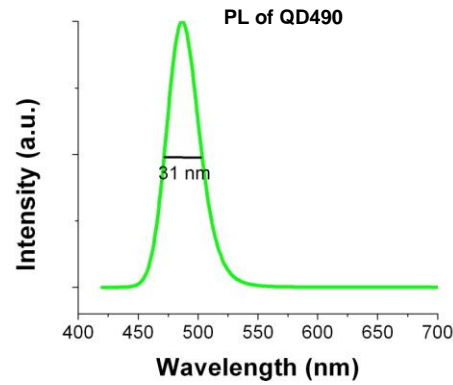
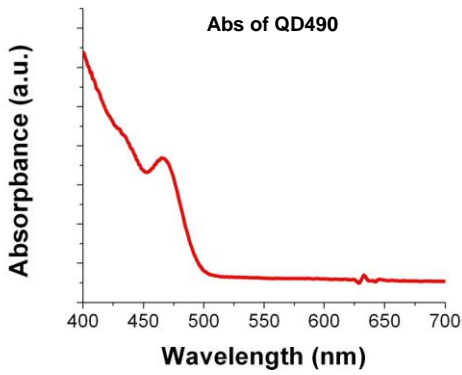
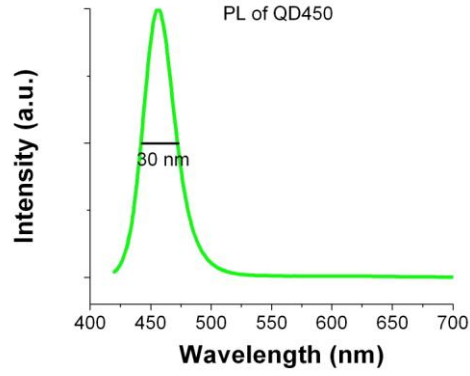
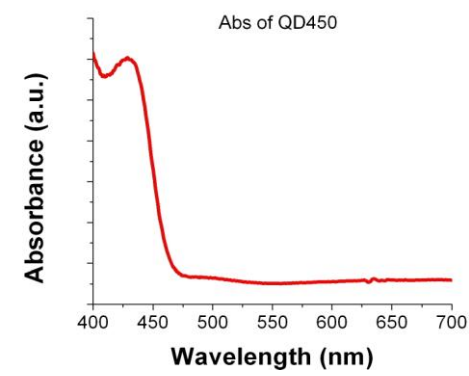
Catalog number:	QVH
Product name:	AclaF™ CdSSe/ZnS or CdSe/ZnS core/shell QDs with carboxylic acid group.
Solvent:	Autoclaved DI H ₂ O
Reactive group:	Carboxylic acid
Storage:	4-25°C; Do not freeze.
pH stability:	5-10
Buffer stability:	Borate, Tris, HEPES, PBS, MES, etc.
Shelf life:	6 months
Concentration:	8.0 uM

