

ABSTRACT

Solar cells convert the sun's energy into electricity. The flow of current in the solar panel generates power which can be used to drive a load. Currently, solar panels have an efficiency of up to 18 percent. Most of the solar panels are made from silicon crystals. Silicon is used due to its availability in sand and surface soils. The production of solar cells using silicon requires highly clean environment and pure silicon. This results to an expensive production process and frequent maintenance. Solar cells used in Kenya are imported from other countries. This research proposes the replacement of silicon in the solar cell with lead selenium nanocrystals, which can be produced locally. The nanocrystals are obtained from reaction solutions and separating them using a centrifuge machine. A solar cell is then fabricated by laying the lead selenium nanocrystal on a substrate by chemical vapor deposition.