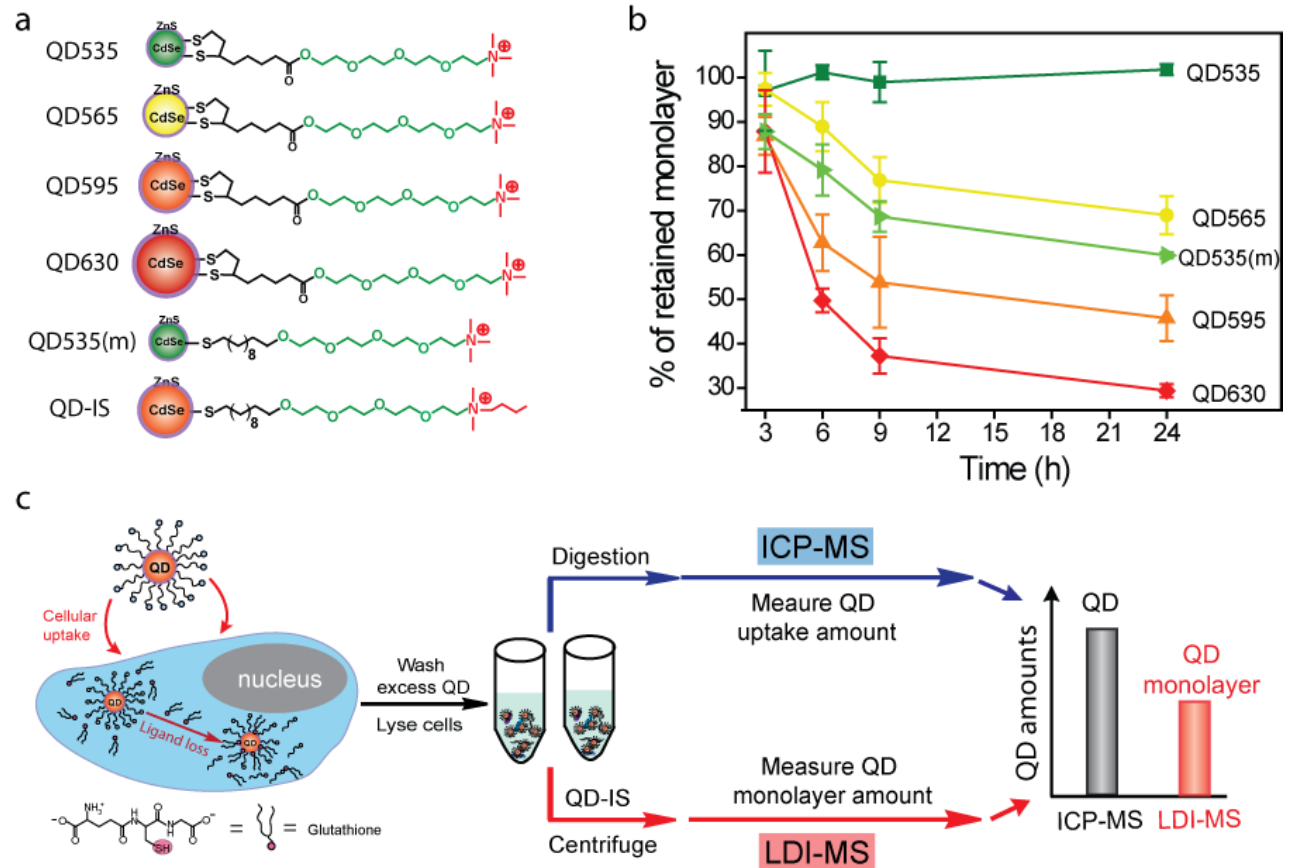


# Quantum Dot Stability in Cells is Size Dependent

Quantum dots (QDs) are highly fluorescent and photostable, making them excellent tools for imaging. When using these QDs in cells and animals, however, intracellular biothiols can degrade the QD monolayer compromising function. CHM scientists have developed a label-free method to quantify the intracellular stability of monolayers on QD surfaces that couples laser desorption/ionization mass spectrometry (LDI-MS) with inductively coupled plasma mass spectrometry (ICP-MS). Using this new approach they have demonstrated that QD monolayer stability is correlated with both QD particle size and monolayer structure, with proper choice of both particle size and ligand structure required for intracellular stability.



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