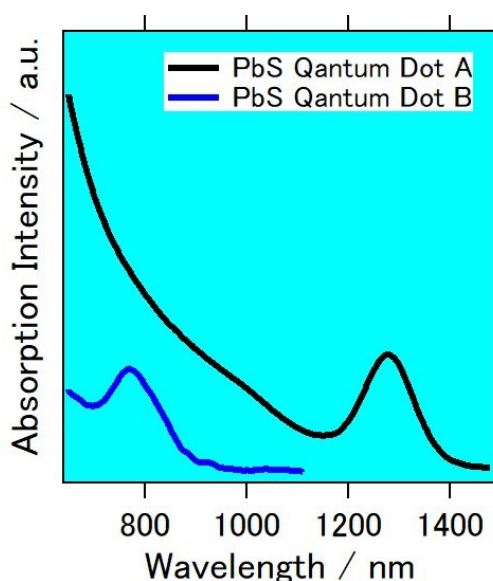
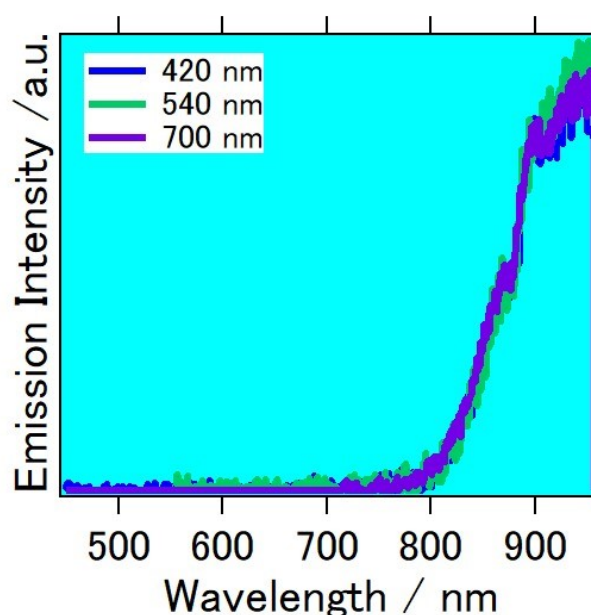


PbS Quantum Dots

PbS quantum dot exhibits absorption, emission spectrum in the infrared light region. Different from other type of quantum dot, since PbS quantum dot has main activity in the infrared light region, this material has been attempted to be applied for infrared light sensor, medical application and quantum dot solar cell etc... quantum dot efficiency ranges approximately 15 – 16 % although we will keep trying to make quantum efficiency higher.



PbS quantum dot absorption spectra depends on synthesis procedure.



excitation wavelength	quantum efficiency (%)	peak wavelength (nm)
420 nm	16.7	948.4
540 nm	16.3	951.3
700 nm	15.1	938.3

Excitation wavelength dependency of emission spectra of PbS quantum dot. Number in the figure indicates the excitation wavelength. Below table indicates the optical property taken from figure.

Absorption and emission peak could be modified in the range of 100 - 200 nm if possible.