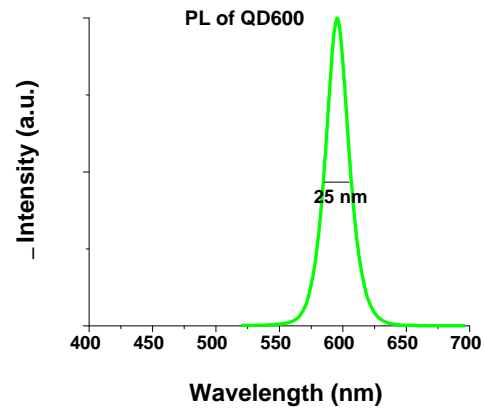
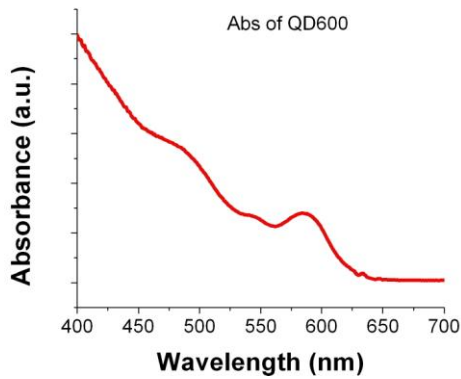
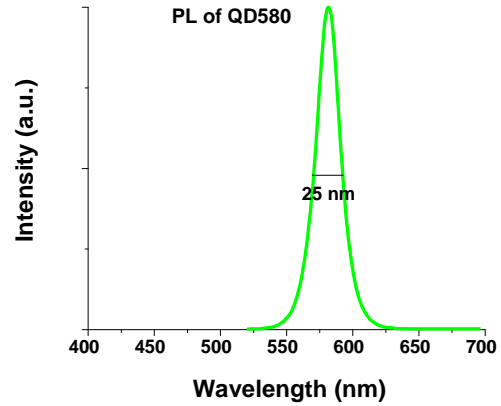
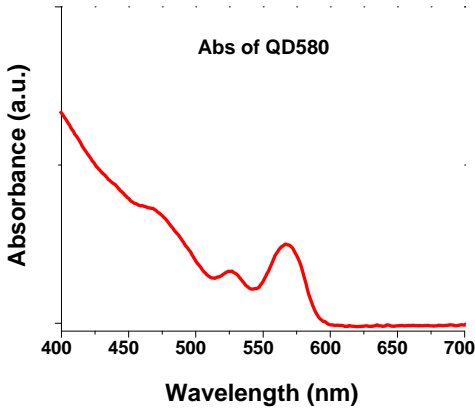
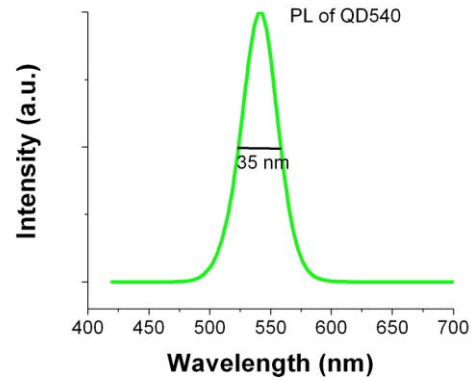
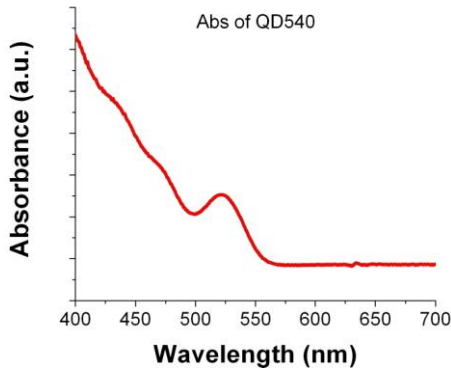
Emission wavelength (nm)	450	490	525	540	580	600	620	645	665
Emission tolerance (nm)	10	10	10	10	10	10	10	10	10
FWHM (nm)	<35	<35	<35	<35	<25	<25	<25	<35	<35
Quantum yield*	>50%	>50%	>50%	>50%	>50%	>50%	>50%	>50%	>50%
Structure	CdSSe/ ZnS/OA /APM	CdSSe/ ZnS/OA/ APM	CdSSe/ ZnS/OA/ APM	CdSSe/ ZnS/OA/ APM	CdSe/ ZnS/ODA/ APM	CdSe/ ZnS/ODA /APM	CdSe/ ZnS/ODA /APM	CdSSe/ ZnS/OA /APM	CdSSe/ ZnS/OA/ APM

