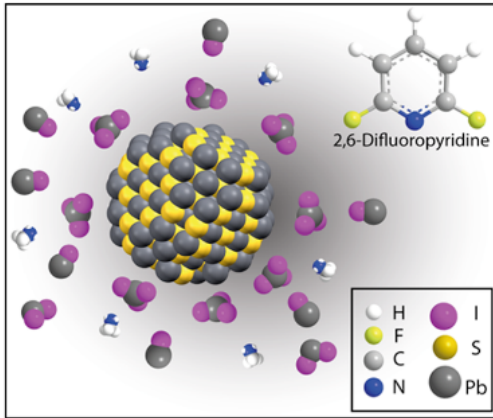
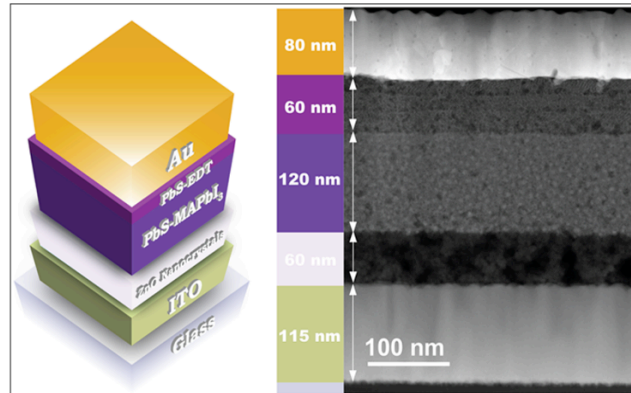


Quantum Dot-Based Photovoltaics:



A schematic of the stabilization of a PbS-MAPbI₃ quantum dot in 2,6-difluoropyridine.



A schematic and a cross-sectional scanning electron micrograph of a bulk layer heterojunction colloidal quantum dot solar cell. The photoactive layer of 3.2 nm-diameter PbS quantum dots coated in methylammonium lead iodide perovskite (colored deep purple) is sandwiched between a ZnO electron transport layer and an ethanedithiol-clad PbS quantum dot hole transport layer. The overall thickness of the device is 435 nm, which is 100 times thinner than a layer of latex paint, and roughly 200 times thinner than an average human hair.