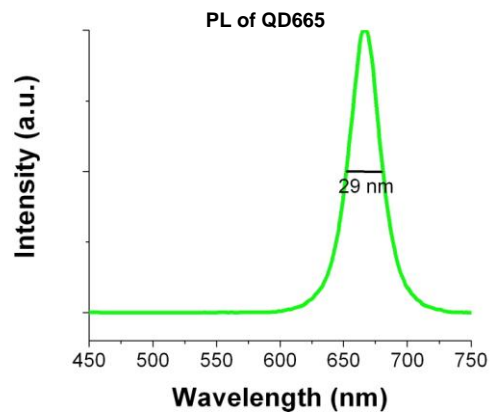
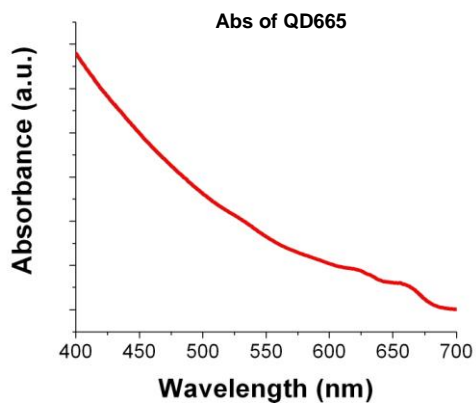
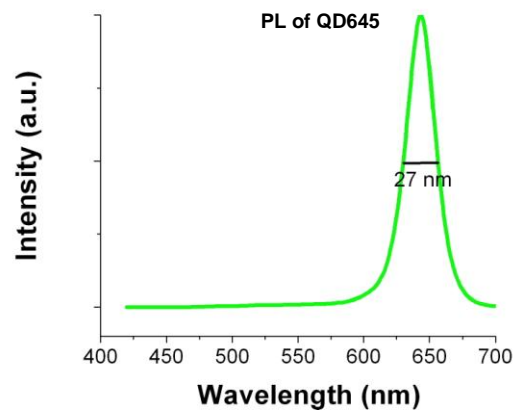
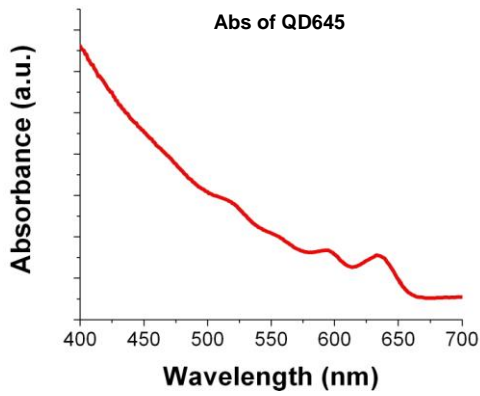
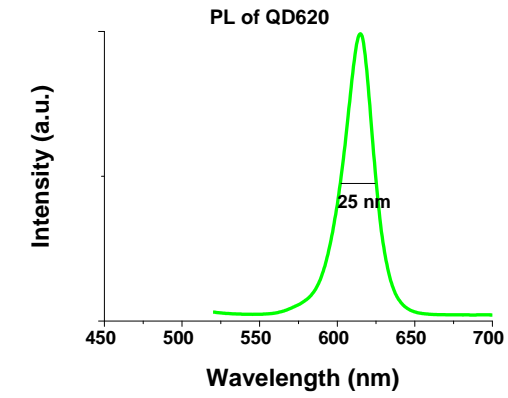
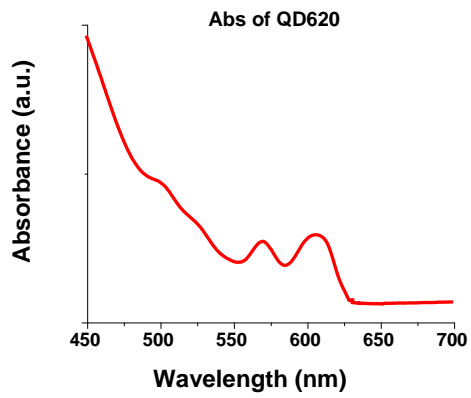
*Quantum yield was measured by integrating sphere method.

Abbreviations: FWHM, Full Width of Half Maximum; OA, oleic acid; ODA: octadecylamine; APM, amphiphilic polymer.

Spectra:









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